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IMPROVING  
HEALTH SERVICES  
*through*  
STRONGER SYSTEMS



# FINAL REPORT THE REDUCING CHILD MORBIDITY AND STRENGTHENING HEALTH CARE SYSTEMS PROGRAM 2003–2007



CHEVENE REAVIS

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A list of acronyms appears inside the back cover.

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## MALAWIANS CONFRONT MANY HEALTH CHALLENGES

**A** small, landlocked country in southeastern Africa, Malawi is home to 13.1 million people and some of the harshest health statistics in the world. According to a 2005 UNICEF study, one out of every eight children in Malawi will not live past their fifth birthday. High maternal mortality (984 women die for every 100,000 live births)

**ACCORDING TO A 2005 UNICEF STUDY, ONE OUT OF EVERY EIGHT CHILDREN IN MALAWI WILL NOT LIVE PAST THEIR FIFTH BIRTHDAY.**

contributes to poor overall health of the families left behind. As the AIDS epidemic continues, nearly 80,000 adults succumb to this killer disease annually. AIDS mortality among adults has also resulted in a dramatic increase in the number of children who have lost one or both parents. Pediatric AIDS, primarily acquired through mother-to-child transmission, underlines the need for scaling up prevention activities. Between AIDS and infectious diseases, including tuberculosis, as well as malaria, famine, and poor access to child health services, high morbidity and mortality among children and adults continue to be a concern for Malawi's Ministry of Health.

Malawi is primarily rural, which makes it challenging to deliver health services, especially in remote regions without many roads. Literacy is low, and unemployment is high. Approximately 65 percent of Malawians live in poverty. The AIDS epidemic has also reduced agricultural production dramatically in Malawi, a country that depends heavily on agriculture. If these problems are not addressed, health care and other social services will deteriorate still further.

Migration and AIDS-related deaths among health care providers are also affecting health services. The total number of doctors currently serving in the Ministry of Health (MOH) and Christian Health Association of Malawi—a major service provider—is only about 160, with a 63 percent vacancy rate. Nursing and other professional health staff are equally scarce. ♦



**THERE WERE ACHIEVEMENTS IN SERVICES AND SYSTEMS THROUGHOUT THE EIGHT DISTRICTS IN WHICH WE WORKED.**

## MAJOR ACHIEVEMENTS OF THE PROGRAM

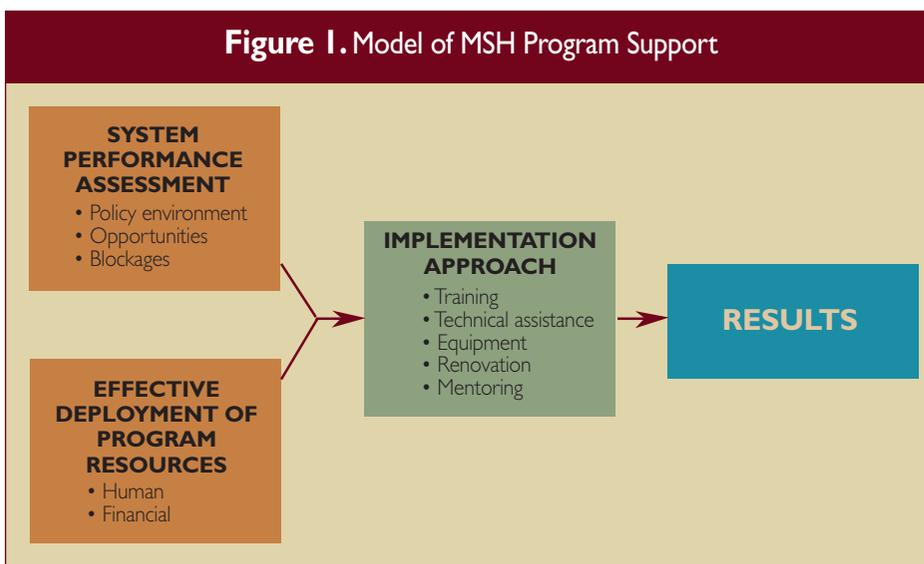
**T**he Reducing Child Morbidity and Strengthening Health Care Systems Program met these challenges through an implementation approach that aligned program resources with a thorough understanding of the current performance of the health sector. Program staff used these resources and applied their expertise to support a series of well-planned activities to:

- ◆ improve prevention and management of childhood illnesses;
- ◆ increase access to services and improve their quality;
- ◆ build management capacity at the district level;
- ◆ strengthen the management of central hospitals.

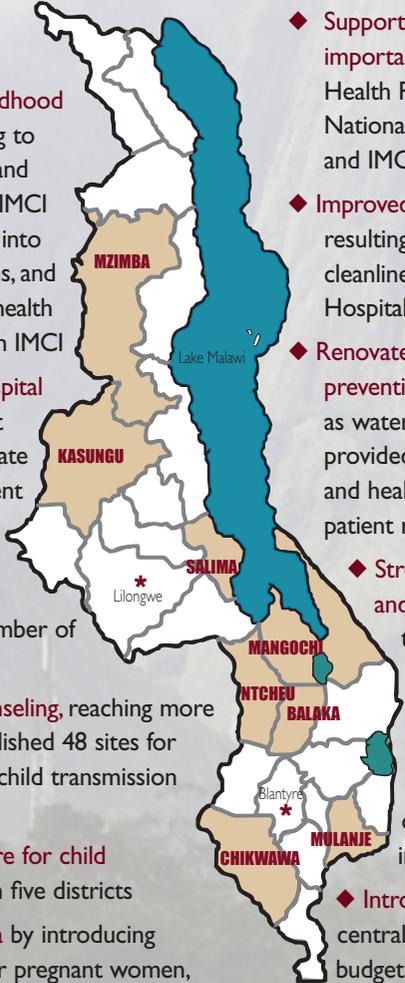
Management Sciences for Health (MSH) fostered flexible, bottom-up planning of activities, in close collaboration with District Health Management Teams and central hospital management teams, and provided comprehensive support—a blend of training, technical assistance, equipment provision, essential renovation activities, and long-term mentoring—to carry out those plans. All activities were aligned with the MOH's strategic priorities: the 2004–10 Programme of Work developed through the Sector-Wide Approach and the Malawi Essential Health Package. This model (see Figure 1) allowed the program to achieve substantial, sustainable results and improved service performance.

