



AMERICAN INTERNATIONAL  
HEALTH ALLIANCE (AIHA)

# FINAL REPORT TO HRSA

HIV/AIDS TWINNING CENTER  
PROGRAM

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## List of Acronyms

AFEM	African Federation of Emergency Medicine
AGYW	Adolescent Girls and Young Women
AIHA	American International Health Alliance
CDC	Centers for Disease Control
CSO	Civil Society Organization
CSWs	Commercial Sex Workers
CHW	Community Health Workers
COP	Country Operational Plan
CQI	Continuous Quality Improvement
DREAMS	Determined, Resilient, Empowered, AIDS-Free, Mentored Women
DFZ	Defense Forces of Zambia
DFSHS	Zambia Defense Force School of Health Sciences
EID	Early Infant Diagnosis
FY	Fiscal Year
GBV	Gender Based Violence
HBCU	Historically Black Colleges and Universities
HOP	Headquarters Operational Plan
HRH	Human Resources for Health
HRSA	Health Resources and Services Administration
KCCB	Kenya Conference of Catholic Bishops
MERS	PEPFAR's Monitoring, Evaluation, and Reporting Strategy
MOH	Ministry of Health
MOHCDGEC	Ministry of Health, Community Development, Gender, the Elderly, and Children
PMTCT	Prevention of Mother to Child Transmission
NIMART	Nurse Initiation and Management of ART
OVC	Orphans and Vulnerable Children
PEPFAR	President's Emergency Plan for AIDS Relief
PLHIV	People Living with HIV
PVLS	Patient Viral Load Suppression
QI	Quality Improvement
SAB	Social Asset Building
SPHMMC	St. Paul Hospital and Millennium Medical College
STI	Sexually Transmitted Infections
TB	Tuberculosis
TCP	The HIV/AIDS Twinning Center Program (also Twinning Center)
VL	Viral Load
VHC	Volunteer Healthcare Corps
WHO	World Health Organization

# Preface

The American International Health Alliance, Inc. (AIHA) is a 501(c)(3) nonprofit organization working to advance global health by helping countries with limited resources build sustainable institutional and human resource capacity. Through volunteer-driven twinning partnerships and other initiatives that mobilize communities to better address healthcare priorities while improving productivity and quality of care, AIHA provides technical assistance using the knowledge and skills of experienced health and allied professionals to strengthen overburdened health systems.

AIHA was established by the U.S. Agency for International Development (USAID) and leading representatives of the US healthcare sector in 1992 to serve as the primary vehicle for mobilizing the volunteer spirit of American healthcare professionals to make significant contributions to the improvement of global health through institutional twinning. To date, AIHA has supported some 180 twinning partnerships linking American volunteers with communities, institutions, and colleagues in 34 low- and middle-income countries in a concerted effort to strengthen health services and delivery, as well as health professions education and training.

Since its inception, AIHA has operated with funding from USAID; the U.S. President's Emergency Plan for AIDS Relief (PEPFAR); the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services; the U.S. Centers for Disease Control and Prevention (CDC); the U.S. Library of Congress; the Global Fund to Fight AIDS, Tuberculosis and Malaria; the Bill and Melinda Gates Foundation; and other donors. With their support, our partnerships and programs represent one of the U.S. health sector's most coordinated responses to global health concerns.

This final performance report provides a comprehensive overview of AIHA's HRSA-supported HIV/AIDS Twinning Center Program between the years 2014-2019, which was made possible with the generous support of the American people thanks to funding from PEPFAR through HRSA Cooperative Agreement No. U97HA04128. The report describes AIHA's unique twinning partnership model, the development and evolution of the program in sub-Saharan Africa, Asia, Eastern Europe, and the Caribbean, and the main program components funded during this 5-year period, as well as brief summaries of two previous Cooperative Agreements under which the Twinning Center operated from 2004-2014.

AIHA wishes to express its sincerest gratitude to the countless professionals in the United States and in the implementation countries who gave so generously of themselves to the twinning program. Our partnerships and initiatives have been so successful because these individuals demonstrated the courage and commitment to change; the patience, dedication, and hard work to gain new knowledge and skills; and a generous spirit of trust and collaboration. Together they made significant contributions to improving healthcare services and delivery for thousands of people across more than a dozen countries. AIHA also thanks PEPFAR and HRSA for the opportunity and privilege of working in these countries and for their steadfast support of the HIV/AIDS Twinning Center Program. Finally, AIHA gratefully acknowledges the contributions of dedicated staff in our headquarters and regional offices, who managed and implemented the program and prepared this final performance report.

