TANZANIA

PARTNERING TO SAVE LIVES: ICAP SUPPORT FOR THE RAPID SCALE-UP OF HIV PREVENTION, CARE, AND TREATMENT

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UNITED STATES PRESIDENT'S EMERGENCY PLAN FOR AIDS RELIEF

Contents

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A child waits to be weighed at the Ujiji Health Center in the Kigoma Region, Tanzania.

Addressing The Global Hiv Epidemic

Globally, 34 million people are living with HIV,[1] and 7,000 are newly infected each day.[2] As of 2011, HIV has infected more than 60 million people and caused at least 30 million deaths.

In the face of such overwhelming figures, it is easy to lose sight of the remarkable strides that have been made in the response to HIV over the past decade. Millions of people living with HIV have built better futures for themselves, their families, and their communities as a result of innovative, effective HIV prevention, care, and treatment programs.

A Global Response

At the end of 2010, roughly 6.65 million people in low- and middle-income countries were receiving antiretroviral treatment (ART),[3] almost a 22-fold increase since 2001 and an achievement that many considered impossible 10 years earlier. Over the same period, the rate of new HIV infections in 22 of the most severely affected countries dropped by more than 26 percent.[4]

A major reason for this dramatic turnaround has been the initiation of the United States President's Emergency Plan for AIDS Relief (PEPFAR), which was launched in 2003. Now after its eighth anniversary, it has proved notable in its size, scale, and impact on increasing access to HIV prevention, care, and treatment and has proven one of the most successful large-scale global public health undertakings ever. By September 2011, the US government had directly supported ART for 50% of the global response—more than 3.9 million men, women, and children worldwide, and more than 13 million of those in HIV care and support services.[5]

Understanding how this turnaround was achieved can help inform health and development efforts around the world.

Key Partner

In 2002, in response to the United Nations Secretary General's Call to Action, the Mailman School of Public Health at Columbia University helped to establish the MTCT-Plus Initiative to address the HIV treatment and care needs of

impoverished communities around the world. This initiative, funded first by a coalition of private foundations and subsequently expanded with funding from the United States Agency for International Development (USAID), supported provision of comprehensive and specialized care, including ART to HIV-infected women, their partners, and their children identified in prevention of mother-to-child transmission (PMTCT) programs. Mailman's experience implementing the MTCT-Plus Initiative helped to inform the model and approaches later adopted by ICAP.

Columbia University's role in implementing PEPFAR activities began in 2003, when it received funding from the Global AIDS Program of the Centers for Disease Control and Prevention (CDC) under the University Technical Assistance Projects (UTAP) to support the development of important components of national HIV programs, including treatment protocols and training. In 2004, ICAP was founded and was awarded a new cooperative agreement from CDC under the PEPFAR framework to provide comprehensive HIV care and treatment in five countries: Kenya, Mozambique, Rwanda, South Africa, and Tanzania, with programming in Côte d'Ivoire, Ethiopia, and Nigeria subsequently added. This initiative, the Multicountry Columbia Antiretroviral Program (MCAP), has rapidly expanded programs for HIV care and ART by promoting early diagnosis of HIV infection, maintaining the health of those living with HIV, and preventing further transmission of HIV within the community. MCAP programming, in addition to being focused on rapidly scaling up HIV care and treatment in partnership with host-country governments, also has emphasized the full continuum of HIV-related services, continued capacity building and health systems strengthening, and transition of operations to host governments and local nongovernmental organizations.

Today a global leader in HIV service delivery, human capacity development, and systems strengthening, ICAP has supported work at more than 2,000 facilities across 21 countries. More than one million people have accessed HIV services through ICAP-supported programs, and approximately one patient in 10 receiving PEPFAR-funded ART in sub-Saharan Africa is obtaining it at an ICAP-supported health facility.

ICAP is grounded in the belief that HIV services should be universally accessible and that people in resource-poor areas can adhere to life-saving treatment regimens. ICAP works with ministries of health, local organizations, and people living with HIV to develop sustainable, locally appropriate HIV prevention, care, and treatment programs that are integrated with national AIDS control programs. ICAP's comprehensive model consists of:

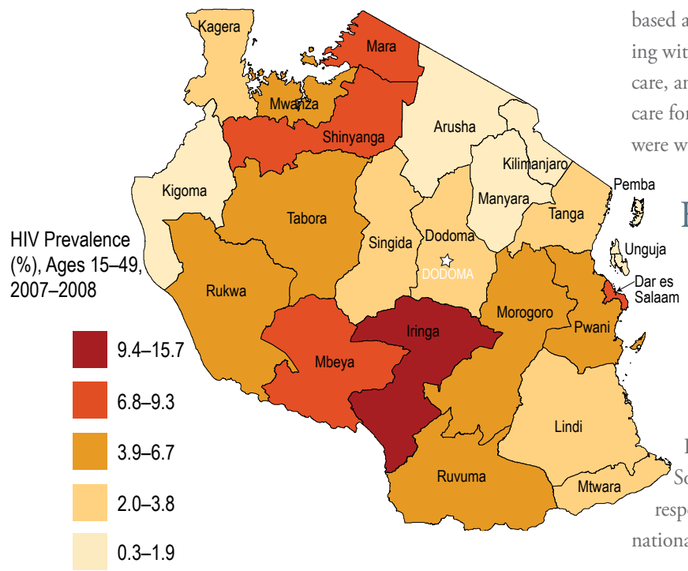
- **A family-focused approach** to HIV prevention, care, and treatment services
- **Support for multidisciplinary teams** of health care providers
- **A continuum of clinical and supportive services** to meet patient and family needs at every stage of HIV disease
- **Programs to promote retention and adherence** to HIV care and treatment
- **Empowerment** of patients and their families
- **Linkages** to community resources
- **High-quality services**, with carefully set standards of care and methodologies for program evaluation, operations research, and program improvement

HIV in Tanzania

The first cases of HIV were reported in Tanzania in 1983, and rapidly extended to all regions, stabilizing only in 1997.[6] Today Tanzania is home to an estimated 1.4 million individuals living with HIV. Some 1.3 million children have been orphaned as a result of AIDS.[7] Nationwide HIV prevalence among those aged 15–49 is estimated at 5.6%.[8] Women are disproportionately affected by HIV, particularly in younger age groups; among Tanzanians aged 15–24, prevalence was 3.9% among women, 1.7% among men.[9]

The nature and magnitude of Tanzania's HIV epidemic varies significantly by geographic area. Regional prevalence ranges from less than 1% in Zanzibar to 15% in Iringa; in Dar es Salaam, Tanzania's most populated city, prevalence is estimated at 9.3%.[10] Indications are that in some rural areas, HIV infections have increased since 2005, although HIV prevalence remains twice as high in urban areas as the countryside.[11]

Consistent with other generalized epidemics, heterosexual sexual contact is the primary transmission risk, while concurrent sexual partnerships, sex work and other forms of transactional sex, and intergenerational sex all contribute to the spread of the epidemic. In Zanzibar, where drug use fuels a concentrated HIV epidemic, prevalence is estimated to be as high as 16% among people who inject drugs.[12]



Health Infrastructure and Capacity

Health care infrastructure is poor and access to services limited in many remote and rural areas of Tanzania. Before PEPFAR, Tanzanian health care workers' capacity to manage HIV patients was low. Very few health care workers had been trained in HIV care and treatment, and those who had training were based at specialty hospitals inaccessible to most Tanzanians living with HIV. The health system was organized to deliver acute care, and the system components needed to provide chronic care for HIV—e.g., laboratory, pharmacy, and commodities—were weak and often unreliable.

