USAID
FROM THE AMERICAN PEOPLE

Report to Congress

CHILD SURVIVAL AND HEALTH PROGRAMS FUND PROGRESS REPORT

Fiscal Year 2004

This document was prepared by USAID
in conjunction with
the Population, Health and Nutrition Information Project.

TABLE OF CONTENTS

ACRONYMS AND ABBREVIATIONS

ABC	Abstain, Be faithful, and, as appropriate, correct and consistent use of Condoms
ACT	Artemisinin-based combination therapy
AFR	USAID Bureau for Africa
AFR/DP	USAID Bureau for Africa/Office of Development Planning
AFR/SD	USAID Bureau for Africa/Office of Sustainable Development
AMR	Antimicrobial resistance
ANE	USAID Bureau for Asia and the Near East
ART	Antiretroviral treatment
ARV	Antiretroviral
CAR	Central Asia Republics
CBO	Community-based organization
CDC	Centers for Disease Control and Prevention
CIDA	Canadian International Development Agency
CORE	Child Survival Collaborations and Resources
CPF	Commodity Promotion Fund
CSH	Child survival and health
CS/MH	Child survival and maternal health
CTC	Community therapeutic care
DCHA	USAID Bureau for Democracy, Conflict and Humanitarian Assistance
DCOF	Displaced Children and Orphans Fund
DHS	Demographic and Health Survey
DOS	Department of State
DOTS	Directly observed treatment, short course

DR Congo	Democratic Republic of the Congo
DTC	Drug and therapeutics committee
DPT	Diphtheria, pertussis, and tetanus
E&E	USAID Bureau for Europe and Eurasia
EPI	Expanded Program for Immunization
ETAT	Emergency triage assessment and treatment
FBO	Faith-based organization
FETP	Field epidemiology training program
FP/RH	Family planning/reproductive health
FSP	Financial sustainability plan
FY	Fiscal year
GAIN	Global Alliance for Improved Nutrition
GAVI	Global Alliance for Vaccines and Immunization
GDF	Global TB Drug Facility
GH	USAID Bureau for Global Health
GLC	Green Light Committee
Global Fund	Global Fund to Fight AIDS, Tuberculosis and Malaria
IAVI	International AIDS Vaccine Initiative
ICIUM 2	Second International Conference on Improving Use of Medicines
ID	Infectious diseases
IDSR	Integrated Disease Surveillance and Response
IMCI	Integrated Management of Childhood Illness
Int'l Partners	International Partnerships
IPT	Intermittent preventive therapy
IRS	Indoor residual spraying
ITN	Insecticide-treated net
LAC	USAID Bureau for Latin America and the Caribbean
LAC/RSD-SPO	USAID Bureau for Latin America and the Caribbean/Regional Sustainable Development Office and Strategy and Program Office

LEAD	Local Enhancement and Development project (Philippines)
LGU	Local government unit
MDR-TB	Multidrug-resistant tuberculosis
MVI	Malaria Vaccine Initiative
NCDI	Noncommunicable disease and injury
NGO	Nongovernmental organization
ORS	Oral rehydration salts; oral rehydration solution
ORT	Oral rehydration therapy
PL	Public law
PMTCT	Prevention of mother-to-child HIV transmission
POU	Point of use
PPC	USAID Bureau for Policy and Program Coordination
PPM	Public-private mix
PRM	Bureau of Population, Refugees, and Migration (Department of State)
PVO	Private voluntary organization
RBM	Roll Back Malaria
RBP-EIA	Retinol-binding protein enzyme immunoassay
RHS	Reproductive Health Survey
SARS	Severe acute respiratory syndrome
STI	Sexually transmitted infection
TEPHINET	Training in Epidemiology and Public Health Interventions Network
UNAIDS	Joint United Nations Program on HIV/AIDS
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
VC	Vulnerable children
WARP	West African Regional Program
WASH	Water Sanitation and Hygiene Initiative (Madagascar)
WHO	World Health Organization

EXECUTIVE SUMMARY

Adolescents study informational fliers at a town meeting on HIV/AIDS in Kibungo, Rwanda.

PHOTO: © 2001 CCP, COURTESY OF PHOTOSHARE

In 2004, the United States Agency for International Development (USAID) continued to lead, support, and implement programs to promote, protect, and improve the health of people in developing and transitional countries. Through a host of partnerships with governments, multilateral agencies, other bilateral donors, the private sector, research and educational institutions, and non-governmental and private voluntary organizations (including community- and faith-based organizations), USAID achieved results at the local, national, and global levels.

USAID's global health activities not only benefit people in the developing world but also protect the security, health, and welfare of the American people in an increasingly globalized world. As a further reciprocal benefit, they also present to people in developing countries the generosity of the United States and its efforts – through USAID, other government agencies, and private organizations – to improve the present and future prospects of millions of people worldwide.

Areas of Intervention

The Agency conducted health programs in the following technical areas in fiscal year 2004:

- HIV/AIDS
- Infectious diseases (tuberculosis, malaria, antimicrobial resistance, and disease surveillance)
- Child survival and maternal health (immunizations, polio, nutrition, pneumonia and diarrhea, maternal and neonatal health, and vulnerable children)
- Family planning and reproductive health
- Strengthening health systems, research, and technical innovation

USAID's interventions in these areas responded to a range of humanitarian and development needs, from those posed by complex emergencies created by natural disasters or human conflict, to those besetting "fragile" states, to those faced by countries at varying levels of social and economic development.

Framework for Tracking USAID's Health Interventions

USAID has developed a framework for tracking the development of its health interventions. The Agency identifies potential high-impact interventions, and then applies safety, effectiveness, and feasibility requirements. Interventions that meet these requirements are then:

- Introduced in demonstration areas and adjusted based on results
- Scaled up to the national level (covering half or more of a country and achieving good coverage at reasonable cost)
- Combined with other interventions in comprehensive programs to maximize country-level impacts
- Extended to the regional level to achieve regionwide or multicountry impacts

The interventions described in this report operate at various stages along this "ladder of progress."

Results Highlights

The report describes USAID's strategic approaches, interventions, and achievements that were reported during 2004. Many sections include lessons learned from experience that have impact on future approaches and interventions.

Highlights of the year's results include:

HIV/AIDS: USAID is a major implementing partner of President Bush's Emergency Plan for AIDS Relief. In the Emergency Plan's 15 focus countries, USAID awarded five grants in 2004 to support orphans and vulnerable children affected by HIV/AIDS and another 10 grants early in FY 2005 to launch programs in 13 countries. In addition, USAID assisted more than 263,000 orphans and vulnerable children outside the focus countries. The Emergency Plan also supported antiretroviral (ARV) drug treatment for 172,000 people living with HIV/AIDS worldwide, 155,000 in Emergency Plan focus countries and 17,000 in other countries. In support of this effort, USAID expanded its pilot projects for providing ARV drug therapy to 21 sites in Ghana, Kenya, and Rwanda, at which 62 percent of recipients were women. In Rwanda, USAID assisted in the scale-up of counseling and testing to 40 sites that served as entry points

PHOTO: © 2003 SAMMY NDWIGA, COURTESY OF PHOTOSHARE

for the national roll-out of ARV therapy, reaching more than 90,000 individuals. USAID also supported programs for preventing mother-to-child HIV transmission in 26 countries throughout the world.

Infectious Diseases:

- *Tuberculosis.* Case detection rates increased globally from 11 percent to 43 percent between 1995 and 2003.* Treatment success rates also increased globally, from 80 percent in 1990 to 82 percent in 2002. Of the 18 highest-priority USAID countries, 14 have increased case detection. The case detection rate is 45 percent in USAID-assisted countries, slightly higher than the global rate.
- *Malaria.* USAID's continued support in eight countries in Africa for insecticide-treated bednets to prevent malaria infections helped triple their use from less than 10 percent of households in 2002 to more than 30 percent in 2004. USAID has provided direct support for intermittent preventive therapy for pregnant women in 21 African countries. This support will benefit about 13 million pregnant women.

Child Survival and Maternal Health:

- *Immunizations.* In 12 USAID-assisted countries, immunization coverage went from 58 percent in 2002 to 62 percent in 2003 under the BOOST Immunization Initiative, a special initiative in 20 countries that increases routine immunization coverage. Through extensive technical assistance, USAID helped the Ministry of Health in Iraq immunize 5 million children against measles, mumps, and rubella. USAID is also a fully engaged partner in, and significant contributor to, the Global Alliance for Vaccines and Immunization (GAVI) and its Vaccine Fund. This innovative global alliance is changing immunization in the world's 74 poorest countries by introducing new lifesaving vaccines while also strengthening the delivery system for vaccinations.
- *Polio eradication.* USAID-supported polio campaigns immunized more than 300 million children under age 5 in Africa and Asia. As a result there was a 50 percent reduction in confirmed cases of polio in USAID-assisted countries in Asia. In Africa, however, a one-year suspension of immunizations in part of Nigeria and low routine immunization coverage in neighboring countries led to increases in confirmed polio cases of about 50 percent.
- *Nutrition.* USAID supported vitamin A supplementation in 22 countries, achieving greater than 75 percent coverage in more than half of them. In the past five years, the availability of iodized salt has increased by 35 percent in 14 USAID-assisted countries. Since 1999, exclusive breastfeeding has increased by 65 percent in 13 USAID-assisted countries. During the same period, the number of countries fortifying staple foods and condiments with lifesaving vitamins and minerals rose from nine to 20.
- *Pneumonia and diarrhea.* USAID-supported efforts to combat childhood pneumonia demonstrated that community-based treatment is both effective and possible, laying the groundwork for reaching more children with lifesaving treatment. USAID is working in eight countries to introduce or scale up community-based treatment of pneumonia. To combat child diarrhea, an improved oral rehydration solution (ORS) developed with support from USAID is now the new global standard of the World Health Organization

* 2003 data are the most recent available from the World Health Organization (*Global Tuberculosis Control: WHO Report 2005*). The case detection rate is the percentage of new smear-positive pulmonary TB cases detected under the WHO DOTS (directly observed treatment, short course) program.

(WHO) and the United Nations Children's Fund (UNICEF). UNICEF now procures only the new ORS to meet the global demand of partners and host governments. USAID is also working with eight countries on expanding country-level implementation of "point-of-use" treatment of household water, a key intervention for preventing childhood diarrhea.

- *Maternal and neonatal health.* In six USAID-assisted countries, maternal mortality has declined steadily since the 1980s. Bolivia and Indonesia, two countries that have received major USAID support for maternal health, reported significant 10-year declines in their maternal mortality ratios of 44 and 21 percent, respectively.
- *Vulnerable children.* In Uganda, 2,250 children abducted into service by the rebel army were reunited with their families through USAID's Displaced Children and Orphans Fund (DCOF). In the Democratic Republic of the Congo, a DCOF-supported activity reunited more than 1,300 street children with their families.

Family Planning and Reproductive Health: USAID missions in Russia, Kazakhstan, Azerbaijan, Georgia, Romania, and Albania expanded their family planning and reproductive health programs. In Georgia, USAID extended services to eight new districts to reach an estimated 410,000 people and introduce family planning in more than 100 facilities serving significant numbers of underserved women. Worldwide, modern contraceptive use among married women in 30 USAID-assisted countries increased from 22 to 38 percent between 1991 and 2004.

Health Systems Strengthening, Research, and Technical Innovation: With USAID assistance, 54 countries have or will have national health accounts, enabling policymakers in ministries of health and finance to make decisions on resource allocations to and within the health sector. More than 40 countries have benefited from the results of USAID's past investment in research in the areas of vitamin A; oral rehydration therapy and zinc treatment for child diarrhea; and postpartum hemorrhage. In contraceptive research, USAID is assisting 25 countries in integrating natural methods of family planning into their health programs.

New Strategic Approaches: USAID continued to adapt its approaches to different national circumstances and stages of development. As a result, USAID is better able to assist countries facing complex humanitarian emergencies, consistent with its mandate. USAID is also beginning to help selected countries address noncommunicable diseases.

Funding

USAID's fiscal year 2004 health programs and activities were largely financed through the Agency's

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PHOTO: © 1999 ANNE PALMER/CCP, COURTESY OF PHOTOSHARE

Child Survival and Health (CSH) Programs Fund but also received funding support from other accounts and international partnerships. Total amounts shown below include funding from all accounts.

HIV/AIDS: $1.2 billion supported prevention, care, and treatment programs and research to mitigate the impact of the HIV/AIDS pandemic. This included $911 million from the CSH account.

Infectious Diseases: $200 million ($183.9 million from the CSH account) supported activities to reduce the threats of infectious diseases such as tuberculosis and malaria and address drug resistance and disease surveillance.

Child Survival and Maternal Health: $442.9 million supported immunizations, nutrition, maternal health, and other core child and maternal health programs. This included $30.3 million for polio eradication. CSH funds accounted for $328 million of this amount. An additional $36 million went to programs that benefit vulnerable children, of which $27.8 million was from the CSH account.

Family Planning and Reproductive Health: $429.5 million supported family planning and reproductive health programs to help families achieve their desired family size while protecting the health of women and children. This included $373.3 million from the CSH account.

Partnerships

Partnerships are critical to USAID's global health strategy. Time and again, partnerships have built consensus and generated change at the global, national, and local levels. Innovative partnerships open opportunities for new approaches to global health problems in which each partner brings to bear its distinctive knowledge, skills, experience, and comparative advantage. The descriptions of USAID activities contained in this report repeatedly attest to the importance and necessity of partnering.

I. HIV/AIDS

PHOTO: KARL GROBL FOR FHI

Children orphaned by AIDS have been ordained as novice monks and receive education in Kien Kes temple in Battambang province, Cambodia.

In 2004, President Bush's Emergency Plan for AIDS Relief supported antiretroviral (ARV) drug treatment for 172,000 people living with HIV/AIDS through bilateral programs worldwide. In support of the Emergency Plan, USAID expanded its pilot projects for providing ARV drug therapy to 21 sites in Ghana, Kenya, and Rwanda and supported programs for preventing mother-to-child HIV transmission in 26 countries.

In both health and development terms, the HIV/AIDS pandemic constitutes an enormous public health challenge in the developing world. As the disease spreads, its impact on individuals, families, communities, and whole societies may also erase decades of development progress. About 95 percent of people living with HIV/AIDS live in developing countries where poverty, inadequate health care, and lack of basic infrastructure are contributing to the spread of the disease.

Twenty million people have died of AIDS since it was first recognized in 1981. At the end of 2004, 39 million people were living with HIV/AIDS worldwide. Five million new HIV infections occurred in 2004, and 3 million adults and children died of AIDS. By 2003, more than 15 million children under age 18 had lost one or both parents to AIDS. Without significant intervention, this number is expected to reach 25 million by 2010.

To combat the global pandemic, President Bush has raised the United States' commitment to and leadership in the fight against HIV/AIDS to an unprecedented level. In his State of the Union address in January 2003, the President announced his Emergency Plan for AIDS Relief, building upon previous successes (such as the 2002 International Mother and Child HIV Prevention Initiative). The Emergency Plan is significantly expanding the technical and financial resources available to address the pandemic.

The Emergency Plan has 15 focus countries* in which, by 2008, it aims to:

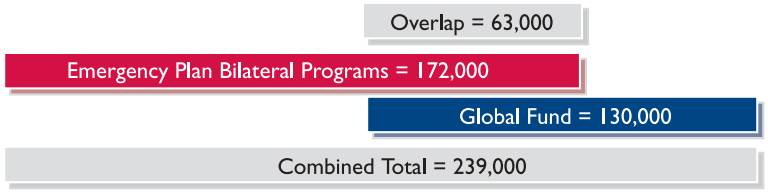
- Support antiretroviral drug treatment (ART) for 2 million people
- Prevent 7 million new infections
- Support care for 10 million people living with and affected by HIV/AIDS, including orphans and vulnerable children

To attain these ambitious objectives, the United States must rapidly scale up interventions, engage new partners, and make sustainable improvements in health care infrastructure. As a key partner in achieving the President's goals, USAID works alongside several other U.S. government agencies under the Office of the U.S. Global AIDS Coordinator. USAID operates through joint programs with international and U.S. partners, including faith- and community-based organizations and the private sector, and collaborates with international initiatives such as the Global Fund to Fight AIDS, Tuberculosis and Malaria (see figure 1).

Figure 1

People Receiving ARV Treatment Worldwide with Support from the President's Emergency Plan for AIDS Relief

Includes
Those receiving support from U.S. bilateral programs – 100% funded by the President's Emergency Plan
and
Those receiving support from the Global Fund To Fight AIDS, Tuberculosis and Malaria – 33% funded by the President's Emergency Plan



Source: Treatment data for the Emergency Plan bilateral programs provided by the Office of the U.S. Global AIDS Coordinator; treatment data for Global Fund programs provided by the Global Fund to Fight AIDS, Tuberculosis and Malaria.

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

PHOTO: © 2003 GERMAIN PASSAMANG TABATI, COURTESY OF PHOTOSHARE

USAID Strategy

With a budget of $574 million* in fiscal year 2004, supplemented by $230 million in transfers from the Office of the U.S. Global AIDS Coordinator, USAID supported programs in approximately 100 countries. Key components of USAID's HIV/AIDS program include:

- Prevention
- Care and support
- Treatment
- Research

Interventions and Achievements

ABC approach to prevention. USAID promotes the balanced "ABC" approach to prevention of "Abstinence, Being faithful, and, as appropriate, correct and consistent use of Condoms." In 2004, USAID initiated $117 million in new multicountry central agreements for abstinence and behavior change programs for youth in 14 of the 15 Emergency Plan focus countries.

Peer education. In **Kenya**, USAID supported the Kenya Girl Guides Association in promoting HIV/AIDS prevention through peer education, life skills training, and outreach activities such as theater and awareness contests. The program has reached more than 25,000 young people; trained 1,500 girl guides as peer educators; and mobilized a broad range of community leaders to support HIV/AIDS programming for youth, especially for young girls who are not yet sexually active.

Mass media for behavior change. USAID supported *Studio 263*, a popular independent TV series in **Zimbabwe** that educates youth on the risks and responsibilities associated with sexual activity. In surveys, 86 percent of the target audience reported having watched the drama within the last week. Surveys have also indicated that the program's messages influenced 48 percent of 15- to 19-year-old viewers to delay the onset of sexual activity and 33 percent of 25- to 29-year-olds to seek counseling and testing services.

Preventing mother-to-child HIV transmission. Prevention of mother-to-child HIV transmission (PMTCT) programs focus on increasing the availability of preventive care, including drug treatment, and building health care delivery systems to reach as many women as possible. USAID has PMTCT programs in 26 countries throughout the world. As part of the PMTCT program, 2,868 women at 12 sites in **Thailand** and **Africa**, plus 764 adults and 1,908 children in their households, have been identified as eligible for HIV care and/or treatment. At these sites, approximately 1,000 adults (28 percent) and 130 children (7 percent) receive highly active ART, while the others are receiving care and being monitored for therapy eligibility. In **Ukraine**, USAID is supporting efforts to create an improved health care delivery model for PMTCT. Achievements to date include a PMTCT training curriculum; training for 130 health care workers; development of a monitoring and evaluation database; and the opening of two follow-up care clinics.

Counseling and testing. Counseling and testing services help people learn their HIV status and link people living with HIV/AIDS to prevention, care and support, and treatment. USAID supports counseling and testing services in more than 25 countries. Activities include establishing testing sites; training and supporting counselors; and promoting outreach programs to enhance community acceptance of HIV/AIDS activities. In **Rwanda**, USAID assisted in scaling up counseling and testing to 40 sites that served as entry points for the national roll-out of ART, reaching more than 90,000 individuals.

* Not including $398 million for the Global Fund to Fight AIDS, Tuberculosis and Malaria

Reaching high-risk groups. USAID's efforts have achieved significant positive impacts among high-risk groups such as uniformed services, prostitutes, and migrant workers, who often remain particularly vulnerable to HIV infection and transmission. In **India**, Tamil Nadu state has a successful program largely funded by USAID's AIDS Prevention and Control Project. HIV prevalence at antenatal sentinel surveillance sites in the state declined from 1.25 percent in 1998 to 0.75 percent in 2003. In addition, behavioral surveys indicate that the percentage of truckers and their helpers who have sex with nonregular partners declined from 48 percent in 1996 to 26 percent in 2003.

Care and support. As part of its care and support portfolio, USAID funds palliative care, including facility-based and home-based programs; psychosocial support for people living with HIV/AIDS; and care for children affected by HIV/AIDS, including medical care, counseling, and material support such as food, shelter, clothing, and school-related expenses. In 2004, USAID provided care to 10,295 people living with HIV/AIDS.

Outpatient care and treatment. In the **Dominican Republic**, USAID established and supported 12 outpatient care and treatment centers for HIV-positive persons. Coordinating with the World Bank, the Global Fund, and other donors, USAID directly supported the renovation of four care and treatment centers and was instrumental in connecting patients receiving ART with community-level care and support. These programs reached more than 1,670 children.

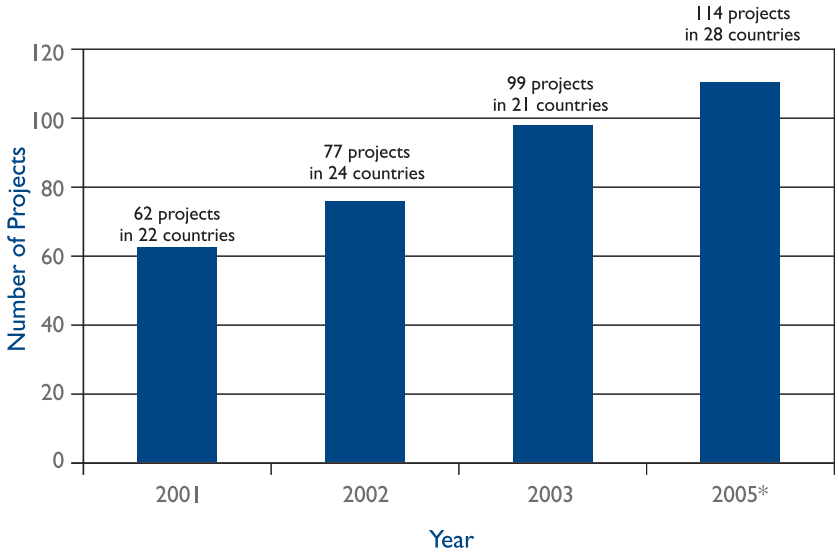
Home-based care. In 2004, USAID's partners in **South Africa** assisted the country's Department of Health in establishing home-based care and nutritional guidelines for HIV-affected households. These partners also supported hospice services and made more than 300,000 home-based care visits. In **Zambia**, USAID initiated a home-based care program to improve the well-being of more than 6,000 people living with HIV/AIDS and continued its national advocacy to reduce stigma and discrimination against people living with HIV/AIDS.

Orphans and vulnerable children. USAID programs provided support to more than 263,000 orphans and vulnerable children impacted by HIV/AIDS outside of the Emergency Plan's focus countries. In the **Dominican Republic**, for example, pilot activities by the Global Orphan Project/Promundo identified more than 1,000 vulnerable children and provided them with 2,100 direct services, including education, food, clothing, medical and psychological care, and legal services. Program enrollment has continued to increase by 10 to 20 children a week, and an additional 1,000 adults and 2,000 children affected by HIV/AIDS benefited from microenterprise and microcredit programs. In the Emergency Plan focus countries, five new grants were awarded to support orphans and vulnerable children. Early in fiscal year 2005, USAID awarded grants to 10 additional organizations to launch programs in 13 countries (see figure 2).

Treatment services. USAID supports a range of programs to increase the availability of treatment services. Activities include improving access to and clinical management of pharmaceuticals, including antiretrovirals (ARVs); training health providers; and establishing treatment programs for clinical care, including screening and

Figure 2

Expansion of U.S.-Supported Projects for Children Affected by HIV/AIDS



Source: USAID. *USAID Project Profiles: Children Affected by HIV/AIDS.* Fourth edition, January 2005.

* Planned projects reported in source.

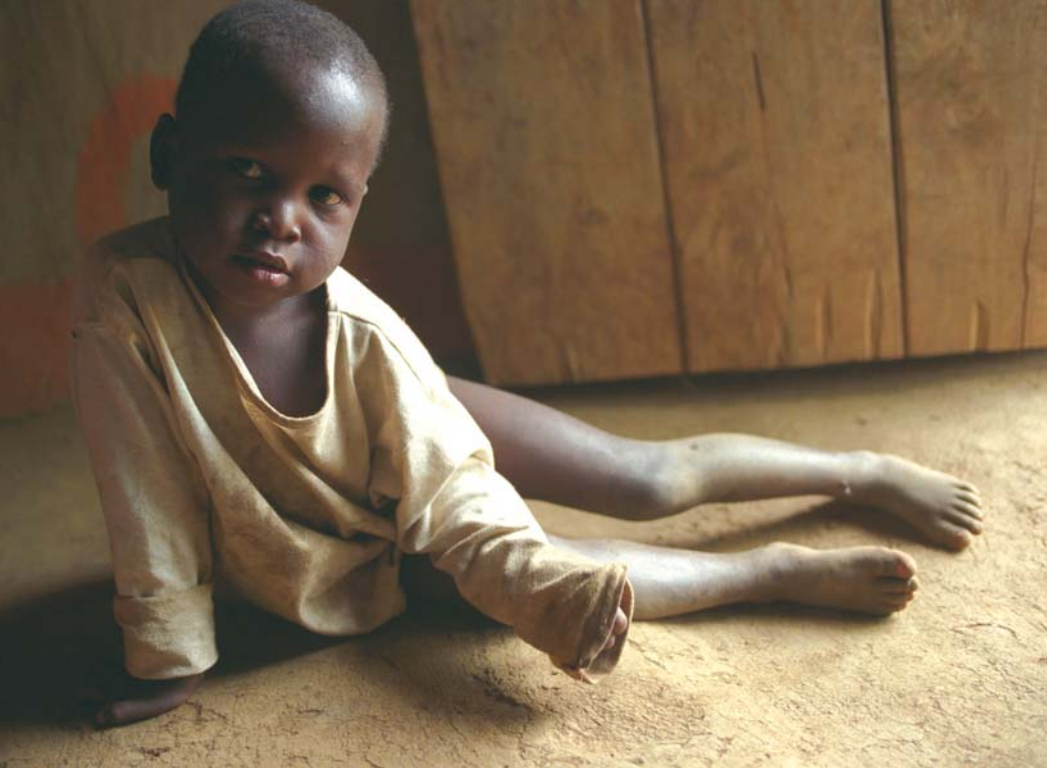


PHOTO: WFP/VANESSA VICK

treatment for opportunistic infections such as tuberculosis. In its first eight months of implementation in 2004, the Emergency Plan supported ARV drug treatment for 155,000 people living with HIV/AIDS in the 15 focus countries and 17,000 in other countries, for a total of 172,000 people worldwide. This early success has put the Emergency Plan well on track to reach its goal of supporting treatment for 200,000 by June 2005.

Antiretroviral drug therapy. USAID is continuously expanding its efforts to introduce ARV drug therapies. In 2003, USAID launched pilot ART programs in multiple health facilities in **Ghana**, **Kenya**, and **Rwanda**. Each site has introduced treatment as an integral component of comprehensive care* and support for HIV-infected patients and their families. The three programs are growing to reach more patients at their start-up sites and expanding to additional sites. By the end of the fiscal year, six sites were running in Ghana, seven in Rwanda, and eight in Kenya. More than 4,700 people were on ART, and more than 10,200 people living with HIV/AIDS were enrolled in comprehensive care programs and positioned to begin ART.

Biomedical research. USAID continued to support the development of vaccines and microbicides (female-controlled chemical barriers to the AIDS virus), both essential technologies for preventing transmission of HIV. USAID's grant to the International AIDS Vaccine Initiative (IAVI) supported the ongoing development of two vaccine candidates as well as IAVI's core immunology laboratory. USAID also supported several microbicide development projects, most notably scaling up for trials of three microbicide candidates.

Operations research. USAID addressed a number of critical operational issues, including PMTCT, increased access to treatment and care services by people living with HIV/AIDS, stigma reduction, and mitigation of the epidemic's impact. For example, a large USAID-supported study of the challenges facing households caring for orphans and vulnerable children in **South Africa** was the subject of a national workshop and has formed the basis for an operations research agenda on care and support for youth. During a USAID study to increase counseling and testing among youth in **Uganda**, youth attendance increased from 66,000 to 112,000.