The contents of this report are the responsibility of AIHA and do not necessarily reflect the views of PEPFAR, HRSA, or the United States Government.

## Executive Summary

AIHA, through the Twinning Center Program, made vital contributions to the HIV/AIDS approach both through traditional twinning partnerships and, in the period of performance, through direct implementation of multiple programs. Over the course of the 15.5-year TCP, with a focus on the last 5.5 years, AIHA has learned valuable lessons, particularly in its core areas of improving human resources for health (HRH) in low- and middle-income countries and in health system strengthening. Since the inception of the TCP, AIHA and partners have provided pre- and in-service training to over 27,000 health care professionals, including physicians, nurses, biomedical engineers and technicians, laboratory technicians, para social workers, and other allied health care workers. These trainings on topics ranging on topics from adolescent disclosure to incorporation of continuous quality improvement and far beyond have provided important skills critical to reducing the burden of HIV/AIDS in nearly 20 countries across Africa, Europe, and Asia. The peer-to-peer twinning model has led to a strong sense of country ownership, as local experts have graduated from being the recipient partner to providing South-to-South twinning leadership and building in-country capacity. While this report outlines the most direct results of AIHA's work through the TCP, the follow-on impacts will be felt for decades to come as shared best practices continue to take root and spread.



AIHA's approach to HRH relies strengthening four inter-related areas. These include national authorities, regulatory bodies, professional associations, and educational institutions. Each of these pillars is crucial to the development of the health and social welfare workforce, and without this comprehensive approach, the TCP would likely have yielded fewer successes. This approach to health and social workforce development has yielded results across the geographic and technical areas encompassed within the TCP.

In South Africa, AIHA supported the development and institutionalization of an entirely new cadre of mid-level health professionals, Clinical Associates. The Clinical Associates, or ClinAs, are analogous to physicians' assistants in the United States. Through partnerships with South African educational institutions including the University of the Witwatersrand, Nelson Mandela University, and University of Pretoria, AIHA and other stakeholders were able to support the training of this new cadre, a majority of whom are employed in the public and private sectors, working to provide HIV/AIDS care and treatment.

While AIHA continued to provide support to pre-service training initiatives, in this iteration of the TCP Cooperative Agreement, the focus shifted more toward in-service training and continuing professional development opportunities. In Tanzania, where AIHA worked with the government for many years in support of the adoption of a task-sharing guideline, AIHA and partners also spearheaded comprehensive training for nurses and midwives on their new responsibilities under nurse-initiated management of ART (NIMART). Early results already demonstrate positive effects on the HIV clinical cascade based on the training and mentorship available to

nurses as they continue to take on more HIV care and treatment leadership. In Zambia, as another example, local lab experts served as mentors to other laboratory professionals, providing training and supportive supervision in lab quality management systems to 69 regional labs.

AIHA's work also focused on strengthening national authorities. For each project in each country, AIHA worked continuously to engage stakeholders, including representatives from national ministries. In Tanzania, NIMART could never have been implemented without support and buy-in from the Ministry of Health, Community Development, Gender, Children and the Elderly (MOHCDGCE), particularly from the Directorate of Nursing and Midwifery Services (DNMS). A strong relationship built with Ethiopian health authorities has translated into the institutionalization of numerous projects that started as TCP activities, including the creation and staffing of a National Poison Control desk and the mainstreaming of HIV/AIDS care in emergency medicine.

AIHA also works closely with professional associations as an important component of supporting development of the health workforce. AIHA helped support the creation of the Professional Association of Clinical Associates in South Africa (PACASA), an organization that has worked closely with the government of South Africa to develop a scheme of service and professional path for this newly developed cadre. In Tanzania, AIHA has worked closely with schools of social work as well as existing associations such as the Tanzanian Association of Social Workers (TASWO) to create a standardized curriculum around the provision of psycho-social support services (PSS) to those living with or affected by HIV/AIDS. Working with professional associations ensures close ties are built with those who are actively practicing their profession, meaning that in-service training and other activities can be delivered efficiently and effectively to those who need them most.

While strengthening HRH is an important component of overall HSS, AIHA has contributed to stronger health systems worldwide in ways beyond workforce development. While blood safety projects under the TCP were relatively small, AIHA made important contributions to the culture of blood safety in Kyrgyzstan and Ukraine with minimal investments. A strong, functioning, and safe blood system is crucial in every country, and health systems are stronger for these projects.