Health System Structure

The Tanzanian mainland and Zanzibar have separate structures for coordinating the response to HIV. On the mainland, the Tanzania AIDS Commission (TACAIDS) is charged with coordinating and mobilizing resources for the national response to the HIV and AIDS epidemic, while the National AIDS Control Programme (NACP) within the Ministry of Health and Social Welfare (MOHSW) coordinates the health-sector response, including HIV and health policy development, national strategy, and coordination and management of HIV

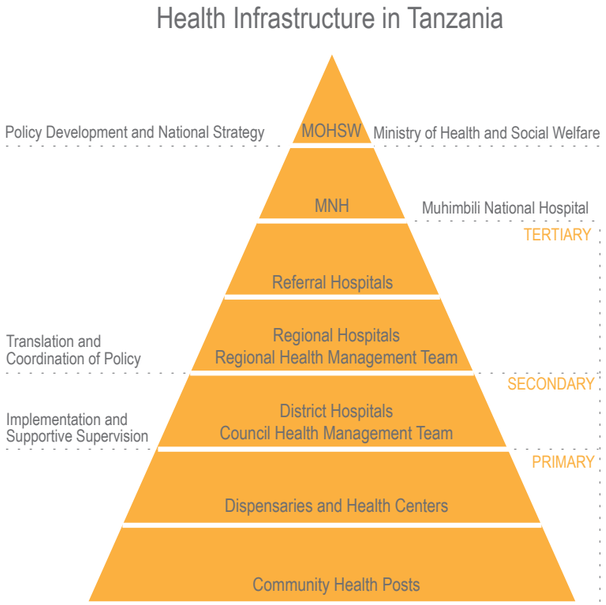
services. Health services are delivered through four tiers:

- National and zonal referral hospitals
- Regional hospitals
- District hospitals
- Health centers and dispensaries

In Zanzibar, the Zanzibar AIDS Commission (ZAC) is charged with HIV strategy development, coordination, and resource mobilization, while the Zanzibar Ministry of Health and Social Welfare is responsible for coordinating clinical HIV services.

HIV Services

The scale-up of care and treatment services in Tanzania under PEPFAR has vastly increased the number of people on ART. This progress has been facilitated by strong political engagement at the national level. In 2007, President Jakaya Kikwete and his wife, First Lady Mama Kikwete, participated in a public HIV test to help launch a national campaign promoting voluntary counseling and testing, and political support for the scale-up of HIV programs is strong within Parliament and other national bodies. By December 2009, the most recent date for which data was available, HIV testing was available at virtually all health facilities, from primary to tertiary level, and ART had been extended to more than 199,413 eligible people living with HIV.[13] However, human resource shortages, prolonged shortages in the national supply of HIV test kits, and late initiation of ART (with people not entering treatment until they are sick), pose challenges to the continuing expansion of ART and will require substantial future investment on the part of the government of Tanzania as well as by international donors. Fewer than 50% of those now eligible for treatment are on ART.



A woman receives a check-up and counseling at a hospital and treatment center in Tanzania.

ICAP IN TANZANIA

In the years since 2004, the government of Tanzania has achieved remarkable success in expanding comprehensive HIV prevention, care, and treatment services. ICAP has been a key partner in that success.

At the outset of ICAP's programming in Tanzania, HIV services were concentrated in a very small number of large, urban hospitals, where they were inaccessible to the vast majority of the country's estimated 2 million people living with HIV. Testing for HIV had not yet been integrated with such primary health care services as antenatal care in any systematic way. Specialized care was rare for HIV-positive individuals suffering from opportunistic infections and AIDS-related cancers. Stigma surrounding HIV was extremely strong, many who were HIV infected did not know their serostatus, and support networks for people living with HIV were limited.

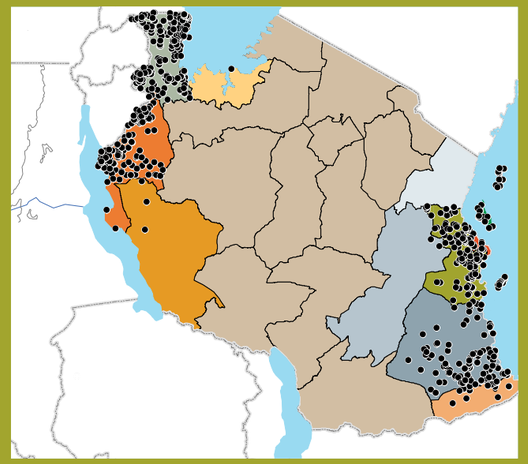
In reversing these situations, ICAP has worked both nationally and in the four regions where it has partnered with local government and community organizations to scale up HIV services. At a national level, ICAP plays an important role in national technical working groups and has assisted the Ministry of Health and Social Welfare in developing national tools, guidelines, and training curricula relating to HIV prevention, care, and treatment.

To reinforce health system capacity, ICAP has supported renovation and upgrades at more than 100 public-sector health facilities as well as training and mentoring for health care workers. Together, these interventions have vastly improved access to HIV services in Tanzania. As of December 2011, ICAP had supported MOHSW in providing ART to more than 40,000 people living with HIV.

A pregnant woman's hand after she gives blood for an HIV test in PMTCT

ICAP-Supported Facilities in Tanzania

As of September 30, 2011, ICAP was supporting 775 facilities in Tanzania, 127 of which are comprehensive HIV care and treatment facilities.



Map Sources: ICAP URS http://mericap.columbia.edu as of 30 Sep 2011; MEASURE DHS (Demographic and Health Surveys); ESRI; Center for International Earth Science Information Network (CIESIN), Columbia University; and Centro Internacional de Agricultura Tropical (CIAT). 2005. Gridded Population of the World Version 3 (GPWv3): National Boundaries. Palisades, NY: Socioeconomic Data and Applications Center (SEDAC), Columbia University. Available at: http://sedac.ciesin.columbia.edu/gpw/

The range of services supported by ICAP includes both voluntary and provider-initiated HIV counseling and testing, laboratory diagnostic and monitoring tests, prevention of mother-to-child transmission services, early HIV diagnosis for exposed infants, adult and pediatric ART, integrated TB/HIV management, cervical cancer screening, facility- and community-based adherence and psychosocial support, and positive prevention programs. ICAP has played a national technical leadership role with respect to early infant diagnosis, TB/HIV integration and psychosocial support (including engagement of HIV-positive individuals as peer educators).

ICAP has also supported the government of Tanzania's strategy of decentralizing HIV and related services to the primary health care level via a combination of facility support and district and regional level strengthening. ICAP's district mentoring initiative (DMI) has played a key role in building health care worker capacity at high-volume care and treatment facilities.

As ICAP transitions into a new phase of support in Tanzania, it will intensify its work with regional and council health management teams to establish sustainable mechanisms for continuous quality improvement while assisting a local nongovernmental organization, Tanzania Health Promotion Support, to gradually assume responsibility for strengthening service delivery.

Phase I: Rapid Scale-Up

ICAP began supporting HIV-related services in 2002 in Tanzania, first through the foundation-funded MTCT-Plus Initiative (which continued under funding from USAID beginning in 2004), with additional funding starting in 2003 through the University Technical Assistance Program (UTAP). More widespread HIV prevention, care, and treatment activities in Tanzania began with the launch of MCAP in 2004. At that time, only 1,500 individuals were on ART nationwide, HIV testing and PMTCT rates were extremely low, and very few infants born to HIV-positive mothers were tested.

