



The AIDSRelief Model

Providing Treatment, Restoring Hope





The AIDSRelief Model

Providing Treatment, Restoring Hope

April 2010

Cover photo: Lab technician Bosco Karasira tests blood samples at Bungwe Health Center in Rwanda.
Rick D'Elia for CRS.

© 2010 Catholic Relief Services, Catholic Medical Mission Board, Futures Group International, IMA World Health, University of Maryland School of Medicine Institute of Human Virology

For more information, contact Naomi Van Dinter at novan@crs.org.

Overview

AIDSRelief, a five-member consortium funded through the President's Emergency Plan for AIDS Relief (PEPFAR), supports the rapid scaling up of HIV care and treatment services for poor and underserved people in ten countries across Africa, the Caribbean and Latin America. The consortium brings together a powerful set of international experts working hand in hand with local partners to build the skills and systems needed to support high quality HIV care: Catholic Relief Services as prime grantee; the University of Maryland School of Medicine Institute of Human Virology as technical lead for clinical care and treatment; Futures Group International as lead agency for strategic information; IMA World Health and Catholic Medical Mission Board as implementing partners; and Children's AIDS Fund, a sixth organization that serves as a key sub-grantee operating sites in three countries. By building clinical capacity and regularly monitoring patient outcomes, AIDSRelief supports its partners in delivering high-quality, sustainable HIV care.

Since its inception, AIDSRelief has been transferring to local partners the knowledge, skills, tools and systems necessary to ensure uninterrupted treatment and a high level of quality care under the AIDSRelief model. The consortium is committed to transitioning program ownership to local partners by 2012 through a focus on partnership and capacity building, empowering local organizations to optimize their strengths to sustain quality care and treatment.

AIDSRelief's strong focus on a comprehensive continuum of care spanning health institutions, community response and household care has proven effective, as demonstrated by an exceptionally low 7.86 percent of patients lost to follow-up. Cumulative mortality is also remarkably low at 8.18 percent, and the on-treatment viral suppression rate is an impressive 82 percent.

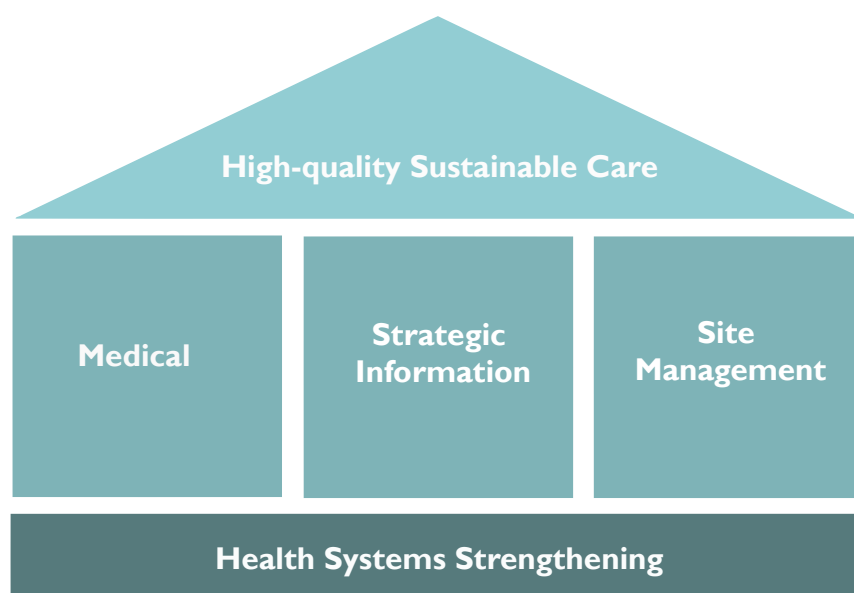
Health systems strengthening (HSS) is a key component of the AIDSRelief model. HIV care and treatment programs require strong, well-managed health systems that can provide comprehensive care. A strong network depends not only on the strength of local partners, but also on the strength of each health facility and its links with the public health sector and the community. This is a fundamental shift for many health institutions in resource-poor settings. Therefore, AIDSRelief supports partners by helping them develop financial, material, technical and human resources through a continuous process of capacity enhancement and improvement.

The strengthening of care delivery systems is critical to sustainability and has therefore been a steady priority in the transition to local management of AIDSRelief programs. Strong

health systems improve the ability of local partners to implement and sustain AIDSRelief’s programmatic values. These include integration, decentralization and sustainability, furthered by the creation of tools and systems that assess, strengthen and measure progress while identifying gaps that require technical assistance.