One of AIHA's most important successes has been in strengthening lab capacity and biomedical engineers and technician skill across five countries in Africa: Ethiopia, Kenya, Tanzania, Uganda, and Zambia. The HIV clinical cascade is dependent in large part on sophisticated machinery and good lab practices to ensure safety, the validity and reliability of testing, and viral load measurement, among others. AIHA has worked through partnerships to improve biomedical engineers and technician capacity in each of the above five countries, but successes have gone even beyond a better equipped, more prepared cadre to work in labs.

In the past, countries have relied on expensive licensing arrangements with the companies that provide VL/EID machinery. Not only has this resulted in long downtimes, as it is not always possible for maintenance to be conducted quickly, but the expense of importing expertise from abroad is a drain on national resources. Through AIHA's programs focused on teaching planned preventive maintenance, biosafety cabinet preparation, and other vital skills, countries are already noting both reductions in downtime and cost savings.

AIHA has also supported the opening of five national laboratory equipment calibration centers (one in Kenya, one in Uganda, and three in Zambia) for the calibration of non-automated equipment, including pipettes, autoclaves, and water baths. These calibration centers are on the path to international certification, ensuring that these countries will have the local capacity to maintain materials necessary to the HIV clinical cascade for years to come.

AIHA did encounter challenges in its work. Several exciting partnerships revolved around information technology, but results were mixed. In Zambia, a telemedicine project geared toward expanding access to high quality care to those far from hospital centers did not reach as many patients as originally hoped. Another project in Zambia, co-creation of a mobile application to reduce loss to follow up among people living with HIV with the private company Zerion, produced excellent results, but its long-term sustainability is in doubt due to the expense of air time, licensing the app, and continuing to train facility and community health workers on its use. This project has transitioned to another implementing partner, and we hope the challenges to sustainability can be overcome.

## AIHA and the Twinning Center Program

### **The AIHA Twinning Model**

As a development model, twinning uses institution-to-institution partnerships and peer-to-peer relationships to benefit both sides. Twinning emphasizes professional exchanges and mentoring for effective information and knowledge sharing, as well as more rapid acquisition of new, evidence-based clinical skills and practices. It also taps into voluntary contributions of knowledge and expertise to leverage resources effectively and helps develop sustainable health system capacity because it supports local ownership and seeks synergy with host country goals and HSS strategies.

#### *Emphasis on Voluntarism*

AIHA's twinning model is based on institutional, community, and individual voluntarism. The model engenders trust and collaboration because the partners are equals. Professional resources supporting partnership activities are provided by their constituent institutions, health professionals, and other stakeholders. U.S. institutions often engage in twinning because it supports their organizational mission or call to service. Partner institutions bring their own resources, through links with private health professionals, suppliers, vendors, and FBOs, or CBOs. This helps partners leverage USG funding through in-kind contributions of professional time, equipment, supplies, and other material goods.

#### *Development of Flexible Models for Scalability*

AIHA's methodology ensures that twinning partnerships play a role in system-wide change and rapid scale up. Scaling up HIV/AIDS-related programs through twinning actively engages key stakeholders, integrates with other donor efforts, and is inclusive of education and learning resources. Most importantly, twinning supports the development of sustainable and replicable models for scaling up and embraces a community-based and multidisciplinary HSS approach. It also makes effective use of case and disease management strategies. In keeping with this, AIHA supports partner efforts to:

- Develop centers of excellence that demonstrate effective organization and clinical practice;
- Develop evidence-based guidelines and protocols for healthcare providers, as well as scalable strategies to integrate and replicate these models, in collaboration with ministries of health, educators, and practitioners; and
- Establish and institutionalize ongoing training programs.

### *Applying AIHA's Twinning Model to Achieve PEPFAR Goals*

As depicted in the graphic below, twinning was an effective PEPFAR HSS strategy to improve services for PLHIV and others affected by the pandemic because it bolstered country capacity at the institutional, human resource, and broader professional network levels.

Employed through the Twinning Center Program, AIHA's twinning methodology helped resource-constrained nations develop and implement sustainable programs that continue to address a broad range of public health issues related to HIV/AIDS. Further, twinning proved to be highly responsive to the health system strengthening needs of target countries. Its flexibility allowed it to adapt the scope, focus, and capacity building activities to the specific needs of local institutions in a way that empowered them to develop their own solutions.