Drug research. USAID has been working to develop single-dose packaging options to improve access to nevirapine for newborns at risk of HIV through mother-to-child transmission. Over the past year, two main packaging options have been researched to determine drug stability, mothers' acceptance, and relative cost. USAID has also supported research that produced practical information on infant feeding and HIV transmission. Results have further supported the hypothesis that exclusive breastfeeding, as opposed to mixed feeding, decreases the risk of mother-to-child transmission.

Behavior change research. USAID carried out an in-depth study in **Uganda** on behavior change for successful HIV prevention. This study characterized how risk avoidance (promotion of abstinence, delay of sexual debut, and partner fidelity or partner reduction) contributed to declining HIV prevalence.

Male circumcision trials. Clinical trials are under way to review whether male circumcision has a strongly protective effect on HIV transmission. USAID is supporting research in **Haiti**, **Zambia**, **Kenya**, and **South Africa** to learn more about issues of safety, complications, acceptability, feasibility, and the logistics of developing pilot demonstration services for safe and

* Comprehensive care also encompasses counseling and testing, preventing mother-to-child HIV transmission, nutritional counseling, treatment and management of opportunistic infections, psychosocial support, and referral to home-based care.

Faith-based partnerships

Religious leaders have an important role to play in reducing stigma and supporting a compassionate response to people living with HIV/AIDS. They can promote behavior change and provide accurate information about the disease. USAID programs have engaged religious communities through partnerships that reach millions of people. Working with more than 800 community-based organizations and faith-based organizations (FBOs) in 40 countries, USAID has reached out to these groups as critical partners in the fight against HIV/AIDS.

FBOs are also critical providers of health care services in developing countries and will be key partners in expanding antiretroviral therapy and other HIV/AIDS care and treatment services. In Cambodia, for example, USAID supports Norea Peaceful Children, a nongovernmental orphan assistance organization established by the Wat Norea Buddhist monastery, in expanding its work to provide care and support to orphans and other children affected by HIV/AIDS. The organization is also reaching out to the community to help people cope with HIV/AIDS through the teachings of Buddhism, the religion of 95 percent of Cambodians.

In Mozambique, USAID supports the grassroots work of more than 2,600 volunteer peer educators. Many of these volunteers are young married couples who serve as role models and mentors for local communities about the central role fidelity can play in HIV prevention and the importance of male support for services like HIV counseling and testing. Faith-based networks mobilize the volunteers, who now work in more than 800 schools and churches in southern and central Mozambique.

To increase its partnerships with FBOs, USAID sponsored a workshop in November 2003 where U.S.-based FBOs and other organizations learned about potential partners in developing countries and possible partnerships with USAID. They also learned about USAID registration procedures for private voluntary organizations, funding sources, application processes, guidelines for developing and evaluating proposals, and monitoring and evaluation requirements.

affordable male circumcision and male reproductive health.

Lessons Learned

One of USAID's top research priorities is to overcome the challenges encountered when providing ART in resource-poor settings. USAID has supported the development of tools to assess the capacity of health centers to provide ART. Ongoing studies in **Brazil**, **Kenya**, and **Thailand** are evaluating strategies to improve adherence to therapy (i.e., taking medications properly and regularly). The lessons derived from these programs have been both sobering and encouraging. A certain proportion of ARV patients will not tolerate their drugs and will drop out of treatment programs. Better strategies for substituting or changing drug regimens for these patients could greatly improve their chances for long-term survival. Clearly, prevention and care services must be a major part of all ART programs. A focus on helping patients maintain a high level of adherence, particularly in the first four months of treatment, is essential and can yield positive results. The most encouraging finding is that those who adhere to their treatment experience major physical and mental health improvements. In one survey, 78 percent stated they were able to return to work.

II. INFECTIOUS DISEASE INITIATIVE

Tuberculosis patients wait to receive their medications from the pharmacy at Old Mulago Hospital in Kampala, Uganda.

PHOTO: WHO/TBP/GARY HAMPTON

USAID's Infectious Disease Initiative seeks to "reduce the threat of infectious diseases of major public health importance." The effort focuses on tuberculosis, malaria, antimicrobial resistance, and infectious disease surveillance and response. The Initiative is making a tremendous difference by achieving real results in saving lives and preventing death and illness due to infectious disease. Its programs are helping people get access to effective treatment for the leading infectious disease killers, particularly tuberculosis and malaria. These programs have been instrumental in improving the quality and management of pharmaceutical drugs, in helping countries undertake critically needed efficacy studies to determine levels and incidence of drug resistance, and in making lifesaving drugs available. USAID's malaria prevention efforts – promoting the use of insecticide-treated nets or indoor residual spraying where appropriate – are also making real progress in the fight against malaria.

USAID plays an active leadership role in global initiatives and partnerships, including Stop TB, Roll Back Malaria, networks of epidemiology training programs, and the World Health Organization's Global Strategy to Contain Antimicrobial Resistance. At the national level, USAID helps countries develop and implement the grant proposals of the Global Fund to Fight AIDS, Tuberculosis and Malaria. At the global level, USAID staff work closely with the Fund on a number of critical issues, including funding for artemisinin-based combination therapy drugs for malaria.

The results USAID achieved in infectious disease programming over the past year are all grounded in building local capacity to address issues for the long term. It is through this local capacity building that results will be sustained in the future.

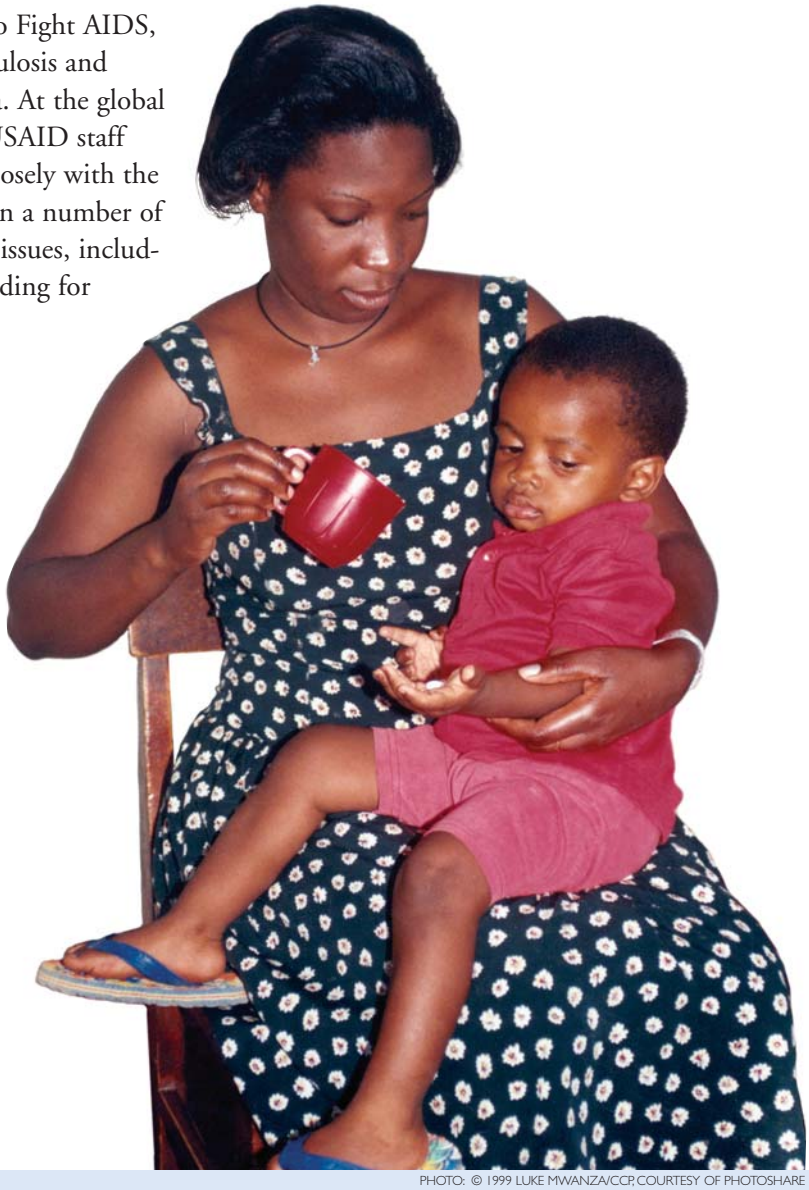


PHOTO: © 1999 LUKE MWANZA/CCP, COURTESY OF PHOTOSHARE

II. INFECTIOUS DISEASE INITIATIVE

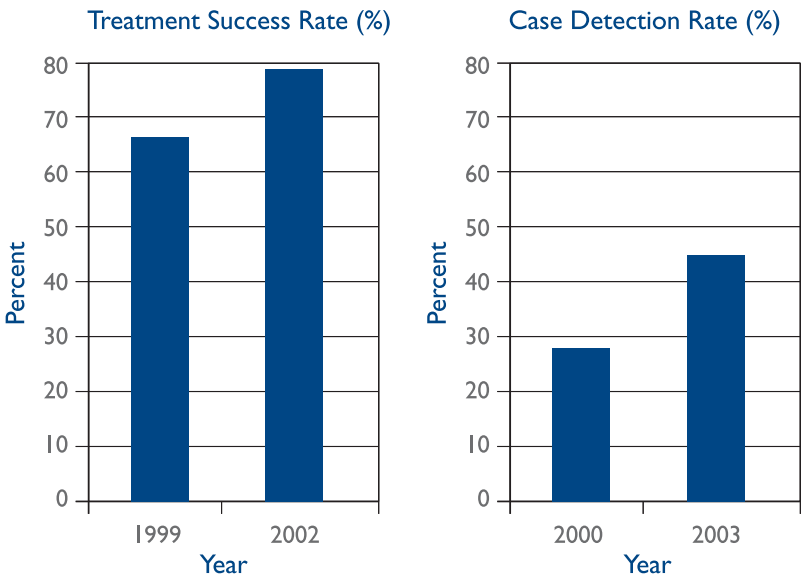
Tuberculosis

PHOTO: © 2003 GERMAIN PASSAMANG TABAT, COURTESY OF PHOTOSHARE

Tuberculosis is one of the world's deadliest infectious diseases, causing approximately 2 million deaths each year. Of the estimated 2 billion people infected with TB, nearly 9 million develop the disease annually; 95 percent of these cases, and 98 percent of TB deaths, occur in developing countries. TB is a major killer of women of reproductive age and a leading cause of death in people who have HIV infection, accounting for one-third of AIDS deaths worldwide. The global resurgence of TB has been fueled by increasing HIV/AIDS prevalence, inadequate investments in public health systems, and emerging TB drug resistance.

USAID continues its global commitment to provide effective treatment to as many people as possible, thereby increasing cure rates and reducing suffering from TB. To that end, USAID works closely with the Stop TB Partnership and shares Stop TB's cornerstone, the WHO-recommended DOTS (directly observed treatment, short course) strategy. Under DOTS, health workers or volunteers observe patients taking their

Figure 3
Tuberculosis Control in USAID's 18 Highest-Priority Countries



Source: World Health Organization. *Global Tuberculosis Control: WHO Report 2005.*

Case detection rates increased globally from 11 percent to 43 percent between 1995 and 2003.* Treatment success rates also increased globally, from 80 percent in 1990 to 82 percent in 2002. Of the 18 highest-priority USAID countries, 14 have increased case detection. The case detection rate in USAID-assisted countries is 45 percent, slightly higher than the global rate.

* 2003 data are the most recent available from WHO (*Global Tuberculosis Control: WHO Report 2005*). The case detection rate is the percentage of new smear-positive pulmonary TB cases detected under the WHO DOTS (directly observed treatment, short course) program.

TB medication during the first two months of a six- to eight-month TB drug regimen. DOTS is a comprehensive approach that significantly increases cure rates and slows the emergence of drug-resistant TB. It is a cost-effective strategy that is especially valuable in resource-constrained settings.

USAID Strategy

USAID's objective is to enhance the capacity of 39 priority countries to achieve the Stop TB global targets of 70 percent case detection and 85 percent treatment success (or cure) among pulmonary TB patients. Globally, case detection rates increased from 11 percent to 43 percent between 1995 and 2003. Treatment success rates increased from 80 percent in 1990 to 82 percent in 2002. The case detection rate in USAID-assisted countries is 45 percent (see figure 3), slightly higher than the global rate, and 14 of USAID's 18 highest-priority countries have increased their case detection.

USAID programs provide financial and technical support to:

- Expand and strengthen DOTS programs
- Improve access to TB drugs
- Develop and disseminate new tools and approaches
- Adapt DOTS to address special challenges, such as multidrug-resistant TB and TB-HIV co-infection

Interventions and Achievements

Expanding and strengthening DOTS. USAID provided support for expanding and strengthening DOTS programs in 39 countries in 2004. Funding for training, technical assistance, improved monitoring and supervision, and laboratory strengthening produced impressive results in the following countries:

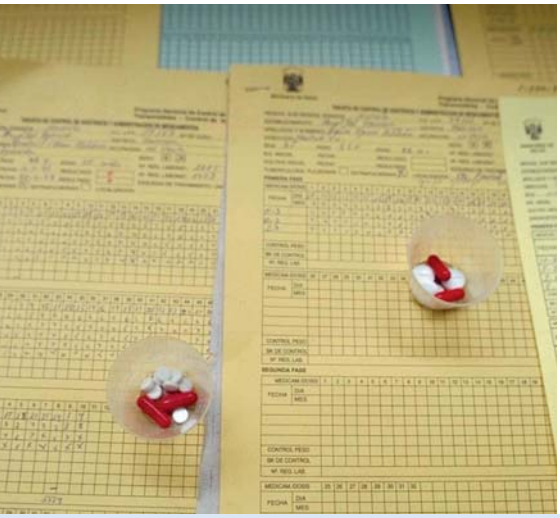
- *Cambodia* – USAID supported pilot community-based DOTS activities in five districts of four provinces and strengthened DOTS programs in six other provinces and the city of Phnom Penh. In USAID-assisted districts, sputum smear-positive case detection rates ranged from 60 to 82 percent, compared with a national average of 59 percent.
- *Dominican Republic* – USAID supports DOTS implementation in more than 900 public and private health facilities in seven districts and Santo Domingo. In these sites, DOTS coverage is 73 percent. Between 2002 and 2003, the smear-positive case detection rate increased by 20 percentage points from 53 to 73 percent, and the 2003 treatment success rate reached 79 percent. USAID has helped the national TB program secure a two-year grant of $2.6 million for DOTS expansion from the Global Fund.
- *Democratic Republic of the Congo* – USAID assists DOTS implementation and strengthening in eight provinces. Support includes training, purchase of laboratory equipment and supplies, and social mobilization. Average treatment success rates in USAID-assisted provinces increased from 65 percent in 2000 to 79 percent in 2003.
- *India* – In Haryana state, DOTS coverage increased from 59 percent to 100 percent between 2003 and 2004. From 2002 to 2003, the case detection rate increased from 50 to 74 percent and the treatment success rate from 82 to 84 percent.
- *Indonesia* – USAID support is closely coordinated with the Indonesian government, Global Fund resources, and other donors. The program focuses on the provinces of Central and East Java, each with a population exceeding 30 million. In Central Java, the case detection rate increased from 22 percent in 2002 to 27 percent in 2003, and the treatment success rate is now 90 percent. The case detection rate in East Java increased from 12 to 30 percent between 2002 and 2003 and the treatment success rate from 74 to 82 percent.
- *Nigeria* – USAID support for DOTS expansion, training, and technical assistance contributed to an increase in the case detection rate from 16 percent in 2002 to 18 percent in 2003, the first year of significant USAID investment in TB control.
- *Russia* – USAID funding helped expand DOTS to 20 of Russia's 88 territories and supported training of more than 4,000 doctors, nurses, laboratory technicians, and social workers. In Orel *oblast*, the treatment success rate improved from 64 percent in 2002 to 77 percent in 2003. In Ivanov *oblast*, it improved from 54 to 70 percent during the same period.
- *Uganda* – USAID provides financial and technical assistance to 16 districts through local government units, faith-based organizations, the Uganda People's Defense Force, and private for-profit health facilities to support implementation of community-based DOTS. In the USAID-

supported districts, the case detection rate increased from 45 percent in 2001 to 53 percent in 2003. The treatment success rate increased from 51 to 60 percent during the same period.

- *Ukraine* – USAID support for DOTS implementation in Donetsk *oblast* resulted in 100 percent coverage of the area's 5 million people. Between 2002 and 2003, case detection rates increased from 40 to 52 percent and treatment success rates from 61 to 70 percent.

Research. USAID supports critical research for accelerating global expansion of the DOTS approach to TB control and improving program performance. Working with its partners, USAID focuses its support on developing, evaluating, and introducing tools and approaches that are appropriate for low-resource countries; have the potential for significant public health impact; and have traditionally been underfunded by the public and private sectors.

Improving access to TB drugs. Access to TB drugs of assured quality is a key component of DOTS. The Global TB Drug Facility (GDF) provides free or deeply discounted TB drugs to programs in need. In 2004, USAID provided $3 million (20 percent of the GDF's annual revenue) for the purchase of TB drugs. As a result of this support and that of other donors, the GDF currently provides TB drugs to more than 3.2 million patients. GDF also plays a large role in strengthening recipient countries' pharmaceutical management systems. USAID supports a full-time procurement adviser to the GDF as well as drug management technical assistance to GDF grant recipients. During 2004, USAID conducted assessment and monitoring visits to 14 of the 65 GDF-supported countries.



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Drug studies. In October, results from a USAID-supported study conducted by the International Union Against Tuberculosis and Lung Disease were published in *The Lancet*. The results have significant implications for improved and simplified treatment, providing strong evidence that a six-month continuation phase of treatment with isoniazid and ethambutol has higher rates of relapse after treatment than a four-month continuation phase using isoniazid and rifampicin. In 2004, USAID also entered into a partnership with the Global Alliance for TB Drug Development, an innovative public-private partnership with the mandate of developing new and improved TB drugs.

New tools and approaches. In TB research, USAID's current priorities focus on new drug development, improved TB diagnostics, and approaches to program implementation. In drug development, USAID's long-standing commitment to supporting research for improved drugs and drug regimens for the treatment of TB resulted in significant progress.

Public-private approaches. For improving program approaches, public-private mix (PPM) is a promising innovation for increasing case detection and treatment success in DOTS programs. PPM aims to expand the involvement of all public and private providers in DOTS. USAID has been a leader in advancing PPM approaches through support for pilot activities; monitoring and evaluation of PPM; data analysis and synthesis; and documentation of lessons learned. More than 40 PPM pilot projects are under way in 14 countries; 24 of these projects have undergone process or outcome evaluations. At most pilot sites, treatment success rates have met or exceeded the global target of 85 percent. Increases ranging from 14 to 61 percent have also been achieved in detecting new smear-positive cases through private sector referrals to DOTS programs or diagnosis and reporting of cases. USAID supported the publication of a cross-site analysis and report on PPM cost-effectiveness and is assisting with the development of guidelines for implementing PPM DOTS activities.

Community-based TB care. Working closely with WHO's regional Africa and Western Pacific offices, USAID supported technical assistance, training, and planning activities to promote the implementation of community-based DOTS approaches and TB-HIV/AIDS collaborative activities. As a result, community-based TB care activities were implemented in three urban centers in the **Democratic Republic of the Congo**, in 12 of 76 districts in **Kenya**, in 34 of 56 districts in **Uganda**, and nationwide

DOTS Plus to fight MDR-TB in Latvia

The USAID-supported DOTS Plus project in Latvia has made impressive gains. Since 1998, USAID funding and technical assistance from the U.S. Centers for Disease Control and Prevention (CDC) have enabled Latvia to implement the "DOTS Plus" strategy for managing drug-resistant TB cases. As a result, multidrug-resistant TB (MDR-TB) among new TB patients decreased from 14.4 percent in 1994 (one of the highest rates in the world) to 8 percent in 2003. Among previously treated TB patients, it decreased from 54.4 percent in 1994 to 23 percent in 2003. The absolute number of MDR-TB patients in the country has been reduced by 40 percent since 1996.

These remarkable results were achieved by strengthening the capacity of the Latvian State Center to serve as a national, and now international, training center in the treatment and management of MDR-TB. In addition to training Latvian clinicians, the Center has trained 159 clinicians and TB program managers from such countries as Kazakhstan, Uzbekistan, Ukraine, and the Philippines. In recognition of the Center's quality and excellence in DOTS Plus, WHO designated it an official Collaborating Center for Research and Training in the Management of MDR-TB in November 2004.

in **Botswana**, **Tanzania**, **Zimbabwe**, **Senegal**, **Togo**, and **Ethiopia**.

Multidrug-resistant TB. USAID promotes access to and proper use of second-line TB drugs through "DOTS Plus," a strategy for the management of drug-resistant TB cases. Twenty DOTS Plus projects have been approved in 13 countries to treat more than 5,800 patients with multidrug-resistant TB (MDR-TB). Guidelines for implementing future DOTS Plus activities are being developed based on the experiences and outcomes of these pilot projects. USAID also provides critical support to the Green Light Committee (GLC), which promotes access to deeply discounted second-line TB drugs of assured quality and ensures that they will be properly used in DOTS Plus programs. The Global Fund requires that all proposals including second-line TB drugs be reviewed by the GLC. As a result, it is estimated that the GLC has saved Global Fund grantees almost $20 million compared with the cost of purchasing the drugs outside the GLC mechanism.

Drug resistance surveys. USAID also supported critically important drug resistance surveys in 15 countries. These surveys are crucial in the fight against MDR-TB. Results from these and other studies, many supported by USAID, were incorporated into WHO's *Third Drug Resistance Report*, a major report for tracking TB drug resistance. The report showed that Kazakhstan has the highest level of MDR-TB. USAID's TB program in **Central Asia** is giving priority to this issue.

TB-HIV/AIDS collaboration. USAID has advanced the adoption of approaches to involving communities in DOTS and collaborative TB-HIV/AIDS activities. With USAID support, **Côte d'Ivoire**, the **Democratic Republic of the Congo**, **Ethiopia**, **Kenya**, **Tanzania**, and **Cambodia** are scaling up collaborative activities, while **Mozambique**, **Rwanda**, **Senegal**, and **Chad** have finalized collaboration plans.

II. INFECTIOUS DISEASE INITIATIVE

Malaria

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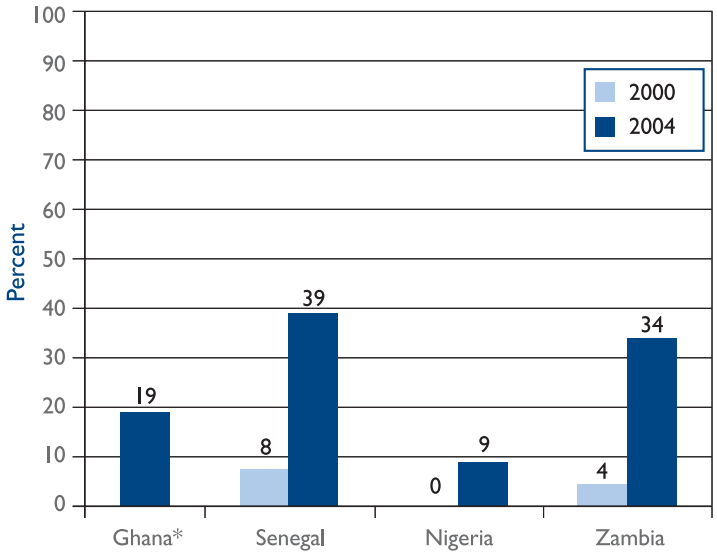
More than 300 million cases of malaria occur every year, causing up to 2 million deaths. Of these deaths, 90 percent occur in Africa, and most of the victims are young children. Malaria affects the health and wealth of individuals and nations alike and is a major constraint to economic development.

At the national level, USAID has been instrumental in establishing, strengthening, and expanding programs in 33 countries to reduce illness and death from malaria. At the global level, USAID has been a leader in developing and expanding key global initiatives such as the Roll Back Malaria (RBM) Partnership and the Global Fund to Fight AIDS, Tuberculosis and Malaria, as well as in investing in the development of new technologies for preventing and treating malaria.

Figure 4

Increase in Households Owning a Bednet Recently Treated with Insecticide



Source: Academy for Educational Development, NetMark project (2005), based on household surveys indicating whether nets had been treated within the last 12 months.

* Baseline data for Ghana are from the 2003 Demographic and Health Survey, which reported 3 percent ownership of nets treated within the last six months.

USAID's continued support in eight countries in Africa for insecticide-treated bednets to prevent malaria infections helped triple their use from less than 10 percent of households in 2002 to more than 30 percent in 2004. USAID has also provided direct support in 21 African countries for intermittent preventive therapy for malaria in pregnancy. This support will benefit about 13 million pregnant women.

USAID Strategy

USAID is committed to reducing global malaria morbidity and mortality through strategies that:

- Prevent malaria infection and illness
- Promote effective treatment of malaria illness and respond to the emergence and spread of drug-resistant malaria
- Protect pregnant women from malaria through a combination of intermittent preventive therapy and insecticide-treated nets
- Address the needs of populations in complex humanitarian emergencies
- Develop new tools and approaches for malaria prevention and control

Interventions and Achievements

Insecticide-treated nets. Through innovative partnerships with the private sector, USAID has greatly expanded the availability and affordability of insecticide-treated nets (ITNs), a very effective tool for malaria prevention, in 15 African nations (see figure 4). Over the past two years, these efforts have been instrumental in increasing household ITN coverage rates in eight of these countries from less than 10 percent to more than 30 percent, with coverage increasing rapidly in 2004. Examples of this progress include:

- *Nigeria* – ITN sales in 2004 approached 800,000, tripling coverage of households with any net from 2002 to more than 30 percent. In addition, with USAID support, the number of nets made by local textile manufacturers increased dramatically. A successful partnership with ExxonMobil is also providing highly subsidized ITNs.
- *Kenya* – ITN sales exceeded 700,000.
- *Eritrea* – With greater than 60 percent coverage, Eritrea became the first African country to reach the targets for malaria control set by African heads of state at the Abuja Roll Back Malaria meeting in 2000. Rural and poor populations (who are most vulnerable to malaria) have benefited equally from these efforts.
- *Ghana and Zambia* – The ExxonMobil partnership is also supporting highly subsidized ITNs in these countries.

Responding to drug-resistant malaria. USAID support has been instrumental in helping 29 countries (17 in **Africa**, six in **Southeast Asia**, and six in the **Amazon Basin**) that are facing new drug-resistant strains of malaria to adopt artemisinin-based combination therapy as their first-line treatment for falciparum malaria. In Africa, 45 million children under age 5 will benefit from this treatment change.

Surveillance. In Southeast Asia, USAID support has been critical in establishing standardized surveillance for drug-resistant malaria in **Cambodia**, **Laos**, and **Thailand**. This information is helping to change national drug policies, improve the treatment of multidrug-resistant malaria, and identify specific factors related to poor use and quality of antimalarial drugs, which contribute to the emergence of drug resistance.

Reducing malaria in pregnancy. USAID has provided direct support for intermittent preventive therapy (IPT) for pregnant women in 21 African countries. About 13 million pregnant women will benefit from this therapy. In 2004, with USAID support, **Malawi** became the first country in Africa to exceed the Abuja target of 60 percent IPT coverage. Also in Malawi, a program targeting pregnant women and children under age 5 sold more than 942,000 subsidized ITNs, an almost fivefold increase over 2002 sales.

Complex emergencies. There is a growing recognition that in African countries experiencing "complex emergencies," malaria accounts for a rapidly growing percentage of total deaths. To expand the availability of high-quality curative and preventive services to populations in the midst of emergencies, USAID supported the development of an alliance of nongovernmental organizations (NGOs) with experience in complex emergencies. This NGO alliance supported improved malaria responses to emergencies in **Ethiopia**, **Liberia**, and the Darfur region of **Sudan** during the past year.

PHOTO: POPULATION SERVICES INTERNATIONAL

Malaria research and vaccine development. The USAID Malaria Vaccine Development Program continues to lead the global effort to develop effective vaccines to combat malaria illness and death in children and pregnant women in malaria-endemic areas. USAID has a long history of successful collaboration with other U.S. government programs as well as those of other donors and the private sector. In collaboration with the Walter Reed Army Institute of Research, the National Institutes of Health, the Malaria Vaccine Initiative (MVI), and GlaxoSmithKline, USAID is supporting field trials of malaria vaccine candidates in **Kenya** and **Mali**. The most promising of these is a blood-stage children's vaccine. This vaccine candidate, which is designed to provide long-term protection to children, successfully completed safety trials in Kenya in 2004. USAID also signed an agreement with MVI that provides additional support for USAID/MVI collaboration in the Kenya field trials and is laying the policy groundwork for introducing a vaccine into malaria control programs. In addition, USAID entered into a new partnership with the Medicines for Malaria Venture, a public-private partnership with the objective of developing new and improved antimalarial treatments.