Health systems strengthening is the foundation that supports the three pillars of the AIDSRelief model: medical, strategic information, and site management (Figure 1). Each of the pillars of AIDSRelief is highlighted in the following pages.

Figure 1. The three pillars of the AIDSRelief model



The First Pillar: Medical

The medical dimension of AIDSRelief centers on the core belief that long-term efficacy and sustainability of treatment depend on using evidence-based strategies and integrated outcomes evaluation to guide both scale-up and technical assistance. As HIV treatment expands and patients remain on therapy longer, it is imperative to assess treatment outcomes to ensure that programs are not compromised by the overwhelming demand for rapid scale-up without evaluating the results. It is this vision that formed the basis of the medical dimension of AIDSRelief (Figure 2).

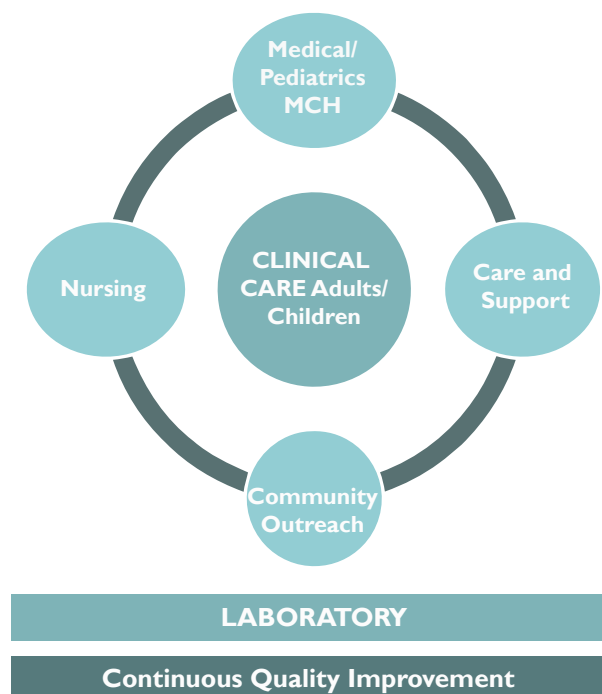
AIDSRelief was built on the belief that delivery of HIV treatment must be, first and foremost, medically driven. The AIDSRelief medical dimension applies a holistic approach that integrates the following:

- **Advocating for the most tolerable, durable, and efficacious therapeutic drug regimens available.** AIDSRelief believes the success and sustainability of ART programs throughout the world may hinge on the first regimen choices available and used. The long-term impact of regimen choice affects not only currently-infected patients but also those who may become infected in the future. In an effort to maximize first line treatment response, minimize side effects, and reduce the extent to which future treatment options are compromised by the first treatment regimen, AIDSRelief has advocated for increasing first regimen options to include therapeutics with low toxicity profiles and higher thresholds for mutation that also preserve future treatment options.
- **Adherence as a vital therapeutic intervention.** For AIDSRelief, adherence — and the support provided to ensure patient adherence — is as important as the drug regimen the patient takes. Through intensive preparatory treatment, education and counseling, help from support groups, home-based outreach, and patient-specific care and treatment plans, AIDSRelief seeks to ensure that the patient is involved in his or her own care and treatment.
- **Disclosure.** AIDSRelief encourages disclosure as a vital component of adherence. In fact, more than 95% of all patients treated in AIDSRelief-supported facilities have disclosed their status to at least one other person, reducing the chances that these patients will miss doses for the sake of hiding their status from those closest to them. This also fosters secondary prevention, as well as home- and family-based testing.
- **Defined catchment area.** AIDSRelief believes that health care and supportive services should be available as close as possible to the patient's home. This promotes feasible and continuous interaction between patients and health care providers, including community health care workers who support patients in their own communities.
- **Longitudinal medical records.** AIDSRelief has supported the development and implementation of longitudinal medical records in the facilities it supports. This has been critical for long-term sustainability and moving health care from the delivery of acute and episodic care to long-term chronic health care.
- **On-site laboratory capacity.** AIDSRelief has developed strong laboratory capacity at primary care facilities to allow for on-site opportunistic infection (OI) and toxicity identification as well as CD4 determination. AIDSRelief believes that this is a crucial tool to allow clinicians to adequately treat and care for patients.
- **Continuity of care with service extension from the clinic to the community.** Since its inception, AIDSRelief has worked to provide significant care and treatment support services

in the community. Through decentralization mechanisms and education, the responsibilities of community health workers are augmented to provide specific services in the community, including supportive and symptomatic care around the time of ART treatment initiation. As service extends into the community, main clinics become less congested and can devote room and time to target difficult, complex cases, while stable patients are provided with continuous care and support through community extension services.