Collaborating closely with the Ministry of Health and Social Welfare at national, regional, and district levels, ICAP had provided a broad package of financial and technical support for prevention, care, and treatment services at hospitals in Dar es Salaam, Mwanza, Kagera, Kilimanjaro, and Zanzibar. To maximize the number of infants and children with access to HIV care and treatment, ICAP mentored health care workers to increase antenatal testing, helped facilities integrate HIV testing into their routine antenatal services, and led the launch of services for early infant diagnosis in Tanzania by establishing a specialized laboratory for HIV DNA polymerase chain reaction (PCR) testing at Bugando Medical Center in Mwanza.

Within communities, ICAP collaborated with local nongovernmental organizations and associations of people living with HIV to increase uptake of HIV services. ICAP's combined clinical and community-focused activities in MCAP's early years created building blocks for a comprehensive, family-focused model of care.

Regionalization of Partner Support

In 2006, to eliminate partner overlap, ensure ART access nationwide, and improve coordination, MOHSW began assigning HIV implementing partners to geographic regions. Designated the primary partner for Kagera, Kigoma, Pwani regions and Zanzibar islands, ICAP subsequently phased out support for facilities in Dar es Salaam (except Ocean Road Cancer Institute), Mwanza (except Early Infant Diagnosis Laboratory at Bugando Medical Center), and Kilimanjaro.

Regionalization of partner support shifted ICAP's support to new regions (with the exception of Pwani)—regions that were more remote and rural, characterized by poor access and infrastructure and comparatively low HIV prevalence. The shift presented an opportunity for enhanced collaboration and coordination with MOHSW at the decentralized level. ICAP capitalized on these changes by strengthening its strategic partnership with regional- and district-level health authorities and building their capacity to manage HIV service scale-up.

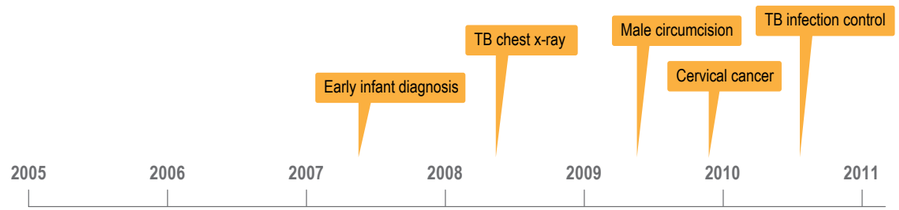
Comprehensive HIV Care

With national scale-up of HIV services in full swing by 2007, ICAP continued to expand ART services while introducing a more complete range of family-focused HIV services that spanned both health facilities and communities. Working through Council Health Management Teams and rapid start-up teams comprising regional and zonal health authorities, ICAP supported a massive expansion of PMTCT services. ICAP also assumed a technical leadership role for national implementation of early infant diagnosis and pediatric ART services, assisting with the development of national early infant diagnosis guidelines as well as a pediatric ART training curriculum.

National and Community Partnerships

Working with local nongovernmental organizations such as Service Health and Development for People Living with HIV/AIDS (SHIDEPHA), Tanzania Development and AIDS Prevention Trust (TADEPA), Zanzibar Association of People Living with HIV/AIDS (ZAPHA+), and strategies such as Mkakati wa Kukuza Uchumi na Kuondoa Umaskini (or MKUTA: National Strategy on Growth and Reduction of Poverty), ICAP expanded its activities in the areas of community-based TB/HIV care, HIV counseling and testing, and psychosocial support. With the National AIDS Control Programme, ICAP piloted a peer education program led by people living with HIV, and introduced family support groups for HIV-positive mothers in PMTCT; these approaches are informing national policy and guidelines on psychosocial support.

Key Tools and Guidelines Developed with ICAP Support



Phase II: Ensuring Quality and Building Capacity—Transition to Local Management

Regional and District Strengthening

To address the request that services be rapidly scaled up and decentralized throughout Tanzania, ICAP intensified its collaboration with regional and council health management teams, focusing on sustainable, systems-based approaches to such critical challenges as human resource development, financial management, quality clinical health care, patient follow-up, laboratory services, and infrastructure. Through its District Mentoring Initiative, ICAP empowered district health managers and health care workers with a combination of targeted skills building, performance improvement, and continuing education.

Reaching Key Populations At Risk

During the same period, ICAP launched a series of innovative activities aimed at bringing services to some of the most marginalized and most hard-to-reach populations in Tanzania. In Zanzibar, ICAP—working under a separate CDC award—trained clinicians about substance use and the joint management of HIV and sexually transmitted infections and helped four local nongovernmental organizations and the Zanzibar Department of Substance Abuse and Prevention (DSAPR) to launch outreach programs using a peer education program specifically targeted to people who inject drugs and other key populations.

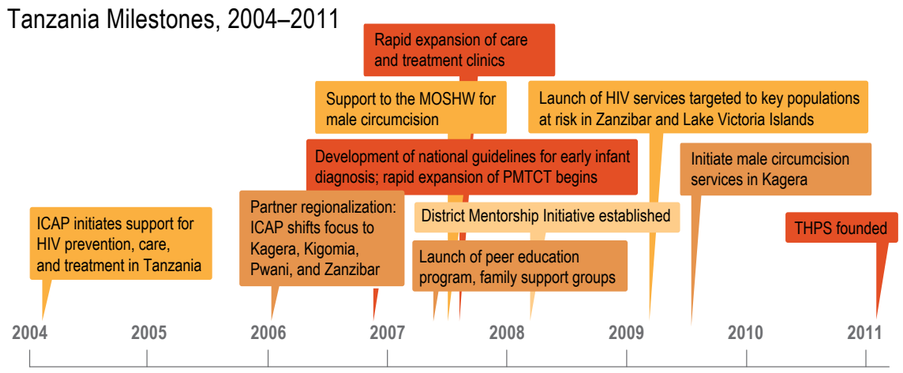
In the Lake Victoria islands, one of the most remote areas of Tanzania, ICAP collaborated with the Muleba Council Health Management Team to organize the introduction of HIV prevention, care, and treatment, male circumsicion, and PMTCT outreach services.

Sustainability and Local Capacity

In 2010, as PEPFAR renewed its emphasis on HIV prevention, quality service provision, program sustainability, and local capacity development, ICAP augmented its support to local entities, empowering them to assume a larger role for planning, managing, and implementing critical HIV services. This involved refocusing the District Mentorship Initiative by establishing six national core indicators and enhancing district mentors' mentorship and communication skills. ICAP also provided regional health management teams with technical assistance for grant seeking and proposal writing, enabling the Pwani and Kagera regional health management teams to apply for and receive funding directly from CDC.[14]

Transition to Local Entities

In 2011, to support transfer of program implementation responsibilities to local entities, ICAP facilitated the establishment of a new local nongovernmental organization: Tanzania Health Promotion Support (THPS). Managed by a local board of directors, THPS is leveraging the unique experience and skills mix of its Tanzanian staff to help gradually transfer program management responsibilities to local entities, including MOHSW, regional and council health management teams, and associations of people living with HIV.



Achievements and Approaches

Building on its collaboration with Bugando Medical Centre, ICAP worked with MOHSW to scale up HIV DNA PCR technology for early infant diagnosis to all four of Tanzania's zonal laboratories, eliminating a major structural barrier to enrolling infants in care and treatment.