Global leadership for new combination therapies

Artemisinin-based combination therapies (ACTs) are currently the most effective drug therapies available for treating malaria and are recommended as such by WHO and the Roll Back Malaria (RBM) Partnership. However, ensuring adequate availability and affordability of these more expensive drugs is a tremendous challenge. To address this, the USAID malaria team has been instrumental in:

- Forging a consensus among the RBM partners on use of ACTs for malaria treatment
- Developing a "road map" for scaling up country-level availability and use of ACTs
- Supporting a publication, released in July 2004 by the National Academy of Science's Institute of Medicine, providing RBM partners with guidance on the most efficient means of financing these newer, more effective treatments
- Promoting the large-scale agricultural production in East Africa of *Artemisia annua* (the natural plant source of artemisinin) in order to make available an additional 40 million to 50 million ACT treatments to meet country needs in 2005
- With the Global Fund, cohosting a meeting of 25 countries preparing to adopt ACTs
- Upgrading the pharmaceutical industry's capacity for "good manufacturing practice" of ACTs, thereby ensuring the availability of high-quality ACT products

Indoor residual spraying for malaria control

The most effective way to prevent malaria is through selective use of insecticides that kill malaria-transmitting mosquitoes. There are two options for getting these insecticides into homes most at risk – indoor residual spraying (IRS) and insecticide-treated nets (ITNs). IRS is an important and time-tested tool in malaria control, with efficacy comparable to that of ITNs in field conditions. USAID supports the use of both IRS and ITNs. The choice of which intervention to use should be driven by local malaria epidemiology, cost-effectiveness, and prospects for sustainability.

There are currently 12 WHO-recommended IRS insecticides – alpha-cypermethrin; bendiocarb; bifenthrin; cyfluthrin; DDT; deltamethrin; etofenprox; fenitrothion; lambda-cyhalothrin; malathion; pirimiphos-methyl; and propoxur – the prices and availability of which vary widely across countries and regions.[1] Key issues for selecting insecticides include rates of resistance among vector mosquitoes, cost, the types of walls in houses (mud or wood, for example – DDT works best on rough mud walls but stains painted or finished walls and is likely to be washed off soon after spraying), and the safety profile of the insecticide for sprayers and household residents.

There is a strong technical consensus that IRS is best suited for use in areas of unstable malaria, epidemic-prone malaria (especially in southern Africa and the Horn of Africa), urban settings with well-documented local malaria transmission, and refugee camps. In each of these settings, IRS has important advantages, including rapid and reliable short-term impact when efficiently implemented and targeted. IRS is, however, relatively demanding in terms of logistics, infrastructure, skills, planning systems, and coverage levels.[2] Nonetheless, such infrastructure systems have been maintained successfully in some southern African countries, allowing for successful IRS programs.

USAID has supported IRS programs in Kyrgyzstan, Zambia, Eritrea, Mozambique, Angola, Sierra Leone, the Democratic Republic of the Congo, and Liberia. This assistance has varied from direct support for spray operations in Kyrgyzstan; to critically needed technical assistance for improved IRS management, planning, and operations in national malaria control programs in Eritrea and Mozambique; to similar support as part of USAID disaster assistance in complex emergency settings such as Sierra Leone and Liberia. Contrary to popular belief, USAID does not ban or discourage DDT use and continues to provide support to national malaria control programs in Madagascar, Ethiopia, and Eritrea, all of which use DDT. USAID support for any activity involving the use of pesticides must receive an environmental review.

USAID is currently commissioning an expert review of the cost-effectiveness of IRS (using a variety of insecticides) versus ITNs (the other main intervention targeted at adult mosquitoes) in a range of epidemiological settings across Africa, with the review report due in early 2006. Studies to date on the cost-effectiveness issue have not been comprehensive, and results have not been comparable. In general, costs seem to depend on the accessibility of structures to be sprayed, the cost of insecticides in the particular country, and available infrastructure.[3] Spray operations in rural areas (where the vast bulk of deaths from malaria occur) appear to be much more expensive than in urban or peri-urban areas.[4]

The areas at highest risk of death from malaria are generally more remote rural areas with poor infrastructure and low levels of service delivery. In such settings, USAID believes that ITNs are a more cost-effective and sustainable intervention. A variety of distribution systems, including health facilities, immunization campaigns, pharmacies, other private sector shops, and projects of nongovernmental organizations, have easily implemented ITN distribution. In contrast, IRS requires highly trained and intensively supervised sprayers, usually on time-limited schedules. Spray operations must also be repeated, typically twice a year. This makes IRS difficult to implement except in a vertical, single-function program.

In summary, USAID directs its support for malaria control based on evidence for maximum impact on reducing child deaths. USAID continues to plan its support for national malaria control programs in sub-Saharan Africa on a country-by-country basis, targeting interventions to the needs and specifics of local situations. USAID will continue to strive to use American taxpayer funds as efficiently and effectively as possible with the most appropriate tools at its disposal to reduce deaths from malaria.

1 K. Walker. "Cost comparison of DDT and alternative insecticides for malaria control." *Medical and Veterinary Entomology* 14 (2000): 345-354.

2 "…virtually no IRS programmes operate in the remaining high-endemicity countries of sub-Saharan Africa. The main reason for this is the requirement for highly structured government-supported programmes and a sustainable high level of financing, which is not available in many of these countries." C. Lengeler and B. Sharp. "Indoor Residual Spraying and Insecticide Treated Nets" in *Reducing Malaria's Burden: Evidence of Effectiveness for Decision Makers*. Global Health Council, Washington, DC. 2003.

3 K. Walker. "Cost comparison of DDT and alternative insecticides for malaria control." *Medical and Veterinary Entomology* 14 (2000): 345-354.

4 L. Conteh et al. "The cost and cost-effectiveness of malaria vector control by residual insecticide house-spraying in southern Mozambique: a rural and urban analysis." *Tropical Medicine and International Health* 9, no. 1 (2004): 125-132.

II. INFECTIOUS DISEASE INITIATIVE

Antimicrobial Resistance

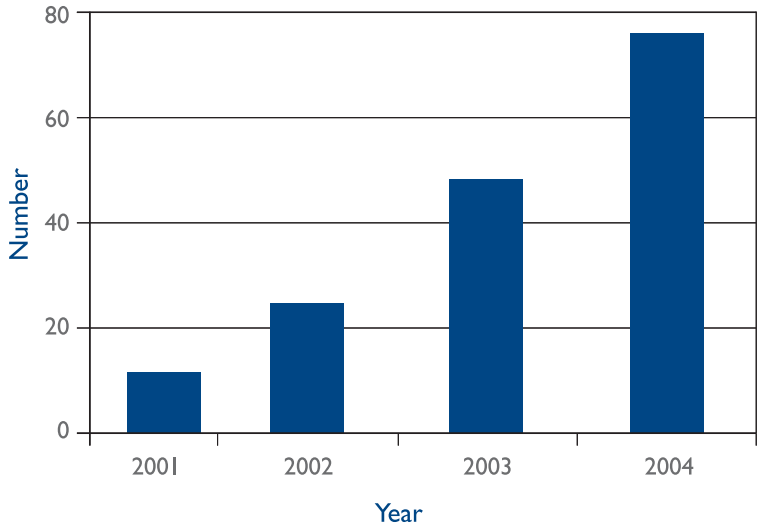
PHOTO: © 2003 GERMAIN PASSAMANGTABATI, COURTESY OF PHOTOSHARE

The problem of resistance to antimicrobial drugs is of growing concern around the globe. Disturbing reports from the field indicate increasing levels of antimicrobial resistance (AMR) to the most commonly used and available drugs. This reality threatens to reverse gains achieved by USAID investments in health programs worldwide. The complex regimens, high costs, and frequently toxic side effects of many second- and third-line treatments do not present a viable alternative to developing-country health systems with already weak finances and inadequate capacity. Moreover, new drug development is not keeping pace with the alarming increases in drug resistance.

Compounding this scenario is the new global health environment. The advent of global initiatives such as the Global Fund to Fight AIDS, Tuberculosis and Malaria, the President's Emergency Plan for AIDS Relief, the World Bank's Multi-Country AIDS Program, and others represents an unparalleled opportunity to increase the availability of medicines in developing countries. At the same time, however, they also

Figure 5

Number of Drug and Therapeutics Committees in 16 USAID-Assisted Countries, 2001-2004



Source: DTC course participants.

USAID has supported 75 international, regional, and national "drug and therapeutics committees" (DTCs), a method of improving the selection, availability, prescribing, and use of antimicrobial drugs, in 16 countries. So far, 464 health professionals from 67 different countries have participated in DTC training activities. Reducing the use of antibiotics is another means of combating antimicrobial resistance, and USAID partners have demonstrated that the use of zinc therapy for diarrhea can achieve this while reducing the duration and severity of diarrhea by approximately 25 percent.

present unprecedented risks for the accelerated development of drug resistance if huge quantities of these newly available medicines are not managed and used appropriately. Furthermore, counterfeit and poor-quality drugs are now saturating many national markets, thereby adversely impacting health outcomes and contributing to the development of drug resistance.

USAID is working to preserve the effectiveness of currently available drugs through significant investments in improving treatment alternatives, enhancing drug quality assurance, and strengthening human resource capacity and drug management systems. Providing technical assistance to health sectors to improve pharmaceutical operations and the use of drugs by providers and consumers in both the public and private sectors is a major focus. USAID has also been instrumental in drawing international attention to the link between poor drug quality and the more rapid emergence of resistance, while supporting efforts at the global, regional, and country levels for strengthened AMR advocacy and implementation of evidence-based AMR containment strategies.

USAID Strategy

USAID's AMR efforts are focused in the following key areas:

- Advocacy
- Containment of AMR
- Improved surveillance
- Training of trainers
- Improved case management

Interventions and Achievements

ICIUM 2 Conference. USAID and its partners organized and sponsored the Second International Conference on Improving Use of Medicines (ICIUM 2), held in Chiang Mai, Thailand. The conference brought together 476 multidisciplinary researchers, national and international policymakers, patient advocates, and clinicians from nearly 80 countries. Participants endorsed many of USAID's ongoing strategies, tools, and approaches for combating AMR and developed plans for defining a new research agenda for the next five years.

Country-level AMR strategies. To operationalize the recommendations of the WHO Global Strategy for Containment of Antimicrobial Resistance (developed with USAID support), USAID is implementing a country-level AMR strategy in **Zambia**. The primary thrusts of this activity are to stimulate scaled-up local coalition building, identify locally feasible strategies to prevent and control AMR, and develop a unified strategy for AMR advocacy. The strategy group has reached consensus on a "Call for Action to Preserve the Effectiveness of Drugs."

Regional surveillance in Southeast Asia. USAID continued to support a coordinated regional activity in Southeast Asia's Mekong region to improve drug quality and drug efficacy surveillance. This has resulted in strengthened capacity to test antimalarial drug quality at both the sentinel site and national levels. Preliminary studies have identified 162 poor-quality antimalarial samples among 1,092 samples of six types of common antimalarial drugs. These findings led to rapid alerts and product recalls in **Cambodia**, **China**, **Laos**, **Vietnam**, and **Thailand**. Based on recent drug efficacy studies, all countries in the region have updated their antimalarial drug policies to use artemisinin-based combination therapies.

PHOTO: WHO/TBP/JAN VAN DER HOMBERGH

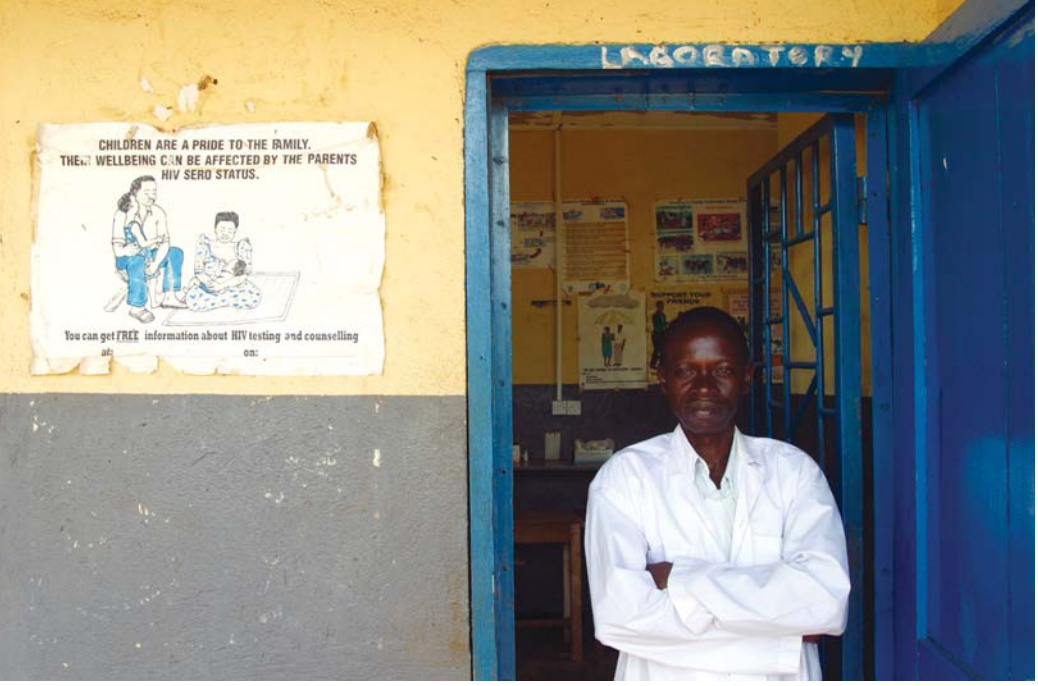


PHOTO: WHO/TBP/GARY HAMPTON

Drug and therapeutics committees. Inappropriate prescribing and use of antimicrobial drugs exacerbate AMR. USAID has been working worldwide to introduce "drug and therapeutics committees" (DTCs) as a method of improving the selection, availability, prescribing, and use of antimicrobial drugs. DTCs are considered a key intervention in WHO's global strategy to contain AMR in hospitals, and the 2004 ICIUM 2 conference recommended that DTCs be established at all levels in institutional settings. USAID has supported 75 international, regional, and national DTCs in 16 countries since 2001 (see figure 5). DTC training courses have been provided to 464 health professionals from 67 countries. However, there remains an urgent need to establish more DTCs to reach a critical mass of qualified health care staff and improve the effectiveness of existing committees. To this end, USAID helped develop a training-of-trainers course that was successfully implemented in **Uganda** in 2004.

Reducing unwarranted antibiotic use. A major contributing factor in the spread of AMR in developing countries is the excessive or unnecessary use of antibiotics. USAID-supported efficacy trials on the use of zinc therapy for diarrhea demonstrated that the use of zinc supplements in combination with oral rehydration therapy and appropriate education programs was associated with significantly lower use of antibiotics while reducing the duration and severity of diarrhea by approximately 25 percent.

II. INFECTIOUS DISEASE INITIATIVE

Surveillance

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The evolving global environment is raising the vulnerability of the world's population to outbreaks of infectious diseases that could have disastrous consequences. Diseases such as severe acute respiratory syndrome (SARS) pose significant economic threats by destabilizing commerce and travel in large regions, and the re-emergence of diseases such as TB and malaria present a threat of significant mortality from drug-resistant pathogens. In addition, newly emerging zoonotic infections such as avian influenza expose the world to the threat of a major pandemic, and, given the world's political instability, the possible intentional release of a fast-spreading pathogen such as smallpox must be considered. Natural disasters such as the South Asian tsunami also highlight the need to protect populations that can suddenly become vulnerable to the spread of infectious diseases. Stopping these threats before they reach their full potential requires an internationally coordinated and intensive approach to disease surveillance, which can only take place through the rapid detection of infectious diseases and the coordinated response of governmental and nongovernmental health officials worldwide. All countries need to establish the capability to detect a threatening pathogen and respond in a timely and appropriate manner.

USAID Strategy

In 2004, USAID reviewed its approach to infectious disease surveillance and developed a new strategy. This new strategy builds on the significant accomplishments of the past and allows for more flexibility to take into account the need to respond to an ever-changing disease environment. The critical elements of this strategy are:

- Strengthening field epidemiology capacity in developing countries
- Strengthening laboratories, diagnostic capacity, and biosafety
- Improving national surveillance systems

Interventions and Achievements

Field epidemiology training. USAID supports the Training in Epidemiology and Public Health Interventions Network (TEPHINET), a global network of field epidemiology training programs (FETPs) in 42 countries. These programs train the field epidemiologists who serve on the front lines of disease surveillance. USAID has initiated special efforts to strengthen FETPs in Africa, which currently has programs in **Uganda**, **Kenya**, **Zimbabwe**, and **Ghana**. USAID established support grants to allow these programs to train more health professionals (including those from other countries), improve the quality of training, conduct outbreak investigations, and develop a financing base to allow the programs to become self-sustaining. In Uganda and Zimbabwe, trainees provide the core outbreak investigation capacity of the Ministry of Health and have investigated more than 10 outbreaks during the last year. In Kenya, FETP trainees and graduates participated in a major investigation of one of the region's largest aflatoxin outbreaks. In Zimbabwe, FETP graduates used surveillance of risk factors for sexually transmitted diseases to revise communications strategies. Their work resulted in decreased HIV transmission.

Strengthening laboratory capacity. USAID is a leading partner in promoting strengthened laboratory capacity so that laboratories can be an integral part of national disease surveillance programs. **Kenya's** FETP, supported by USAID, has become the first program in Africa to include laboratory training in its curriculum. This program now trains laboratory managers in the principles of epidemiology and also trains field

PHOTO: WHO/TBP/DAVENPORT

epidemiologists how to work with laboratories to improve diagnostic accuracy.

Strengthening diagnostics. USAID support has helped train laboratory technicians in identifying new pathogens such as the SARS corona virus. A SARS training program in **South Africa** included participants from Senegal, Kenya, Madagascar, Ghana, Burkina Faso, Gabon, South Africa, and Zimbabwe. A similar program in **Brazil** trained laboratory staff from Argentina, Brazil, Chile, Colombia, Mexico, Panama, Uruguay, and the Caribbean Epidemiology Center. In addition, USAID is supporting programs in external quality assurance in WHO's Africa and Eastern Mediterranean regions. These programs perform regular proficiency testing of national laboratories in 68 countries to identify program weaknesses and make recommendations for training and infrastructure needs.

Biosafety. USAID has been a major supporter of improving biosafety practices worldwide, helping programs improve their handling, storing, and transporting of dangerous agents. It is critical to ensure that laboratories handling dangerous pathogens follow proper handling, storage, and transport procedures. USAID assisted WHO in rewriting the third edition of the *Laboratory Biosafety Manual* in six languages and in developing biosafety containment guidelines for the SARS and polio viruses.

Integrated Disease Surveillance and Response program. USAID was a critical partner in developing the first core indicators for the Integrated Disease Surveillance and Response (IDSR) program in Africa. USAID resources supported the design and field-testing of the indicators, which 25 countries now use to track the timeliness and effectiveness of their disease surveillance activities. USAID is also working closely with WHO's Regional Office for Africa to strengthen its capacity to develop standardized indicators to monitor progress.

Improved national surveillance systems. USAID is working with national governments to improve their overall surveillance systems. Intensive work in **Tanzania**, **India**, **Ghana**, **Mali**, **the Democratic Republic of the Congo**, **Uganda**, **Ethiopia**, and **Georgia** has led to vastly improved training and implementation of infectious disease surveillance capacity. Tanzania, Ghana, and Uganda are leaders in Africa through work supported by their ministries of health. Georgia is rapidly scaling up work initiated by USAID to improve its national information and surveillance systems.

Weekly surveillance data reporting. Robust weekly infectious disease reporting systems are in place in **Ghana**, **Uganda**, **Tanzania**, and **Zimbabwe**. Graduates of the local FETPs supported by USAID operate these systems. In each country, weekly surveillance data on priority diseases and conditions, with laboratory confirmation, are routinely made available to policymakers, health workers, other partners, and the public. In Uganda, the data are published weekly in the national newspaper to alert the public and hold the health system accountable in dealing with infectious disease outbreaks.

III. CHILD SURVIVAL AND MATERNAL HEALTH

USAID has strengthened the linkages between child survival and maternal health interventions.

PHOTO: © WFP/NANCY PALUS

In 2004, new approaches and initiatives, combined with effective program implementation by USAID field missions, continued to make progress in reducing illness, malnutrition, and preventable deaths among mothers and young children, the most vulnerable groups in some of the world's poorest countries. As seen in figure 6, mortality rates among children under age 5 in USAID-assisted countries have declined over the past 20 years.

The strategy underlying USAID's child survival and maternal health programs includes:

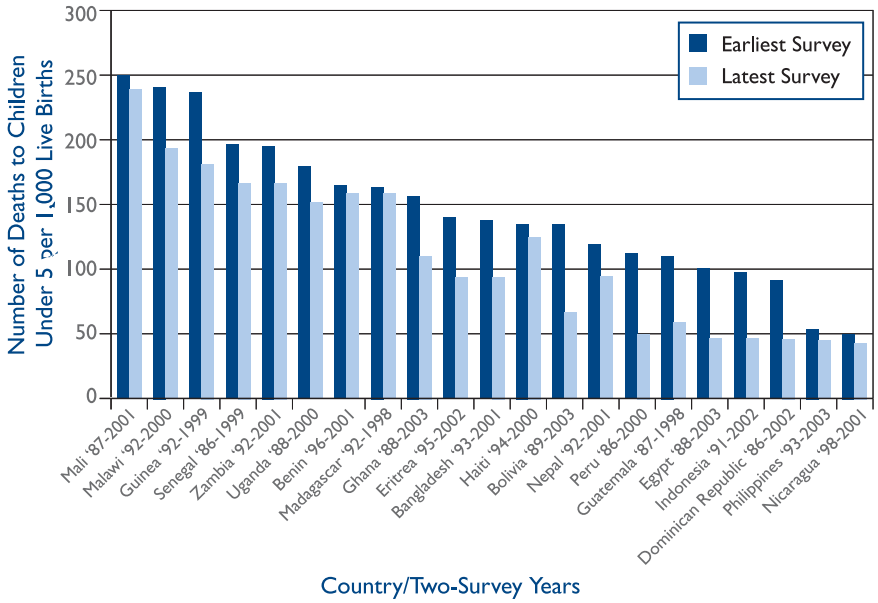
- Supporting the development of high-impact interventions to prevent or treat the most important health threats
- Identifying the best program approaches to deliver these interventions to the greatest possible number of families
- Implementing these programs at country scale
- Influencing additional investment in these programs through research, policy, and partnerships

Measurable community- and national-level accomplishments reflect the success of this approach in 2004. These accomplishments included:

- Increasing immunization coverage in USAID-assisted countries
- Delivering vitamin A to children in more than 20 countries, with new programs launched in potential high-impact countries, including India, Ethiopia, and Haiti
- Implementing new treatment approaches against major killer infectious diseases of children, including community-based antibiotic treatment of pneumonia in Senegal and the introduction of zinc therapy and an improved oral rehydration solution for treating diarrhea in India and Bangladesh
- Linking new technologies with community approaches to treat postpartum hemorrhage (the most lethal complication of childbirth)
- Supporting a package of "essential newborn care" aimed at reducing the high rate of mortality among the youngest and most vulnerable infants, who in developing countries are mostly born at home in poor communities rather than in hospitals
- Expanding simple technologies to provide safe water to households in settings that lack piped water systems
- Developing new approaches to the difficult task of measuring maternal mortality, a key to evaluating the success of maternal health programs
- Expanding programs to prevent blindness and improve the lives of sight-impaired children

To increase the impact of its resources, USAID strengthened the linkages between child survival and maternal health interventions and other high-impact programs. For example,

Figure 6
Reductions in Under-5 Mortality Rate in 21 USAID-Assisted Countries



Source: Demographic and Health Surveys, 1986-2003.

PHOTO: © 2000 TODD SHAPERA, COURTESY OF PHOTOSHARE

prenatal, delivery, and newborn care services in Africa are linking with services for preventing mother-to-child HIV transmission. Similarly, prenatal care and other child health interventions are strengthening their connections with bednet programs for malaria prevention and malaria treatment programs.

Partnerships provided another point of leverage. USAID played an important role in global efforts like the Global Alliance for Vaccines and Immunization (GAVI), the Polio Eradication Initiative, and the Global Alliance for Improved Nutrition (GAIN). The Agency took a leading role in expanding the influence of the interagency Child Survival Partnership, working with the United Nations Children's Fund (UNICEF), the World Health Organization (WHO), the World Bank, the Bill & Melinda Gates Foundation, and other donor partners to accelerate maternal and child health actions in high-mortality countries. USAID built partnerships with private corporations such as Procter & Gamble for safe water and Pfizer Pharmaceuticals for pneumonia treatment. Partnerships were also strengthened with private voluntary organizations (PVOs) and faith-based organizations (FBOs). USAID responded to maternal and child health needs in such fragile states as Sudan, Liberia, Afghanistan, and Iraq, and at year's end, to the urgent needs resulting from the devastation of the Indian Ocean tsunami.

In 2004, the Millennium Declaration's Development Goals of improved child survival and maternal health became increasingly powerful stimuli to investment and action by donors, international organizations, and countries themselves. Through its technical leadership, active role in partnerships, and field programs delivering high-impact interventions, USAID is positioned to lead, influence, and add momentum to accelerated global efforts in child survival and maternal health.

III. CHILD SURVIVAL AND MATERNAL HEALTH

Immunizations

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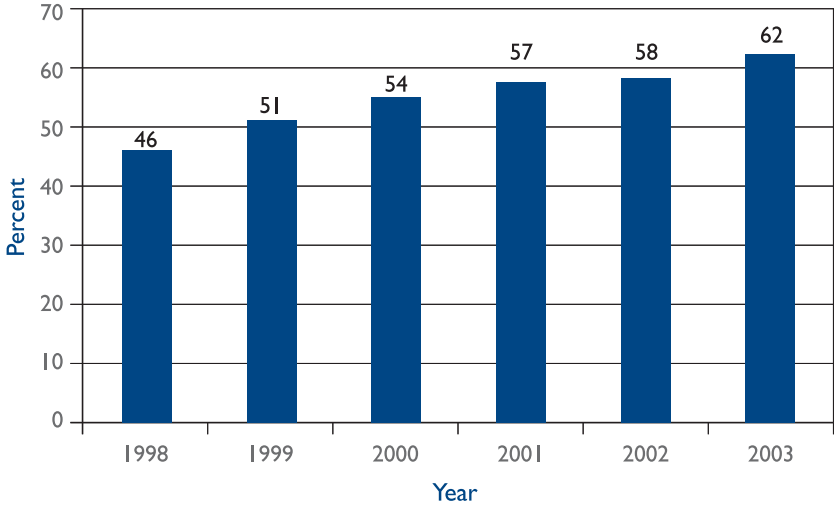
Immunizations save millions of lives every year around the world in the most cost-effective way. In the developing world, immunizations play a special role in light of the challenging conditions in which children live. Health-compromised children, including those who are malnourished, are more prone to die of vaccine-preventable diseases. While children in the developed world generally are immunized against deadly diseases such as measles, diphtheria, and pertussis, the threat presented by these preventable diseases remains an ongoing fact of life for parents and children in developing countries with limited economic resources and inadequate health care systems.

Given the critical role of immunizations in promoting strong, viable health care systems, USAID focuses on global, regional, and country-specific programs that use immunization initiatives to promote disease prevention and general infant and child health. To further its own limited resources in meeting this objective, USAID partners with other leaders of the global health community

In 12 USAID-assisted countries, diphtheria-pertussis-tetanus coverage went from 58 percent in 2002 to 62 percent in 2003 under the BOOST Immunization Initiative, a USAID initiative that targets specific countries with additional technical support. USAID is also a fully engaged partner in, and significant contributor to, the Global Alliance for Vaccines and Immunization (GAVI). This innovative global alliance is changing immunizations in the world's 74 poorest countries by introducing new lifesaving vaccines while also strengthening the delivery system for vaccinations.

Figure 7

DPT3 Coverage in 12 USAID-Assisted Countries, 1998-2003



Source: World Health Organization Statistical Information System "Best Estimates."

to maintain an effective worldwide approach to immunization.

Routine immunization coverage rates continue to hover around 75 percent worldwide, with the lowest coverage in Africa. As the global population continues to grow, the number of children protected with basic vaccines shows a corresponding quantitative increase, while the percentage remains stagnant. Despite the constant rate of immunization in an expanding population, indicators show success against some of the most persistent mortality-inducing diseases. For example, in the battle against measles in Africa, immunizations are saving hundreds of thousands more lives annually than five years ago. In addition, more vaccines are reaching more children worldwide as the global effort to incorporate immunizations against hepatitis B, *Haemophilus influenzae* type b, and (where appropriate) yellow fever is seeing results.