The program **improved prevention and management of childhood illnesses** at the district, hospital, and community levels. We achieved these improvements by strengthening the

**Figure 1.** Model of MSH Program Support



## RESULTS OF THE REDUCING CHILD MORBIDITY AND STRENGTHENING HEALTH CARE SYSTEMS PROGRAM

- 
- ◆ Supported the expansion of **Integrated Management of Childhood Illnesses (IMCI)** by collaborating to develop a national IMCI policy and five-year strategic plan, revising IMCI materials and introducing them into national-level training institutions, and training more than 300 tutors, health care providers, and facilitators in IMCI
  - ◆ Strengthened the **Pediatric Hospital Initiative**, a quality improvement approach emphasizing appropriate emergency care and management of children admitted to hospitals, resulting in more children receiving appropriate treatment and lowering the number of child deaths
  - ◆ Expanded **HIV testing and counseling**, reaching more than 243,775 people, and established 48 sites for services to prevent mother-to-child transmission of HIV
  - ◆ Increased **community-based care for child malnutrition** through 60 sites in five districts
  - ◆ Addressed **high rates of malaria** by introducing periodic antimalarial therapy for pregnant women, increasing coverage from 53 percent to 80 percent of women receiving prenatal care in seven districts
  - ◆ Supported the development and introduction of important health policies, including the National Health Policy, Central Hospital Reform Policy, National Transport Policy, Quality Assurance Policy, and IMCI Policy
  - ◆ Improved infection prevention at district hospitals, resulting in one of the highest scores in Malawi for cleanliness and infection prevention at Salima District Hospital
  - ◆ Renovated hospital wards to improve infection prevention and quality of care, supplied utilities such as water and electricity to health centers, and provided equipment such as 90 radios to hospitals and health centers to improve communications for patient referrals and other emergencies
  - ◆ Strengthened the **decentralized annual budgeting and planning process**, with all 28 districts throughout Malawi now preparing and submitting standardized District Implementation Plans
  - ◆ Supported national implementation of the **Essential Health Package** to ensure that high-quality, equitable health services are provided in the eight focus districts
  - ◆ Introduced improved management systems in two central hospitals and eight districts, for planning and budgeting, financial management, human resource management, drug supply management, transport management, supervision, and quality assurance



#### IN THIS PHOTO:

Before the program, lines at Kasungu District Hospital were long, and it and other facilities were often ill equipped to prevent infection or triage patients. Frequently, even emergency cases had to wait in line.

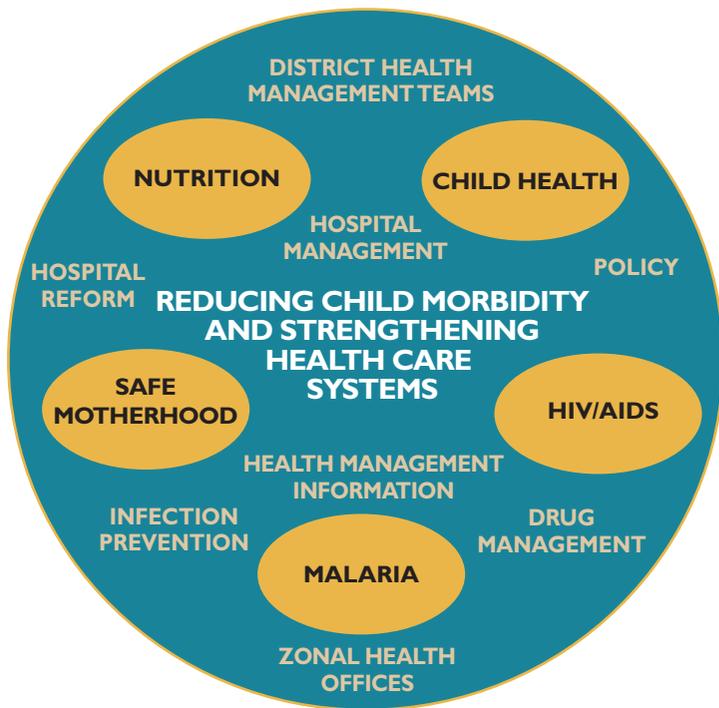
### THE PROGRAM IMPROVED PREVENTION AND MANAGEMENT OF CHILDHOOD ILLNESSES AT THE DISTRICT, HOSPITAL, AND COMMUNITY LEVELS.

national Integrated Management of Childhood Illnesses (IMCI) Taskforce and building the capacity of district-level staff, community leaders, traditional health providers, and caregivers to recognize the symptoms of common childhood illnesses and take action to treat, refer, or seek care for children. The program also addressed other health issues that affect both children and adults, including HIV/AIDS, malaria, and malnutrition, and developed appropriate systems and approaches to meet the requirements of these health concerns.

Important initiatives such as prevention of mother-to-child transmission of HIV and community care for severe acute malnutrition were expanded, **giving communities easier access to services**. We **improved quality of care** by expanding facility-based IMCI, strengthening the provision of intermittent presumptive therapy for malaria in pregnant women, improving supervision of services, and putting in place better referral systems between communities and district hospitals.