In the space of eight years, from 2004 to 2011, ICAP provided ART to more than 43,129 women, men, and children living with HIV in Tanzania. During the same period, more than 77,957 people living with HIV received care and support services, and 11,321 HIV-positive pregnant women accessed services and antiretroviral prophylaxis to prevent the transmission of HIV to their infants as a result of ICAP's work. That these numbers were achieved in some of the most rural and remote areas of the country speaks to the commitment and hard work of all who participated in the effort: health care workers, district and regional health managers, ICAP staff, and people living with HIV and their families.

To help the government of Tanzania respond to its complex HIV-related needs, ICAP has adopted a dual role. First, as an implementing partner, ICAP has supported the rapid scale-up of HIV services, working in liaison with decentralized health authorities, people living with HIV, and local nongovernmental organizations. Second, as a technical leader, ICAP has assisted the MOHSW in developing and implementing policies, training curricula, and clinical guidelines. By its innovative, evidence-based approaches to clinical services, adherence and psychosocial support, and capacity development, ICAP has been able to support rapid national scale-up while strengthening systems at the central and decentralized levels.

Building Partnerships

ICAP's approach to capacity building and systems strengthening is built on collaboration with local institutions at every level of the health system during every stage of the program. At national level, ICAP supports MOHSW on a number of policy and programmatic issues by participating in national technical working groups and providing direct technical assistance for development of policies, tools, and training curricula.

Motorcycles, equipped with specially designed "cool boxes," transport stabilized blood samples and allow for prompt delivery to laboratories.

In Kagera, Kigoma, Pwani and Zanzibar regions, ICAP has built regional health management teams' technical and management capacity to provide supportive supervision for district-level HIV services. In addition, in each region, ICAP sponsors annual stakeholder progress meetings that convene representatives of regional headquarters, districts, health facilities, associations of people living with HIV, and partner organizations to review progress and ensure alignment of ICAP activities with Council Health Development Plans. At district level, ICAP works directly with council health management teams to give them the technical, financial, administrative, and leadership capacity to manage HIV prevention, care, and treatment programs; and collaborated with council health management teams on the development of district plans, activities, and budgets.

Creating Physical Infrastructure

In support of health system strengthening, ICAP has contributed enormously to improving Tanzania's physical health infrastructure—converting older structures into modern care and treatment clinics through a CDC-contracted agency, Regional Procurement and Supply Office, and renovating reproductive and child health clinics, labor wards, pharmacy, and outpatient wards within ICAP-supported facilities. To date, ICAP has supported 102 infrastructure projects in its supported regions: 36 in Pwani, 37 in Kagera, 26 in Kigoma, and 3 in Zanzibar; these included 58 renovations, 19 conversions, and 25 solar power installations.

During renovations, child-friendly spaces for pediatric care and treatment (e.g., with sandboxes and playgrounds) have been created, ventilation and space utilization were improved, and furniture, equipment, and supplies were updated. Solar power installations at high-volume rural facilities without access to reliable power sources ensured the functioning of basic diagnostic equipment such as microscopes. The ICAP infrastructural support has yielded higher morale among health care workers and increased patient attendance at health facilities. Ana A.K. Mwaga, Pwani Regional Health Secretary, noted that as a result of the renovations, "Patients are happy with the conditions here, and more people are coming to Pwani for services from [surrounding] Tanga, Morogoro, and Dar es Salaam. The spirits of the health workers have also been raised."

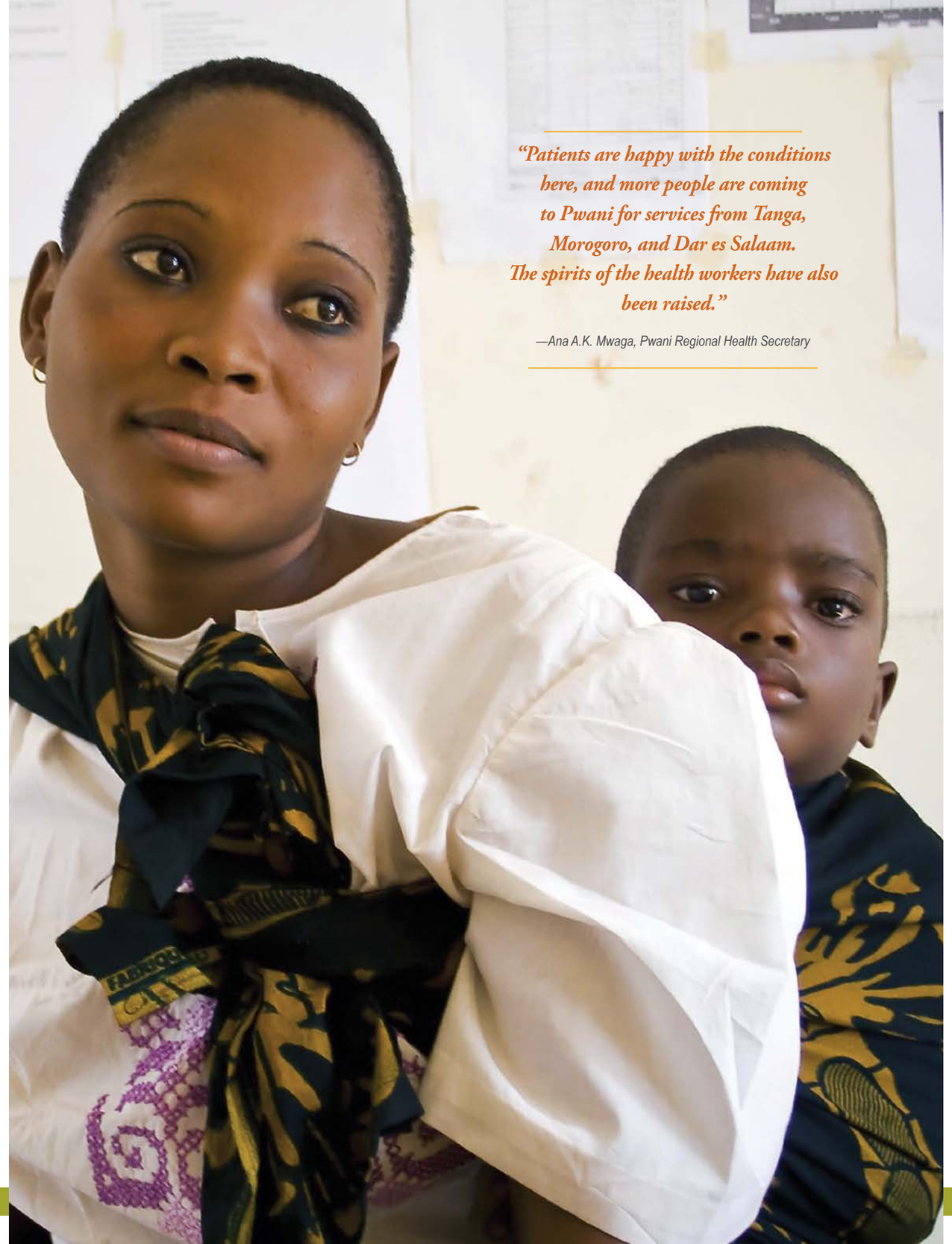
TOP Kibondo Labor and Delivery before renovation in Kigoma Region
BOTTOM The same building after the ICAP-supported renovation

Increasing Care and Treatment

By providing technical assistance for development and dissemination of national policies, guidelines, and training curricula as well as infrastructure support, in-service training, mentoring, and district and facility support, ICAP has served a critical function in transforming Tanzania's HIV care and ART treatment landscape. Since 2004, ICAP-supported facilities have enrolled nearly 80,000 people living with HIV in care and more than 43,000 on ART. Today, more than 23,000 patients are on ART at ICAP-supported facilities.