USAID Strategy

USAID's immunization strategy involves:

- Expanding and improving the quality of routine immunization systems
- Devising strategies at the global level and providing support at the country level to tackle the challenges associated with immunization financing
- Introducing innovative technologies, new vaccines, and underutilized vaccines, and contributing to vaccine research
- Supporting disease control initiatives for measles mortality reduction

Interventions and Achievements

BOOST Initiative for routine immunizations. In 1999, USAID launched the BOOST Immunization Initiative to strengthen national immunization programs in USAID-assisted countries with stagnating or falling vaccination coverage rates. This initiative has provided support to 20 countries to improve their national routine immunization services. In some countries, the funds stimulated more extensive investments by USAID missions, and in others they were targeted at specific obstacles to improved coverage. USAID's tracking of the progress of routine immunization programs in these countries has found that coverage continues to increase. Figure 7 shows the official reported coverage for diphtheria, pertussis, and tetanus (DPT3) for 12 BOOST countries. The strategic application of targeted funds in these countries has been successful, and USAID will continue its involvement in them.

Improved DPT coverage. Countries reporting improved DPT3 coverage in 2004 include:

- *Angola* – USAID is revitalizing routine immunization in Angola. In 2003, the DPT3 coverage rate in Angola was 46 percent; in 2004, it increased to 60 percent, with 19 districts achieving coverage of at least 80 percent. Activities included immunization training for 1,400 health facility staff and development of community links and outreach activities.
- *Dominican Republic* – With USAID assistance, immunization coverage is rising in the Dominican Republic, with DPT3 coverage rates increasing from 56 percent in 2002 to 78 percent in 2004. As a member of the interagency coordinating committee in the Dominican Republic, USAID has provided continuous support to the country's Expanded Program for Immunization (EPI), including staff training, development of operational plans, technical assistance for data

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GAVI and the Vaccine Fund

USAID is fully engaged as the largest government contributor to the Vaccine Fund, the funding arm of the Global Alliance for Vaccines and Immunization (GAVI). With global commitments of $1.3 billion since 2000 to the world's 74 poorest countries, GAVI and the Vaccine Fund have made a difference through the following results:

- 9.4 million additional children have been immunized with traditional diphtheria, pertussis, and tetanus vaccine.
- 41.6 million additional children have been immunized with hepatitis B vaccine.
- 5.6 million additional children have been immunized with *Haemophilus influenzae* type b vaccine.
- 3.2 million additional children have been immunized with yellow fever vaccine.
- 991 million immunizations were provided with single-use "auto-disable" syringes, a technology developed with USAID funds.

In order to leverage GAVI's investments, USAID has provided technical and financial support focused on building capacity for sustainable immunization financing. GAVI, with USAID support, has developed the "financial sustainability plan" (FSP), a unique tool to help countries estimate the cost of immunization programs. Each GAVI recipient country must develop and submit an FSP in the third year of receiving GAVI funding. Findings from 22 GAVI-eligible countries have demonstrated a need for further work in immunization program financing while indicating that:

- The FSP is receiving country-level attention, as this groundbreaking tool provides insight into the resource requirements of entire programs.
- Some governments and in-country donors are increasing their spending on vaccines for use in immunization programs but most of that is not being spent on routine immunizations. The cost of new vaccines is accounting for a larger share of immunization program costs.
- Without increased country-level government and donor financial commitment, developing countries will not be able to sustain needed newer vaccines in their immunization programs.

USAID's efforts in immunization financing also include:

- Working through GAVI at the global level to develop novel procurement options for vaccine purchasing in order to lower the costs to countries of new vaccines
- Advocacy and communication
- Technical assistance to increase country program efficiencies

collection, and replacement of critical cold chain equipment.

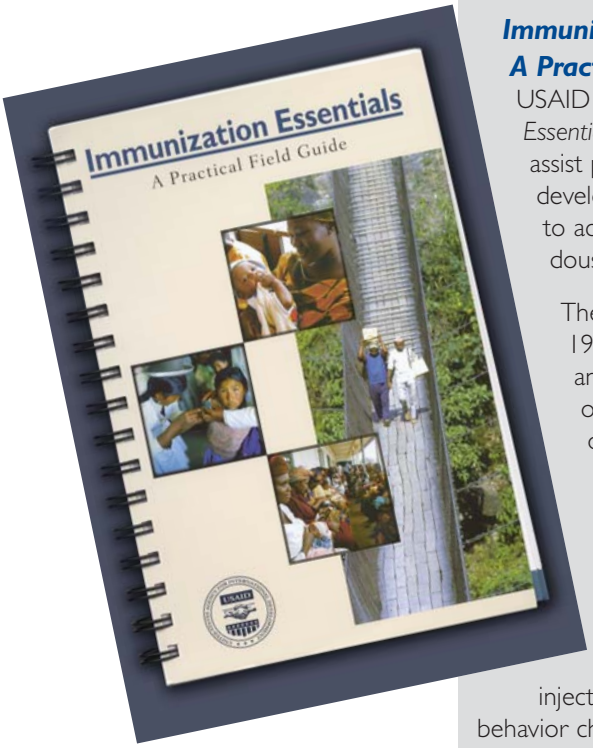
- *Madagascar* – USAID provided technical support for planning an immunization program. In USAID focus districts, DPT3 coverage rates climbed from 55 percent in 1997 to 91 percent in 2004.

Immunization financing. **Rwanda** has made good progress in its immunization efforts, attaining DPT3 coverage rates over 90 percent. Because of GAVI funding, children are receiving new lifesaving vaccines against hepatitis B and *Haemophilus influenzae* type b, in addition to the six traditional antigens. USAID/Rwanda has successfully rallied the donor community to form a special immunization subgroup to merge efforts in the area of immunizations. With USAID taking the lead in providing technical assistance to the Ministry of Health, other donors are increasing their funding allocations to Rwanda's EPI program. USAID assistance to GAVI's Financing Task Force also provided support for developing financial sustainability plans in **Uganda**, **Tanzania**, **Zanzibar**, **Malawi**, **Ghana**, **Kenya**, and **Madagascar**.

Immunizations in Iraq. Working with **Iraq's** Ministry of Health, USAID provided support for immunizing 5 million children ages 6 to 12 against measles, mumps, and rubella. USAID supported efforts that achieved an overall immunization coverage of 71

percent in spite of the challenges of Iraq's security situation.

Regional coverage in Latin America. To create and maintain a measles-free zone, USAID's Bureau for Latin American and the Caribbean has dedicated efforts to strengthen immunization through USAID mission programs that partner with the Pan American Health Organization. This program has been successful in maintaining regionwide coverage of 95 percent for measles immunizations. Through this strengthening of routine immunization systems over time, DPT3 coverage rates regionwide have steadily increased from 76 percent in 1990 to 89 percent in 2003.



Immunization Essentials: A Practical Field Guide

USAID has released *Immunization Essentials: A Practical Field Guide* to assist public health personnel in developing countries in their efforts to achieve and sustain the tremendous promise of immunization.

The book is a revision of USAID's 1988 publication *EPI Essentials* and provides technically and operationally sound information on vaccines and vaccine-preventable diseases; immunization program management; service delivery; monitoring, evaluation, and information management; vaccine supply and quality; the cold chain and logistics; injection safety; disease surveillance; behavior change; costs and financing; and new vaccines and technologies.

Demand from the field for the guide has been very high. A Spanish version will soon be available.

III. CHILD SURVIVAL AND MATERNAL HEALTH

Polio Eradication Initiative

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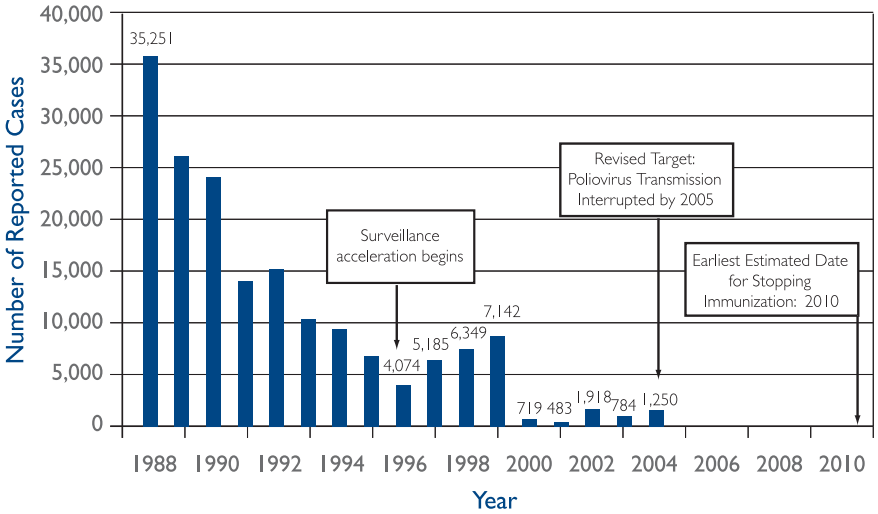
USAID joined the global Polio Eradication Initiative in 1996 after supporting the successful eradication program in the Americas. Since then, USAID has contributed nearly $360 million to support this massive public health initiative. USAID continues to be a major partner in the global effort to eradicate polio and achieve a polio-free world.

As of February 2005, 1,250 confirmed cases of polio in 17 countries had been reported for 2004, compared with 784 cases in 13 countries in 2003 (see figure 8). Intensified eradication activities made noticeable progress in Asia, with immunization campaigns in Afghanistan, India, and Pakistan reducing the number of polio cases in those countries to 179 from 266 in 2003. In sub-Saharan Africa, however, a one-year suspension of immunizations in Kano state, Nigeria, and low routine immunization coverage in several neighboring countries resulted in increased numbers of polio cases. Reported polio cases in Niger and Nigeria more than doubled, from 327 in 2003 to 788 in 2004, and there were 157 cases in Burkina Faso, Chad, Côte d'Ivoire, and Sudan, four countries where endemic wild

USAID-supported polio campaigns immunized more than 300 million children under age 5 in Africa and Asia. In USAID-assisted countries in Asia, these efforts resulted in a 50 percent reduction in confirmed polio cases. In Africa, however, a one-year suspension of polio immunizations in part of Nigeria and low routine immunization coverage in neighboring countries led to increases of about 50 percent in confirmed polio cases.

Figure 8
Progress and Plan to Eradicate Polio, 1998-2010



Source: World Health Organization, February 2005.

poliovirus transmission was re-established. By the end of 2004, the Central African Republic had also reported cases.

USAID Strategy

Developed with polio eradication partner organizations such as WHO, UNICEF, Rotary International, and the Child Survival Collaborations and Resources (CORE) Group of nongovernmental organizations (NGOs), USAID's strategy focuses on:

- Building collaborative and cooperative partnerships
- Strengthening and improving health systems
- Supporting polio immunization campaigns and supplemental immunizations
- Developing integrated surveillance approaches and establishing networks of surveillance officers who investigate all reported cases of acute flaccid paralysis in children
- Improving and expanding data collection and dissemination

PHOTO: © 2002 ARZUM CILOGLU/CCP, COURTESY OF PHOTOSHARE

Interventions and Achievements

Partnerships. USAID continued to advocate with other donors and the private sector to increase resources and political support for polio eradication. As a result, in June 2004 leaders of the Group of Eight countries renewed their efforts to finance eradication activities. USAID encouraged France, Germany, Tokyo, Denmark, Canada, Italy, Norway, and Sweden to increase resources. These combined efforts resulted in more than $100 million in new contributions.

National commitments. In January 2004, WHO and the health ministers of the six countries that remain endemic for poliomyelitis signed the Geneva Declaration for the Eradication of Poliomyelitis, committing themselves to interrupting the final chains of poliovirus transmission through intensified immunization. In October 2004, heads of state or government of the African Union launched the Synchronized Pan-African Immunization Campaign against Poliomyelitis in 23 countries of **Central** and **West Africa**. USAID funds supported this campaign.

Community-based networks. At the national and local levels, the CORE Group of NGOs expanded its networks of local community-based organizations in **India**, **Angola**, **Nepal**, and **Ethiopia**. CORE/India became part of India's Social Mobilization Network for Polio and deployed 1,500 mobilizers to the highest-risk areas of Uttar Pradesh.

Health systems. USAID supports elements of polio eradication (such as cold chain management, vitamin A distribution during polio immunization campaigns, integrated surveillance of other vaccine-preventable diseases, and data analysis) that help strengthen and improve health systems. In **India**, sanitation drives and health camps have mutually supported polio and other interventions such as deworming and vitamin A distribution. As a result, the percentage of children who have not started polio vaccinations decreased from 29 percent in 2002 to 2 percent in 2004. In the **Philippines**, polio campaigns and social mobilization activities have included vitamin A distribution. **Nepal** and **Bangladesh** have used polio eradication-related data and infrastructure to improve routine immunization outreach.

Immunization campaigns. In 2004, polio campaigns immunized more than 300 million children under age 5 in Africa and Asia. Since 1988, these campaigns have averted more than 5 million cases of polio. Countries with effective campaigns in 2004 included:

- *Nigeria* – USAID's community-based planning process was a significant factor in rapidly improving the quality of immunization rounds in northern Nigeria once they restarted in July 2004.
- *Afghanistan* – With USAID technical support, Afghanistan adopted new approaches to reach more than 31,000 children in mobile populations.

- *Iraq* – In September 2004, USAID and its partners helped Iraq carry out a polio immunization campaign that reached 70 percent of the targeted 4.7 million children.
- *Egypt* – USAID assisted in three national immunization campaigns, each of which vaccinated more than 11 million children.
- *Ethiopia* – More than 330,000 children along Ethiopia's border with Sudan received polio immunizations. More than half these children had never received immunizations against any vaccine-preventable disease. USAID will target border areas in the future to strengthen routine immunizations.

Surveillance officers. USAID supports networks of surveillance officers in many countries. These officers investigate every reported case of acute flaccid paralysis in children under age 15. In an increasing number of USAID-supported countries, surveillance officers are reporting on cases of measles, neonatal tetanus, and other vaccine-preventable diseases, forming the basis of an epidemic early warning system.

Enhanced surveillance in polio-endemic countries. USAID is supporting enhanced surveillance in all countries recently endemic for the disease, particularly in **Central Africa** and **the Horn of Africa,** to ensure that no chains of poliovirus transmission escape detection and to prepare for regional certification of eradication. USAID partially funded surveillance reviews in all endemic countries and supported corrective action where needed. Without these reviews, countries are less likely to be certified polio-free.

Interrupting the final chains of poliovirus transmission

Egypt and India – Particularly efficient virus transmission means that more than 95 percent of children in infected areas need to receive oral polio vaccine every six weeks until transmission stops.

Afghanistan and Pakistan – These countries share two reservoirs of poliovirus that require very high immunization coverage during large-scale synchronized mopping-up activities. In addition, both countries must continue ongoing nationwide eradication campaigns. These activities will require increased numbers of female vaccinators, increased commitment from political and religious leaders, and targeted evidence-based communication planning and implementation. Access to children in conflict areas needs to be ensured.

Niger and Nigeria – With very low poliomyelitis immunization coverage, these countries need to rapidly rebuild community confidence in vaccine safety and raise coverage substantially during at least six immunization rounds in 2005.

Burkina Faso, Chad, Côte d'Ivoire, and Sudan – These countries need marked increases in the number and quality of immunization rounds as well as increased attention to hard-to-access areas.

Polio-free areas – Surveillance must remain at certification-standard levels, and routine immunization efforts must increase to prevent reintroduction of poliovirus. Building on the polio infrastructure should continue worldwide.

Laboratory support. USAID supports a global laboratory network – LabNet – capable of detecting poliovirus in samples taken from thousands of children each year. In 2004, 148 LabNet polio laboratories analyzed approximately 100,000 stool samples. In **Iraq**, USAID funded the refurbishment of the national polio laboratory, which was destroyed during the early days of the war.

Data collection and use. USAID conducts targeted studies to assess the effectiveness of program activities and determine best practices. In 2004, the Agency established a technical advisory group to provide guidance on polio communications and shared with its partners a review of its support for polio communications. The review covered elements of advocacy, social mobilization, interpersonal communication, capacity building, reaching marginalized populations, media mix, financing, and other aspects of effective behavior change communications. The review's findings have led to changes in planning and resource allocation. **Nigeria** has used them to replicate activities of India's Social Mobilization Network.

Lessons Learned

The cessation of polio vaccinations in a single region of just one country can result in dramatic increases in cases there and in neighboring countries. The outbreak in Nigeria and subsequent spread to other African countries and Saudi Arabia provide several lessons, including the:

- Need to achieve and sustain population immunity until the poliovirus is eradicated
- Importance of routine immunization when campaigns are unfunded

PHOTO: © 2002 CCP, COURTESY OF PHOTOSHARE

- Importance of rapid case reporting and investigation
- Need to work closely with communities to build public trust in oral polio vaccine and increase local ownership of the overall initiative

Civil unrest and conflicts, funding shortages, and competing priorities threaten the global polio eradication initiative. Increased advocacy and political attention in global forums are needed to sustain political will as activities continue beyond the initial projected date for eradication. At all levels, coordination of government, donor, and NGO activities becomes critical. Closing the financing gap will require the complete fulfillment of existing pledges, new pledges from current partners, and the participation of other international development donors.

III. CHILD SURVIVAL AND MATERNAL HEALTH

Nutrition

PHOTO: WFP/RICHARD LEE

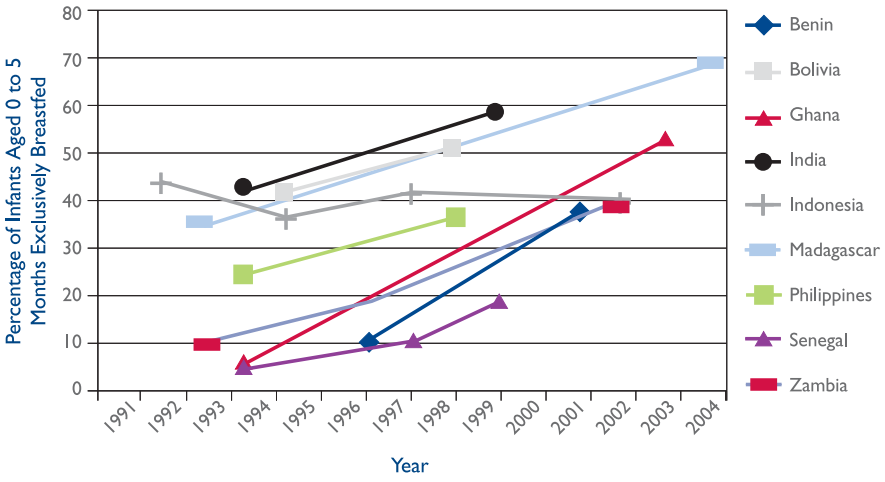
The *Fifth Report on the World Nutrition Situation*, published in March 2004, estimates that 30 percent of all children in developing countries are malnourished. This means that 147.5 million children in the world do not have sufficient amounts of nutritious foods to meet their needs. There is strong evidence that poor nutrition is an underlying factor in almost 60 percent of all childhood deaths. Among children who survive, inadequate nutrition results in diminished physical growth, impaired ability to learn, and increased injury from childhood diseases. Ultimately, poorly nourished children become less productive adults and have a negative impact on the economic development of their countries.

To have a sustained impact on malnutrition rates, the prevention and treatment of malnutrition should deal with root causes such as poverty, shortfalls in the food supply, failures of health sectors to address other childhood diseases, and the erosion of proper home feeding practices for infants and children. Identification and referral of children in the early stages of malnutrition is critical to

USAID supported vitamin A supplementation in 22 countries, achieving greater than 75 percent coverage in more than half of them. From 1999 to 2004, exclusive breastfeeding increased by 65 percent in 13 USAID-assisted countries. During the same period, the number of countries that fortify staple foods and condiments with vitamins and minerals rose from nine to 20; in 14 USAID-assisted countries, the availability of salt fortified with iodine increased by 35 percent.

Figure 9

Exclusive Breastfeeding Trends in Nine Countries with USAID Breastfeeding Programs



Source: Demographic and Health Surveys.

improve survival. In order to help communities implement programs to improve children's nutritional status, USAID has developed a strategy with clearly defined activities and impacts.

USAID Strategy

In order to focus its nutrition assistance, USAID stresses seven essential interventions:

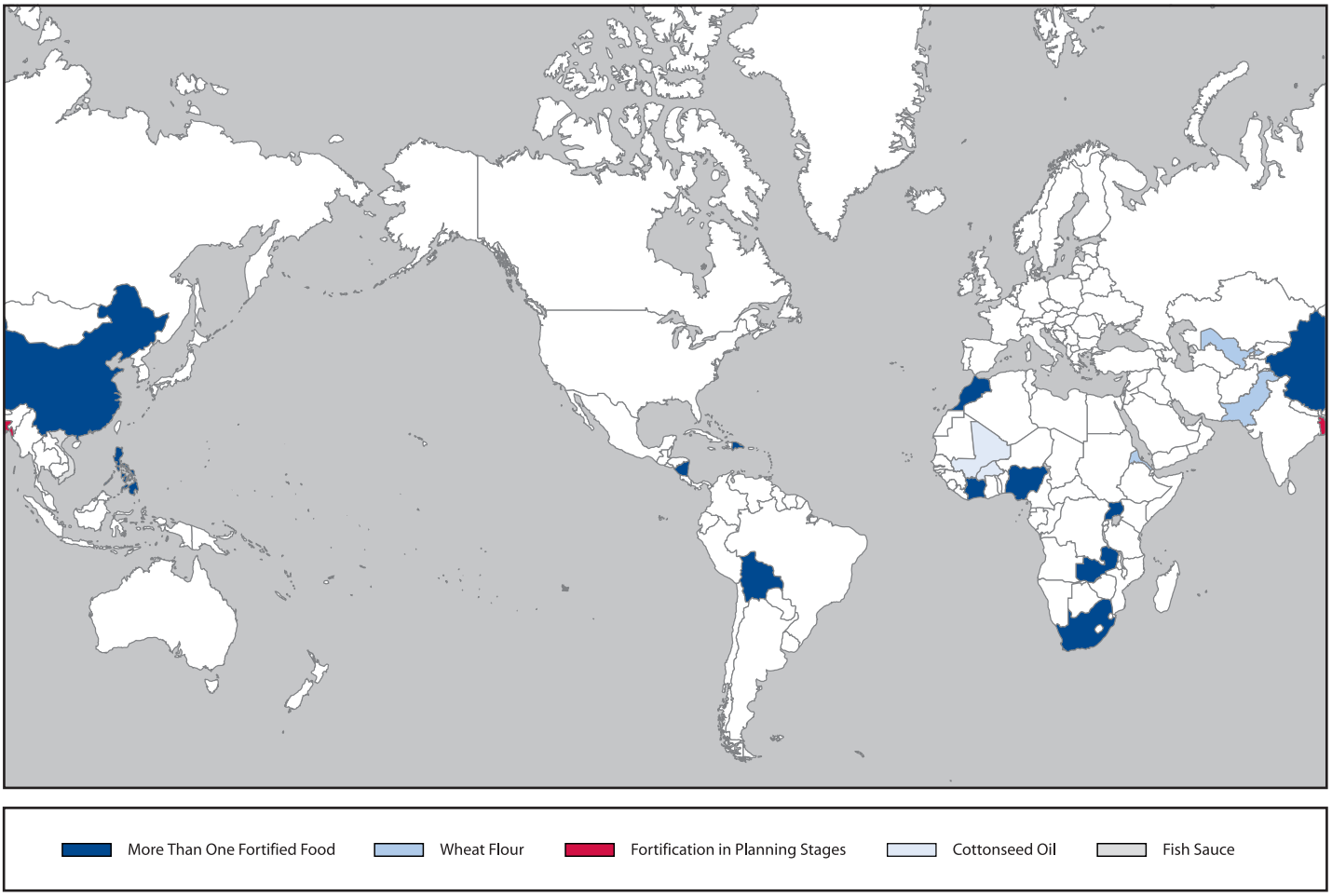
- Exclusive breastfeeding
- Appropriate complementary feeding
- Adequate nutritional care during illness
- Adequate intake of vitamin A
- Adequate intake of bioavailable iron
- Improved women's nutrition
- Adequate intake of iodine

Interventions and Achievements

Exclusive breastfeeding. USAID supports programs that encourage women to give infants only breast milk through the first six months of life (see figure 9). Breast milk provides all the nutrition needed by infants while protecting them from infectious and other diseases. In **Nigeria**, messages delivered through community-based channels to promote improved breastfeeding practices increased the percentage of mothers practicing exclusive breastfeeding from 10 percent in 2001 to 26 percent in 2003. In the Amazon Basin of **Peru**, Project Hope saw exclusive breastfeeding through the first six months of life rise from virtually zero to 85 percent over a seven-year period. From 1997 to 2003, chronic malnutrition in the

Figure 10

Countries with USAID Food Fortification Programs



Source: USAID.

Note: Sugar is fortified with vitamin A; rice, fish sauce, and soy sauce with iron; oil with vitamin A only or vitamin A and vitamin D; wheat and maize flour with one or more of the following: folic acid, iron, vitamins A, B-1, B-2, B-6, B-12, D, niacin, and zinc.

Table 1

Increases in Vitamin A Supplementation and Coverage (# of countries)

	1999	2004
Countries with semiannual Child Health Week supplementation programs	6	25
Countries distributing vitamin A through routine health services	0	2
Countries with greater than 50 percent national vitamin A supplementation coverage	5	19

Source: UNICEF.

region, as measured by stunting, decreased from 55 to 37 percent.

Complementary feeding. From 2000 to 2003, a USAID-supported program in **Mali** brought about improvements in complementary feeding, with 81 percent of the children receiving timely complementary foods as compared to 46 percent at baseline.

Nutrition and HIV/AIDS. USAID addresses the food and nutrition needs of people infected and affected by HIV/AIDS by supporting programs that deliver nutrition, counseling, care, and support to HIV-positive individuals in communities hardest hit by the epidemic. In order to strengthen capacity to deliver quality counseling on improved nutrition and the management of HIV-related illnesses and opportunistic infections, USAID is supporting the development of tools for health professionals in **Kenya**, **Malawi**, **Mozambique**, **Rwanda**, **Uganda**, and **Zambia**.

Vitamin A supplementation. Vitamin A is essential for eyesight protection, the rapid development of a child's immune system and, in turn, a child's overall health and well-being. USAID-funded research has demonstrated the power of vitamin A to reduce child mortality by an average of 23 percent in vitamin A-deficient populations. In 2004, USAID supported vitamin A supplementation in 22 countries, achieving over 75 percent coverage in 12 of those countries and over 50 percent coverage in three of the countries with newer programs. **Haiti** held its first national distribution in 2004 despite political upheaval and natural disaster, and **India** and **Ethiopia** restarted their programs after years of neglect. Two major supporters of vitamin A supplementation – UNICEF and the Canadian International Development Agency (CIDA) – adopted versions of the "Child Health Week" model pioneered by USAID as a means of extending coverage of vitamin A supplementation and other preventive interventions, including catch-up immunizations, deworming, nutrition education, and growth promotion.

Table 2

Increases in Consumption of Iodized Salt

Country	Percentage of Population Consuming Iodized Salt	
	Baseline Year (1999–2000)	Most Recent Year (2001–2005)
Afghanistan	1	40
Ghana	41	44
Indonesia	64	73
Malawi	48	86
Philippines	24	70
Senegal	31	57
Tanzania	67	84
Azerbaijan	44	70
Macedonia	30	100
Uzbekistan	19	48
Moldova	33	52
Georgia	8	67
Armenia	70	84
Cambodia	12	18

Source: UNICEF.

Table 1 demonstrates the rapid expansion of vitamin A supplementation between 1999 and 2004.

Food fortification. USAID continues to support food fortification as an effective way to prevent multiple micronutrient deficiencies, both through the Global Alliance for Improved Nutrition (GAIN) and through direct support to country programs (see figure 10). As a result of USAID's efforts, the largest cooking oil producers in **Morocco** and **Uganda** are fortifying their products with vitamin A. Sugar continues to be fortified with vitamin A throughout Central America. In 2004, data generated by a USAID-supported nutrition surveillance system in **Nicaragua** showed reductions in vitamin A deficiency from 23.4 percent in 1993 to 0.3 percent in 2003 following the introduction of fortified sugar in late 1999.