- **Community health care workers.** AIDSRelief believes in the power and importance of peer treatment support provided through a community-based network. AIDSRelief has trained community health care workers and volunteers to be more than just friendly visitors; they are also trained to identify signs of side effects and toxicity. Community nurses and adherence officers provide the health care workers with supportive supervision so that they can offer the patient support and treatment quickly and reduce the risk of non-adherence.
- **Integration of maternal-child health (MCH) care into comprehensive HIV care.** Recognizing the patient and the family as an indivisible whole, AIDSRelief seeks to integrate the care of HIV-infected pregnant women, exposed infants and infected children into comprehensive HIV care, avoiding vertically integrated approaches that can fragment care. The solution combines strengthening practices within the maternal-child care system, strengthening maternal-child care within the HIV care system, and most importantly, finding creative ways to integrate maternal-child and HIV care expertise into a unique approach that focuses on care of the HIV-infected woman and her infant.

Figure 2. The AIDSRelief Medical Dimension





Sr. Veronica Wanjiru at a health center in Mombasa, Kenya. David Snyder for CRS

Patient Level Outcomes

The medical component of AIDSRelief is guided by a focus on patient level outcomes (PLO). AIDSRelief values viral suppression as an indicator of success, and incorporates cross-sectional point-in-time viral load monitoring into both program evaluation and program improvement. Throughout the PLO process, AIDSRelief uses this viral load data in two fundamental ways.

First, AIDSRelief uses the PLO viral loads to identify programs with strong viral load outcomes and target additional resources for further expansion. Programs with sub-optimal results receive additional technical assistance and capacity building before further expansion. This approach allows AIDSRelief to continue to scale up services in an evidence-based fashion while minimizing potential impacts of scaling sub-optimal outcomes.

Second, AIDSRelief uses patient level outcomes for quality improvement. Most facilities supported by AIDSRelief do not have access to measured viral loads for clinical use. AIDSRelief recognizes that in the absence of routine viral loads, sites must be able to identify patients at risk of treatment failure earlier than signs or symptoms of clinical progression can be observed. AIDSRelief uses the PLO process to assist sites in identifying characteristics of patients who are at risk for treatment failure. Sites are supported to identify individual patient health and behavior factors as well as aspects of care delivery that are most related to treatment success. Sites also develop quality improvement activities that use their own treatment outcome data to target areas that need improvement (Figure 3).

Figure 3. Activities of the Quality Improvement Program



The Second Pillar: Strategic Information

Because AIDSRelief relies on an adaptive management model to plan its activities and address gaps in services, comprehensive and timely access to clean, complete and accurate data is a top priority. A focus on strategic information (SI) provides decision-makers at the country management and clinic level with high quality, usable data, while developing the capacities of local partners to manage information.

AIDSRelief's SI activities are guided by three core goals:

- **Addressing needs** — ensuring that partners have the equipment, staff, training and systems in place to comply with all donor and national health information requirements and to meet the needs of all AIDSRelief patients, staff and facilities.
- **Developing capacity** — improving the ways in which partners collect, manage and use data so that program and patient monitoring is performed at increasingly comprehensive levels and gaps in services are addressed earlier and more effectively.

- **Ensuring sustainability** — empowering partners to gain increasing autonomy in evaluating and addressing their own needs, improving their systems and planning for the future.

In order to achieve these goals, AIDSRelief relies on a number of proven processes and customized tools.



In Nairobi, Kenya, a community health worker visits with clients. David Snyder for CRS.

Baseline Assessment (Site Assessment and Activation)

Baseline assessment is the first step in launching well-informed AIDSRelief projects. Using specialized tools and evaluation techniques, the team reviews the national government requirements, patient tracking system, patient flow, data collection methods, and electronic medical records system.

This process assesses the quantitative reports generated by the treatment sites and identifies existing challenges or gaps. It also identifies the minimum data set captured at the site and determines if new variables should be tracked to meet national government, donor and stakeholder requirements, as well as the level of expertise demonstrated by SI personnel. Additionally, these evaluations give local partners further understanding of their existing structure and capacity and identify the practices, procedures and training needed for successful implementation of the project.