The phased expansion of ICAP support, executed in line with the National Multisectoral Strategic Framework on HIV/AIDS (2003–2007 and 2008–2012), has balanced the need for rapid scale-up of life-saving services with the need to build human and systems capacity in the areas of counseling, diagnosis

A woman and child receiving voluntary counseling and testing services at a HIV care and treatment center.



"Patients are happy with the conditions here, and more people are coming to Pwani for services from Tanga, Morogoro, and Dar es Salaam. The spirits of the health workers have also been raised."

—Ana A.K. Mwaga, Pwani Regional Health Secretary

(including early infant diagnosis), patient retention and follow-up, and monitoring and adherence strategies.

To bring HIV services closer to the patients who need them, ICAP worked with MOHSW to expedite the extension of care and treatment services to primary health care facilities in the early years of the national program. ICAP's support to health facilities has included, in addition to the infrastructure upgrades described above:

- Training and mentoring health care workers
- Support for management of patient records and registers
- Financing of technical and administrative staff
- Establishment of referral linkages for laboratory services and complex case management

With regional and council health management teams, ICAP has introduced care and treatment services for vulnerable, at-risk, and hard-to-reach populations, including internally displaced populations in Kigoma region and highly mobile fishing and sex trade populations on the Lake Victoria islands in Kagera region.

Through a special partnership with Ocean Road Cancer Institute (ORCI), ICAP has extended comprehensive palliative care services to patients with HIV in Dar es Salaam and supported decentralization of palliative care services, including pain management, to Tanzania's four zonal referral hospitals and 35 district hospitals.

Preventing Mother-to-Child Transmission and Increasing Early Infant Diagnosis

Before PEPFAR began funding services in Tanzania, testing of pregnant women in antenatal care for HIV was extremely low in Tanzania—in part because of stigma, a sense of the futility of testing, and health care workers' lack of familiarity with needed skills they would need to care for pregnant women. ICAP responded by coaching facility health personnel about the importance of HIV counseling and testing during pregnancy. As a result, the antenatal testing rate at ICAP-supported facilities increased from 50% in 2005 to more than 90% by 2008. As of 2011, ICAP supports PMTCT services at more than 600 health facilities in three regions and Zanzibar Island, and has provided counseling and testing to more than 500,000 pregnant women in antenatal care.

To ensure that pregnant women newly diagnosed with HIV could obtain timely CD4 test results, ICAP has provided motorcycles to council health management teams in the four areas. The motorcycles, equipped with specially designed "cool boxes," stabilized blood samples and allow for prompt delivery to laboratories, ultimately facilitating proper staging for pregnant women and their initiation on ART if appropriate.

Early infant diagnosis became a top ICAP priority when, according to ICAP's former Tanzania country director Mark Hawken, "We saw that the only way we were going to get children into care was to identify them through testing. And for those less than 12 months of age, the only way to test was through PCR." ICAP responded by setting up Tanzania's first specialized laboratory for HIV PCR DNA testing in collaboration with MOHSW and Bugando Medical Centre. The lab became a crucial resource

ABOVE Bed net in a room at a health center

BELOW Laboratory improvements were critical to improve the Tanzanian health system.

for expansion of pediatric care and treatment services, permitting facilities throughout the Lake Zone to test infants born to HIV-positive mothers and enroll them in services appropriate to their serostatus. Building on its collaboration with Bugando Medical Centre ICAP, working with MOHSW, has scaled up HIV DNA PCR technology for early infant diagnosis to all four of Tanzania's zonal laboratories, eliminating a major structural barrier to enrolling infants in care and treatment.

Integrating TB/HIV Services

In the area of TB/HIV service integration, ICAP supports the National Tuberculosis and Leprosy Programme (NTLP) and the National AIDS Control Programme in developing national infection control guidelines for TB, launching a new national chest x-ray reading initiative for clinicians nationwide, and developing national job aids and posters for cough hygiene. ICAP supported the development of a national standardized screening questionnaire to support identification of suspected TB cases among HIV-positive individuals in care and treatment. In collaboration with another nongovernmental organization, PATH, the monitoring and evaluation team at ICAP assisted in finalizing the national monitoring and evaluation training package for health care workers implementing TB and TB/HIV activities.

To support TB detection and treatment at community level, ICAP partnered with MKUTA, an organization of TB patients promoting community awareness of TB and HIV and educating people about the importance of early treatment. MKUTA activities focus on TB Clubs, similar to the support groups that have proven effective among ART patients; such a model, promoting accountability among peers, has helped many patients with TB and HIV complete their TB treatment successfully and achieve better HIV care and treatment outcomes. Together, MKUTA and ICAP have worked on establishment of a national TB monitoring and evaluation system; ICAP contributed to the IPT protocols, training materials and systems for monitoring and evaluation.

Enhancing Laboratory Systems

For ICAP, laboratory systems were a critical but weak link in the broader Tanzanian health system. To strengthen them, ICAP has committed substantial technical and financial support, working with Tanzanian authorities to determine standard packages for laboratories at regional, district, and facility levels; providing equipment and training in quality assurance and quality control; assisting in development of laboratory networks for sample transportation; and supporting the laboratory accreditation process.

By 2011, ICAP has upgraded 157 laboratories—including laboratories at regional and district hospitals and health centers—by providing laboratory equipment, consumables, and training for 520 laboratory staff in HIV-related monitoring and diagnostics. Several laboratories—including Mnazi Mmoja laboratory in Zanzibar—are now on the road to international accreditation as a result of ICAP's interventions and support.

Collaborating closely with MOHSW and CDC, ICAP has led the development of guidelines for early infant diagnosis and, later, seconded two staff to MOHSW to facilitate expansion of HIV DNA PCR early infant diagnostic testing services across the country. As of 2011, more than 4,800 samples provided for early infant diagnosis had been tested, resulting in identification and treatment for HIV-positive infants.

Given gaps in the national system for supply chain management, ICAP has also served a gap-filling function, establishing a buffer stock of laboratory reagents and supplies to avoid service interruptions and putting in place an emergency sample transportation plan so that lab samples can be sent to alternative facilities when there are system breakdowns.

Strengthening Adherence, Psychosocial Support, and Community Partnerships

ICAP recognized early on that strong, dynamic adherence, psychosocial support, and community partnerships would be integral to retaining care and treatment patients and ensuring their compliance with their drug regimens and overall care plans. ICAP's adherence, psychosocial support, and community services built on three key strategies:

- Equipping health care workers with the skills and knowledge they need to manage their patients and clients effectively
- Engaging HIV-positive individuals as peer educators, capable of supporting patients along the full facility–community continuum

A woman receives antenatal care at the Ujiji Health Center in Kigoma Region

- Building facility-community linkages through support groups

Adherence Counseling

Despite their frequent interactions with care and treatment patients, many cadres of health care workers lacked training in adherence counseling for people living with HIV. To improve the skills and knowledge of physicians, nurses, and other health care workers who interact with patients, ICAP worked with MOHSW ad MDH to develop and deliver a curriculum on advanced adherence counseling. This training helps to improve the consistency and continuity of the messages delivered to ART patients across facilities and over the course of their treatment.