PHOTO: © 2002 CCP, COURTESY OF PHOTOSHARE

Biofortified crops. HarvestPlus, a new initiative to introduce biofortified crops, is in its early stages. Research centers are testing six staple foods – beans, cassava, maize, rice, sweet potatoes, and wheat – for their capacity to be bred with increased vitamin and mineral content.

Iron-deficiency anemia. A joint WHO/USAID analysis has highlighted the immense importance of iron-deficiency anemia, concluding it is an underlying cause of 115,000 maternal deaths and 591,000 perinatal deaths per year. These figures are higher than previous estimates because research has found that even mild and moderate anemia have a direct correlation to increased mortality and morbidity. Examples of USAID programming to combat iron-deficiency anemia include:

- *India* – In partnership with a local NGO, the north Indian state of Jharkhand developed and implemented a pilot community-based anemia program targeting 100,000 women of reproductive age and adolescents in a disadvantaged tribal area. When brought to scale, the program will reach almost 5 million women in the state.
- *Eritrea* – USAID partnered with the Ministry of Health to correct persistent shortages of iron/folate supplements; revise protocols for antenatal supplementation; design and disseminate communication materials for health workers and the community; and develop procedures to strengthen supervision. Supervisors now report that supplies of iron/folate supplements are available in clinics.
- *Uganda, Nicaragua, Honduras, El Salvador* – These countries also are addressing iron-deficiency anemia with USAID support.

Iodine deficiency. Adequate iodine intake, most often achieved by fortifying salt with iodine, enables proper fetal neurological development and improved cognitive function in children. Iodine-deficiency disorder is the single most preventable form of mental retardation. In **Mali**, a USAID-supported program increased the proportion of households using iodized salt from 56 percent in 2003 to 94 percent in 2004. In USAID's Europe and Eurasia region, the percentage of households consuming iodized salt increased from 26 percent in 2000 to 52 percent in 2004. Seven countries (**Macedonia**, **Bulgaria**, **Serbia and Montenegro**, **Croatia**, **Turkmenistan**, **Bosnia and Herzegovina,** and **Armenia**) have achieved "universal salt iodization" (more than 90 percent of households using iodized salt) or are close to that threshold. This means that 57 percent of newborns in the region are now protected from iodine-deficiency disorder. USAID also supports the elimination of iodine deficiency through the global and country programs of UNICEF and Kiwanis International. Table 2 shows the difference this support has made in many countries.

III. CHILD SURVIVAL AND MATERNAL HEALTH

Pneumonia and Diarrhea

PHOTO: © 2003 MANOFF GROUP, COURTESY OF PHOTOSHARE

Each year, pneumonia and diarrhea are responsible for the deaths of more than 4 million children under age 5 – about 43 percent of all under-5 deaths. Nearly 80 percent of these deaths are preventable with simple, affordable child survival interventions. In countries where these and other key interventions have been implemented with high coverage, USAID has been able to make progress in reducing childhood illness and death.

In 2004, USAID intensified its pneumonia- and diarrhea-related efforts through a focused set of high-impact programs and the accelerated introduction of innovative technologies and approaches. To maximize the benefits of its programs, USAID expanded or launched several initiatives, including community-based treatment of pneumonia with antibiotics, "point-of-use" water disinfection, zinc as an adjunct for treatment of diarrhea, and a new formulation of oral rehydration solution.

USAID continues its commitment to the development and expansion of holistic approaches to child health. Integrated care packages include key child survival interventions targeting the major killers of children under age 5 – pneumonia, diarrhea, malaria, malnutrition, and vaccine-preventable diseases. Depending on a country's needs, these packages may also include interventions related to maternal, reproductive, and newborn health, as well as crosscutting activities such as behavior change and communications for appropriate family health behaviors.

Figure 11

Community-Based Treatment of Pneumonia: Phases of Intervention

Advocacy	Introduction	Expansion
Bangladesh		Guatemala
Cambodia		Honduras
Ethiopia	Benin	Nepal
Madagascar	DR Congo	Nicaragua
Tanzania	Haiti	Senegal

Phase of Intervention

Source: USAID.

USAID-supported efforts to combat childhood pneumonia demonstrated that community-based treatment is both effective and possible, laying the groundwork for reaching more children with lifesaving treatment. USAID is now working in eight countries to introduce or scale up community-based pneumonia treatment. In diarrhea programming, the oral rehydration solution (ORS) developed by USAID and other donors will be the only ORS provided by UNICEF worldwide. USAID is also working with eight countries on expanding country-level implementation of "point-of-use" treatment of household water, a key intervention for preventing childhood diarrhea.

USAID Strategy

Pneumonia. USAID's strategy for managing childhood pneumonia focuses on improving access to lifesaving treatment with cost-effective antibiotics. In underserved areas where facilities are scarce, the emphasis is on community-based approaches through training and supporting community health workers to diagnose and treat pneumonia and refer severe cases (see figure 11).

Control of Diarrheal Diseases. USAID's strategy for preventing, controlling, and treating diarrheal diseases includes improved access to safe water and sanitation, with a focus on "point-of-use" water disinfection; improved hygiene behaviors, including handwashing; therapeutic zinc treatment; and oral rehydration therapy (ORT), which includes the new reduced-osmolarity formulation of oral rehydration solution (ORS), recommended home fluids, and increased fluids with continued feeding (see figures 12 and 13).

Point-of-use water disinfection – using partnerships to save lives

Point-of-use (POU) treatment of household water has emerged as a key intervention for preventing childhood diarrhea. For the world's 1.1 billion people without access to safe water, POU treatment offers the promise of clean drinking water. For poorer populations around the globe and in humanitarian crisis situations, POU treatment has the potential to reduce dramatically the number of children who die from diarrhea.

USAID is working with two approaches to POU treatment. In collaboration with the U.S. Centers for Disease Control and Prevention (CDC), USAID missions in six countries are using adaptations of the CDC Safe Water System, which includes POU chlorination, inexpensive safe water containers, and hygiene practices related to water storage and use. In addition, USAID has partnered with Procter & Gamble to expand use of its "PuR" water purification product in commercial, social marketing, and emergency distribution settings in Pakistan, Haiti, and Ethiopia. Unlike simple chlorination, PuR can turn even muddy water into safe, drinkable water within minutes.

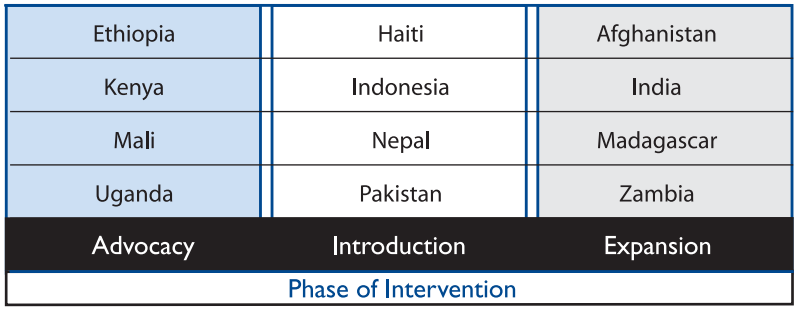
Interventions and Achievements

Water sanitation and hygiene. Building on USAID support, **Madagascar's** Water Sanitation and Hygiene (WASH) Initiative is improving access to clean water. Through WASH, the government is developing a national sanitation policy and has more than doubled the national budget for improving water, sanitation, and hygiene. USAID's support for social marketing of Sur'Eau, a bottled chlorine-based water disinfectant, has also improved access to safe water. In 2004, Sur'Eau sales topped 430,000 bottles, and the program launched a new lower-cost product that will more easily reach poorer households at greatest need.

Global advocacy and country handwashing programs. Working with the World Bank, UNICEF, the London School of Hygiene and Tropical Medicine, Procter & Gamble, Colgate-Palmolive, Unilever, and other partners in the Global Public-Private Partnership for Handwashing with Soap, USAID has played a key role in expanding global advocacy for and country-level implementation of improved hygiene behaviors. In **Nepal**, USAID and UNICEF are supporting a handwashing campaign launched in the fall of 2004. The campaign promotes other hygiene activities, such as household water disinfection, as well.

Use of recommended oral rehydration formulations. Two years ago, the largest-selling ORS brand in **India** was not formulated according to WHO and UNICEF recommendations. To promote recommended formulations, USAID launched a campaign in urban areas in eight northern states that are home to more than 100 million people. As a result, use of appropriate ORS formulations increased from 29 percent in 2002 to 48 percent in 2004. When the new reduced-osmolarity formulation became available in 2004, India became the first country to adopt its exclusive use as national policy. Since then, other countries with local production capaci-

Figure 12
Point-of-Use Water Disinfection: Phases of Intervention



Source: USAID.

ty, such as **Indonesia**, have also made the switch.

Guidance for treating child diarrhea. In 2004, WHO and UNICEF issued new guidance for treating diarrheal illness in children with reduced-osmolarity ORS and zinc therapy. Both these technologies, developed with USAID support, reduce the severity and duration of diarrheal illness (see figure 14).

Integrated Approaches to Child Health

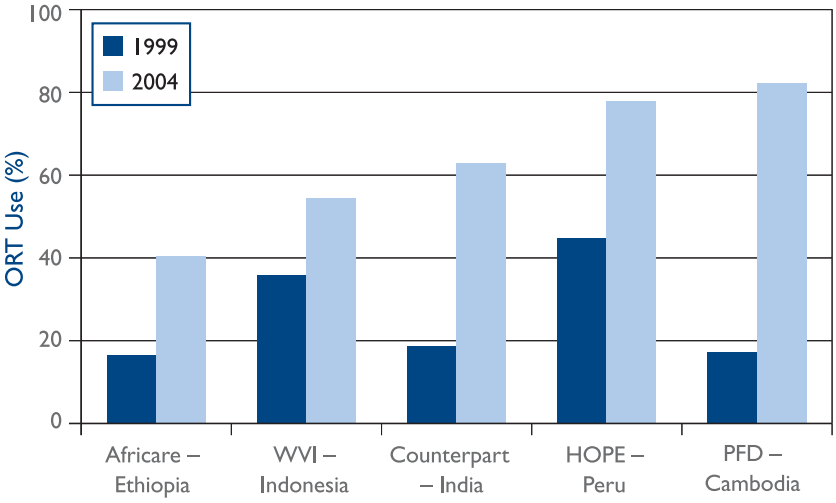
USAID's strategy focuses on household- and community-based Integrated Management of Childhood Illness (IMCI), including the Integrated Community Child Care and Community-IMCI approaches; facility-based IMCI; and quality assurance methodologies.

Facility-based approaches. In **Niger**, 14 hospitals worked together to improve emergency triage assessment and treatment (ETAT), using the quality improvement collaborative methodology. Teams of providers in each hospital developed and tested ideas for improving ETAT, and all of the hospitals adopted the most successful changes. Examples of changes included assigning one provider to triage new patients, placing all emergency drugs and supplies in the emergency room, and improving medical records. After eight months, 88 percent of children were being treated according to the guidelines. In 2005, 17 additional hospitals will be added, covering 64 percent of Niger's basic hospitals and all referral centers. Similar work is being conducted in **Eritrea**, **Malawi**, **Guatemala**, and **Nicaragua**.

Media approaches. In **Uzbekistan**, continuing USAID-supported media campaigns on acute respiratory infection, diarrhea, and anemia are reaching large numbers of citizens. In Ferghana *oblast*, extensive health promotion activities at clinics and in communities are achieving positive results. Beginning from a 2001 baseline, findings from annual surveys clearly demonstrate an increase in knowledge

Figure 13

ORT Use: Trends from Five USAID-Funded Programs



Source: USAID Child Survival and Health Grants Program.

Key: WVI = World Vision International; Counterpart = Counterpart International; HOPE = Project HOPE; PFD = Partners for Development.

Figure 14

Diarrhea Management with Therapeutic Zinc and Reduced-Osmolarity ORS: Phases of Intervention

Afghanistan		
Cambodia		
Ethiopia		
Haiti	DR Congo	
Madagascar	India	
Nepal	Mali	
South Africa	Pakistan	
Tanzania	Sudan/Darfur	Bangladesh
Advocacy	Introduction	Expansion
Phase of Intervention		

Source: USAID.

Zinc for the prevention and treatment of diarrhea

With support from USAID, researchers have established the evidence base for the use of zinc as a complement to oral rehydration solution (ORS) in treating diarrhea in children. Given in conjunction with ORS, zinc supplementation reduces the duration and severity of diarrhea episodes and has the potential to decrease mortality by 50 percent. When taken in its full course of 10 to 14 days, it has a further preventive effect of reducing the number and duration of repeat episodes in the ensuing two to three months.

USAID has been working with its partners in Bangladesh, India, Pakistan, Mali, and Tanzania, as well as in complex emergency settings such as Sudan's Darfur region, on plans to introduce zinc on a larger scale. In the coming year, USAID will work to increase the use of zinc in its country programs. To accelerate progress, USAID and WHO have launched a public-private partnership for commercial production and distribution of zinc therapy. USAID also supported the initiation of a multi-organization task force to expand the roll-out of zinc through public, private, and nonprofit channels.

over time – fewer people think a child with a cough or cold needs antibiotics (20 percent in 2004 versus 38 percent in 2001); fewer people expect antibiotics for diarrhea (8 versus 27 percent); and more people understand that a child with diarrhea needs increased fluids (81 versus 63 percent).

Lessons Learned

In 2004, the launch of new initiatives in pneumonia and diarrhea gave USAID the opportunity to apply lessons learned from prior experience – in particular, the recognition of the need to bring preventive and therapeutic interventions as close as possible to the children who need them. Previous evaluations of the IMCI approach had revealed, for example, that in many areas with poor access to public health facilities, the majority of children who died were never taken to a qualified facility and therefore had no chance to benefit from IMCI. This finding led USAID to support alternative approaches to improving care, such as community-based treatment of pneumonia, which has the potential to bring care almost to the doorstep of the ill child.

Likewise, USAID efforts to introduce and scale up point-of-use water disinfection and zinc treatment for diarrhea are taking advantage of multiple distribution channels to increase their coverage as rapidly as possible. These channels include public health providers in peripheral health facilities; the commercial private sector (including pharmacists, drug sellers, and shopkeepers); nongovernmental organizations; and community- and faith-based organizations operating in underserved areas.

PHOTO: WHO/TBP/DAVENPORT

III. CHILD SURVIVAL AND MATERNAL HEALTH

Maternal and Neonatal Health

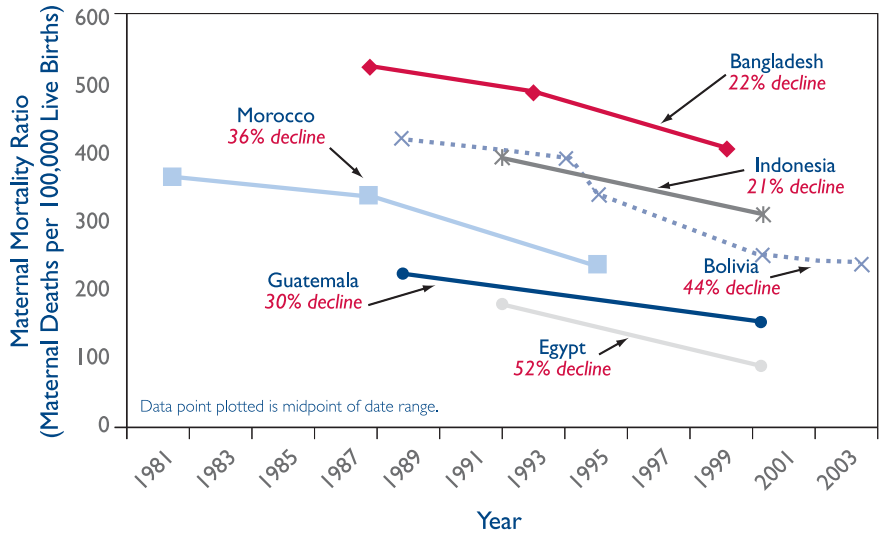
PHOTO: WFP/SHHZAD NOORANI

No health indicator demonstrates greater differences between the developed and developing worlds than maternal mortality. The lifetime risk of maternal death for a woman in sub-Saharan Africa is 200 times higher than for a woman in North America. Maternal death remains a persistent problem in the developing world; only limited progress has occurred toward the Development Goal of the Millennium

In six USAID-assisted countries, maternal mortality has declined steadily since the 1980s. Bolivia and Indonesia, two countries that have received major USAID support for maternal health, reported significant 10-year declines in their maternal mortality ratios of 44 and 21 percent, respectively.

Figure 15

Maternal Mortality Reduction in Six USAID-Assisted Countries



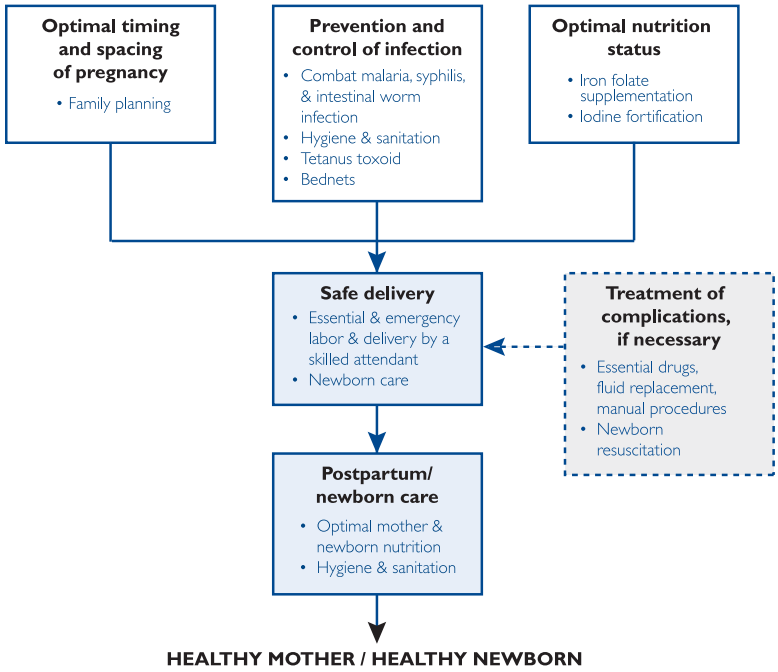
Sources: Bangladesh: National Institute of Population Research and Training (2002); Bangladesh Maternal Health Services and Maternal Mortality Survey Preliminary Report (2001).
Bolivia: USAID (2004).
Egypt: Ministry of Health and Population (2001); Egypt National Maternal Mortality Study (2000).
Guatemala: Duarte et al. Linea Basal de Maortalidad Maternapara El Año (2000); Mott Guatemala, 2003.
Indonesia: Demographic and Health Survey (2002-2003).
Morocco: DHS data from Measure Evaluation (2002); USAID/MInistry of Health, 30 Years of Collaboration Between USAID and the Ministry of Health (nd).

Declaration of a three-quarters reduction in the maternal mortality ratio between 1990 and 2015 (see figure 15). Some countries in Africa have recorded worrisome increases in maternal mortality, and subnational disparities in maternal mortality reflecting poverty and discrimination often persist even in countries with documented success.

Globally, the overall level of maternal mortality has remained essentially unchanged over the past 15 years, with an annual estimate of 530,000 maternal deaths as of 2000. These half million maternal deaths are just the "tip of the iceberg," however. An additional 8 million women suffer complications of pregnancy and childbirth that have serious repercussions for individual, family, and community health. For example, women suffering from severe anemia because of hemorrhage are weakened physically and cannot be highly productive. Women with obstetric fistula due to obstructed labor are often ostracized from their family and community. Furthermore, maternal health and nutrition status and care during pregnancy and birth profoundly influence the health and survival of the newborn. Neonatal mortality trends parallel those in maternal mortality. More than 4 million newborns die each year, and nearly as many are stillborn. Newborn mortality is a growing proportion of infant and under-5 mortality.

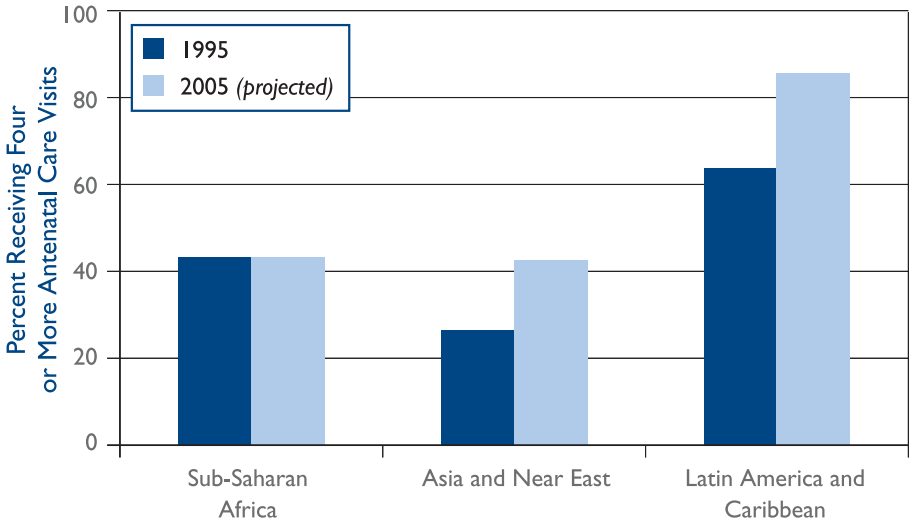
Most maternal deaths and a substantial proportion of newborn deaths are preventable (see figure 16). Skilled attendance at birth – the indicator used internationally to reflect care that can promote survival – continues to improve by about one percentage point per year. Antenatal care (important for infection control and micronutrient supplementation) and facility delivery

Figure 16
Reducing Maternal and Neonatal Mortality



Source: USAID.

Figure 17
Trends in Antenatal Care Coverage in Three USAID Regions



Source: Various DHS and RHS. Averages are rolling weighted regional averages for countries with available data.

Note: Europe and Eurasia regional average not included due to limited availability of country-level data.

(needed for treatment of serious obstetric complications) also continue to rise gradually. Nonetheless, in developing countries where USAID works, more than half of women deliver without the assistance of a skilled birth attendant who can monitor labor, provide a clean and safe delivery, detect complications promptly, and help a woman obtain care in the event of a life-threatening complication. In addition, mothers and newborns infrequently receive care in the immediate postpartum period, despite being extremely vulnerable at this time.

USAID Strategy

USAID's approach to promoting maternal and newborn survival and health focuses on:

- Community preparation for birth
- Care during pregnancy and birth and in the postpartum and newborn period
- Care for complications and emergencies
- Strengthened policies and health systems

Maternal mortality declines in Indonesia and Bolivia

Newly published population-based surveys report declines in maternal mortality ratios of 21 percent in Indonesia and 44 percent in Bolivia over the past decade. While the determinants of these declines are multifaceted and complex, both these countries have sustained family planning and maternal health programs supported by USAID with strong policy and financial support from their own governments as well. Bolivia increased service use with a health insurance program, and Indonesia brought skilled care to villages by training 50,000 community midwives. These results demonstrate what can be achieved through political commitment, partnership, and sustained support.

Interventions and Achievements

Safe Motherhood. In 2004, the White Ribbon Alliance for Safe Motherhood, active in 12 countries, started new secretariats in **Ethiopia** and **Tanzania**. The Alliance encourages community, business, government, and international partners to promote increased recognition of obstetric complications and demand for lifesaving services.

Community preparation for birth. Community mobilization efforts in **Indonesia** have successfully advocated to local governments to allocate funds for community-based transportation for obstetric emergencies and for blood typing in blood banks. Communities have also developed their own savings programs for costs of emergency care. In one project site, a revolving fund was established to pay for emergency complications, and the local government increased its maternal health budget from 8 to 18 percent of the total health budget.

Skilled attendance at birth. Skilled attendance at birth is the key indicator of progress in maternal and neonatal health programs. In 15 districts in **Senegal**, skilled attendance increased from 46 to 77 percent of births between 1999 and 2004 as a result of a program that provided privacy, compassionate care, and 24-hour services.

Malaria in pregnancy. Malaria threatens 24 million pregnancies in sub-Saharan Africa each year. USAID has provided direct support for intermittent preventive malaria therapy for pregnant women in 21 African countries. This support will benefit about 13 million pregnant women.

Maternal bleeding. Excessive maternal bleeding after childbirth (postpartum hemorrhage) causes more than 30 percent of maternal deaths in Asia and Africa. Until recently, it was believed that little could be done to prevent this life-threatening complication of childbirth. However, convincing evidence now indicates that active management of the third stage of labor can prevent hemorrhage-related maternal deaths.

Table 3

Postpartum Hemorrhage Program Coverage, New Programs, 2003 and 2004

Country	Number of Service Delivery Sites	Postpartum Hemorrhage Program Coverage in Targeted Area (%)
Benin	7	55
Ethiopia	24	9
Mali	7	6
Zambia	2	8

Source: USAID.

Note: USAID initiated programs in 2003 and 2004 in the above African countries to prevent maternal hemorrhage directly following birth.

PHOTO: © 2004 EMMANUEL 'DIPO OTOLORIN, COURTESY OF PHOTOSHARE

Recent studies from **Guatemala** and **Zambia** have documented cost savings from this intervention. USAID has helped develop a "Prevention of Postpartum Hemorrhage Toolkit" to disseminate this information to policymakers and service providers.

Obstetric fistula. USAID also assists women with disabilities resulting from pregnancy, with a special emphasis on obstetric fistula. An estimated 2 million women suffer from fistula, a complication of childbirth resulting from prolonged or obstructed labor that can cause permanent urinary and/or fecal incontinence. In **Uganda** and **Bangladesh**, USAID is supporting programs in private and mission hospitals to train surgeons and nurses in fistula repair and rehabilitation of affected women.

Abandoning female genital cutting. Based on successes documented in **Mali**, a USAID-supported program in **Ethiopia** has been working to promote abandonment of female genital cutting (FGC) at the community level via a two-pronged approach – first, by educating women and community leaders on the harmful effects of FGC, and second, by targeting community leaders to advocate for change in the demand for FGC. The comprehensive program works with women, men, youth, and religious and political leaders. In July 2004, the Ethiopian parliament passed a law against FGC drafted by a member of the Anti-FGC Women Leaders Team established under the program. Also, a forum of 83 prominent Muslim and Christian religious leaders organized by the program issued an edict against the practice. In targeted communities, more than 2,250 people have participated in anti-FGC education activities.

Reducing cesarean sections. USAID's promotion of evidence-based care in **Ukraine** resulted in a decrease in cesarean sections from 18 percent of pregnancies in 2003 to 11 percent in 2004. Other results included increases in birthweight, the virtual elimination of newborn hypothermia, and an overall reduction in maternal and infant mortality.

Policy development. USAID supports policy development based on research and data analysis to assess and overcome critical barriers to achieving improved maternal and newborn health. For example, an analysis found that iron-deficiency anemia, a condition that affects 55 percent of pregnant women in developing countries, was an underlying risk factor in 20 percent of maternal deaths attributed to other causes. This finding provides the analytic support for re-invigorating national programs for preventing and controlling iron-deficiency anemia.

Essential obstetric care in Latin America. USAID also addresses essential health system elements necessary for well-functioning maternal child health services, including personnel, commodities, quality improvement, and monitoring and evaluation. In Latin America, groundbreaking improvement collaboratives in essential obstetric care have documented sustained quality-of-care improvements. In **Honduras**, **Ecuador**, and **Nicaragua**, indicators of the quality of essential obstetrical care showed broad improvement. In Ecuador, for example, before the intervention none of the newborns received care that followed national quality standards. After the intervention, 81 percent of newborns received such care. This initiative has demonstrated a cost-effective approach that relies on South-to-South assistance to improve quality of care.

Lessons Learned

- The HIV pandemic has undermined the capacity to utilize and provide basic maternal child health services. Severely limited resources and the magnitude and extent of the problem pose a daunting challenge to achieving a broad decrease in maternal mortality. It is essential to carefully link maternal and child health with HIV programs to achieve public health impact.
- Home birth remains a reality, if not a preference, for half the world's women. Services at fixed facilities cannot be the only strategy for improving care. Community-based delivery care, postpartum care, and newborn care must be expanded to improve pregnancy outcomes.

III. CHILD SURVIVAL AND MATERNAL HEALTH

Vulnerable Children

PHOTO: © 1993 CCP, COURTESY OF PHOTOSHARE

Many children in developing countries must face the harsh realities of today's world – famine, natural disasters, war, HIV/AIDS, parental death, physical disabilities, and economic and social crises – all of which have an emotional and physical impact. To assist countries that do not have the capacity to respond to these crises, USAID supports programs to help families and communities meet the needs of vulnerable children. The primary objective of these programs is to strengthen family and community capacity to respond to the special needs (physical, social, educational, and emotional) of displaced children and orphans; mentally or physically disabled children, including blind and hearing-impaired children; and older children and adolescents in need of social integration and vocational or technical training.