#### Twinning Helped Build ...



The success of AIHA's partnerships clearly demonstrated the applicability of our twinning model to a broad range of public health priorities at both the institutional and systemic levels. Technical assistance interventions related to partnerships involved schools of health and allied professions and focused on pre-service and in-service training, as well as training of trainers, not only for physicians and nurses, but also for mid-level medical cadres, social workers and para social workers, and other allied health professions such as lab, pharmacy, and biomedical technicians, which represent an ongoing and acute need in low- and middle-income countries around the globe.

Under the Twinning Center Program, scaling up HIV/AIDS-related programs through twinning actively engaged key stakeholders, integrated with other donor efforts, and was inclusive of education and learning resources. In addition, twinning proved to be equally suitable for institutions as diverse as hospitals, professional associations, NGOs, and FBOs, and — because they are institution-based — AIHA twinning partnerships bring together the collective knowledge, commitment, and expertise of their constituent members.



Regardless of partnership focus, AIHA’s overall twinning methodology ensured that each:

- Was based on formalized, results-oriented workplans and signed memorandum of understanding;
- Employed a non-prescriptive, but rigorous collaborative approach;
- Used a community-based strategic planning process to develop, monitor, and modify programmatic objectives in a continuous feedback loop;
- Transferred and exchanged practical knowledge, skills, and experience using collaborative and peer-to-peer training, mentoring, shadowing, and supportive supervision of health workers;
- Provided skilled volunteers who mentored counterparts and fostered adoption of new, evidence-based approaches; and
- Successfully leveraged resources and created true engagement when the resource partner was identified through a competitive solicitation in which local partners participate.

### Selected Technical Focus Areas of Twinning Center Partnerships

- HIV Care & Treatment
- HIV Counseling & Testing
- Information Technology
- Lab Strengthening & CQI
- OVC Community Services
- Palliative Care
- Pharmacy Services
- HIV Prevention - Key & Priority Populations & PWP
- HIV Prevention through Media
- Health Professions Education
  - Clinical Pharmacists
  - Pharmacy Technicians
  - Nurses
  - Emergency Medicine Specialists
  - Laboratory Technicians
  - Medical Technologists
  - Social Workers
  - Social Welfare Assistants
  - Para Social Workers

### *Program Design and Implementation under the Twinning Center*

As previously stated, AIHA’s unique twinning methodology is designed to promote sustainable partnerships between institutions looking to foster more effective and efficient health service delivery. Unlike more traditional consultancy programs, twinning partnerships are voluntary and peer-based technical assistance programs. The model emphasizes the transfer of knowledge and skills through professional exchanges, mentoring, and ongoing learning via remote modalities. Twinning partnerships make an investment in health and allied care professionals as part of the larger health system. It is important to note that twinning is as an ongoing, multi-pillar approach to technical assistance.

Under the HRSA-supported HIV/AIDS Twinning Center Program, AIHA’s partnerships directly or indirectly contributed to efforts to increase the number of people receiving HIV-related treatment and prevention services and more broadly impacted the health of people across the board through our overall HSS and HRH initiatives.

During the 15-year lifespan of the HIV/AIDS Twinning Center, USG country team support for the twinning approach fell into three main categories:

- When an institutional, peer-to-peer approach would optimize specific capacity-building targets;
- When results could not be achieved solely using USG funding, making the significant in-kind contributions twinning requires imperative for success; and
- When capacity-building requirements did not have another technical assistance vehicle, such as MEPI or NEPI — for example, mid-level cadres such as Clinical Associates, Pharmacy Technicians or Clinical Pharmacists, and Social Welfare Assistants.

The Figure below shows the basic steps AIHA takes to ensure that partnerships are locally driven, owned, and sustainable. For the Twinning Center partnerships over the past decade, this created an underlying framework for providing effective tools and strategies that support ongoing institutional and human resource capacity building, including staff training, outreach, collaboration, and information sharing as described in greater detail in Figure 1.