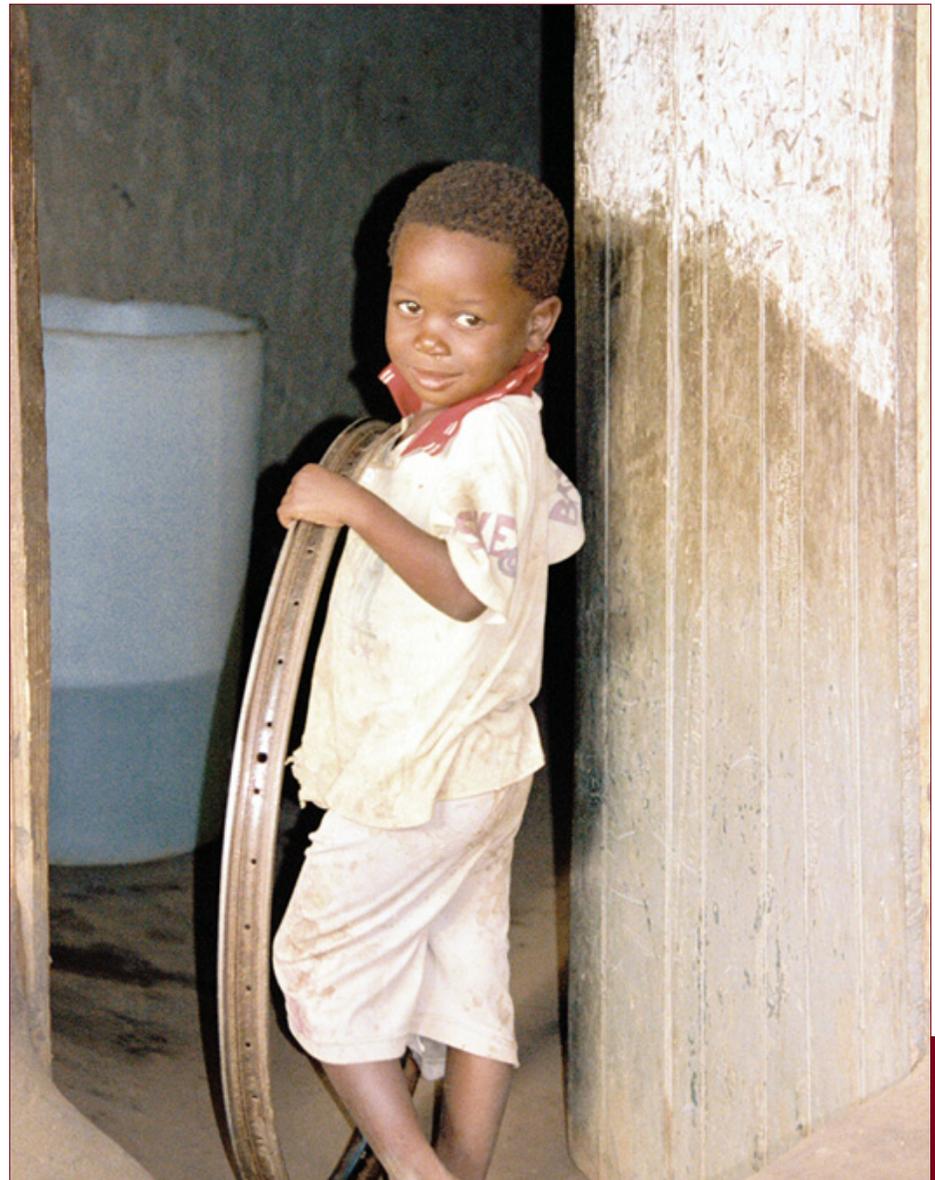
We **built management capacity at the district level** by strengthening the performance of the District Health Management Teams in eight districts of the country. The program focused on management systems—planning and budgeting, financial management, logistics management, human capacity development, transport management, communication systems, quality assurance systems, and health management information systems—and developing the capacity of district-level managers and staff to use them.

Our work in **strengthening the management of central hospitals** focused on Kamuzu Central Hospital in Lilongwe



**Figure 2. Health Services and Systems**

Services provided by the program (in yellow ovals) were directly supported by improved systems (in tan).



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and Queen Elizabeth Central Hospital (QECH) in Blantyre. The program prepared these two hospitals for autonomous management by creating a policy framework that will enable them to operate independently and by developing or strengthening the full range of management systems they need. Other achievements included drafting of regulatory instruments—such as memoranda of understanding with training and research institutions, a Biomedical Ethics and Research Policy, Central Hospital Reform Policy, National Health Policy, and Malawi Health Bill—to support decentralized management.

This program created **changes in the health services and systems of Malawi that are likely to be sustained** because program activities were fully integrated. Integration means that we made improvements in access to and delivery of health services at all levels of the health sector in conjunction with developing supporting systems, reforming policies, and fully engaging stakeholders. Figure 2 shows the health services and systems on which we worked. ♦

## EXPANDING AND IMPROVING HEALTH SERVICES

**T**he program supported service delivery in many areas, including combating child morbidity and mortality, expanding prevention and treatment of HIV/AIDS and infectious diseases, improving the quality of care, and reducing maternal mortality.

### SAVING CHILDREN'S LIVES

**INTEGRATED MANAGEMENT OF CHILDHOOD ILLNESSES.** IMCI is a key approach to the prevention and

management of childhood disease, so MSH worked closely with the Ministry of Health to expand and strengthen the implementation of IMCI. At the national level, we helped the MOH develop an IMCI policy and strategic plan. We also provided technical assistance to shorten the training of facility-based providers from 11 to 6 days—an important factor in making training more accessible and less costly. We supported district-level implementation through training of 233 providers, 36 tutors, and 40 facilitators. District supervision of IMCI was encouraged, which contributed to

**IN THIS PHOTO:**  
Trainers in Kasungu





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improved quality of care. Now during consultations, the majority of children (more than 80 percent, up from a baseline of less than 20 percent) are assessed for danger signs; immunization status is assessed in more than 90 percent of visits; and more than 70 percent of caregivers of children with diarrhea were correctly advised to give the children extra fluids and continue feeding them.

The program supplied essential equipment to 227 facilities to further strengthen IMCI. Nutrition activities, improved drug supply and management referral systems, and distribution of insecticide-treated mosquito nets also contributed to reducing morbidity and mortality among children.

**PEDIATRIC HOSPITAL INITIATIVE.** To reduce the high child mortality rate in Malawi, a major goal of this program, we scaled up integrated child health services through the Pediatric Hospital Initiative (PHI). Because the quality of services at district hospitals tends to be better than that at local health clinics, pediatric hospital wards are always busy. In the past, Malawi's hospitals have used a first-come, first-served approach to admitting patients.

The PHI improved the quality of care for children using a low-cost process that allows hospital staff to identify case management problems and find solutions for them. The program introduced:

- ◆ triaging pediatric patients based on an assessment of their need for urgent care;
- ◆ standard protocols for managing hospitalized children with fever, pneumonia, diarrhea, malnutrition, and other common but serious conditions;
- ◆ essential equipment such as oxygen concentrators to effectively manage emergencies.

This initiative is helping Malawi to make important improvements in child health indicators. For malaria,

## IN FOUR DISTRICTS, CHILD MORTALITY IN HOSPITALS DECLINED BY 29 PERCENT BECAUSE OF THE PEDIATRIC HOSPITAL INITIATIVE.

pneumonia, diarrhea, and malnutrition—the prime killers of children in Malawi—hospitals are using the new triaging and case management protocols to identify and treat priority illnesses more precisely than ever before. In five districts where the initiative was launched in 2006, compliance with management guidelines for fever and pneumonia rose from a baseline of 50 percent to more than 80 percent by July 2007. In four program districts, child mortality in hospitals declined by 29 percent during the same period. In a fifth district, where reduced mortality was not seen, the District Health Management Team investigated and identified a number of management problems.

While the PHI introduced small improvements to basic management of pediatric health care, the difference it has made has been undeniable. According to Margaret Chipeta, the head nurse at Kasungu District Hospital, “MSH has helped us work as a team and has reinvigorated our motivation to improve the health care services in our district. More patients are using the health facilities because the services are better.”

### IN THIS PHOTO:

A health surveillance assistant in Kasungu provides outreach services.