Key SI Achievements

- Facilitated the harmonization of a paper-based medical records system with required indicators and mapped the flow of patients and the records system
- Facilitated meetings with clinical and medical records staff around harmonization of medical records and built capacity to use strategic information for clinical and program management
- Built and strengthened M&E capacity at clinics to collect, manage and analyze strategic information using both paper-based and electronic patient monitoring and management (PMM) systems
- Designed and implemented nationally-recognized electronic PMM systems to meet country, donor and clinic requirements
- Provided technical assistance to build capacity in compiling required indicators
- Built capacity to improve the culture of information use; clinics are gradually embracing strategic information for planning and clinical management

Training and Ongoing Technical Assistance

After the baseline assessment, training sessions with health facilities develop and introduce a harmonized system, required indicators, data collection tools, the concept of data use for decision making, and data analysis methods. Using training modules, technical assistance, and continuous quality assurance, AIDSRelief promotes a culture of data demand and information use (DDIU) at clinics. While reporting to donors and governments is an essential function, AIDSRelief believes the primary aim of collecting strategic information is to assist clinicians and clinic managers in providing high-quality longitudinal HIV care and treatment to assist in chronic disease management. Accordingly, AIDSRelief provides technical assistance to facilitate the development and implementation of a data management system that responds to the needs of physicians, community-based treatment staff, hospital administrators, nurses, the U.S. Government and other donors, as well as of the project itself.

Training also results in increased capacity to use data to improve the outcome and quality of the ART program. Trainings on both paper-based and electronic systems have not only taught local partner treatment facility (LPTF) staff how to use the database, but have also increased their understanding of the role of monitoring and evaluation and how to retrieve and use information to manage their programs. Through this training and technical assistance, DDIU is improving and sites are gradually embracing, strategic information for planning and clinical management.



Community health workers participate in training in Malindi, Kenya. David Snyder for CRS.

IQSolutions

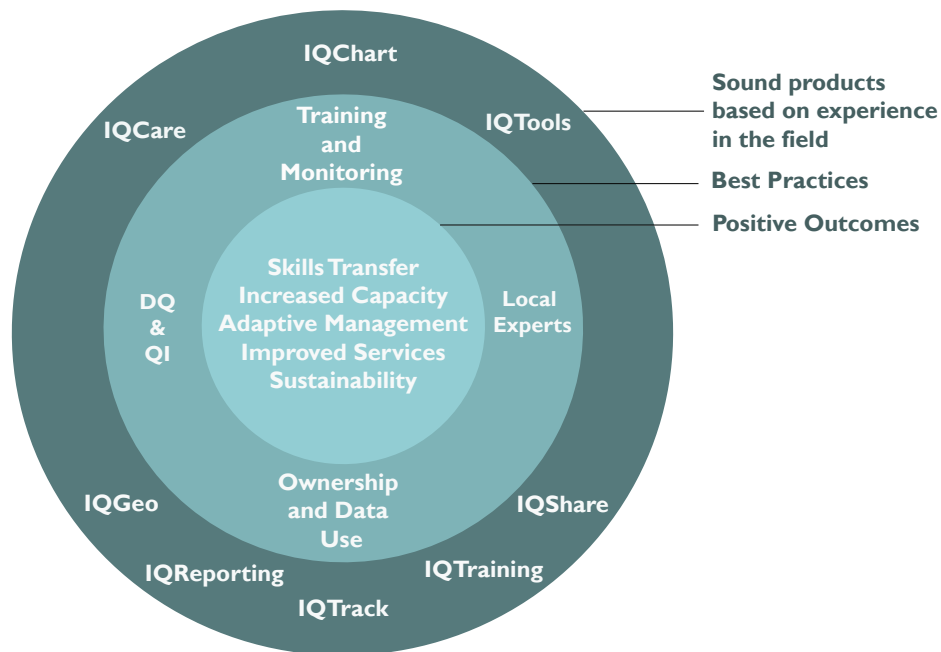
Once trained to use data to improve their programs, clinics need tools to manage the large amounts of data they collect. Three main informatics solutions were developed to support and meet clinics' needs for efficient and user-friendly data management (Figure 4).

Collectively these tools are known as IQSolutions, and they consist of IQCare, IQChart, and IQTools. Additional supporting tools are also incorporated into IQSolutions.