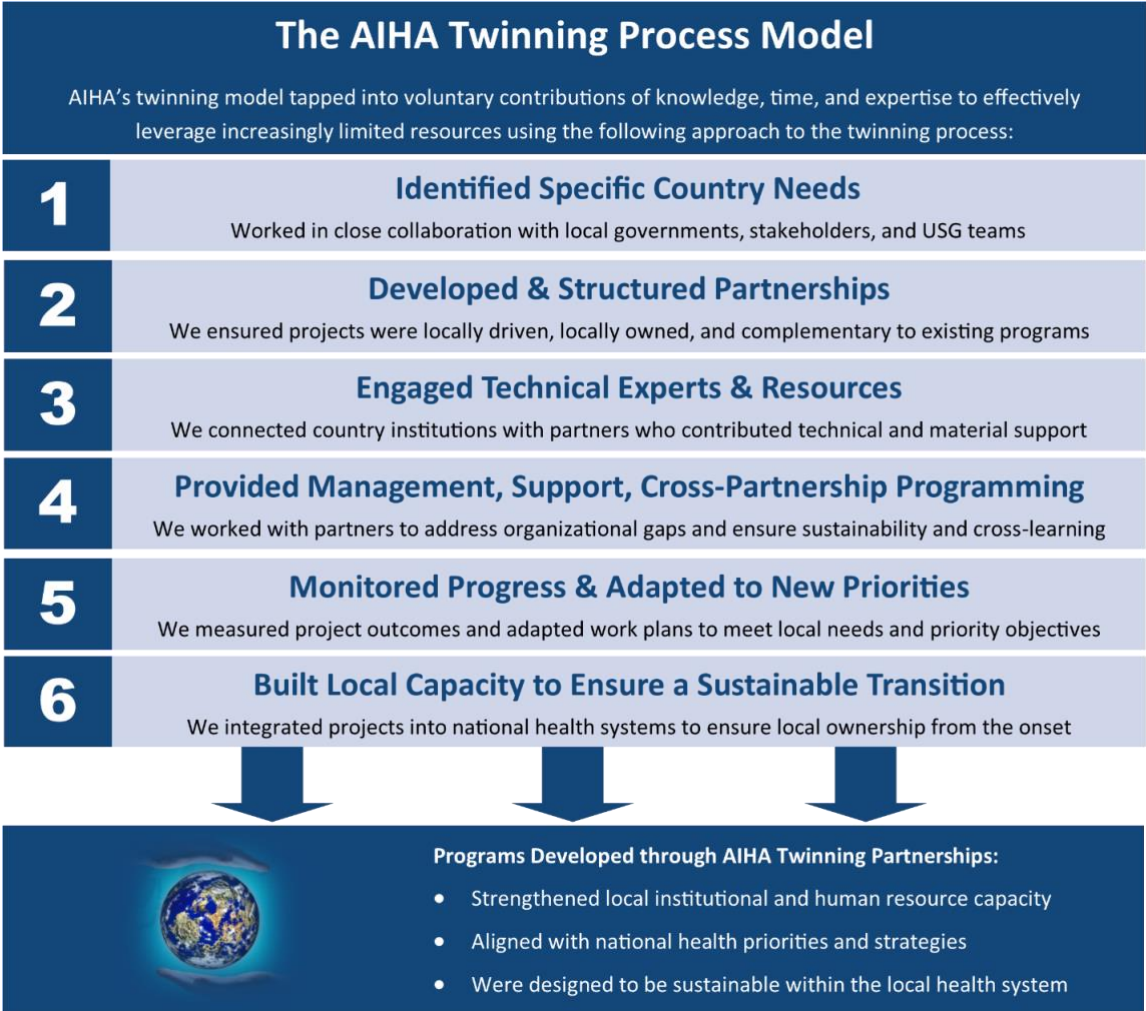


Figure 1. AIHA Twinning Process Model.

In terms of process, AIHA worked with HRSA, USG country and regional teams, and key country stakeholders to identify local needs, and determine where the partnership approach can help achieve country and PEPFAR goals for a target area or institution.

AIHA then identified local organizations that needed technical assistance, as well as “resource partner” institutions that could provide the needed support. AIHA increasingly engaged local partner institutions in the selection process. Local partners often suggested potential resource partners to include in solicitations, engaging in all steps of review and selection to ensure ownership from the start. This inclusive process supported country buy-in and leads enhanced sustainability.

Resource partners traveled to local partner institutions to build working relationships, conduct site visits and needs assessments, and develop work plans. Jointly developed work plans set forth measurable objectives and a timeline to achieve them, as well as activities, outputs, and outcomes. This collaboration also helped ensure project activities aligned with national strategies, while work plans maximized coordination with USG-supported programs in country to eliminate duplication of effort and include plans for project sustainability both during and after the funding period.

Next, a series of professional exchanges occurred to allow local partners to see successful projects in action, shadow counterparts, and participate in hands-on training activities. When resource partners visited, they provided technical assistance, and mentoring, and assisted with the adaptation, development, and implementation of interventions designed to address identified needs.