**IN THIS PHOTO:**  
Community therapeutic  
care volunteer at work in  
Mulanje



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## A VOLUNTEER COMMITTED TO HELPING MALNOURISHED CHILDREN

June 11, 2007

Dear Madam,

Thank you for the official visit last August which focused on malnourished children. On that day you visited me and Crispin Austin of Nkomera Village, who was hit by severe malnutrition and had been discharged from the CTC programme 15 days before our visit.

The number of malnourished children registered in my book has gone up from 12 since you came here to 21. There is improvement [in identifying children who need treatment].

As a CTC volunteer, I grew a soy crop this year and harvested a 50-kilo bag. . . . I want to learn more about how to mix soy flour with maize flour and how to prepare a delicious soy porridge. This will enable me to bring correct information to the community as well as parents who bring their children to the Under-Fives Clinic. . . . [I am] committed to teaching parents to become self-reliant on soy, instead of relying on governmental and nongovernmental organizations for assistance, since it is grown locally.

I shall organize a cooking demonstration day. . . . I will distribute phala [the highly nutritious soy and maize porridge] to the children. I will hire a photographer to show every activity in pictures.

I know that your visit was not the first and the last. I believe you will come to see the changes.

Your faithful volunteer,  
Moffat Chiusti

## COMMUNITY THERAPEUTIC CARE FOR MALNUTRITION.

In 2006, with the support of the Office of US Foreign Disaster Assistance (OFDA), the program began to rapidly scale up community therapeutic care (CTC) in the five districts of Malawi hardest hit by famine. Sixty new sites were set up to make it easier for people from the surrounding communities to bring their children for services. CTC programs allowed malnourished children to be treated as outpatients, saving families the expense and lost work time that come with hospitalizing a child, thus enabling the program to reach more children. From January 2006 to January 2007, 5,557 children with severe acute malnutrition were enrolled in CTC. Of these, 86 percent were cured, 10 percent dropped out of the program, 2 percent were referred to nutrition rehabilitation units, and 2 percent died.

These results were possible because the program trained more than 2,200 health workers and nearly 1,550 volunteers to identify malnourished children, monitor their progress, and make referrals for their further care when necessary.



SALLIE CRAIG HUBER

### IN THIS PHOTO:

Margaret Kaseje, Country Director for Family Health International, tasting Chiponde, an affordable nutritional supplement for children

Furthermore, MSH supported the development of a system to provide Chiponde (a ready-to-use therapeutic food), implemented a supervisory system, and worked with the Ministry of Health to institutionalize these systems. Even after the food crisis abated and OFDA funding ended in January 2007, the CTC program continued and expanded. Committed CTC volunteers continue to serve malnourished children in their communities with enthusiasm.

## **EXPANDING PREVENTION AND CARE SERVICES FOR HIV/AIDS, TUBERCULOSIS, AND MALARIA**

### **PREVENTION AND CARE SERVICES FOR HIV/AIDS.**

Until recently, HIV/AIDS testing, counseling, and treatment services in the program's eight target districts were quite limited. Today they are so common that, according to one HIV/AIDS counselor at Chikwawa District Hospital, the stigma associated with AIDS has nearly disappeared. "There has been so much education about HIV that it is almost as commonly known as malaria," he says. At a nearby health center, the medical assistant notes that patients used to come through the back door for HIV counseling and testing but now enter through the waiting room.

Through this program, more than 243,775 people have been tested for HIV at hospitals, clinics, and community-based outreach initiatives. In addition to increased access to testing and counseling, the program bolstered HIV/AIDS services through other activities. In 8 district hospitals and 40 program-supported health centers, pregnant women are offered HIV testing during prenatal care visits. If the result is positive, these women are provided treatment to prevent mother-to-child transmission of the virus. The number of pregnant women who were tested increased from fewer than 250 or 4 percent of all new prenatal patients in the quarter ending in December 2004 to more than 18,550 (85 percent of all new prenatal patients) in the quarter ending in



## **AN HIV-POSITIVE WOMAN LEADS A SUPPORT GROUP**

After learning that her husband had had an affair, Beatrice Munyowa got tested and discovered she was HIV-positive. Although at first she faced some discrimination, she wanted to be open about her status in order to raise awareness of AIDS. She wanted people in her community to understand that anyone can get HIV, countering the misconception that married people do not need to worry about becoming infected with the virus.

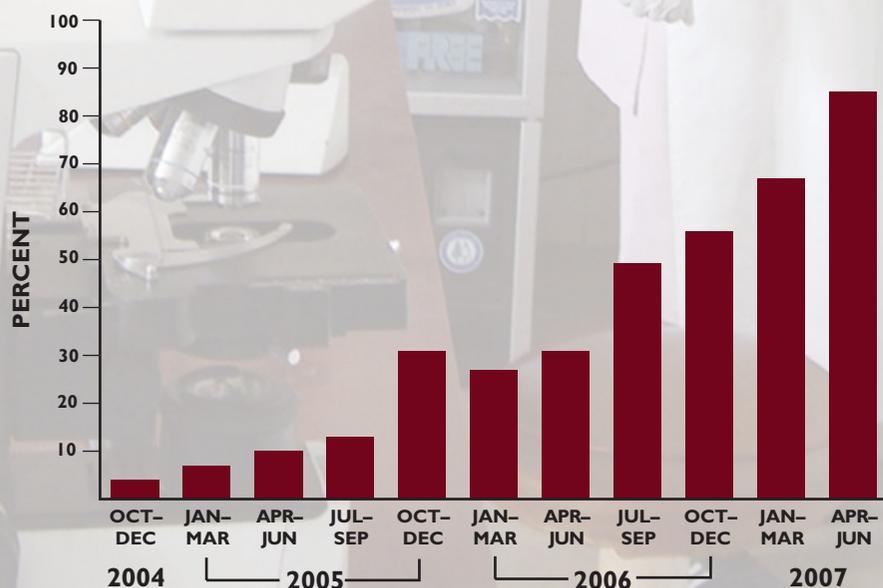
During an MSH-supported community mobilization visit, Beatrice learned about a new support group in her area. The community mobilization team used dance and drama to help people understand the importance of knowing their status and realize that being HIV-positive is not a death sentence because effective treatment is available. Beatrice now accompanies teams throughout the district and tells her story. She also manages a support group for people living with HIV/AIDS and their friends and families. The group—men and women, young and old—meets twice a month. When one member encounters a challenge, the group finds solutions together.

Beatrice brings a message of hope to people who are also HIV-positive. "I just want to talk to people about HIV/AIDS and help them understand that you can still have a full life when you are HIV-positive," she says. "This is important to me and I will never stop."

**ABOVE:** Beatrice Munyowa, leader of a support group for people living with AIDS

THROUGH THIS PROGRAM, MORE THAN 243,775 PEOPLE HAVE BEEN TESTED FOR HIV.