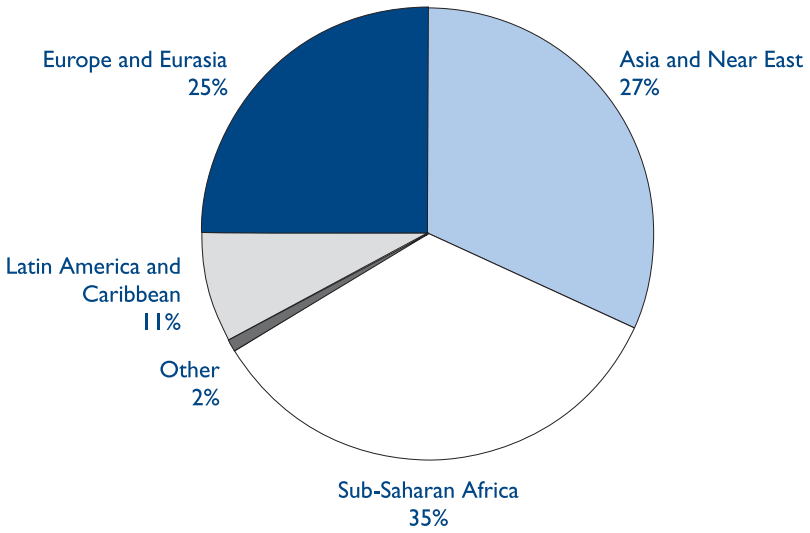
USAID Strategy

USAID supports numerous activities to help families and communities

In Uganda, 2,250 children abducted into service by the rebel army were reunited with their families through USAID's Displaced Children and Orphans Fund (DCOF). In the Democratic Republic of the Congo, a DCOF-supported activity reunited more than 1,300 street children with their families. In Cambodia, USAID provided equipment to the Preah Ang Duong Hospital, enabling ophthalmologists to perform 175 sight-saving operations on children.

Figure 18

Displaced Children and Orphans Fund: Spending by Region, Fiscal Year 2004



Source: USAID.

PHOTO: WFP/NANCY PALUS

meet the needs of vulnerable children. These activities fall into three program categories:

- Displaced children and orphans
- Blind children
- Other vulnerable children

Programs for these children, undertaken with governmental agencies and local or international NGOs, support and protect vulnerable children primarily through activities and strategies that strengthen family and community capacity to respond to the physical, social, and emotional needs of these children.

Interventions and Achievements

Displaced Children and Orphans Fund. Since 1989, USAID's Displaced Children and Orphans Fund (DCOF) has helped children who do not have the care and protection of their families because of war or extreme poverty (see figure 18). DCOF currently supports approximately 30 programs in 22 countries, providing technical assistance and funding for programs that address the humanitarian and long-term developmental needs of displaced children and orphans in three main areas of intervention: 1) identifying displaced children and reuniting them with their families or communities; 2) ensuring children's access to and inclusion in mainstream health, educational, and other essential social services; and 3) increasing economic opportunities for vulnerable children and their families. DCOF assistance in these areas supports direct interventions, collection and sharing of evidence-based "lessons learned," and capacity building of human and institutional resources.

Leahy War Victims Fund. DCOF's complementary fund, the Leahy War Victims Fund, supports programs benefiting children with physical disabilities caused by land mines or by preventable diseases such as polio that might result from conflict-related interruptions to immunization campaigns. In Vietnam, nearly 6,000 children with disabilities now attend mainstream schools. In three project sites, 85 percent of children with disabilities attend regular schools, compared with only 30 percent at the start of the program. Nearly 900 teachers and education managers have received comprehensive training in inclusive education. Additionally, more than 800,000 preschool and primary students have been screened for hearing disabilities. More than 15,000 were identified with difficulties and have received appropriate interventions.

Programs for displaced children. Recent DCOF results on behalf of displaced children include:

- *Uganda* – For the past 18 years, the rebel army in Uganda has abducted tens of thousands of children and subjected them to extreme forms of torture and coercion to join the rebel army. Through a major project in northern Uganda, DCOF has been supporting counseling services, vocational training, and other specialized interventions to facilitate the re-entry and reunification of former abductees with their families and communities. In 2004, more than 2,250 children were reunited with their families.
- *Democratic Republic of the Congo* – The belief that family hardships result from child witchcraft is a recent phenomenon in a number of African countries. In the Democratic Republic of the Congo, an estimated 70 percent of street children are accused of witchcraft, and DCOF has supported an innovative program to help such children reunite with their families. The program works with the government and churches to implement and reinforce laws to protect these children. In 2004, USAID exceeded its target of 1,000 reunifications by uniting 1,311 children with their families, an estimated 70 percent of whom remained together after six months. The Ministry of Social Affairs has been working effectively to reunify vulnerable children in Kinshasa, and government social workers have been key players in family mediation and reunification.
- *Sierra Leone* – During Sierra Leone's civil conflict, rebels abducted thousands of girls and used them as

combatants, cooks, porters, and partners in forced marriages. After the disarmament and demobilization program registered only 548 girls (out of 6,845 children registered in total), USAID, UNICEF, and other partners supported a program to provide girls and young women with opportunities to leave their captors for a safer and better environment. The program developed a standardized approach to identifying, assessing, and developing individual case plans, and provided reintegration assistance. Five implementing partners identified and provided services to about 1,000 girls and young women, more than 65 percent of whom benefited from family tracing services. The partners prepared and distributed "best practices," contributing to more effective protection of children and women.

- *Liberia* – In Liberia, USAID supported the rehabilitation and reintegration of women and children associated with the fighting forces. To date, the program has demobilized 2,428 children from the fighting forces and reunified 2,400 children with their families.

Programs for blind children. Three quarters of the world's more than 1.4 million blind children live in developing countries. Blindness affects the individual sufferer and has a lasting effect on a country's economic development. USAID helps local or international NGOs reduce child blindness in countries where basic eye care services are either inadequate or nonexistent. USAID resources provide essential equipment, training, and increased access to basic eye care. In 2004, USAID went beyond basic preventive and treatment services to include educational training and rehabilitation for children already blind.

Project Child Vision. In 2004, the USAID-supported Project Child Vision implemented community-based programs for significant refractive error and cataract treatment and surgery in **Mexico**, **South Africa**, **Bangladesh**, **Morocco**, and **Nigeria**. More than 350,000 children underwent screening for refractive error, with more than 33,000 receiving eyeglasses and more than 1,300 receiving referrals for further care. Nearly 600 children had cataract surgery, and more than 1,100 adults and 353 children received low-vision services.

International Eye Foundation. With USAID support, the International Eye Foundation offered eye examinations and treatment to more than 200,000 children and offered inducements for young ophthalmologists to set up services in rural and peri-urban areas throughout **Latin America**.

Seva Foundation. In 2004, USAID added a number of new partners in its efforts to reduce childhood blindness. The Seva Foundation's two-year "Reducing Blindness Among Women and Children in Nepal and Cambodia Through Improved Vision Care" project has already treated more than 6,000 rural villagers in **Nepal** for eye conditions, more than half of whom were women and children. In **Cambodia**, the Foundation screened children in the third through sixth grades in 16 schools for refractive errors. Those in need received prescription eyeglasses.

Eye surgery. USAID provided state-of-the-art equipment to Preah Ang Duong Hospital in Phnom Penh, **Cambodia**, which enabled their ophthalmologists to perform 175 sight-saving operations on children.

Support for education. USAID supported the Perkins School for the Blind in Massachusetts in accelerating its program to train 550 educators from around the world to work with children who are deaf and blind (or blind with multiple disabilities) and to teach blind children how to communicate using Braille.

Other vulnerable children. Funds for other vulnerable children were used for a variety of activities in countries of special need, i.e., countries with unusually large numbers of extremely vulnerable children for whom increased accessibility to mainstream health services and/or other psychological or social

PHOTO: WHO/TBP/DAVENPORT

services are critically needed. In **Indonesia**, 23 NGOs serve thousands of children who live or work on the street, helping them obtain official identity documents for attending school and obtaining health benefits. Groups are also raising funds for school scholarships and after-school programs and mobilizing community contributions of food, clothing, and school supplies for families in need.

Lessons Learned

- Almost all societies have traditional expectations and mechanisms to ensure that unaccompanied or other vulnerable children are protected by their extended families or communities. Governments, donors, NGOs (including FBOs), and private sector groups have important roles to play in caring for and protecting vulnerable children, but they need to ensure their activities do not diminish natural resilience and local problem solving. Donors should focus on identifying and strengthening appropriate community capacities and avoid creating heightened or unsustainable expectations and long-term dependency. Programs (especially those assisting the reintegration of children affected by armed conflict) should identify and build on culturally appropriate belief systems, structures, and practices. DCOF strives to ensure that all these traditional sources of care and protection constitute the foundation of all interventions.
- HIV/AIDS awareness and prevention should be incorporated into all programs for children and youth.
- Many developing countries have competent, experienced professionals capable of providing high-quality eye care. However, their ability to do so is limited by equipment and resource shortages and inadequate facilities. These professionals are willing and able to train their colleagues to accelerate the extension of services to those most in need. USAID's fund for blind children is having a significant development impact – more vision-impaired and blind children are realizing their potential, benefiting their development and their country's development.

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IV. FAMILY PLANNING AND REPRODUCTIVE HEALTH

Voluntary family planning programs can enhance the health of mothers and children.

PHOTO: USAID/SANDRA JORDAN

USAID missions in Russia, Kazakhstan, Azerbaijan, Georgia, Romania, and Albania expanded their family planning and reproductive health programs. In Georgia, USAID extended services to eight new districts to reach an estimated 410,000 people and introduce family planning in more than 100 facilities serving significant numbers of underserved women. Worldwide, modern contraceptive use among married women in 30 USAID-assisted countries increased from 22 to 38 percent between 1991 and 2004.

USAID investments in family planning and reproductive health (FP/RH) programs have made a sustained contribution to the health of individuals and families over the past 40 years. USAID has made voluntary family planning services widely available in many developing countries, thereby contributing to substantial declines in unintended pregnancies and maternal mortality, to improved health, and to reduced fertility rates, all of which enhance a nation's potential for lasting social and economic development.

Despite improvements, however, maternal mortality in developing countries remains high. More than 500,000 women die during pregnancy and childbirth each year, with most of these preventable deaths occurring in the developing world. Many of these deaths could be prevented if women had access to family planning.

USAID Strategy

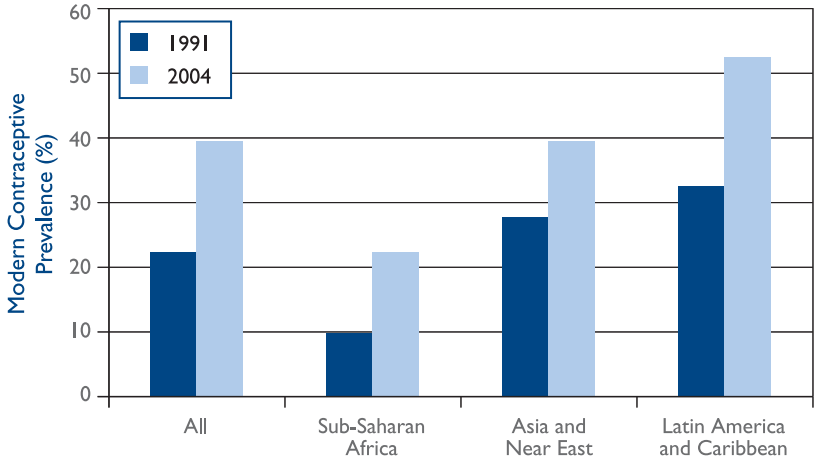
The strategy guiding USAID's FP/RH programming relies on a framework of global leadership in policy, advocacy, and services; generation, organization, and communication of knowledge in response to field needs; and field support for implementing effective and sustainable programs. USAID responds to the needs of countries using the appropriate mix of the following key components of effective family planning programs:

- Service delivery, including training and performance improvement
- Contraceptive availability and logistics
- Health communications
- Biomedical and social science research
- Policy analysis and planning
- Monitoring and evaluation

In 2004, USAID undertook new programs that addressed such issues as private sector involvement, human capacity development, and biomedical research. The FP/RH portfolio also supports special initiatives to address such emerging issues as integrating family planning and HIV/AIDS programs, eradicating female genital cutting, developing guidelines for delivering lifesaving post-abortion care, and promoting male involvement in family planning.

Figure 19

Increases in Contraceptive Use Across 30 USAID-Assisted Countries



Source: Demographic and Health Surveys.

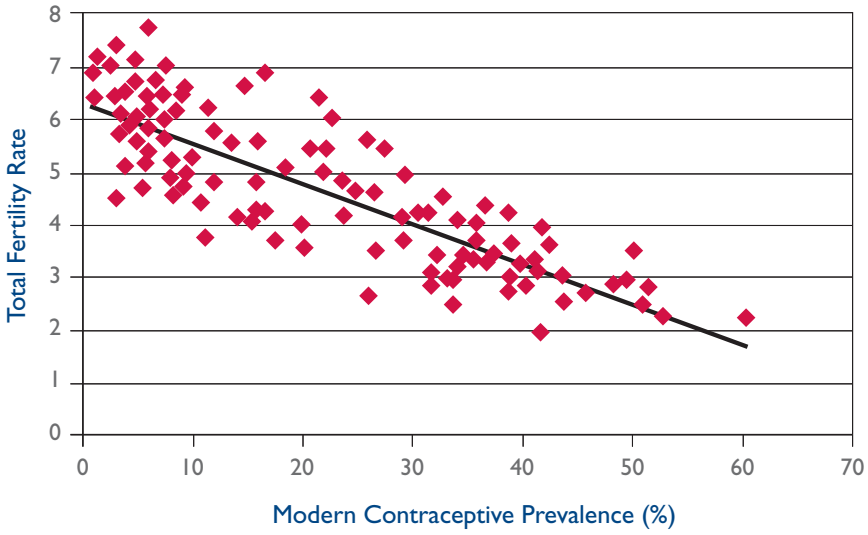
PHOTO: WHO/TBP/DAVENPORT

Interventions and Achievements

Increased contraceptive prevalence. Worldwide, overall modern contraceptive use among married women in 30 USAID-assisted countries increased from 22 to 38 percent between 1991 and 2004 (see figure 19). Among these countries, **Bangladesh** stands out as one of USAID's success stories in family planning programming. Today, virtually all women in Bangladesh are aware of modern family planning methods. About 50 percent of married women use a contraceptive method, up from 8 percent when USAID started supporting the national family program in the mid-1970s. Over the same period, the average number of births per woman dropped from about seven in 1975 to three in 2004.

Figure 20

Relationship Between Use of Modern Contraceptive Methods and Total Fertility in USAID Countries with Available Data



Source: Various Demographic/Reproductive Health Surveys, mid-1980s through early 2000s.

Note: Graph includes multiple survey dates for some countries; data for Armenia 2000 not included.

Increases in contraceptive use reported by other USAID-supported programs in 2004 include:

- *Madagascar* – Contraceptive use among married women in Madagascar increased from 10 to 17 percent in the past five years. Family planning services and commodities, especially long-lasting contraceptives, are being made more available throughout the country by an umbrella association of 11 Malagasy nongovernmental organizations working in communities with technical and managerial support from USAID and other donor-supported projects.
- *Rwanda* – USAID's interventions increased method availability nationwide and increased coverage levels of FP/RH services in seven targeted districts. As a result, more facilities are offering a full range of services every day. Contraceptive prevalence rates, less than 1.5 percent in 2001 in the seven districts, reached as high as 12.6 percent in 2004.
- *Ethiopia* – A 2004 study in Ethiopia showed a contraceptive prevalence rate of 21 percent for all methods and 18.3 percent for modern methods. USAID is seeking innovative ways to increase access to and improve the quality of family plan-

ning services and, to meet growing demand, is supporting a national logistics system for all commodities. In 2004, more than 1,500 frontline workers received training.

- *Romania* – Between 1999 and 2004, use of modern family planning methods increased from 29.5 to 38.2 percent, and the total abortion rate (the average number of abortions a woman has in her lifetime) decreased from 2.2 to 0.84. USAID is working with the government to reach critical underserved populations and to ensure that the gains in voluntary family planning are sustainable when U.S. assistance phases out in 2008.

Decentralized services. USAID supported **Indonesia's** efforts to decentralize the government family planning program under the National Family Planning Coordinating Board. USAID worked closely with stakeholders to develop an early warning and rapid response system to flag family planning system problems and develop rapid solutions. Program areas with USAID family planning activities showed significant progress in meeting quality-of-care standards – infection prevention compliance increased from 19.6 percent in 2002 to 65.1 percent in 2004 and client-provider interaction from 61 percent compliance in 2002 to 85.6 percent in 2004. As a result of USAID assistance, 300 private sector midwives began providing reproductive health services in line with national quality standards.

Commodities and services. USAID works with private providers and pharmaceutical organizations in the **Philippines** to increase the commercial availability of affordable family planning commodities. In 2004, the Well-Family Midwife Clinic Project became a full business franchise operation, distributing commodities as well as providing services. Of the 203 midwife clinics, 75 percent signed a five-year franchise agreement with the Well-Family Midwife Clinic Partnership Foundation. This development ensures that midwife clinics will continue to function as family planning clinics providing services and commodities that meet quality standards.

Contraceptive procurement. USAID's Bureau for Global Health managed more than $90 million for central procurement of contraceptives and condoms (and related activities) and shipped contraceptive commodities valued at almost $80 million to 92 recipients in 56 countries. USAID also negotiated a more favorable price for the injectable contraceptive DepoProvera ($.95 per vial compared with the previous price of $1.03).

Supply chain management. USAID continued to provide global leadership on supply chain management, working in collaboration with multiple donors and international organizations to publish *Guidelines for the Storage of Essential Medicines* and supporting a one-day logistics course that trained more than 400 staff from the World Bank and other partners on ways to improve logistics planning.

Increased FP/RH support in USAID's Europe and Eurasia region

In 2004, USAID used increased funding from redirected United Nations Population Fund (UNFPA) monies to supplement planned activities in Russia, Kazakhstan, Azerbaijan, Georgia, Romania, and Albania. USAID missions designed family planning programs to address these countries' very high abortion rates and low contraceptive prevalence rates. The programs aim to increase availability of and access to family planning service delivery; address severe shortages in contraceptive supplies; broaden the contraceptive method mix; and provide more public information on pregnancy and disease prevention through mass media and other information campaigns.

In Albania, public health policymakers and program managers for the first time have nationally representative data on key indicators, thanks to the Reproductive Health Survey (RHS) implemented by the U.S. Centers for Disease Control and Prevention (CDC) with funding support from the USAID Albania mission and USAID/Washington. This first-ever population-based survey in Albania indicated high unmet need for family planning and low awareness and use of modern contraception. It found, for example, that:

- 68 percent of married women have an unmet need for contraception.
- While 68 percent and 65 percent of women have heard of oral contraceptives and tubal ligation, respectively, no more than one-third of women have heard about other modern methods.
- Only 8 percent of married couples use modern contraception.

In eastern Georgia, USAID extended services to eight new districts to reach an estimated 410,000 people and introduce family planning in more than 100 facilities serving significant numbers of underserved women. Activities included targeted awareness campaigns; training to improve service delivery quality and broaden the choice of methods; placement of a family planning adviser in the Ministry of Health; and initiation of a contraceptive security effort.

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Software for improving commodity management. USAID adapted two software packages (*Supply Chain Manager* and *Pipeline Monitoring and Procurement Planning*) in response to the expressed needs of field program managers, who increasingly work in integrated systems with multiple products. The Pfizer pharmaceutical company found the *Pipeline* software so useful it made it a model for its Diflucan Donation Program's commodity management practices.

Forecasting supply and distribution. USAID's Local Enhancement and Development (LEAD) project in the **Philippines** worked closely with local government units (LGUs) to help them forecast contraceptive supply and distribution. LEAD has provided technical assistance and training to 146 LGUs to improve their capacity to deliver family planning and related health services. To date, 42 LGUs have allocated budget funds for buying contraceptives. In addition, 30 governors have made commitments to fund contraceptives for the LGUs in their provinces.

Promoting male involvement in family planning. A media and communications campaign to promote male involvement in family planning in **Ghana** doubled men's awareness of vasectomy. Half of the men who saw a TV advertisement for clinics offering vasectomy took some sort of action, such as visiting a doctor or health center or discussing the procedure with their partner, wife, or colleagues. The number of vasectomies in a pilot program in Accra increased from four in three months to 24. In seven months, 53 vasectomies were performed, compared with 26 for all of the previous year, and 346 callers requested information from the telephone hotline. The campaign is being replicated for other family planning methods and in other countries.

Natural family planning. Several research studies suggested that the Standard Days method of natural family planning attracts women who rely on less effective traditional methods, have discontinued other methods, or have never used any method.

Monitoring and evaluation. A USAID-supported Measure DHS study, *Profiling Domestic Violence: A Multi-Country Study,* provided insight into the causes and consequences of gender-based violence and how its high prevalence undermines the achievement of reproductive health goals. Another study, *A Focus on Gender: Collected Papers Using DHS Data*, is a collection of papers that provide important insights into methodological issues in measuring household-level gender relations and women's empowerment. The papers attest to the importance of gender equity for achieving demographic and reproductive health goals.

Family planning and maternal/child health. In **Egypt**, the government health care system remains compartmentalized. With USAID assistance, however, the family planning and maternal/child health departments are beginning to work more closely together to provide integrated services. The departments have developed integrated care protocols, supervision systems, and training curricula. At the community level, USAID's program components work in concert to deliver a package of information and services meeting the health care needs of families. In 2004, more than 74,000 men, women, and youth were informed about family planning, maternal/child health, and other health topics.

Family planning and preventing mother-to-child HIV transmission. In **Senegal**, USAID helped the Ministry of Health evaluate its pilot program for preventing mother-to-child HIV transmission (PMTCT) and design and implement a plan for scaling it up. Activities included training for 30 national trainers and the development of PMTCT

Extending services in India

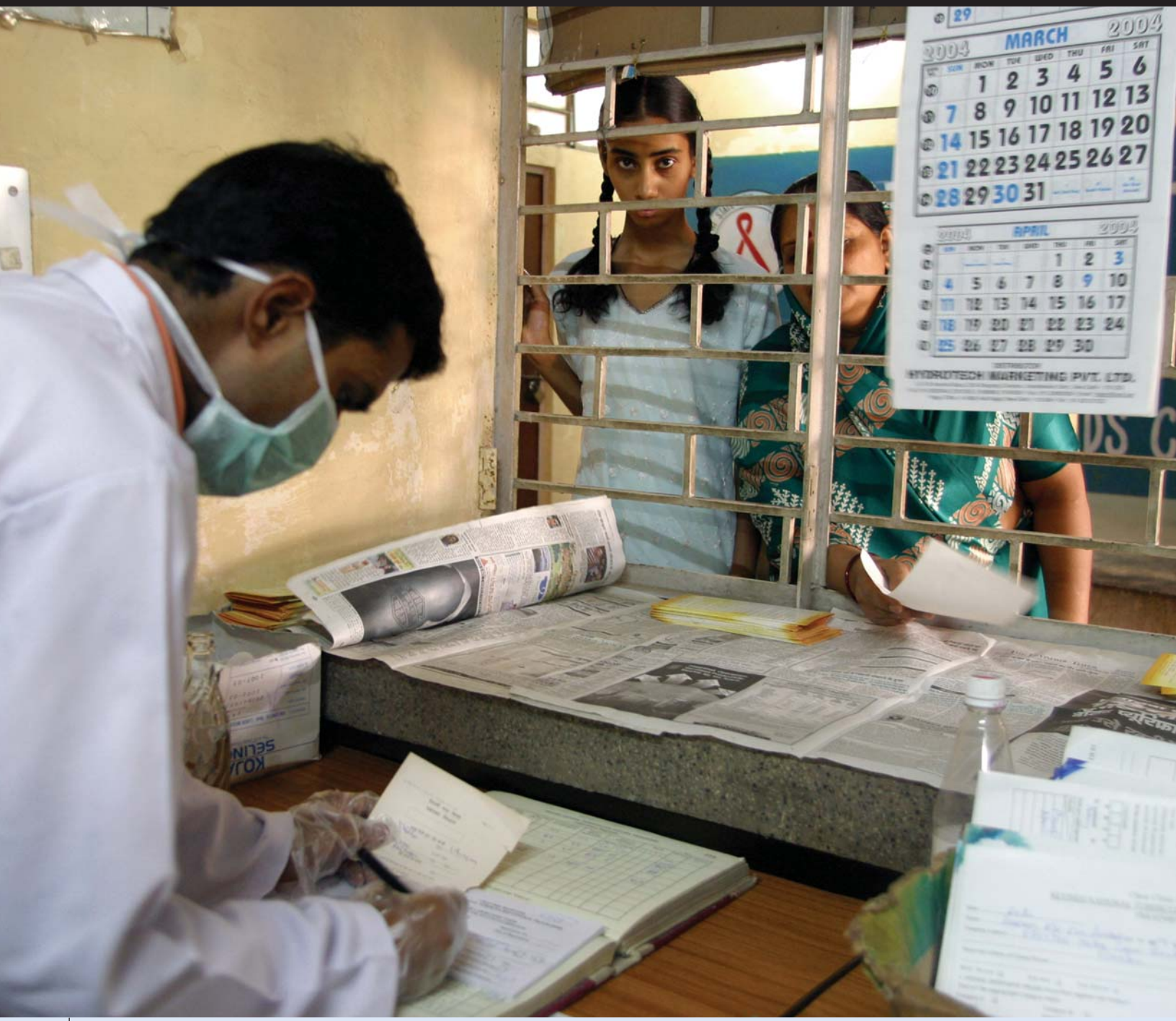
In three states in northern India, home to more than 210 million people, approximately 20 to 25 percent of married women are at risk of unintended pregnancy. In response, USAID has supported the Innovations in Family Planning Services project, one of the largest family planning programs in the world. To improve the supply and quality of family planning services, and access to them, the project formulated district-specific action plans that took into account the unique resources and environments of individual districts. In 2004, the Indian government adopted the district guidelines developed by USAID for use in the national reproductive and child health program. This leverages a significant portion of the $1.7 billion annual program aimed at improving maternal, reproductive, and child health throughout India and greatly increases the impact of USAID's past investments.

PHOTO: WFP/LAURA MELO

manuals. USAID also continued to strengthen the case management of sexually transmitted infections (STIs) through screening of pregnant women and prostitutes. As a result, 139 health care providers are prepared to treat STIs and 110 providers know how to diagnose syphilis and other STIs using a laboratory guide developed with USAID assistance. Antiretroviral drugs, HIV tests, and testing equipment are more widely available due to an improved logistics system. To date, HIV prevalence among pregnant women is still relatively low at 1.5 percent nationwide.

Family planning and HIV/AIDS counseling and testing. **Kenya's** Ministry of Health used USAID-funded research to integrate family planning into HIV/AIDS counseling and testing services. The project, which integrates family planning services at the country's 300 counseling and testing centers, serves as a model for other countries that seek to make high-quality reproductive health and family planning programs as widely available as possible.

V. HEALTH SYSTEMS STRENGTHENING, RESEARCH, AND TECHNICAL INNOVATION



A young TB patient comes to the Jhandawarl DOTS clinic in India to give her sputum sample.

PHOTO: WHO/TBP/GARY HAMPTON

Health Systems Strengthening

PHOTO: © 2003 GERMAIN PASSAMANGTABATI, COURTESY OF PHOTOSHARE

The large-scale delivery of even basic health services requires complex organizations. The clinician treating a patient is supported by systems to provide drugs, finance health services, ensure the quality and efficiency of care, manage the health work force, and provide the information needed to operate effectively.

These systems support all health care, including such USAID priority services as basic child survival and AIDS treatment. Although these priority services depend on these systems, disease-specific assistance cannot easily address them in a sustainable manner, and developing countries cannot duplicate these critical support functions for each individual service.

To a large degree, USAID's strategy for strengthening health systems is based on adapting approaches currently used in the U.S. health system. As in the United States, the design and effectiveness of health systems in developing countries can be evaluated quantitatively. Modern approaches to health systems can produce measurable

Figure 21
USAID Investment in National Health Accounts

Source: Partners for Health Reform*plus* project, 2005.