AIHA worked with both partners to continually monitor and update work plans and to ensure their activities remained focused on actual needs, context, and evidence-based approaches.

Over the past decade, AIHA has developed a suggested timeline for the life cycle of a partnership, which is illustrated in Figure 2. It’s important to note that the scope of partnerships often evolved in response to partner needs, donor requests, or organizational capacity. When a local partner’s organizational and human resource capacity was sufficiently strengthened, they sometimes received direct funding and support from AIHA to work independently, as was the case with a number of HRSA-supported twinning partnerships in sub-Saharan Africa.

## Twinning Partnership Life Cycle

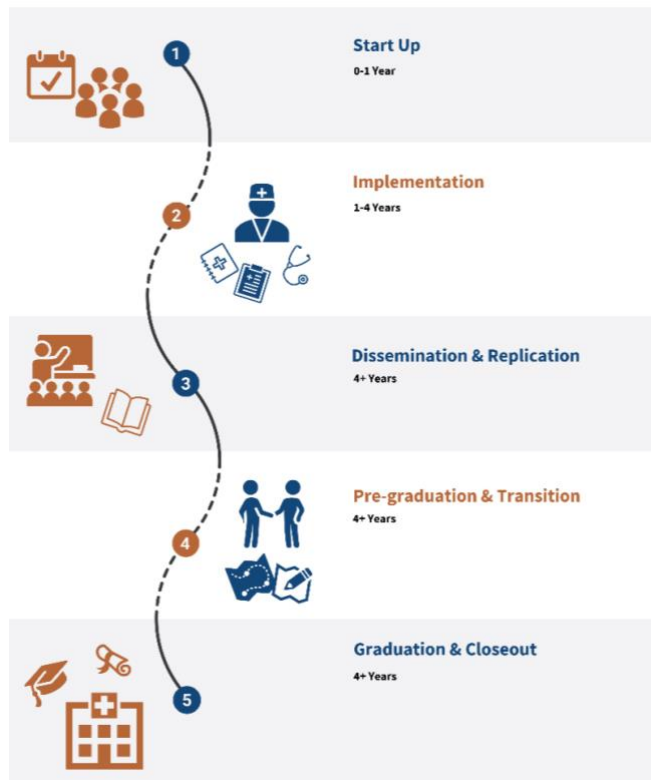


Figure 2. Twinning Partnership Life Cycle.

## Summary of the HIV/AIDS Twinning Center Program, 2004-2014

AIHA's HIV/AIDS Twinning Center Program was established in late 2004 through a Cooperative Agreement with HRSA. Based on our successful implementation of the program during 2004-2009, AIHA was awarded a subsequent five-year Cooperative Agreement in February 2009 to continue managing and expanding partnerships and related activities under the aegis of the Twinning Center. In March 2014, as the second Cooperative Agreement ended, HRSA awarded AIHA a third five-year Cooperative Agreement to continue programming through March 2019; in October 2018 HRSA provided a six-month extension of this final Cooperative Agreement to conform the program to the USG's standard fiscal year.

From the onset, AIHA designed all Twinning Center programs to support PEPFAR objectives through twinning partnerships, targeted development initiatives, and long-term volunteer placements that helped build critical institutional and human resource capacity to improve health and combat HIV/AIDS.

PEPFAR supported training or retraining of nearly 2.6 million healthcare workers during its first five years. At that time, PEPFAR's primary focus was on areas that most directly impacted HIV/AIDS programs, namely HIV/AIDS training for existing clinical staff, such as physicians, nurses, pharmacists, and laboratory technicians; management and leadership development training for healthcare workers; and building new cadres of health workers. Additional PEPFAR-supported activities included support for policy reform to promote task shifting from physicians and nurses to community health workers; development of information systems; human resources assessments; training support for health workers, including community health workers; retention strategies; and twinning partnerships.

During the initial five years of the Twinning Center, AIHA worked closely with PEPFAR, HRSA, and U.S. Government teams in our target countries to quickly establish the solid organizational and operational policies, procedures, and structures necessary to support the rapid initiation and expansion of twinning partnerships, as well as the placement of highly skilled volunteers through the Volunteer Healthcare Corps (VHC).

In 2005, AIHA launched its first Twinning Center partnerships in Tanzania and Zambia and went on to triple the program's country presence in 2006 by adding Ethiopia, Kenya, Mozambique, and South Africa to our portfolio. The following year, AIHA further augmented the program by launching partnerships in Botswana, Côte d'Ivoire, and Namibia. While strengthening operations in the countries mentioned above, we continued to grow our Twinning Program operations in 2008 by initiating programs in Nigeria and the Russian Federation. The rapid growth in the number of Twinning Center partnerships initiated during the last three years of AIHA's first Cooperative Agreement is illustrated in Figure 3.