**Figure 3.** Percentage of Pregnant Women Tested as a Proportion of All New Prenatal Visits



June 2007 (see Figure 3). Through this testing activity, an increasing number of pregnant women are also being referred for antiretroviral treatment.

MSH has also helped develop and introduce systems to support this HIV/AIDS work. Through joint problem-solving, we improved access to testing by reviewing referral practices and identifying barriers to access. Locally developed solutions greatly boosted the number of people with access to HIV testing: more people wanted to know their status, and more pregnant women, more tuberculosis (TB) clients, and more hospitalized patients were tested.

All districts in Malawi, not just the eight program districts, have included HIV activities in their District Implementation Plans for the current fiscal year as a result of MSH's support and training. A handbook for management of HIV testing and counseling sites is now available, as is a job aid for HIV testing in pediatric and adult wards.

**TUBERCULOSIS.** Working with the National Tuberculosis Control Program, MSH provided antibiotics (cotrimoxazole preventive therapy) to newly diagnosed HIV-positive TB patients and introduced active case-finding for TB at HIV testing sites. In program districts, more than two-thirds of all newly diagnosed tuberculosis patients are now tested for HIV. The program trained more than 1,050 staff working in over 100 facilities to provide cotrimoxazole therapy to ward off the opportunistic infections that often plague those living with AIDS. We also collaborated with the TB program to ensure that appropriate TB activities were included in district workplans.

**MALARIA PREVENTION AND TREATMENT.** To combat malaria, the program undertook efforts to strengthen the demand for preventive services, especially intermittent presumptive treatment (IPT) for pregnant women, and to increase the use of bed nets and other mosquito reduction initiatives. We supported the implementation of directly

**LEFT:**  
Laboratory technician at Kasungu District Hospital

**IN THIS PHOTO:**

Women redipping mosquito nets, which must be retreated with insecticide every six months

## DISTRIBUTION OF BED NETS IN MULANJE PROTECTS THOUSANDS AGAINST MALARIA

Collaboration among the Mulanje District Health Office, MSH, and Population Services International (PSI) led to the sale of subsidized insecticide-treated nets (ITNs) in four communities in 2006. In just five days, PSI sold more than 1,400 nets—a dramatic increase over the 904 ITNs distributed in Mulanje in the first eight months of 2006. Each ITN can protect several family members from mosquitoes, so the impact of these sales goes far beyond the 1,400 nets sold.

This campaign was successful because the District Health Management Team, with assistance from MSH and PSI, laid the groundwork in advance by targeting underserved areas and sending health surveillance assistants and the District Information, Education, and Communication Officer to inform the communities about the sales campaign. These health workers conveyed health messages about ITNs, including the recommendation that people regularly sleep under nets to protect themselves from mosquito bites.

**LESSONS LEARNED.** MSH had previously supported the sale of nets by local ITN committees, an approach that involved extensive training and supervision of the committees and assistance in development of financial management and stock management systems. From a cost-benefit perspective, selling nets through the collaborative mass-campaign approach appears to be far superior to selling nets through ITN committees.



## HARD WORK BY THE HOSPITAL MANAGEMENT AND STAFF AND THE SURROUNDING COMMUNITY IN SALIMA IS PAYING OFF.

observed therapy (DOT) for IPT using a problem-solving approach. For example, we helped staff identify and resolve patient flow problems. We provided buckets and mugs for water so that patients could take their antimalarial medicines while at the clinic. We also trained health workers in the appropriate timing of IPT and dispelled the myth that antimalarials cannot be taken on an empty stomach.

From a baseline of 53 percent, IPT increased to 80 percent in seven of the eight target districts. While extensive activities in all districts increased distribution of insecticide-treated bed nets (see previous page), this activity ceased at the end of 2006 when the MOH introduced distribution of free bed nets.

The program also contributed to improving the quality of malaria treatment for children at health centers and district hospitals. Support for the introduction of IMCI was crucial to fortify malaria treatment, as were new systems and tools. Those included a malaria case management tool, regular case-management review meetings at district hospitals, and guidelines for prenatal care of women with malaria (developed in collaboration with the National Malaria Control Program).

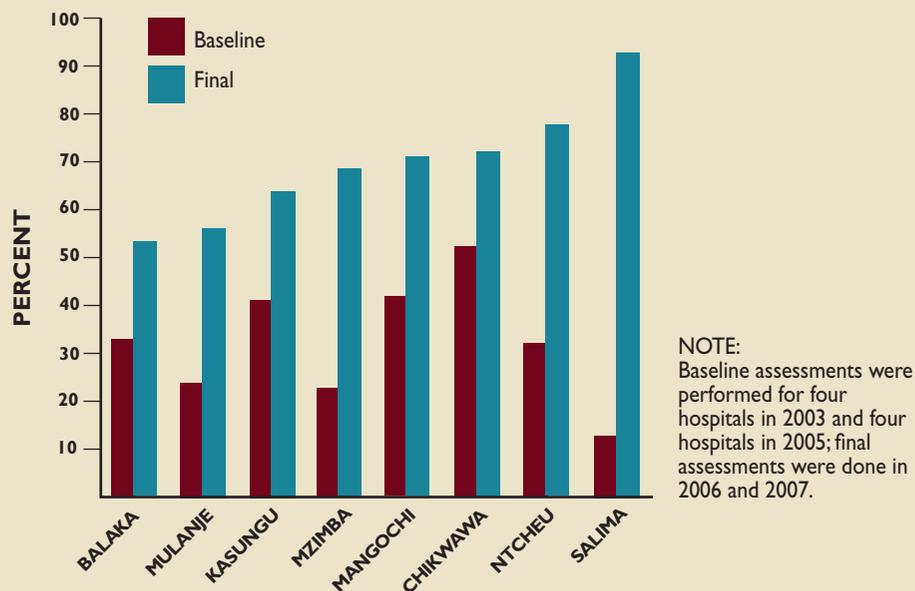
### IMPROVING QUALITY OF SERVICES

**INFECTION PREVENTION.** While the concept of infection prevention is simple, changing attitudes and awareness about it in Malawi, as in many countries, is a significant challenge. In a recent speech, Minister of Health Marjorie Ngaunje referred to hospital-acquired infections as a major cause of patient morbidity and mortality. She urged all hospitals to adhere to strict infection prevention measures. The eight district hospitals supported through this program worked hard to meet new standards for infection prevention set by the Ministry of Health.