As the national care and treatment program grew, ICAP has diversified its approach to adherence, psychosocial support, and community activities, focusing on adherence counseling as way to prevent new infections. A comprehensive model for adherence counseling was developed and health care workers have been trained in its application to ensure that every patient received clear, complete, and effective guidance on minimizing transmission of HIV to others. This comprehensive model—known as positive health, dignity, and prevention—educates patients about risk reduction, partner testing, disclosing their status to others, condom use, family planning interventions, and screening for and managing sexually transmitted infections.

Based on its experience working with HIV-positive individuals to improve services, ICAP also has developed standardized national tools to help integrate people living with HIV groups into the national care and treatment response.

Peer Education

The recognition of meaningful involvement of people living with HIV as a cornerstone of effective services led ICAP to establish a strong peer education program that drew on the experience of successful care and treatment patients to orient and educate new patients. Initially, this idea was controversial. People living with HIV lacked formal health training, and there were concerns within the MOHSW about potential breaches of confidentiality as well as about the complications of bringing another cadre of worker into health facilities.

ICAP advocated with MOHSW for permission to test the approach and, upon gaining approval, implemented a pilot program whereby HIV-positive individuals experiencing good clinical outcomes served as peer educators to introduce HIV care and treatment to newly diagnosed patients. Based on its success, ICAP scaled up the peer educator approach to build on the pilot. As a result, ICAP rapidly expanded peer educator activities in collaboration with associations of people living with HIV, training more than 600 peer educators, who are currently deployed in 117 facilities across the three ICAP-supported regions and Zanzibar Island.

Peer educators are trained to take on two major responsibilities vis-à-vis care and treatment patients: First, they educate patients about the importance of good adherence, partner and family testing, and positive prevention. Second, they trace patients who are lost to follow-up and convince them to return to the facility.

The peer educator program has since become integral to the national care and treatment program. With ICAP support, the peer educator program has lead to the defaulter tracing system and an M&E system to measure its impact.

"Peer educators are very knowledgable. We observe that with peer educators' support, ART patients are now talking freely about their status with each other and at home, and encouraging others to come to the facility for testing."

—Miriam Mwilola, Kisarawe District Nursing Officer

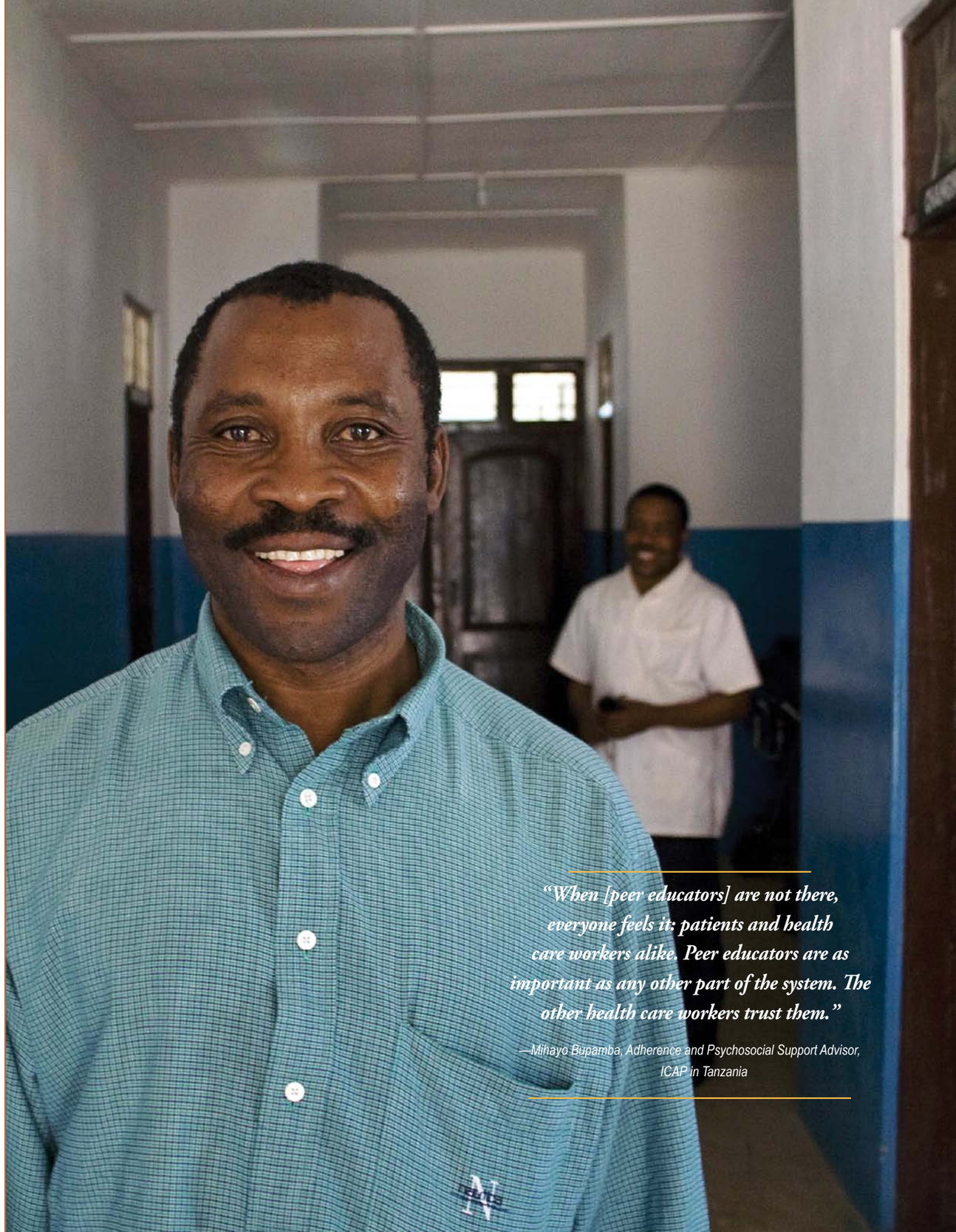
Support Groups

Social stigma can leave people living with HIV feeling isolated and rejected, discouraging them from seeking or adhering to care and treatment.

Partially because of success in saving the lives of HIV-infected children during ICAP's early years, ICAP increasingly encountered a growing number of adolescents needing psychosocial support. Many showed signs of emotional disturbance, blaming their parents and experiencing suicidal thoughts, sometimes because parents and caregivers had not talked to them about their HIV status. To better respond to these emerging needs, ICAP in collaboration with MOHSW, MDH and Mildmay (Uganda) developed a psychosocial support package especially for adolescents and then trained health care workers, support group facilitators, and peer educators in its use.

The psychological impact of stigma can be especially acute for pregnant or breastfeeding mothers as they cope with the possibility of transmitting HIV to their infants. To respond to the specific psychosocial needs of this group as well as others, ICAP has supported the creation of specialized psychosocial support groups at high-volume PMTCT facilities. The number of psychosocial support groups targeting antenatal and postnatal mothers have grown from just six in 2008 to more than 82 by the end of 2011.

OPPOSITE A doctor at a health center in Tanzania



"When [peer educators] are not there, everyone feels it: patients and health care workers alike. Peer educators are as important as any other part of the system. The other health care workers trust them."

—Mihayo Bupamba, Adherence and Psychosocial Support Advisor, ICAP in Tanzania

A member of an HIV support group speaks with a nurse.

"Family Support Groups plant the seeds of improved communication between partners and build friendships, personal empowerment, and hopes for the future—while reducing HIV transmission from mothers to their children."