By the end of this five-year award, AIHA had launched a total of 36 distinct twinning partnerships in 10 sub-Saharan African countries and Russia, fielded 39 VHC volunteers in three of these countries, and graduated two partnerships that had successfully completed — and in one instance surpassed — their development



Figure 3. Number of Twinning Partnerships Established.

objectives.

“All partners, whether Africa- or U.S.-based, agreed that collaborative decision making led to a sense of joint ownership.”

— AIHA HIV/AIDS Twinning Center  
Program Evaluation, The QED Group,  
LLC, May 2013.

In most cases, AIHA partnered a U.S. institution with a significant amount of experience in a focus area with an overseas institution looking to build similar capacity. We also tapped into the wealth of HIV-related knowledge and expertise that already existed in Africa by establishing “South-South” partnerships that link organizations from one or more focus countries.

Apart from one direct technical assistance initiative with the Uganda-based African Palliative Care Association that AIHA supported with central funding, all the Twinning Center partnerships were funded through their respective Country Operational Plans (COPs). AIHA worked with African Palliative Care Association to help develop their institutional capacity to serve as a resource partner to other African nations looking to establish or strengthen palliative care associations, develop

standardized training curricula, and provide advocacy training and technical assistance in policy and organizational development. During the first Cooperative Agreement, African Palliative Care Association served as the technical resource partner for twinning alliances with counterpart organizations in Botswana, Côte d’Ivoire, and Zambia.

As PEPFAR transitioned from its first five years to its second, the World Health Organization (WHO), the Institute of Medicine, and other global public health leaders increasingly stressed that the shortage of motivated, well-trained health workers was — and remains to this day — the central impediment to scaling up access to treatment, care, and prevention services. Particularly in Africa, the human resource shortage has dominated the health sector, reaching crisis proportions. While WHO recommends a minimum of 2.3 healthcare workers per 1,000 country residents as a bare minimum for delivering essential health services, most African countries do not come close to meeting this recommendation.

The dearth of an adequate healthcare workforce in many countries presents a serious challenge not only to HIV/AIDS programs, but to all health programs. It also presents a significant obstacle for implementing the evidence-based interventions that help improve quality of care.

PEPFAR II recognized that quality and sustainability in HIV/AIDS prevention, treatment, and care programming require skilled health and allied service providers, along with an organized, effective health system infrastructure needed to support these workers. Consequently, the technical assistance focus shifted toward health systems strengthening (HSS) and programs that build local human resources for health (HRH) that would naturally enhance sustainability.

Specific examples of this shift included increased support for twinning partnerships, the promotion of deeper integration of HIV/AIDS services within overall health systems, further expansion of local human resource capacity, and targeted strengthening of healthcare organizations. Collectively, these efforts helped ensure that country institutions were better able to effectively respond to HIV/AIDS on a long-term, sustainable basis. In short, this emphasis on systems strengthening and human resource capacity building, represented a broader, more holistic approach to technical assistance and development.

As the most experienced coordinator of twinning programs globally, AIHA clearly understood the dynamics, approaches, and challenges of a development model based on institution-to-institution, peer-to-peer partnerships and other complementary technical assistance programming as mandated under the HRSA Cooperative Agreement. By addressing the challenges of human resource development and organizational strengthening through our twinning partnerships and VHC volunteers, AIHA effectively contributed to building sustainable capacity necessary to improve service delivery quality and support the continued scale up of interventions to meet the goals of PEPFAR II.

"Investing in pre-service education is a time-consuming process. It requires long-term investment to make sure that the system runs smoothly, and the program is sustainable. We're grateful for our twinning partnership with Howard University and our collaborative capacity development efforts to ensure we build a critical mass in the face of Ethiopia's severe shortage of trained healthcare workers."

— *Dr. Ephrem Engidawork, Associate Professor of Pharmacology, Addis Ababa University, Ethiopia.*

Recognizing that HIV/AIDS threatens the healthcare workforce by increasing their work burden, sickening and killing them, and stigmatizing those who care for PLHIV, AIHA continued to work closely with HRSA, host country officials and ministries of health, and U.S. Government teams in country to help scale up and expand HIV prevention, care, treatment, and support services in countries targeted for PEPFAR assistance. We did this by creating and providing ongoing support for needs-driven partnerships and related projects designed to advance each nation's Strategic HIV/AIDS Plan and U.S. Country Operational Plan. These partnerships varied widely in scope, focus area, and capacity building activities. Participating institutions included hospitals, NGOs, universities, professional associations, community- and faith-based organizations, and local and national ministries of health.