**Figure 4. Scores from Assessments of Infection Prevention in Eight District Hospitals**



With help from MSH, one of these hospitals—Salima District Hospital—assessed its obstacles to infection prevention and identified challenges to overcome. For example, hospital staff did not have proper equipment or training to sterilize medical equipment; important protocols, such as proper waste disposal and equipment disinfection, were not in place; and patients and their families contributed to unsanitary conditions by littering the hospital building and grounds.

MSH helped the Salima Hospital management team draw up a plan to work with its staff and nearby communities to put new protocols for infection prevention in place. Education sessions helped the community understand its role in keeping the hospital clean, and training programs helped staff incorporate activities into their daily routines to support the hospital's goal of becoming an infection-free facility.

This hard work by the hospital management and staff and the surrounding community in Salima, as in other districts, is paying off (see Figure 4). In February 2007, Salima District Hospital, once reputed to be one of Malawi's worst district hospitals, received one of the highest scores for cleanliness and infection prevention in all of Malawi. Now the hospital floors gleam and fresh air blows through sparkling clean windows. Local newspaper clippings praising the hospital's new standards of cleanliness hang on bulletin boards. One



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headline reads, "Salima District Hospital, Clean at Last!" The staff is committed to continuing this progress.

Salima District Health Officer Florence Bwanali recalls that during the first months of the MSH-led infection prevention initiatives, the hospital staff felt demoralized. "Now the staff are willing to work because I make sure that the team is motivated," she says. "Now all of us are very happy and this award is going to keep our morale high."

**OTHER QUALITY INITIATIVES.** The introduction of bimonthly referral meetings in the southern region also contributed greatly to the quality of service delivery. Through the meetings, a standard referral form was introduced, and regular reviews of referral feedback, training of district clinicians in patient management, and district visits by specialists from central hospitals were established. The project trained trainers in emergency triage, assessment, and treatment, and produced a training DVD for district trainers.

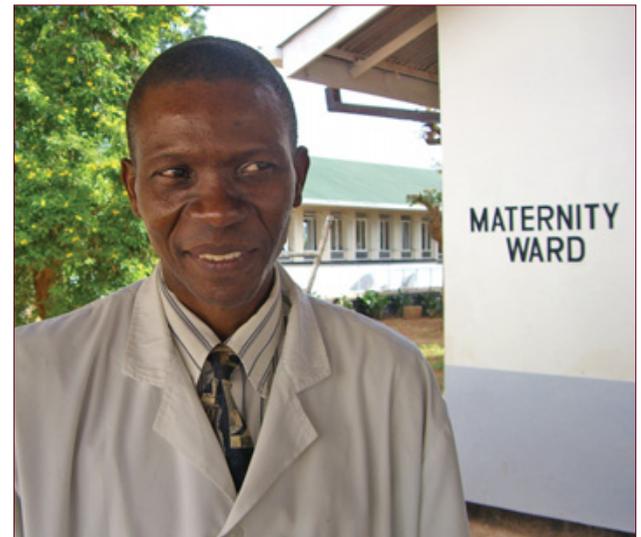
MSH also supported infection prevention work in the two central hospitals, which were accredited and have since maintained their accreditation. The support included procurement of materials, training, and involvement in internal assessments. Introducing complaint boxes at QECH greatly improved staff attitudes toward work and punctuality. Over time, the number of negative comments dropped by 30 percent, and the number of compliments increased.

**BOTTOM:**  
Clinician at Kasungu District  
Hospital

## REDUCING THE NUMBER OF MATERNAL DEATHS

Maternal mortality rates in Malawi are among the highest in southern Africa: 984 per 100,000 live births. To address this serious health issue, the program helped the District Health Management Team (DHMT) in Kasungu conduct routine maternal death audits, which revealed many factors that contribute to maternal deaths. Some women in labor arrived at health facilities by ambulance but had to wait in the vehicle for nearly an hour before receiving attention. When word spread about this lack of attention to care, and in places where ambulances were not available, some women sought the services of traditional birth attendants, who do not have sufficient training or equipment to manage complicated births.

To address these findings, MSH helped the DHMTs in the eight program districts strengthen emergency referrals by installing or repairing 90 radios and developing local transport policies to speed up and streamline ambulance service. Ambulance drivers in Kasungu were trained in emergency triage and customer service, thus decreasing waiting times for women in labor. MSH supported four DHMTs in organizing discussions with traditional authorities



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## THE PROGRAM HELPED MAKE SURE PREGNANT WOMEN WITH COMPLICATIONS ARE PROMPTLY GIVEN ADEQUATE ATTENTION.

and birth attendants to help these community leaders recognize early danger signs in labor and to promote referrals for delivery at fully equipped and staffed health facilities.

In remote areas, traditional birth attendants were partnered with hospital staff to make sure pregnant women with complications are promptly referred to hospitals and receive adequate attention upon their arrival. Training for traditional birth attendants included attention to infection prevention and record-keeping to help nearby facilities track the number of women giving birth in neighboring communities. To improve attitudes toward hospitals, volunteers were trained to greet women on arrival at the hospital and escort them to the maternity ward.

With the strengthening of emergency referral services, a renewed commitment to customer satisfaction, and formal partnerships with local communities, Kasungu District Hospital recorded a dramatic reduction in maternal mortality, from 52 maternal deaths (1.2 percent of all mothers delivering) in 2005 to 29 (0.8 percent) in 2006, and the Kasungu maternity ward is now busier than ever: ♦



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### LESSONS LEARNED ABOUT EXPANDING HEALTH SERVICES

- ◆ **Work on-site with staff to help them identify problems** and find practical solutions—often solutions are simple.
- ◆ **Adhere to the guidelines** in the MOH's national Essential Health Package.
- ◆ **Plan for expansion** by making sure that all required inputs (trained staff, equipment, necessary supplies, effective supervision and support) are in place when expansion begins.

#### TOP:

MSH staff member and nurse from Kasungu District Hospital showing a patient register to a traditional birth attendant

#### BOTTOM:

Nurses in their new infection prevention T-shirts

RUDI THETARD





**Figure 5.** Partners and Levels in the Health System

<b>PARTNERS</b>	<b>LEVELS</b>
Individuals Households Volunteers	<b>Community</b>
Health Center Staff	<b>Health Center</b>
District Hospitals District Health Management Teams	<b>District</b>
Zonal Health Teams	<b>Zone</b>
USAID and Other Donors Policymakers/Ministry of Health Central Hospitals	<b>National</b>

## STRENGTHENING HEALTH SYSTEMS

Improved health services depend on strong systems in Malawi, as elsewhere in the world. For example, the program combined its efforts to underpin the referral system—essential for emergency care of children and pregnant women—with adequate transport and a radio communication network. This integrated approach to all program activities involved working at multiple levels: central, health zones, districts, and communities (see Figure 5). This work benefited both the eight program districts and, through central and zonal initiatives, all districts of the country. In addition, MSH assisted two central hospitals with improvements in important management systems. Partners at every level were essential to the program's success.