—Amy Cunningham, ICAP director for Tanzania (2007–2010)

All ICAP-supported groups convey additional knowledge about what it means to be HIV positive, allow members to share experiences and successes in a supportive environment, and help them through the process of disclosing their status to family and friends. ICAP also sponsors monthly health talks for support group members to ensure that they are equipped to make decisions in the interest of their own health and the health of those around them.

Family Support Groups

More than 2,050 pregnant women newly diagnosed with HIV have found comfort and acceptance within family support groups at ICAP-supported facilities in Kigoma, Pwani, and Kagera regions. The groups recruit HIV-positive pregnant women in antenatal clinics and labor wards. In bimonthly meetings facilitated by clinic staff, participants learn from their peers' experiences with disclosure, family planning, infant feeding, and other issues.

Family support groups have been instrumental both to helping HIV-positive women cope with and accept their status and to promoting adherence to care, safe infant feeding practices, partner disclosure, early enrollment of HIV-exposed infants, and acceptance of PMTCT services. In addition to supporting creation of a related implementer's guide and monitoring and evaluation tools, ICAP works with facilities to develop a peer mentorship system for the groups.

Community Partnership

To prepare for the transition of adherence, psychosocial support, and community services to local entities, ICAP helps facilitate multisectoral partnerships between facilities and community organizations, combining resources to address gaps in patient care. In one especially successful example, in the area of palliative care, ICAP works with Ocean Road Cancer Institute to train health care workers to support end-of-life care and, in collaboration with local faith-based organizations, has helped establish a community-based network of volunteers providing home-based care services (e.g., terminal counseling, pain management), with supervision from health care workers.

"The strength of this program in Zanzibar is the combined commitment of the partners to help one of the most marginalized populations at risk for HIV infection."

—Amy Cunningham, ICAP director for Tanzania (2007–2010)

Reaching Key Populations

Over time, ICAP constantly innovated and adapted its services. Several innovations—not planned from the beginning—emerged in response to clear and pressing needs in populations with concentrated prevalence.

People who Inject Drugs: Zanzibar

Starting in 2008, ICAP has teamed up with the Zanzibar government and with nongovernmental and community-based organizations in an innovative partnership called United for Risk Reduction and HIV/AIDS Prevention (URRAP), designed to reduce HIV prevalence among the estimated more than 4,000 people who inject drugs. ICAP works with HIV service facilities to train clinicians about substance use and the management of HIV and sexually transmitted infections, and builds the capacity of local nongovernmental programs to conduct outreach programs to people who inject drugs, men who have sex with men, and sex workers.

ICAP has been working with HIV service facilities to train clinicians about substance use and the management of HIV and sexually transmitted infections while supporting peer educator programs comprised of former drug users who are in recovery. In addition, As part of this program, ICAP has worked to improve quality of life among people who inject drugs on the island by providing education on HIV prevention (including HIV testing and safe injecting practices) and linkages to HIV services.

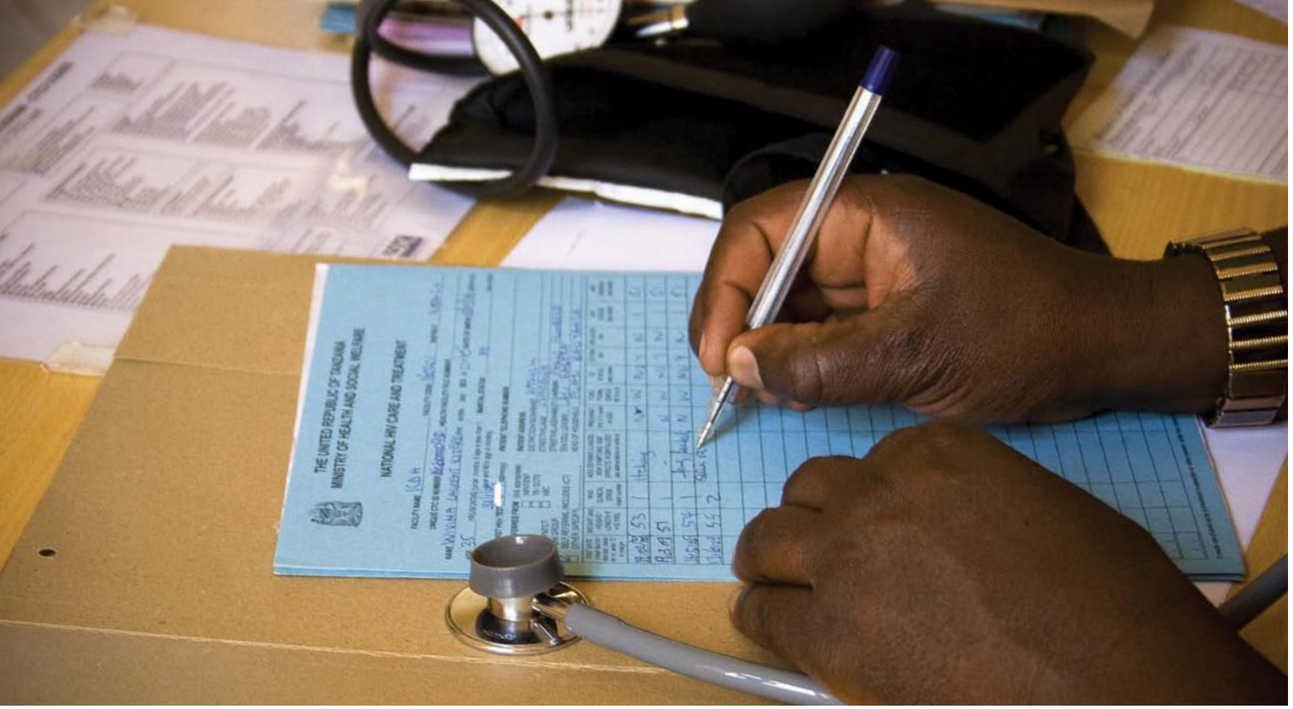
Primary implementing partners include the Zanzibar Youth Education, Environment and Development Support Association; Zanzibar Association of Information Against Drug Abuse and Alcohol; and the Zanzibar Youth Forum.

Isolated Populations: Lake Victoria Islands

In this remote area of Tanzania—with some islands accessible from the mainland only by an eight-hour boat ride—sexual risk behaviors are high. Fishing and sex work comprise major sources of income; the fishermen are mobile, and male circumcision rates have traditionally been low, at 35%. After local counseling and testing and male circumcision initiatives revealed elevated HIV prevalence, ICAP introduced comprehensive HIV prevention, care, and treatment and PMTCT outreach services in collaboration with Muleba Council Health Management Team, in April 2011.

Because of the islands' minimal physical infrastructure, island residents have traditionally had only limited access to the most basic of health services. Before ICAP's intervention, only a handful of people living with HIV who could afford a monthly boat ride would travel to the mainland for care and treatment.

To provide ICAP's HIV services, a boat transports an outreach team and supplies from the mainland to the islands every month. ICAP's support—including support for community drama groups—has made care and treatment accessible to populations at risk of acquiring HIV in one of the most isolated areas of Tanzania.



Building Capacity through Innovation

One hallmark of a strong program is the ability to adapt and adjust to changing opportunities and constraints. Before PEPFAR, HIV services in Tanzania were limited and functioned parallel to the broader health system. Although PEPFAR's launch provided an infusion of funding to rapidly scale up HIV services, many other resources required to expand these services nationwide were in short supply. These constraints forced ICAP to develop a focused strategy to build human resources for health capacity and to strengthen every level of the health system.