- **IQCare** is a robust and comprehensive data capture and reporting system with patient management tools designed to measure patient outcomes. IQCare helps clinics collect and make use of accurate longitudinal patient data. It also provides flexible reporting leading to enhanced data use and analysis. It is currently in use at over 100 clinics in four countries (Kenya, Nigeria, Tanzania and Uganda).
- **IQChart** is a multi-language patient management information system based on the World Health Organization (WHO) patient registers. It collects critical information from the registers and longitudinal data from patient records and automatically generates essential information required by the clinics as well as for donor reporting. Used primarily in Rwanda and Guyana, it was developed to be an efficient yet simple patient monitoring and reporting tool for lower-capacity sites. Through extensive training and technical assistance, it has now been adopted by other PEPFAR Track 1.0 implementing partners (ICAP, Intrahealth and EGPAF) and is in use at over 100 clinics in Rwanda.

- **IQTools** is a support application for data cleaning, data mining and reporting. It was originally developed to help sites identify data inconsistencies in order to produce accurate reports. This tool has the ability to link to third-party databases and run several validation routines as well as generate reports. There are over 50 data cleaning queries which highlight potential issues with dates, missing data, data out of reasonable range, etc. In addition, IQTools can improve site DDIU activities by generating customizable reports on a number of key adherence and clinical indicators.
- **IQMerge** is housed within IQTools but has the specific function of merging de-identified datasets to make data analysis more efficient and to look at emerging trends across all health facilities within a country or region. The need for comparative analysis and aggregate reporting at higher levels necessitated the creation of IQMerge. IQMerge efficiently creates the merged dataset, handles the resultant large dataset, and incorporates some automated validations and reporting functions. It is able to combine data from any number of IQCare or IQChart facilities into one master SQL database.

Figure 4. Training in best practices, supported by IQSolutions software tools, allow clinics to channel their data into a variety of positive outcomes.



Some key features of IQMerge:

- A simple and intuitive interface with Microsoft Windows-style menus
- Tree-views for a list of databases to be merged
- Handy error reporting, warning and diagnostic information tabs

- Robust and scalable
- Modular programming allows extension of the merge utility to other electronic systems
- Robust SQL database for back end
- Free and extensively tested Microsoft technologies

De-identified patient level data from an entire district, or all health facilities that use an IQSolution, can be aggregated into a single SQL database, making it available for analysis and informed decision making.

IQReports is a data warehouse holding PEPFAR Track 1.0 facility-based quarterly reports and other Ministry of Health and project reporting data. Health facilities compile these standard reports using an Excel template and send them via email to a central server, which verifies the data and adds it to the data warehouse. Using an internet browser, program managers and M&E staff can then access IQReports. The application provides a variety of standard options to run reports across countries and time frames. Custom reports can also be run.

Because IQSolutions are issued under a Creative Commons license, these extensive tools can be used by health facilities free of charge, creating a sustainable foundation of advanced SI tools while addressing immediate needs and developing capacity.

The Third Pillar: Site Management

HIV care and treatment programs are most successful when they are a part of strong, well-managed health facilities. AIDSRelief's site management activities focus on ensuring that LPTFs have the appropriate management, administrative and support services in place to support a high-quality ART program. The AIDSRelief site management team assists LPTFs in developing strong administrative and management practices to ensure efficient operation of the site on a daily basis. The ultimate goal is to build capacity of local partners to assume primary responsibility for HIV care in their facilities and communities.

This includes advising the sites in areas such as management and administration, human resources, development of work plans and timelines for project activities, and ongoing contact with and reporting to government representatives, donors, and other stakeholders. When necessary, AIDSRelief identifies gaps and links the sites to technical assistance to address these problems.

Crucial components of site management include:

- **Program Support.** In conjunction with the medical and strategic information teams, the site management team provides targeted program support and technical assistance. This begins with identifying needs of the LPTFs during an initial assessment and continues with quarterly reviews to monitor progress, reviewing site reports, and providing feedback to sites on technical and operational needs. The site management team also reviews the recommendations made by clinical, supply chain, finance and compliance, and SI teams and

works with site project coordinators and hospital management to implement solutions.

AIDSRelief works with site teams to develop and implement work plans and set targets to guide the staff on a daily basis. AIDSRelief staff visit the sites regularly, make recommendations on technical and operational needs, and troubleshoot any roadblocks. AIDSRelief also assists the sites with regular program support such as preparing legal agreements, responding to donor requests and writing reports.

- **Finance and Compliance.** AIDSRelief works with the LPTFs to develop comprehensive, realistic budgets; assure that expenditures are linked to programmatic plans; and provide justification for expenditures. AIDSRelief also ensures that sites implement good accounting procedures and builds the LPTF's capacity to carry out proper forecasting of activity cash requirements. This includes assisting the sites in deploying accounting software, and training staff to use and maintain the programs.