**DISTRICT PLANNING.** Although the MOH introduced the process of District Implementation Plans (DIPs) some years ago, it was clear at the beginning of this program that the MOH's mandate for the development and use of DIPs was not routinely followed. The program's charge to assist with improved management at the district level began with assisting the central MOH Planning Directorate in the review and revision of guidelines for DIPs.

The MSH team supported the districts to make sure their plans were linked with the priorities of national programs such as those for TB and malaria. When zonal health offices were introduced in 2005, the program assisted these offices so that zonal staff could support the development of DIPs.

All districts in Malawi now routinely submit annual DIPs according to the standardized guidelines. The quality of health



**IN THIS PHOTO:** Partners at every level were essential to the program's success.

### PROGRAM COORDINATORS NOW KNOW HOW MANY OF THEIR PLANNED ACTIVITIES HAVE BEEN IMPLEMENTED, WHAT THE EXPENDITURE FOR ACTIVITIES WAS, AND HOW THEY NEED TO ALTER ACTIVITIES TO ACHIEVE BETTER RESULTS.

care has improved because proper planning and budgeting have led to funding for essential equipment for infection prevention and other equipment such as radios for better communication between hospitals and lower-level service sites.

Greater involvement of stakeholders—mission hospitals, nongovernmental organizations, district assemblies—in developing and reviewing plans has increased support from MOH staff in implementing the plans. MSH has actively promoted regular quarterly review of the implementation of DIPs, which has strengthened the capacity of district staff to manage programs. Program coordinators now know how many of their planned activities have been implemented, what the expenditure was for activities, and how they need to alter planned activities to achieve better results. DIPs were drawn up efficiently in 2007 because the development of DIP guidelines was timely and the development of plans also began on time—a significant step forward.



PHOTO: MSH

RUDITHETARD

**IN THIS PHOTO:**

Women getting water at the hospital

## HOW SERVICES HAVE BENEFITED FROM BETTER SUPERVISION

- ◆ Free IPT services were implemented for pregnant women at Kankao Rural Hospital in Balaka.
- ◆ Wells were repaired, making water available at two health facilities in Mulanje.
- ◆ Supervisors helped identify and provide vital supplies and equipment, such as hurricane lamps and kerosene and pails for mobile clinics, enabling health center staff to provide services such as deliveries after hours.
- ◆ Reuse of syringes and gloves stopped at two facilities in Mangochi with improved enforcement of infection prevention.
- ◆ In Salima, the DHMT increased the number of outreach sites after noticing low immunization coverage in the catchment area of Lifuwu Health Center.

**HEALTH ZONES.** With the creation by the MOH of five health zones to supervise and support districts, the program began providing operational support to two zonal offices in December 2005. MSH first provided support to the MOH to develop a set of clinical and managerial supervisory tools for zonal offices and to define zones' roles, responsibilities, and reporting mechanisms. The program's technical and operational support enabled the establishment of a decentralized supervision mechanism, filling a sorely needed function.

MSH initiated mentoring for zonal staff to improve drug management, data collection, and transport management in the districts within zones. Through the mentoring process, we built the capacity of both zonal and district staff: 55 pharmacy technicians, assistant statisticians, transport officers, and health

## MORE REGULAR SUPERVISION OF DISTRICT STAFF IS NOW CONTRIBUTING TO BETTER MANAGEMENT OF SERVICES AND QUALITY OF CARE.

administrators, and 28 focal persons for health management information systems for the entire country, benefited from this assistance. More regular supervision of district staff is now contributing to better management of services and quality of care.

**DISTRICT SUPERVISION.** Routine supportive supervision of health facilities has been very challenging in Malawi. Supervision has typically been erratic, vertically driven, and not always supportive. MSH worked with the DHMTs to restructure supervision by introducing multipurpose supervisors and cluster supervision, whereby a supervisor or team of supervisors supports two to five health centers. This approach not only reduces duplicative work but also provides more regular supervision: by the end of the program, 90 percent of facilities were receiving supervision every six months, compared to 44 percent at the beginning. We also helped DHMTs conduct regular quarterly reviews of supervisory visits so that the findings from supervisory visits would be discussed with managers and solutions to problems found.

**STRENGTHENING HEALTH MANAGEMENT INFORMATION SYSTEMS.** Encouraging the use of data by managers was a key component of the MSH program. Facility staff were trained to collect data correctly, report in a timely way, and interpret data through the use of simple graphs. Data quality was improved in three districts, leading to 34 facilities being accredited in meeting criteria for data quality and timeliness of reports. Timely reporting rates rose from a baseline of 59 percent to 86 percent. The information systems work made it possible to create an evidence-based district planning and review process: these had been two separate and unrelated activities before the MSH program.



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**PHARMACEUTICAL MANAGEMENT.** The program strengthened drug management primarily at the district level: 227 drug stores were reorganized and upgraded, and the timely submission of drug order forms increased from 30 percent in 2003 to more than 90 percent in 2007. Drug pilferage was reduced by instituting regular stock checks and use of stock cards and by engaging health center advisory committees in checking the quantities of drugs received by health centers. MSH helped pharmacy technicians acquire skills in supervising drug management at health facilities and coordinating district and hospital drug committees.

**TOP:**  
Pharmacy technician at  
Chikwawa District Hospital

**BOTTOM:**  
District Health Management  
Team in Chikwawa



SCOTT MCKEOWN



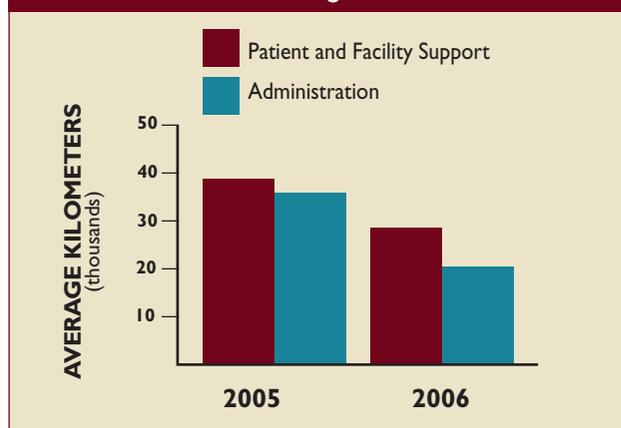
**TRANSPORT MANAGEMENT.** With the MOH, district hospitals, and DHMTs, MSH strengthened transport management, with a focus on making sure referral systems function well. We facilitated the finalization of a national transport policy and guidelines. After the guidelines for QECH were disseminated to all transport users in the hospital, reports showed significant reductions in fuel consumption.