With USAID assistance, 54 countries have or will have national health accounts, enabling policymakers in ministries of health and finance to make decisions on resource allocations to and within the health sector. More than 40 countries have benefited from the results of USAID's past investment in research in the areas of vitamin A, oral rehydration therapy and zinc treatment for child diarrhea, and postpartum hemorrhage. In contraceptive research, USAID is assisting 25 countries in integrating natural methods of family planning into their health programs.

PHOTO: © 2003 L. GOODSMITH, COURTESY OF PHOTOSHARE

improvements in the short term and provide benefits into the future.

Health care financing. Paying for health care is a pervasive obstacle in USAID-assisted countries. The traditional model of free services provided with general government funds is increasingly ineffective, and out-of-pocket payments for health care, while very common, are also problematic, particularly for the poorest groups. In the **Dominican Republic**, USAID has supported the Ministry of Health's efforts to expand the family health insurance program to cover an additional 250,000 poor people while supporting more efficient services through computerized costing and medical records.

National health insurance. In the **Philippines**, USAID support helped the National Health Insurance Program expand its coverage from 54 percent of the population in 2003 to 77 percent in 2004, thereby adding coverage for 3 million of the country's poorest people. The benefit package was also expanded to pay for DOTS treatment for tuberculosis.

Prepaid health insurance. USAID is helping five districts in **Rwanda** expand community-managed prepaid health insurance organizations. In 2004, membership increased by 135 percent to 275,000. These members use modern health services at six times the rate of nonmembers. A similar program in **Senegal** expanded coverage by 25 percent in 2004, while also building community oversight for health facilities and introducing community outreach in 123 local government areas.

National health accounts. Developing national health accounts (NHAs) allows decision-makers to understand for the first time how health spending is distributed across the health sector. In **Ethiopia**, USAID-supported accounts helped other donors work more effectively. Systematic cost information showed where investments would have the most impact in increasing access to and quality of health services. The accounts also provided the basis for monitoring progress in child survival. With USAID assistance, 53 other countries have or are developing NHAs (see figure 21).

Pharmaceutical management. Drugs and supplies are essential to modern health care, and their availability is central to the way the community views health services. Developing countries need to be able to make good decisions about which drugs to purchase and in what quantity; obtain fair prices; and ensure these critical supplies are effectively distributed and used. In **Senegal**, a USAID-supported survey convinced the Ministry of Health that a partnership with the commercial private sector could help solve the problem of limited availability of oral rehydration salts (ORS) for childhood diarrhea. While not all Ministry facilities had ORS at the time of the survey, the far larger group of commercial outlets had none at all. The Ministry agreed to provide ORS to those outlets to increase access for children in need.

Improving quality and efficiency. Practical guidelines have been developed for all USAID priority services to help providers assess and treat patients according to the best available evidence. USAID adapts these approaches to the needs of developing countries, where wasteful practices and low levels of quality and effectiveness are common. In **Nicaragua**, USAID has supported the introduction of modern quality improvement approaches in half of the country's hospitals that treat children. Preliminary results show that compared with the 2003 baseline level, these hospitals had reductions in 2004 of 86 percent in malaria deaths, 57 percent in deaths due to diarrhea, 50 percent in deaths from dengue hemorrhagic fever and meningococcal meningitis, and 38 percent in pneumonia deaths. Based on these results, the Ministry of Health is introducing national standards based on the improved practices.

Improvement collaboratives. In **Rwanda**, 38 Ministry of Health clinics are using "improvement collaboratives," a quality improvement approach developed in recent years in the United States (see box), to improve the care of children with malaria. An improvement collaborative of the health centers of Kibungo district observed that mothers often brought a child with malaria symptoms to the clinic two or three days after the illness began. However, the risk of

mortality increases steeply after just 24 hours. Teams of local providers and members of the community identified several practical steps that might reduce this delay, and in slightly less than a year the percentage of children brought to the centers within 24 hours approximately doubled.

Human resources planning and management. Health systems budgets typically invest 70 percent or more of their resources in personnel. Recent reviews agree that weak human resources systems have reached a crisis in sub-Saharan Africa and that other regions are moving in the same direction. Long-neglected systems now face a very large increase in workloads as a result of the AIDS pandemic as well as other causes. In **Zambia**, the Central Board of Health requested USAID assistance in planning the human resources component of a major expansion of AIDS-related services using a $20 million grant from the Global Fund to Fight AIDS, Tuberculosis and Malaria. A study of the work force currently providing AIDS services yielded a number of important insights, so that the time required for specific services, such as counseling an HIV-positive woman after testing, can now be used to estimate staffing needs. The study measured the quality of each service and showed that low-cost volunteer counselors performed as well as or better than salaried professionals. On average, only about 60 percent of the messages in the national standards were being delivered. The cost-effectiveness of the provider training given by different organizations varied widely.

Matching health education and service delivery. A common issue in human resources is the lack of coordination between the institutions that educate health personnel and those that deliver health services. Frequently, new graduates are poorly trained in the areas of greatest need. In **Egypt**, USAID supported a national initiative to rewrite core curricula in professional schools to match the needs of the health system. The new curricula were approved by the involved decision-makers and disseminated to medical and nursing school departments.

Improvement collaboratives

Improvement collaboratives were introduced in the U.S. health system about eight years ago and are now widely used to increase quality and efficiency in selected clinical areas. A USAID initiative is adapting this approach for use in 12 developing and middle-income countries.

Following the industry model of quality management, teams of health workers are trained to use simple techniques to study their work practices, develop ideas for improving them, and test the most promising ideas. This strategy has been effective in a wide range of developing countries, including those listed below, in producing measurable improvements.

Current USAID-Supported Improvement Collaboratives

Topic Addressed	Participating Countries
Prevention of mother-to child HIV transmission	Rwanda
Antiretroviral AIDS therapy	Rwanda, Russia
Malaria case management	Rwanda
Essential obstetric care	Ecuador, Honduras, Nicaragua, Benin, Eritrea
Infection prevention	Tanzania
Pediatric hospital care	Eritrea, Guatemala, Malawi, Nicaragua, Niger
Hospital care for pediatric AIDS	Tanzania
Family planning services	Tanzania
Adolescent reproductive health services	Jamaica

The improvement collaborative organizes a group of teams to work together on a single problem area. Typically, teams from about 30 facilities volunteer to work jointly on an issue such as malaria management. Experts provide a model of what level of care is realistic, and each team picks part of the issue to work on. Through frequent organized communications, each team learns from the experience of the others. This organization is intended to motivate health workers. The information sharing increases both the speed and the efficiency of improvement, and the collaborative structure is well suited to spreading improved practices to a wider group of peers.

PHOTO: WHO/TBP/GARY HAMPTON

Demographic and Health Surveys. USAID support for the **Kenya** Demographic and Health Survey (DHS) in 2003 showed that population coverage for childhood immunizations had declined from 65 to 60 percent since 1998, with the percentage of children receiving no vaccinations doubling to 6 percent. These findings were disseminated in the popular press, which also reported the government's resulting commitment to increase funding for immunizations by $3.4 million.

Immunization information. In **Georgia**, USAID supported the development of a new information system for the immunization program. The system virtually eliminated the frequent stock-outs that had affected the program, resulting in increased coverage of major immunizations, including an increase in hepatitis B coverage from 48 to 69 percent.

Research and Technical Innovation

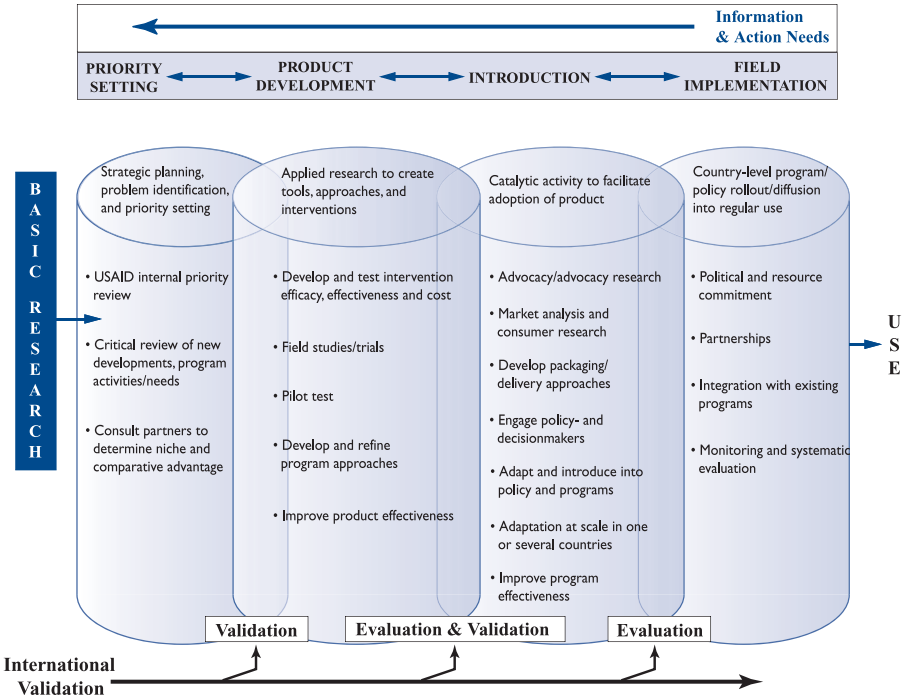
PHOTO: WHO/TB/P.DAVENPORT

USAID remains a leader in developing and implementing effective low-cost public health programs by maintaining a close connection between field program implementation and investments in research. As seen in figure 22, USAID supports research and the introduction, adaptation, and widespread use of evidence-based programs, services, policies, and interventions in host countries.

Past USAID investments have led to cost-effective technologies and approaches in oral rehydration therapy, antenatal care and delivery, rapid diagnostics for sexually transmitted infections, and the use of vitamin A to enhance child survival. As requested by Congress, a full report describing USAID health-related research and development activities will be submitted in 2005.

Figure 22

Pathway from Research to Field Implementation and Use



Source: USAID.

A key to USAID's successes in research and development has been its ability to partner at different stages of the "research to use pathway" with the National Institutes of Health, the Centers for Disease Control and Prevention, the Department of Defense, host governments, UNICEF, WHO, universities, nongovernmental and private voluntary organizations, manufacturers, marketing groups, and other private sector groups.

A pioneer in results monitoring, USAID routinely collects and analyzes data to improve program performance and assess progress toward achieving global impacts. USAID has taken the lead in developing indicators and methodologies for evaluating health sector programs and trends. The USAID-supported Demographic and Health Surveys, a continuously refined series of survey programs that began more than 25 years ago, are recognized as the best source of worldwide data in the international health sector. Other donors and international agencies rely heavily on these data and analyses for program planning and evaluation.

Recent USAID-supported research activities and technical innovations have addressed:

- Microbicides

PHOTO: © 1997 JENNIFER NADEAU, COURTESY OF PHOTOSHARE

- Tuberculosis
- Antibiotic treatment
- Use of zinc in treating diarrhea
- Vaccine research
- Malnutrition
- Contraceptive development
- Operations research
- Other research successes, referenced throughout this report

Economic costs of HIV/AIDS. Numerous researchers, business organizations, government agencies, and policy analysts have adopted a business model, developed with USAID support, for estimating the costs of HIV/AIDS to private and public sector organizations in Africa. Under the USAID-funded Right to Care program in the private sector, the model and its application prompted many firms to increase the HIV benefits they offer to their employees.

Microbicides. USAID continues to be a leader in developing and testing female-controlled chemical barrier methods for HIV prevention. Two products are in phase III clinical trials. A third product is slated to enter phase III trials, and innovative behavioral research is examining issues of acceptability, community preparedness, and service delivery.

Use of antibiotics. Based on USAID-supported research and the recommendations of an expert meeting, WHO has released guidelines recommending governments eliminate the use of naladixic acid in treating dysentery and shigellosis. This recommendation will help reduce antimicrobial resistance and preserve the effectiveness of the existing treatment, which is both inexpensive and widely available, during dysentery outbreaks in complex emergencies in Africa.

Multicountry trials for pneumonia treatment. USAID supported multicountry trials that developed new interventions and updated WHO guidelines for treating childhood pneumonia. The research findings and evidence helped develop treatment approaches that also reduce antimicrobial resistance. Important research results included the recommendation that oral amoxicillin be given twice daily instead of three times (thereby improving ease of treatment) and the finding that oral antibiotics are as effective as injectable antibiotics in treating severe pneumonia. Efforts are under way to test whether oral antibiotic treatment can be extended to community settings, which would reduce cost and extend treatment to underserved populations.

Use of zinc in treating diarrhea. USAID is a leader in technical interventions to combat diarrheal diseases, which continue to be a signficant killer of children worldwide. One important issue concerns both the formal and informal drug sectors, where there are pressures and incentives to provide antibiotics to treat diarrhea, even when they are not needed. Research in **Bangladesh** has demonstrated that zinc is an acceptable substitute for antibiotics. This information is helping to guide the global roll-out of zinc treatment, which reduces the severity and duration of diarrhea (see page 47).

Vaccine delivery. Inadvertent freezing of vaccines during distribution is a widespread problem that can reduce vaccine potency and compromise the effectiveness of immunization programs. To document the severity of the problem, USAID's HealthTech program conducted temperature-monitoring studies in **Indonesia**, **Vietnam**, and **Mozambique**. Results demonstrated levels of cold chain freezing between 75 and 100 percent, and all three countries are updating their procedures, training, and equipment. A report of the Indonesia results in the

PHOTO: WFP/ANJA DUTOIT

WHO Bulletin helped increase global awareness of the problem.

Vitamin A. Until recently there was no tool outside of the laboratory to determine the magnitude and spread of vitamin A deficiency. USAID has helped develop a new test, the retinol-binding protein enzyme immunoassay (RBP-EIA), for field monitoring of vitamin A deficiency and recognizing at-risk populations. The test produces data rapidly and will reduce costly reliance on centralized laboratories. By the end of 2005, the RBP-EIA should be commercially available at affordable prices for use in low-resource settings.

Natural family planning. USAID is the largest bilateral donor in the field of contraceptive research and development. Two new modern methods of natural family planning (the "Standard Days" method and the "TwoDay" method) recently completed clinical trials that showed them to be more than 95 percent effective when used properly. At least 25 countries are integrating these methods into their family planning and health programs.

Combating neonatal mortality. Despite the significant burden of neonatal mortality, there are few effective community-level interventions available for treating newborns. Ongoing studies in **Nepal**, **Bangladesh**, and **Pakistan** are identifying the etiology of illness and developing potential interventions. These efforts suggest that simple community-based behavioral interventions are a feasible first step that can significantly reduce neonatal mortality. When they are completed, these studies will provide effective alternatives to seeking care from the informal marketplace, or seeking no care at all, for sick newborns.

VI. NEW STRATEGIC APPROACHES

Interventions that benefit the most vulnerable populations are especially critical during humanitarian emergencies.

PHOTO: © 2001 EVA CANOUTAS, COURTESY OF PHOTOSHARE

USAID continued to adapt its approaches to different national circumstances and stages of development. As a result, USAID is better able to assist countries facing complex humanitarian emergencies and help selected countries confront the growing disease burden posed by noncommunicable diseases.

New opportunities in the health sector are a direct result of changing demographics, epidemiology, and diversity in developing-country populations. Accordingly, USAID articulates goals and objectives that vary according to differing needs and to a country's readiness to advance through transformational development. This assistance life cycle approach to health programming, nascent programming on noncommunicable diseases and injuries, and a renewed emphasis on expanding effective programs to national scale for development impact are areas where USAID is adapting to changing circumstances in the developing world.

Assistance Life Cycle

The assistance life cycle approach can be summarized as follows:

- In **humanitarian emergencies**, the emphasis is on working with private voluntary and nongovernmental organization (PVO/NGO) partners to provide rapid delivery of lifesaving measures, including potable water, nutritious food, infectious disease prevention, and treatment of injuries.
- In **fragile states**, the priority is to increase institutional capacity to deliver essential health services, largely in partnership with NGOs. Equity across ethnic groups is an explicit concern in access and delivery of health services. The programmatic focus in these countries is on the core family health interventions – child survival, maternal health, and family planning, with prevention and treatment of infectious diseases, including HIV/AIDS, based on local epidemiology.
- In **lower-income transformational development states**, the above priorities for fragile states remain significant but emphasis is also given to developing functional public and private sector health systems; undertaking health policy reform; generating health data for monitoring and evaluation; building human capacity in the health sector; and improving the quality and sustainability of health services.
- In **middle-income transformational states and transition countries**, core family health activities continue, but consideration of "graduation" from such programs will be measured against technical criteria now under development. USAID health assistance in these countries focuses on scaling up basic health services targeted to underserved populations; strengthening the role of private sector health care providers; and building sustainable public sector health systems that will enable an orderly transition from USAID assistance to host-country financing of health costs. To the extent that data show that the burden of disease is shifting toward chronic and noncommunicable diseases, such as heart disease, diabetes, and AIDS, USAID assistance will help the health system respond appropriately. This could include improving the coordination of public and private sector providers, implementing prevention strategies, developing better financing mechanisms, and controlling costs.
- **Global and transnational health issues** include the global fight against HIV/AIDS and other significant infectious diseases like malaria and TB. USAID is cooperating closely on these programs with other U.S. agencies and international partners to mount effective prevention, treatment, and mitigation programs. USAID allocates funds for these programs to countries where they can have the greatest public health impact.

Among these categories, health programming for humanitarian emergencies and fragile states has seen the most progress. Complex humanitarian emergencies (a term to describe

PHOTO: WFP/JENNIFER ABRAHAMSON

conditions when democratic collapse, reform crisis, corruption, rebellion, civil strife, war, or political conflict pose major threats to human life and health) affect about 120 million people worldwide. Higher mortality rates, especially among the most vulnerable – notably women of childbearing age and children less than 5 years old – characterize these adverse circumstances. Among refugees and internally displaced populations, common causes of death include diarrheal diseases, acute respiratory infections, measles, and other common preventable infectious diseases. Pre-existing malnutrition, high rates of TB and/or HIV/AIDS, and weak health delivery systems further compromise countries in complex humanitarian emergencies and magnify the threats to health.

In such settings, USAID uses its leadership and technical expertise in child survival and health to reduce mortality and other adverse outcomes in the most vulnerable groups and to control key infectious diseases. Moreover, it ensures coordination between the emergency humanitarian response and recovery and rehabilitation efforts in fragile states. Three key strategies help achieve these results:

- *Developing evidence-based approaches and tools* to address health needs in disadvantaged populations. These include practical and scientifically sound interventions such as new emergency and state-of-the-art food products designed to meet the caloric and micronutrient requirements of special groups (e.g., those infected and affected by HIV/AIDS) and zinc as an adjunct treatment to oral rehydration therapy for childhood diarrhea in high-mortality areas.
- *Involving communities in their own health care* to promote sustainability of health improvements, including community therapeutic care (CTC), a new approach to emergency feeding that uses locally produced ready-to-use foods. USAID-supported results monitoring shows that CTC achieves greater impact than traditional therapeutic feeding centers in emergency situations and has generated momentum to review WHO guidelines and protocols for managing acute malnutrition. In **Iraq**, community engagement has improved infant feeding. Under the Food for Peace program, analysis of infant feeding practices and health worker training in appropriate practices have reversed the increases in diarrhea and mortality in children under age 5 that occurred during the Oil for Food program.
- *Breaking down the barriers* between relief and health development is essential to meeting the evolving health needs of fragile countries. USAID missions, with the assistance of various Agency bureaus and offices, have carefully planned transitions for the **Democratic Republic of the Congo**, southern **Sudan**, and **Liberia**, addressing humanitarian and transition assistance, conflict mitigation, food security, and democracy and governance. Joint strategies, with feasible and timely health and conflict mitigation/management, have also been developed for **Burundi**, **Nicaragua**, **Nepal**, and **Nigeria**.

Noncommunicable Diseases and Injuries

With the exception of sub-Saharan Africa, there has been a sustained worldwide decline in the disease burden of acute infectious diseases. Health systems in USAID-assisted countries will increasingly face health problems that require service delivery strategies fundamentally different from those currently in place. The central new challenge involves the care of chronic noncommunicable diseases and injuries (NCDIs).*

The care of an illness that may last for years requires improved coordination of different kinds of providers for needs that vary over time. U.S. chronic disease experts estimate that about 80 percent of the health care needs of a patient with a chronic disease should be met by nonprofessionals, particularly the educated patient and family. Issues of prevention grow in importance, along with the efficient use of costly professionals and facilities. Medical records systems need to be improved, along with communication among providers. Most developing-country health systems have not developed strategies to address this kind of care. Drawing on U.S. research and expertise

* Noncommunicable diseases and injuries account for 67 percent of global deaths of people between ages 15 and 59 and almost half of the global burden of disease. By 2020, WHO estimates they will account for 70 percent of the global burden of disease. They include cardiovascular disease, cancer, respiratory disease, diabetes, mental illness, accidental injury, disabilities, suicide, and injury resulting from sexual and domestic violence. The most prominent are linked to common risk factors, namely tobacco and alcohol use, unhealthy diet, physical inactivity, and environmental carcinogens.

in chronic disease, WHO has developed a comprehensive model for developing countries to adapt.

The need to develop effective approaches to chronic diseases is clearest and most urgent for AIDS. With expanding availability of effective treatment, AIDS is becoming a chronic infectious disease. The health system features needed to deal effectively with chronic AIDS patients are similar to those needed to deal with a growing burden of noncommunicable diseases and injuries. A diverse group of long-term conditions are challenging health systems to become proactive and efficient in addressing these problems.

The majority of NCDI-related death, disability, and illness occurs in low- and middle-income countries, and NCDIs strike disproportionately at poor and marginalized populations. These patterns contribute to widening health gaps between and within countries, to increased threats to national work forces and socioeconomic development, and to increased human suffering. While acute infectious diseases remain important, developing countries are currently spending scarce resources on chronic and noncommunicable diseases and injuries, and these investments are expected to grow.

USAID's approach to this growing disease burden focuses on providing the knowledge and insights countries need to respond to this new and difficult challenge. Rather than emphasize the provision of material resources, USAID will offer guidance to developing countries to make better use of their own resources and seek to build their system capacity to deal with NCDIs. For example, the management of noncommunicable diseases such as diabetes, cancer, and heart disease all require coordination among hospitals and community support organizations. Expertise in achieving such coordination is needed, supported by expertise in the individual diseases.

USAID's initial work in this area will include evaluation of cost-effective interventions, research, surveillance, gender analyses, advocacy, monitoring and evaluation tools, and replication of proven approaches to reduce NCDIs that pose the greatest public health burden on working-age populations. From the outset, strategic approaches will emphasize:

- Prevention activities, including the reduction of major risk factors
- Promotion of individual and community responsibility for health
- Strong links to health system reforms and other health programs, including HIV/AIDS, maternal health, and reproductive health programs

USAID-supported activities in noncommunicable diseases and injuries

Russia – A program in Dubna to train care providers and patients in diabetes identification and self-management resulted in 25 to 30 percent declines in average insulin doses, a 60 percent decrease in hospitalizations, and a 40 percent decrease in care-related costs. In another program, no deaths or progression of eclampsia occurred among women with pregnancy-induced hypertension. Hospitalizations decreased by 61 percent, and the cost of care by 87 percent. A program on asthma treatment and management reduced the number of emergency ambulance calls by half and the percentage of hospital admissions by three-quarters. More than 40 percent of patients showed a decrease in daytime and nighttime symptoms, and overall patient satisfaction with disease control doubled.

Kosovo – A primary health care partnership has implemented management strategies for chronic disease prevention and treatment and developed a sustainable community-based program of chronic disease screening. The program focused on hypertension and identified 185 hypertensive patients. An initial assessment found that patients' mean blood pressure readings decreased after they received treatment.

Egypt – Through a public-private partnership with Procter & Gamble, a USAID-supported initiative is reaching a target population of 28 million with information on lowering the risk of chronic and noncommunicable diseases. The initiative uses free television and radio time provided by the Ministry of Information.

Rwanda – The country's major referral hospital has used modern quality improvement methods to improve the care of seriously injured victims of automobile accidents. By reorganizing emergency room procedures and staff schedules, the hospital documented a measurable decline in case fatality rates.

Expanding Program Impact

USAID recognizes there are urgent needs for health programming at all stages of economic and social development, from humanitarian assistance to transformational development to transition and "graduation." These needs range from the familiar elements of family health (child survival, maternal health, and family planning); to the cross-border threats of infectious diseases (especially HIV/AIDS); to

continued support for health systems where they will increase program impact; to selective work on noncommunicable diseases and injuries where the evidence shows them to be of major importance to health. USAID is currently updating its health strategic framework to continue its global leadership in proven interventions and to phase in new evidence-based programs, especially those important for workforce health and productivity.

As USAID broadens its portfolio to include the new problems that changing conditions bring, it will remain steadfast in its commitments to its core areas of HIV/AIDS; infectious diseases; child survival and maternal health; family planning and reproductive health; and health systems, research, and technical innovation. Through coordinated approaches with its many partners worldwide, the Agency will continue to develop effective health programs and expand their implementation from the local to the national, regional, and global levels so that they achieve long-lasting and sustainable impacts. These activities will not only benefit the people of the developing world – in an increasingly globalized world, they will also protect the security, health, and welfare of the people of the United States. In addition, they will present to people in developing countries the generosity of the United States and its efforts – through USAID, other government agencies, and private organizations – to improve the present and future prospects of millions of people worldwide.

PHOTO: WFP/LORI WASELCHUK

FINANCIAL ANNEX

FUNDING TABLES

Table 1: FY 2004 USAID Total Health Budget by Program Category and Bureau

($ Thousands)

Program Category	AFR	ANE	E&E	LAC	DCHA	GH	Int'l Partners	PPC	Total
Child Survival & Maternal Health	80,589	158,799	25,283	47,390	50	66,036	64,190	594	442,931
Vulnerable Children	5,060	10,900	8,191	1,835	8,275	1,760	-	-	36,021
HIV/AIDS	392,230	81,924	27,594	51,289	-	144,959	502,701	1,440	1,202,137
Infectious Diseases	63,500	36,579	12,038	21,810	-	65,460	-	1,150	200,537
Family Planning & Reproductive Health	99,190	122,720	20,590	50,000	-	130,200	5,250	1,500	429,450
Total	640,569	410,922	93,696	172,324	8,325	408,415	572,141	4,684	2,311,076

Table 2: FY 2004 Child Survival and Health Account Funds by Program Category and Bureau

($ Thousands)

Program Category	AFR	ANE	E&E	LAC	DCHA	GH	Int'l Partners	PPC	Total
Child Survival & Maternal Health	78,589	79,550	-	39,040	50	66,036	64,190	594	328,049
Vulnerable Children	5,060	10,900	-	1,835	8,275	1,760	-	-	27,830
HIV/AIDS	231,000	66,200	6,000	38,400	-	65,350	502,701	1,440	911,091
Infectious Diseases	63,500	32,690	-	21,110	-	65,460	-	1,150	183,910
Family Planning & Reproductive Health	99,190	92,400	-	50,000	-	130,200	-	1,500	373,290
Total	477,339	281,740	6,000	150,385	8,325	328,806	566,891	4,684	1,824,170

Table 3: FY 2004 Child Survival and Health Account Funds by Program Category, Subcategory, and Country

($ Thousands)

Bureau/Country	CS/MH		VC	HIV/AIDS	Infectious Diseases			FP/RH	Total
	Primary Causes*	Polio	Vulnerable Children	HIV/AIDS	TB	Malaria	Anti-microbial Resistance, Surveillance, & Other ID	Family Planning & Reproductive Health	
AFRICA									
Angola	1,200	1,500	1,000	2,500	400	1,000	-	500	8,100
Benin	1,250	100	-	2,000	-	2,000	-	2,200	7,550
Burundi	200	-	-	-	-	500	-	-	700
Congo, Dem. Rep of	5,900	2,125	1,000	3,779	1,400	2,900	400	4,900	22,404
Eritrea	1,600	-	-	2,300	-	600	-	500	5,000
Ethiopia	4,600	-	300	16,500	1,200	2,000	800	8,200	33,600
Ghana	2,700	500	-	7,000	500	1,000	500	6,420	18,620
Guinea	2,150	-	-	2,200	-	-	-	2,000	6,350
Kenya	1,000	-	-	22,277	1,500	1,200	-	8,900	34,877
Liberia	1,200	-	719	-	-	300	-	600	2,819
Madagascar	2,750	75	-	2,000	-	2,000	-	3,540	10,365
Malawi	2,200	-	-	11,500	1,400	1,500	-	3,200	19,800
Mali	2,900	-	-	4,000	-	1,800	-	5,500	14,200
Mozambique	3,500	-	-	10,550	-	1,500	230	4,600	20,380
Namibia	-	-	-	3,965	-	-	-	-	3,965
Nigeria	3,000	4,000	-	7,608	1,600	2,400	-	13,600	32,208
Rwanda	1,100	-	-	8,500	-	1,000	-	2,700	13,300
Senegal	2,500	-	-	6,000	800	2,500	-	2,875	14,675
Sierra Leone	100	-	-	-	-	-	-	-	100
Somalia	100	-	-	-	-	-	-	-	100
South Africa	2,000	-	-	25,700	2,000	-	-	1,328	31,028
Sudan	6,700	500	-	-	500	2,000	800	1,000	11,500
Tanzania	2,500	-	-	12,500	-	1,300	800	5,900	23,000
Uganda	2,260	-	1,060	23,000	1,900	3,000	-	4,800	36,020
Zambia	4,420	-	681	22,500	-	4,000	-	3,200	34,801
Zimbabwe	-	-	-	9,900	-	-	-	1,200	11,100
AFR/DP	-		300	-	-	-	-	-	300
AFR/SD	5,659	4,100	-	2,971	2,160	2,610	3,500	1,727	22,727
REDSO/ESA	1,400	100	-	6,500	500	2,000	-	2,000	12,500
Southern Africa Regional	-	-	-	5,950	-	-	-	-	5,950
WARP	700	-	-	9,300	-	1,500	-	7,800	19,300
Total	65,589	13,000	5,060	231,000	15,860	40,610	7,030	99,190	477,339

Source: USAID, Bureau for Policy and Program Coordination, Office of Strategic and Performance Planning

* The heading "Primary Causes" has replaced the "Child Survival and Maternal Health" subcategory heading included in previous years' reports to more accurately reflect the structure of the Child Survival and Health Account.