Because AIDSRelief is funded by PEPFAR, it is important that local partners are conversant in the regulations that govern the use of U.S. government funds. Thus, a major aspect of site management is training in USG finance and compliance. Monitoring, training and updating of LPTF staff on compliance issues takes place on a regular basis.

In addition to supporting the LPTFs' budget-related financing, AIDSRelief works with sites to create internal procurement policies and to ensure that staff complies with all procedures. This includes procurement of both pharmaceuticals (including supply chain management) and capital equipment. AIDSRelief site management teams assist in implementing software to standardize and streamline local procurement.

- **Supply Chain and Pharmacy Management.** A successful ART program requires an uninterrupted supply of antiretroviral medications, opportunistic infection drugs, lab reagents and other supplies. AIDSRelief ensures that pharmacy and supply chain staff are able to forecast, procure and dispense medication and are trained to use computerized drug management information systems. This is followed by continuous on-site job mentoring. LPTF staff are trained in development and use of standard operating procedures to support logistics management, institutionalization of standard operating procedures and inventory management. Throughout the six years of the program, AIDSRelief has been successful in ensuring that there are no stock outs of AIDSRelief-procured ARVs.
- **Referrals and Community Linkages.** AIDSRelief takes a holistic approach to HIV care that assists patients, families and communities as they cope with the physical, economic, social and emotional impacts of HIV. To address a continuum of needs, AIDSRelief patients are often referred to complementary programs and services including orphans and vulnerable children

(OVC) programming, home-based care, food and nutrition, agriculture, and livelihoods. These linkages build upon the local partners' strong community roots and optimize community mobilization, recruitment and adherence.

AIDSRelief also builds working relationships with regional and district level government institutions to advocate for the program. Linkages are built with community-based organizations to work in collaboration to build capacity, support the facilities' adherence programs, and maximize treatment outcomes.

- **Infrastructure and Equipment.** To provide high quality services, medical and health teams must be able to work in an appropriate environment, and that working environment goes beyond simply a building. Therefore, a critical component of site management is ensuring that sufficient physical resources are in place at each LPTF to create a suitable setting for sustainable health care.

If the building itself is inadequate, AIDSRelief assists with capital improvements such as renovation or refitting of existing structures. In addition to exam, treatment and waiting areas, an LPTF might require renovations to create appropriate space for the laboratory and pharmacy services. Once the physical structure is in place, other necessities include a reliable supply of water and electricity, specialized equipment and commodities, record keeping systems, computers and other inputs needed for the site to function on a daily basis. The AIDSRelief site management team consults with LPTFs to determine what improvements, if any, are needed and how to budget and plan for enhancements.

- **Leadership and Management Structures.** An efficient and effective health facility requires strong leadership to provide direction and guidance. Therefore, a central theme of site management is ensuring good governance. AIDSRelief works with LPTFs to establish and develop governing bodies such as boards of directors and advisory committees. Additional support is provided to develop a vision and mission for the facility, set policy direction and create administrative structures that address clinic management issues. Good leadership and strong management helps ensure effective program implementation.
- **Human Resources.** AIDSRelief works with the sites to develop documented human resources policies and procedures, job descriptions and performance plans, ensuring that key positions are filled with appropriate, qualified staff. AIDSRelief also ensures that each LPTF has a staffing structure/plan that supports the site's care and treatment objectives.

Throughout, AIDSRelief site management teams work hand in hand with the LPTFs to build the systems and structures that support quality health care. This collaborative relationship allows sites to take ownership for challenges as well as success, and empowers them to develop creative solutions to obstacles. The end result is a well-managed health care facility with access to the financial, material,

technical and human resources needed to deliver high quality care in a holistic setting. Once AIDSRelief has transitioned, the facilities are attractive to donors as well-managed points of care in which to invest resources for maximized health outcomes for the targeted communities.

Conclusion

The AIDSRelief consortium established an effective model of intervention in an unparalleled response to HIV in resource-poor settings. By strengthening health systems as the foundation of the response, AIDSRelief has been able to make great strides toward its original goal of assuring that people living with HIV and AIDS have access to ART and high-quality medical care. With more than 183,000 patients in treatment as of March 2010, and a viral suppression rate that is rarely seen even in the US, AIDSRelief has demonstrated that its project model is a success.



A patient receives her supply of ARV medications at a hospital in Mwanza, Tanzania. David Snyder for CRS.