At the district level, we helped develop transport guidelines and professionalize transport management. Transport guidelines mandated the use of vehicle logbooks, submission of trip requests before travel, and control of vehicles after hours, when misuse of official vehicles is

greatest. These efforts reduced expenditure on fuel at the district level and increased the availability of ambulances at the community level to provide transport for emergencies. Overall, establishment of these guidelines reduced the total number of kilometers traveled and redirected scarce resources to patient care instead of administrative activities (see Figure 6).

**CENTRAL HOSPITAL MANAGEMENT.** To improve the quality of care, especially for people living with AIDS, at the central hospitals in Lilongwe and Blantyre and to allow the hospitals to function as autonomous units, the program helped develop a trust fund mechanism and strengthened hospital management systems. For example, pharmaceutical management was strengthened at both hospitals. Improvements included a new stock control system, introduction of pharmaceutical ordering books and spreadsheets to track pharmaceutical consumption by cost center; production of a pharmacy bulletin for prescribers, and monthly production of Central Medical Stores reports. At QECH, the pharmacy was renovated, and improved supervision, storage, dispensing, and security were instituted in the pharmacy. At Kamuzu Central Hospital, installation of an electronic pharmaceutical inventory and control system (ePICS) strengthened stock management. Other systems improvements in these hospitals included planning and budgeting, finance, human resources, transport, supervision, and quality assurance. ♦

**Figure 6. Distance Traveled for Patient and Facility Support vs. Administration (Monthly Average) in Mangochi**



**TOP:**

Medical transport in Ntcheu, illustrating the problems that MSH addressed

**OPPOSITE:**

Waiting at the Mbalachanda tobacco estate clinic

WORK BENEFITED BOTH THE EIGHT PROGRAM DISTRICTS AND, THROUGH CENTRAL AND ZONAL INITIATIVES, ALL DISTRICTS OF THE COUNTRY.

## LESSONS LEARNED ABOUT STRENGTHENING HEALTH SYSTEMS

- ◆ Design activities with the leadership and participation of the central MOH, since jointly led interventions will be the most successful.
- ◆ Focus on those areas where districts and central hospitals need support and initiate activities only at their request.
- ◆ Use MOH systems and approaches as the basis for interventions, applying a joint problem-solving and performance-improvement approach to identify and address needs.
- ◆ Consider unplanned, additional activities carefully. It is better to support implementation of fewer activities and complete them rather than trying to do more with limited success.
- ◆ Look at systems strengthening holistically: support not only training but also other needs such as materials, technical assistance, and the long-term supervision and support required for sustainability.



THESE ADVANCES WERE NOT GAINED WITHOUT CHALLENGES, AND FOSTERING SUSTAINABILITY WAS FOREMOST IN THE MINDS OF THOSE WHO PLANNED AND IMPLEMENTED THIS PROGRAM.

## FOSTERING SUSTAINABILITY

**T**he achievements of this program were many: children's health improved and deaths were averted. Mothers have a better chance of surviving childbirth. More than 243,775 men, women, and children were tested for HIV, including pregnant women who, if HIV positive, were treated so that their children had a better chance of not being infected during childbirth. More families received and used bed nets to prevent malaria.

Many citizens of Malawi were trained to modify health-related behaviors and outcomes—from leaders and managers in the Ministry of Health to nurses and health assistants serving in simple rural health clinics to community volunteers who assisted with identifying and referring thousands of malnourished children for treatment. Policies were introduced, materials and equipment provided to support health services, and systems developed to ensure that health services are well managed and delivered effectively and efficiently.

### LESSONS LEARNED ABOUT SUSTAINABILITY

These advances were not gained without challenges, and fostering sustainability was foremost in the minds of those who planned and implemented this program. Lessons learned about improving and managing childhood illnesses, increasing access to and quality of services, and building management capacity at the district level and in central hospitals are highlighted elsewhere in this report. Several lessons are worth summarizing here:

- ◆ **Taking a comprehensive approach to all program activities** to ensure integration of systems and services is a prerequisite for success.
- ◆ **Working in partnership to identify barriers and performance gaps** and to design and implement flexible approaches to remove them promotes ownership and commitment to improved services and systems.
- ◆ **Using a participatory approach that engages all stakeholders**—MOH leaders, managers and service providers from all levels of the health system, and health care consumers—leads to better acceptance and application of new policies and approaches, improving chances of sustained performance.
- ◆ **Providing the right amount of assistance at the right place**, combined with coaching and mentoring and clear

#### IN THIS PHOTO:

Local chief in Salima, who helps mobilize the community on community therapeutic care for malnutrition



exit strategies, instead of “doing things for people” increases the acceptability of new approaches and systems.

The results of the systems strengthening interventions of this program, summarized in USAID’s external end-of-project evaluation, were:

- ◆ progress was made in all eight districts;
- ◆ the data show improvements in the performance of district health systems;
- ◆ there were positive differences between MSH-supported districts and others.

Staff shortages and turnover are significant threats to sustainability and were largely beyond the scope of this program. However, a newly instilled pride in accomplishments—improvements in infection prevention, enhanced

pediatric hospital services, acquisition and application of new skills in the integrated management of childhood illnesses, expanded knowledge of how to identify and manage malnourished children, and many other innovations introduced through this program—hold promise for the future. New staff have been inspired to pursue careers in health care provision or management and those who already hold positions have been motivated to continue.

This program introduced many new approaches and systems that have been demonstrated to work well in Malawi. These proven interventions have caught the attention of the wider health-sector community, both implementers and donors, who are supporting their adaptation throughout the country. Thus, many of the initiatives described in this report have a good chance of continuing to contribute to the improved health and well-being of the citizens of Malawi. ◆





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## ACRONYMS

AIDS	acquired immune deficiency syndrome
CTC	community therapeutic care
DHMT	District Health Management Team
DIP	District Implementation Plan
DOT	directly observed therapy
EPI	Expanded Programme of Immunization
HIV	human immunodeficiency virus
IMCI	Integrated Management of Childhood Illnesses
IPT	intermittent presumptive treatment
ITN	insecticide-treated net
MOH	Ministry of Health
MSH	Management Sciences for Health
OFDA	Office of US Foreign Disaster Assistance
PHI	Pediatric Hospital Initiative
PSI	Population Services International
QECH	Queen Elizabeth Central Hospital
TB	tuberculosis
USAID	United States Agency for International Development



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