Table 3 *(cont.)*: FY 2004 Child Survival and Health Account Funds by Program Category, Subcategory, and Country

($ Thousands)

Bureau/Country	CS/MH		VC	HIV/AIDS	Infectious Diseases			FP/RH	Total
	Primary Causes*	Polio	Vulnerable Children	HIV/AIDS	TB	Malaria	Anti-microbial Resistance, Surveillance, & Other ID	Family Planning & Reproductive Health	
ASIA/NEAR EAST									
Afghanistan	14,870	2,000	4,830	-	600	400	-	8,300	31,000
Bangladesh	9,800	1,000	1,000	3,700	-	-	-	20,000	35,500
Burma	-	-	-	-	-	-	-	-	-
Cambodia	4,690	-	1,170	13,800	3,800	1,400	1,800	2,700	29,360
India	7,300	5,300	-	13,500	4,800	400	2,500	14,000	47,800
Indonesia	10,800	600	1,000	9,000	3,200	700	-	7,700	33,000
Laos	-	-	-	-	-	-	-	-	-
Nepal	4,540	500	1,000	8,700	-	700	1,500	7,900	24,840
Pakistan	9,500	2,100	-	900	600	-	-	12,500	25,600
Philippines	4,700	-	-	1,500	4,150	-	-	18,500	28,850
Sri Lanka	-	-	300	-	-	-	-	-	300
Thailand	-	-	-	-	-	-	-	-	-
Vietnam	-	-	-	-	-	-	-	-	-
ANE Regional	1,350	500	1,600	15,100	1,850	1,950	2,340	800	25,490
Total	67,550	12,000	10,900	66,200	19,000	5,550	8,140	92,400	281,740
EUROPE AND EURASIA									
Russia	-	-	-	3,000	-	-	-	-	3,000
Ukraine	-	-	-	1,750	-	-	-	-	1,750
CAR Regional	-	-	-	1,000	-	-	-	-	1,000
Europe Regional	-	-	-	250	-	-	-	-	250
Total	-	-	-	6,000	-	-	-	-	6,000

Source: USAID, Bureau for Policy and Program Coordination, Office of Strategic and Performance Planning

* The heading "Primary Causes" has replaced the "Child Survival and Maternal Health" subcategory heading included in previous years' reports to more accurately reflect the structure of the Child Survival and Health Account.

Table 3 *(cont.)*: FY 2004 Child Survival and Health Account Funds by Program Category, Subcategory, and Country

($ Thousands)

Bureau/Country	CS/MH		VC	HIV/AIDS	Infectious Diseases			FP/RH	Total
	Primary Causes*	Polio	Vulnerable Children	HIV/AIDS	TB	Malaria	Anti-microbial Resistance, Surveillance, & Other ID	Family Planning & Reproductive Health	
LATIN AMERICA AND THE CARIBBEAN									
Bolivia	4,475	-	-	900	400	600	584	7,611	14,570
Brazil	-	-	1,000	6,050	2,090	-	-	-	9,140
Dominican Republic	4,000	-	535	5,300	1,300	-	-	2,031	13,166
El Salvador	2,700	-	-	500	350	-	-	3,600	7,150
G/CAP	-	-	-	-	-	-	-	-	-
Guatemala	4,150	-	-	500	-	-	-	6,750	11,400
Guyana	-	-	-	1,700	-	-	-	-	1,700
Haiti	8,550	-	-	5,200	1,800	680	53	6,500	22,783
Honduras	3,142	-	-	4,200	400	285	-	4,750	12,777
Jamaica	544	-	-	1,300	-	-	527	2,250	4,621
Mexico	-	-	-	2,200	1,500	-	-	-	3,700
Nicaragua	3,000	-	-	500	-	-	435	3,870	7,805
Paraguay	-	-	-	-	-	-	-	2,325	2,325
Peru	5,450	-	300	1,000	500	800	1,184	8,348	17,582
Central America	-		-	4,950	-	-	-	-	4,950
Caribbean Regional	124	-	-	3,733	-	-	172	-	4,029
LAC/RSD-SPO	2,905	-	-	367	3,660	1,755	2,035	1,965	12,687
Total	39,040	-	1,835	38,400	12,000	4,120	4,990	50,000	150,385
CENTRAL PROGRAMS									
Admin Expenses	-	-	-	5,960	-	-	-	-	5,960
DCHA	50	-	8,275	-	-	-	-	-	8,325
Global Health	63,716	2,320	1,760	65,350	26,700	29,350	9,410	130,200	328,806
PPC	594	-	-	1,440	1,150	-	-	1,500	4,684
Total	64,360	2,320	10,035	72,750	27,850	29,350	9,410	131,700	347,775

Source: USAID, Bureau for Policy and Program Coordination, Office of Strategic and Performance Planning

* The heading "Primary Causes" has replaced the "Child Survival and Maternal Health" subcategory heading included in previous years' reports to more accurately reflect the structure of the Child Survival and Health Account.

Table 3 *(cont.)*: FY 2004 Child Survival and Health Account Funds by Program Category, Subcategory, and Country

($ Thousands)

Bureau/Country	CS/MH		VC	HIV/AIDS	Infectious Diseases			FP/RH	Total
	Primary Causes*	Polio	Vulnerable Children	HIV/AIDS	TB	Malaria	Anti-microbial Resistance, Surveillance, & Other ID	Family Planning & Reproductive Health	
INTERNATIONAL PARTNERSHIPS									
CPF	-	-	-	27,801	-	-	-	-	27,801
GAIN	2,560	-	-	-	-	-	-	-	2,560
GAVI	59,640	-	-	-	-	-	-	-	59,640
Global Fund	-	-	-	397,640	-	-	-	-	397,640
IAVI	-	-	-	23,580	-	-	-	-	23,580
Iodine Deficiency Disorder	1,990	-	-	-	-	-	-	-	1,990
Microbicides	-	-	-	21,870	-	-	-	-	21,870
UNAIDS	-	-	-	25,850	-	-	-	-	25,850
Total	64,190	-	-	496,741	-	-	-	-	560,931
Grand Total: CSH	**300,729**	**27,320**	**27,830**	**911,091**	**74,710**	**79,630**	**29,570**	**373,290**	**1,824,170**

Source: USAID, Bureau for Policy and Program Coordination, Office of Strategic and Performance Planning

* The heading "Primary Causes" has replaced the "Child Survival and Maternal Health" subcategory heading included in previous years' reports to more accurately reflect the structure of the Child Survival and Health Account.

Table 4: FY 2004 USAID Health Budget from Other Accounts by Program Category, Subcategory, and Country

($ Thousands)

Bureau/Country	CS/MH		VC	HIV/AIDS	Infectious Diseases			FP/RH	Total
	Primary Causes*	Polio	Vulnerable Children	HIV/AIDS	TB	Malaria	Anti-microbial Resistance, Surveillance, & Other ID	Family Planning & Reproductive Health	
AFRICA									
Angola	-	-	-	1,000	-	-	-	-	1,000
Botswana	-	-	-	177	-	-	-	-	177
Cote d'Ivoire	-	-	-	1,143	-	-	-	-	1,143
Ethopia	-	-	-	7,799	-	-	-	-	7,799
Kenya	-	-	-	19,818	-	-	-	-	19,818
Malawi	-	-	-	-	-	-	-	-	-
Mozambique	-	-	-	5,041	-	-	-	-	5,041
Namibia	-	-	-	7,836	-	-	-	-	7,836
Nigeria	-	2,000	-	15,582	-	-	-	-	17,582
Rwanda	-	-	-	10,589	-	-	-	-	10,589
South Africa	-	-	-	14,152	-	-	-	-	14,152
Sudan	-	-	-	2,000	-	-	-	-	2,000
Tanzania	-	-	-	13,080	-	-	-	-	13,080
Uganda	-	-	-	26,567	-	-	-	-	26,567
Zambia	-	-	-	24,095	-	-	-	-	24,095
Southern Africa Regional	-	-	-	2,350	-	-	-	-	2,350
Sub-Saharan Africa (PL 480)	-	-	-	10,000	-	-	-	-	10,000
Total	-	2,000	-	161,230	-	-	-	-	163,230
ASIA/NEAR EAST									
Afghanistan	47,844	-	-	-	-	-	-	1,156	49,000
Burma	2,000	-	-	1,000	100	100	1,172	-	4,372
Cambodia	-	-	-	1,000	-	-	-	-	1,000
Egypt	11,805	1,000	-	1,212	345	-	2,172	13,436	29,970
India	-	-	-	2,000	-	-	-	-	2,000
Jordan	11,300	-	-	400	-	-	-	9,500	21,200
Reg. Dev. Mission	-	-	-	9,300	-	-	-	-	9,300
Sri Lanka	250	-	-	750	-	-	-	-	1,000
West Bank/Gaza	2,480	-	-	62	-	-	-	3,658	6,200
Yemen	2,570	-	-	-	-	-	-	2,570	5,140
Total	78,249	1,000	-	15,724	445	100	3,344	30,320	129,182

Source: USAID, Bureau for Policy and Program Coordination, Office of Strategic and Performance Planning

* The heading "Primary Causes" has replaced the "Child Survival and Maternal Health" subcategory heading included in previous years' reports to more accurately reflect the structure of the Child Survival and Health Account.

Table 4 *(cont.)*: FY 2004 USAID Health Budget from Other Accounts by Program Category, Subcategory, and Country

($ Thousands)

Bureau/Country	CS/MH		VC	HIV/AIDS	Infectious Diseases			FP/RH	Total
	Primary Causes*	Polio	Vulnerable Children	HIV/AIDS	TB	Malaria	Anti-microbial Resistance, Surveillance, & Other ID	Family Planning & Reproductive Health	
EUROPE AND EURASIA									
Albania	1,425	-	-	525	200	-	-	300	2,450
Armenia	3,545	-	392	304	149	-	390	939	5,719
Azerbaijan	663	-	794	-	-	-	-	2,083	3,540
Belarus	-	-	-	1,000	-	-	-	-	1,000
Bosnia	-	-	1,459	-	-	-	-	-	1,459
Bulgaria	-	-	-	-	-	-	-	983	983
Georgia	1,928	-	-	380	-	-	753	529	3,590
Kazakhstan	2,841	-	-	550	180	-	-	1,175	4,746
Kosovo	-	-	200	250	150	-	-	-	600
Kyrgyzstan	2,439	-	-	855	600	107	-	987	4,988
Macedonia	-	-	-	100	-	-	-	-	100
Moldova	-	-	-	1,481	933	-	-	600	3,014
Montenegro	-	-	-	-	-	-	-	500	500
Romania	-	-	3,185	600	-	-	-	1,850	5,635
Russia	320	-	2,106	7,058	3,595	-	581	3,560	17,220
Serbia	-	-	-	-	-	-	-	1,500	1,500
Tajikistan	2,257	-	-	1,600	820	45	-	543	5,265
Turkmenistan	797	-	-	125	315	-	-	303	1,540
Ukraine	2,365	-	-	3,704	1,000	-	250	1,986	9,305
Uzbekistan	4,411	-	-	250	910	-	-	1,790	7,361
CAR Regional	450	-	-	-	150	-	-	-	600
Eurasia Regional	1,294	-	37	2,019	617	-	-	595	4,562
Europe Regional	548	-	18	793	293	-	-	367	2,019
Total	25,283	-	8,191	21,594	9,912	152	1,974	20,590	87,696

Source: USAID, Bureau for Policy and Program Coordination, Office of Strategic and Performance Planning

* The heading "Primary Causes" has replaced the "Child Survival and Maternal Health" subcategory heading included in previous years' reports to more accurately reflect the structure of the Child Survival and Health Account.

Table 4 *(cont.)*: FY 2004 USAID Health Budget from Other Accounts by Program Category, Subcategory, and Country

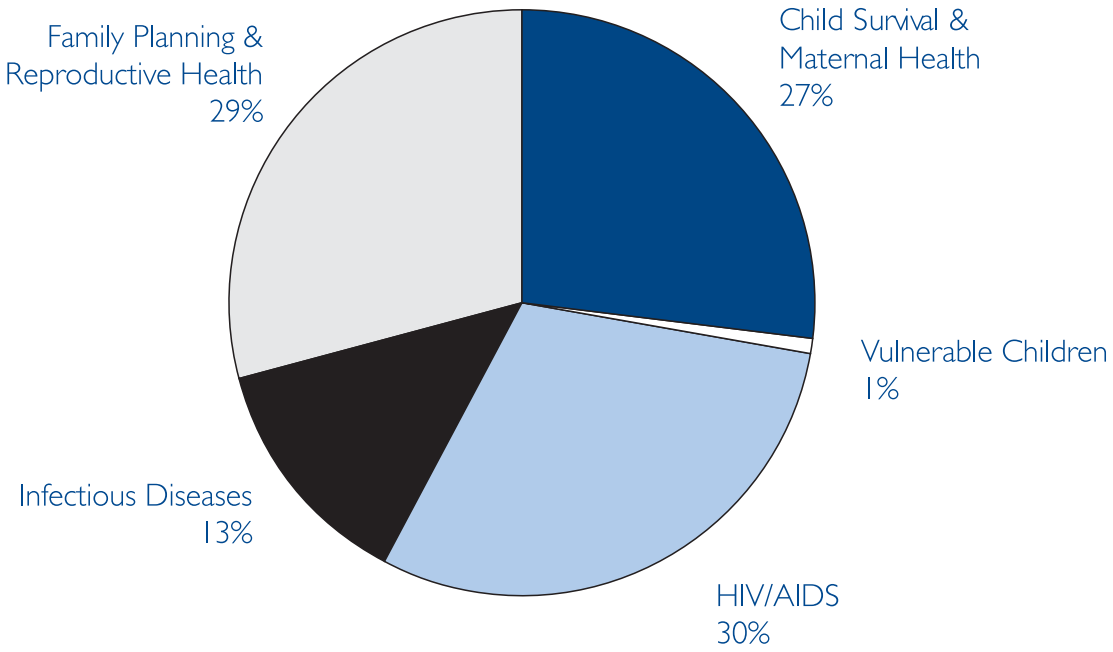
($ Thousands)

Bureau/Country	CS/MH		VC	HIV/AIDS	Infectious Diseases			FP/RH	Total
	Primary Causes*	Polio	Vulnerable Children	HIV/AIDS	TB	Malaria	Anti-microbial Resistance, Surveillance, & Other ID	Family Planning & Reproductive Health	
LATIN AMERICA AND THE CARIBBEAN									
Bolivia	300	-	-	-	-	-	700	-	1,000
Ecuador	8,050	-	-	-	-	-	-	-	8,050
Guyana	-	-	-	3,806	-	-	-	-	3,806
Haiti	-	-	-	6,083	-	-	-	-	6,083
Honduras	-	-	-	1,000	-	-	-	-	1,000
Caribbean Regional	-	-	-	1,000	-	-	-	-	1,000
Central American Reg	-	-	-	1,000	-	-	-	-	1,000
Total	8,350	-	-	12,889	-	-	700	-	21,939
CENTRAL PROGRAMS									
Global Health	-	-	-	79,609	-	-	-	-	79,609
DOS, PRM	-	-	-	-	-	-	-	5,250	5,250
Total	-	-	-	79,609	-	-	-	5,250	84,859
Total: Other Accounts	111,882	3,000	8,191	291,046	10,357	252	6,018	56,160	486,906
Total: CSH	300,729	27,320	27,830	911,091	74,710	79,630	29,570	373,290	1,824,170
Total: All Accounts	412,611	30,320	36,021	1,202,137	85,067	79,882	35,588	429,450	2,311,076

Source: USAID, Bureau for Policy and Program Coordination, Office of Strategic and Performance Planning

* The heading "Primary Causes" has replaced the "Child Survival and Maternal Health" subcategory heading included in previous years' reports to more accurately reflect the structure of the Child Survival and Health Account.

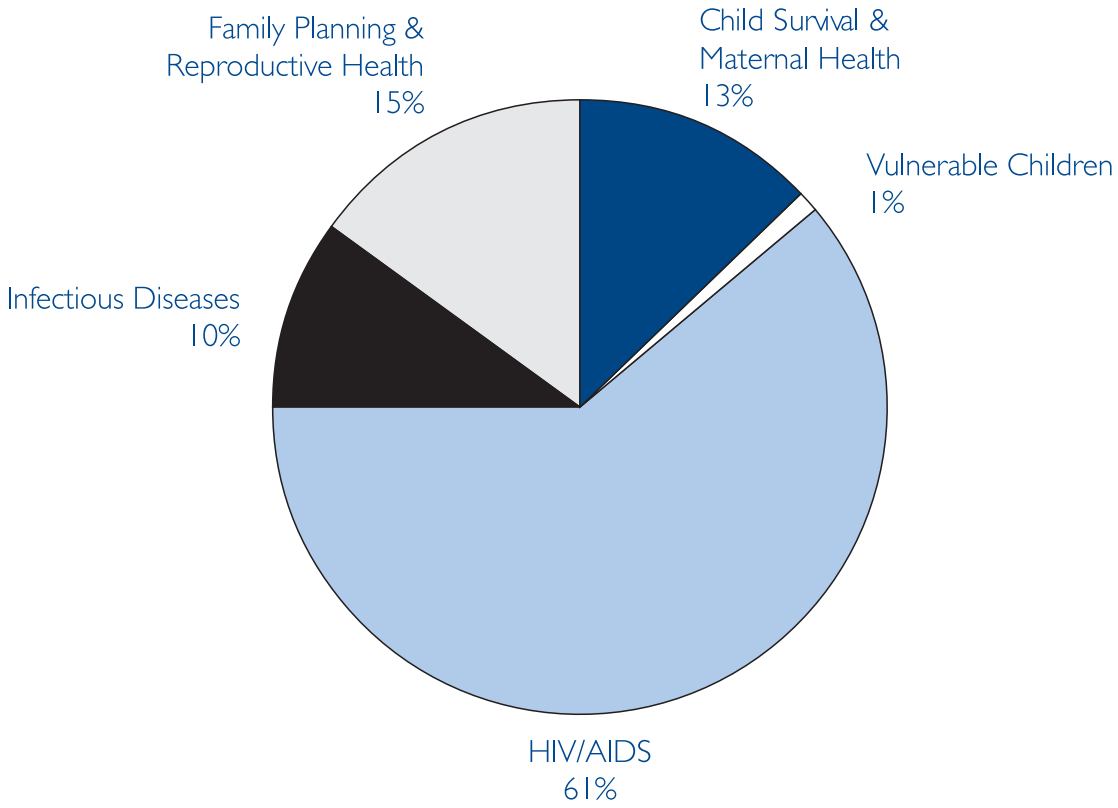
FY 2004 USAID Total Health Budget by Program Category



FY 2004 Total Funding = $2,311,076,000

Source: USAID, Bureau for Policy and Program Coordination, Office of Strategic and Performance Planning

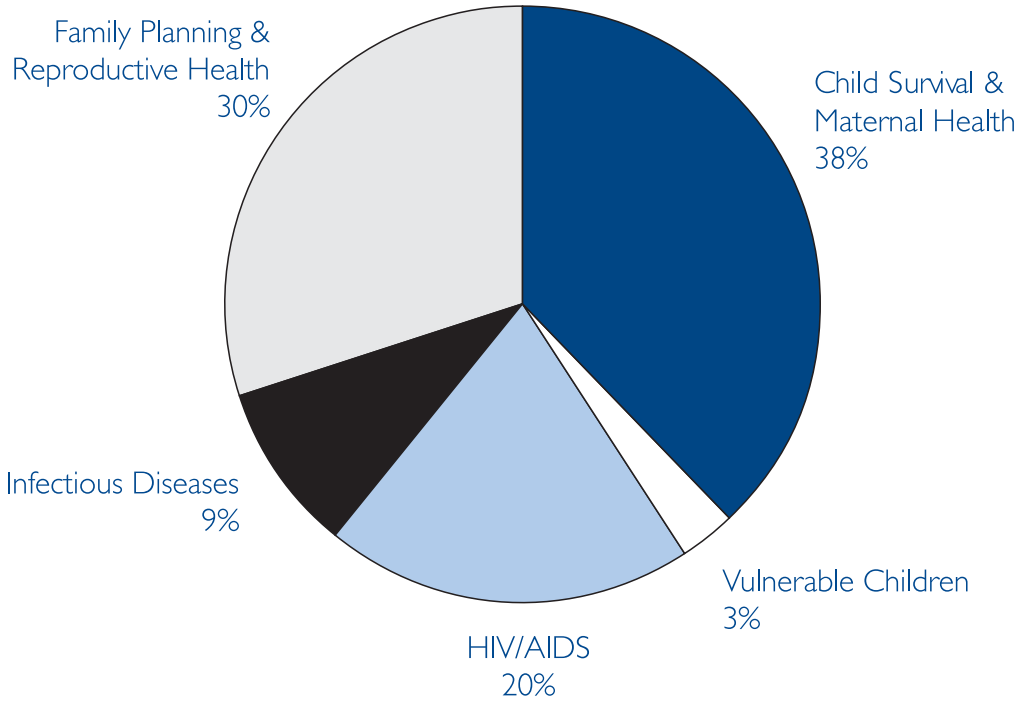
FY 2004 Africa Region Total Health Budget by Program Category



FY 2004 Total Funding = $640,569,000

Source: USAID, Bureau for Policy and Program Coordination, Office of Strategic and Performance Planning

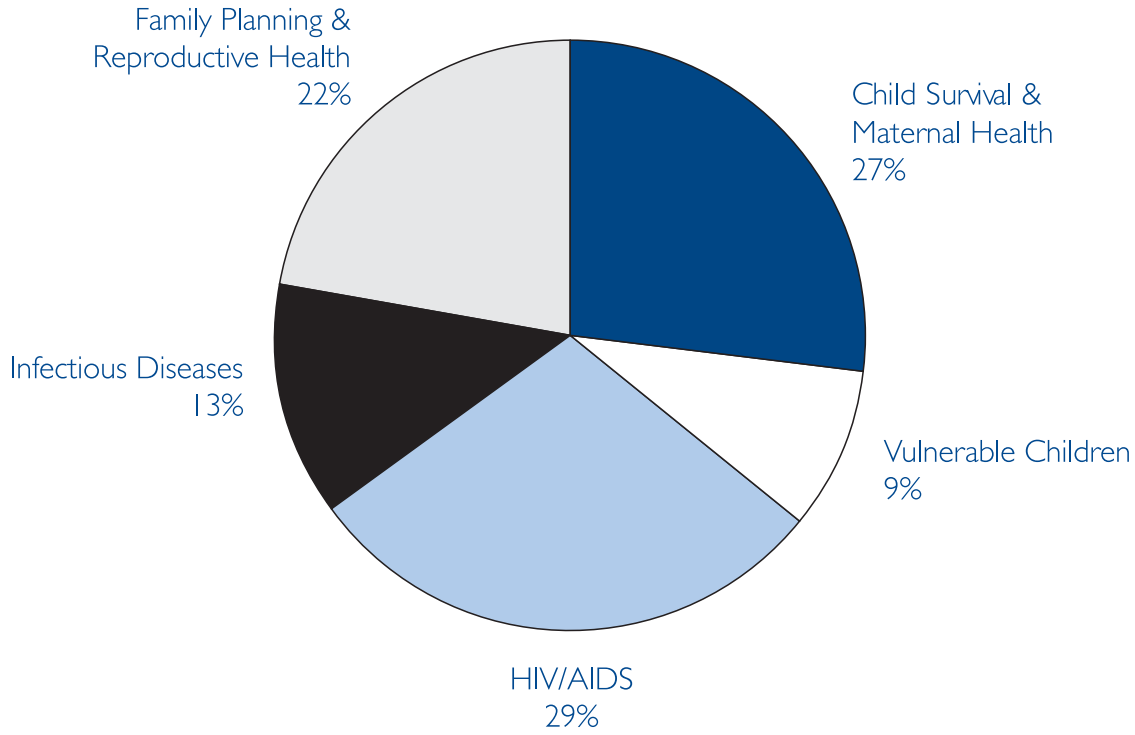
FY 2004 Asia and Near East Region Total Health Budget by Program Category



FY 2004 Total Funding = $410,922,000

Source: USAID, Bureau for Policy and Program Coordination, Office of Strategic and Performance Planning

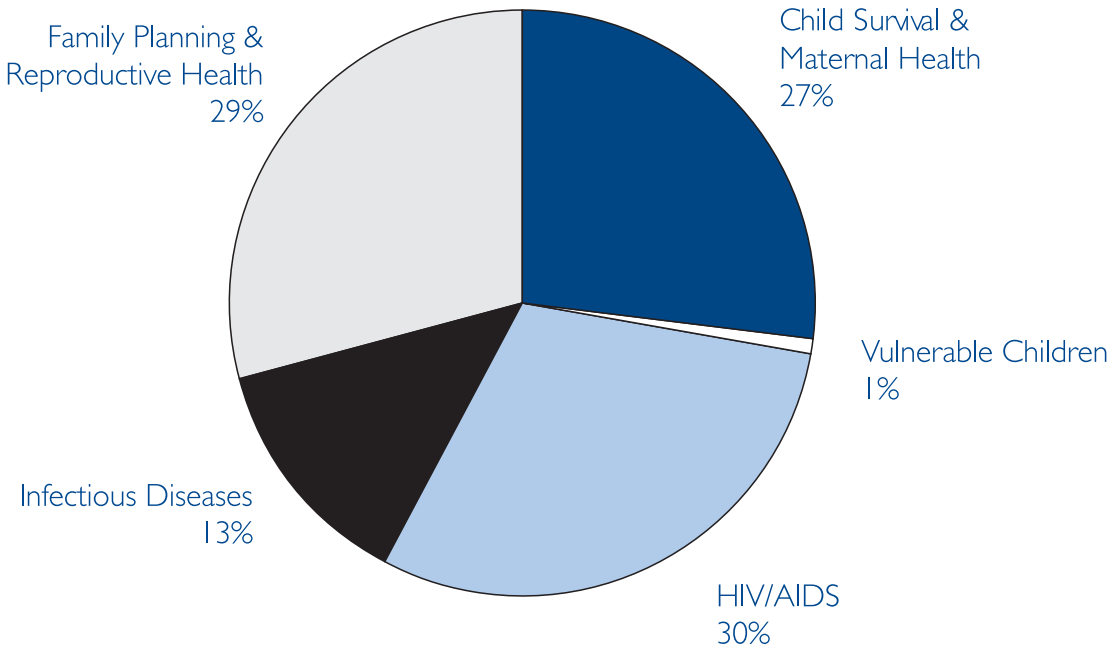
FY 2004 Europe and Eurasia Region Total Health Budget by Program Category



FY 2004 Total Funding = $93,696,000

Source: USAID, Bureau for Policy and Program Coordination, Office of Strategic and Performance Planning

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



FY 2004 Total Funding = $172,324,000

Source: USAID, Bureau for Policy and Program Coordination, Office of Strategic and Performance Planning