Under our second Cooperative Agreement with HRSA (2009-2014), AIHA established 14 new partnerships, graduating 37 from the Twinning Center's technical assistance program implemented in 2004-20014.

Since its inception in 2006, the Twinning Center has placed 113 skilled professionals in five African countries, including 9 who took on second placements and 10 Ethiopian Diaspora volunteers who later repatriated.

One hundred thirteen skilled volunteers contributed a total of 26,000 working days toward strengthening human, institutional, and systems-wide capacity in five countries in sub-Saharan Africa.

AIHA's twinning model was particularly well-suited to developing and/or expanding programs that build sustainable human resource capacity because of the strong institutional linkages forged when we partnered two or more organizations that were dedicated to the same — or very similar — missions. Working closely with ministries of health and other key stakeholders, AIHA and our twinning partners established new or updated training programs at existing institutions to address both short and long-term healthcare workforce development goals.

As the Twinning Center Program continued to evolve during this time, pre- and in-service training for health professionals and allied caregivers emerged as a primary focus of many of our partnerships. These covered a broad range of healthcare disciplines, including medicine (general practice, adult and pediatric urgent care, pediatric surgery); nursing; clinical associates and other physician extenders; clinical pharmacy; laboratory; medical technology; social work and para social work; case management; and even mass media.

Partners collaborated to develop or update curricula, establish certificate programs, and strengthen the teaching and clinical training skills of local faculty or staff. As a result, our local partner institutions gained the capacity they need to provide ongoing training opportunities well beyond what could be accomplished through traditional “one-off” training sessions.

During the second Cooperative Agreement, roughly two-thirds of AIHA’s HRSA-supported Twinning Center partnerships focused on the development of sustainable pre-service, in-service, and continuing education programs. Most of these alliances involved universities, education and training institutions, and affiliated clinical sites, but some also involved professional associations.

AIHA and our partners made every effort to fully involve a broad range of stakeholders to better ensure the ongoing sustainability of their respective programs. Again, these stakeholders included national and local governments, the private sector, community-based organizations, faith-based organizations, and other groups as appropriate. Other key programmatic sustainability strategies included developing professional credentialing, building the capacity of professional associations, and seeking other sources of funding to maintain activities in the future, which are all part of AIHA’s multi-pillar approach to capacity building.

As part of our ongoing sustainability efforts, AIHA worked to ensure that local partner institutions, along with the health and allied professionals trained, reached a higher level of capability and performance, and that this higher level is maintained even after they graduate and PEPFAR funding ends.

AIHA recognized that replicability of successful programs would depend on a number of factors, including feasibility (can it work in a new setting); affordability (are the unit costs and total costs within reach of available resources); and awareness and interest (are others aware of the model or approach and, if so, are they interested and motivated). Consequently, we worked with our partners to document their models and approaches, including both the technical aspects (how to design and implement them) and the budgetary aspects (identify the unit and total costs). We also worked to help them disseminate and share the approaches and models to the greatest extent possible.

With the support of PEPFAR, HRSA, and various U.S. Government funding agencies overseas, AIHA established 50 twinning partnerships spanning three regions (sub-Saharan Africa, Eurasia, and the Caribbean) under the first two Twinning Center Cooperative Agreements.

### **HIV/AIDS Twinning Center Program (2014-2019)**

The third and final Twinning Center Cooperative Agreement lasted 5.5 years, 2014-2019. During this period, AIHA and its partners continued to respond to shifts in PEPFAR priorities. Pre-service training shifted to in-service training and the development and implementation of continuing professional development courses for cadres including nurses and laboratory professionals. With its implementation of the DREAMS partnership to help girls develop into Determined, Resilient, Empowered, AIDS-Free, Mentored, and Safe women in Kenya,

AIHA moved into direct implementation. AIHA also moved into new technical areas, expanding biomedical capacity, contributing to national ability to maintain equipment for measuring viral load, in countries including Kenya, Uganda, and Zambia. Over the course of this cooperative agreement, AIHA worked in 12 countries and on four regional projects funded via the Headquarters Operational Plan, or HOP process, as opposed to COP process.