District Mentorship Initiative

Through the District Mentorship Initiative, ICAP has supported the three regions and Zanzibar Island in integrating services and strengthening health systems at the decentralized level. With both off- and on-site training and mentoring, ICAP empowers health care workers to take up and sustain new roles as district and regional mentors.

ICAP mentors—typically doctors or nurses with strong clinical skills, experience in HIV care settings, mentorship/facilitation skills, and commitment to providing quality clinical services—provide individualized teaching to supplement the routine supportive supervision provided by health management teams. This mentorship is then provided to facility-based health care workers in high-volume care and treatment facilities. This initiative builds the skills of staff in clinical mentorship and supportive supervision, including clinical and communication skill, health systems management, financial and organizational management, and monitoring, supported by ICAP's finance, grants, and clinical teams.

The District Mentorship Initiative was rolled out in 38 facilities in Kagera, Kigoma, and Pwani regions. The quality of care provided at each pilot facility, measured before initiation and again after six to seven months, improved—for example, in the timely enrollment of pregnant women on ART, in ART retention, in CD4 testing, in TB screening, and in adherence counseling. The network of 55 mentors that ICAP has trained through this initiative has allowed it to greatly expand its reach.

The initiative's use of quantitative methodologies provides valuable facility-level data on quality gaps and achievements. Regional authorities, based on their appreciation for the initiative, are working with districts to scale up the program to additional facilities with their own funds.

One hallmark of a strong program is the ability to adapt and adjust to changing opportunities and constraints. A short supply of human resources and other resources forced ICAP to develop a focused strategy to strengthen every level of the health system.

A regional manager, a pediatrician/clinical advisor, and an adherence and psychosocial support officer at a Tanzanian hospital.

Training

ICAP has conducted a number of in-service trainings, sometimes based on curricula developed jointly by ICAP and the MOHSW and in other instances in collaboration with the MOHSW and other implementing partners. Topics have included such areas as PMTCT, adult and pediatric HIV care and support, ART, laboratory, pharmacy, patient monitoring and evaluation, key populations at risk, and TB/HIV service integration. In addition, ICAP has provided training for other innovative interventions, including the District Mentorship Initiative, male circumcision for HIV prevention, prevention with positives, nutrition, and basic emergency obstetric and neonatal care. As of 2011, ICAP has trained more than 23,000 health care workers and peer educators.

From Research to Practice: Positive Health, Dignity, and Prevention

The multi-country public health evaluation, "HIV Prevention for People Living with HIV/AIDS: Evaluation of an Intervention Toolkit for HIV Care and Treatment Settings," aims to examine patient-level outcomes associated with an HIV clinic-based HIV prevention intervention. Health care providers deliver HIV prevention messages, assess sexually transmitted infections (STIs), and provide basic contraceptives and safer pregnancy counseling. In addition, trained lay counselors (persons without medical training) provide counseling and support to HIV-positive patients and their families in the clinics. The study is assessing the effect of the interventions on the following outcomes: risky sexual behavior; disclosure of HIV status; partner HIV testing; alcohol use; HIV antiretroviral (ARV) medication adherence; STI treatment; pregnancies; and contraceptive use. In addition, the acceptability of the interventions and the feasibility of integrating the interventions into the clinics was assessed.

The evaluation, conducted in Kenya, Namibia, and Tanzania, with the active involvement of CDC Atlanta, staff is a longitudinal group-randomized trial with 9 intervention clinics and 9 comparison clinics, where enrolled patients were followed for 12 months. ICAP has collaborated as the implementing partner for this research.

Baseline data collection was completed in all countries by early 2010 and 6- and 12-month follow-up data collection was completed by the end of 2011. A total of 3,547 patients were enrolled, as well as 223 health care providers and 46 lay counselors. Data analysis of primary outcomes is currently ongoing.

In addition to this public health evaluation that is assessing specific outcomes, ICAP has been providing technical assistance to the Ministry of Health in Tanzania to integrate Positive Health Dignity and Prevention guidelines, training and job aids into national HIV clinical guidelines and curricula.

Children wait to be weighed at a health clinic.

Setting the Stage for Transition

ICAP's focus on local capacity development and systems strengthening has intensified, ensuring that every activity was carried out in consultation with an appropriate local counterpart. ICAP has built an in-country team that is broadly representative of youth, women, and people living with HIV, which helps reinforce this norm of respect for local ownership. In programmatic terms, ICAP has invested more of its resources in building the capacity of local associations of people living with HIV as well as the capacity of regional and council health management teams while helping to form, register, and develop the capacity of a local nongovernmental organization—Tanzania Health Promotion Support (THPS)—to gradually assume some of the responsibilities for program implementation that cannot be absorbed by the government of Tanzania over the short term.

At decentralized level, ICAP has established a strategic mix of direct financial, technical, and material support to increase local ownership at all stages of the program. This approach encompasses joint planning (wherein ICAP integrated its programs with the council health development plans); training and support of clinical mentors and of data and health records assistant staff; and intensive collaboration with district and regional authorities. ICAP provides training and on-the-job support to build district and regional financial management capacity by providing biannual training for key program and finance staff and technical assistance and supervision from ICAP subaward advisors.

With a view to sustainability and local ownership, ICAP prepares peer educators to assume an increasingly prominent role in delivering health services, engaging in monthly strategy meetings with health care workers, assisting health care workers with many of their responsibilities, recruiting new clients for testing, and providing a critical support system for newly enrolled care and treatment patients. By the end of 2011, the peer educator program has been so successful that the national MOHSW was preparing to formally adopt the approach.

Finally, ICAP began the process of transferring key staff to THPS. In 2011, ICAP set up a subaward to THPS, allowing it to begin assuming responsibility for program implementation and management starting in Pwani region and incrementally extending to other ICAP-supported regions. While transitioning activities to THPS, ICAP will provide technical assistance and support for resource mobilization, human resource management, strategic planning, and other areas critical to the organization's capacity.

THE NEXT CHAPTER

Lessons Learned 2004–2011

The ICAP program in Tanzania has achieved noteworthy successes and helped to distill several lessons that can be applied to future programs. One overarching lesson, according to ICAP's country director in Tanzania from 2010–2011, Dr Redempta Mbatia, is to plan for a full transition to local actors and to start implementing that transition on day one. "It's important," she says, "to look at the existing systems, to have a vision for how you're going to transition every element of the program and to start that transition immediately."

ICAP has expended substantial time and energy focusing on sustainability and local ownership throughout the program, and although some processes moved more slowly as a result, greater sustainability and local ownership ultimately resulted.

As ICAP's work in Tanzania has evolved, challenges have been identified and addressed, and best practices have emerged.

- **A dual focus** on strengthening clinical services and creating supportive community-oriented systems (e.g., peer education and support groups) helps break down barriers to access. By combining clinical HIV services with psychosocial support that extends beyond the health facility, ICAP has helped create the space for public/community dialogue on HIV, making it a part of everyday life in the community. This proved essential to combating stigma and increasing demand for HIV services, particularly in socially conservative areas of Tanzania.
- **Mentorship,** an investment in human capacity, pays off over time in the form of improved quality of care. Although group trainings have the advantage of being scalable, ICAP's District Mentorship Initiative—which involves a prolonged learning program tailored to health care workers' individual needs and priorities—has yielded improvements in HIV service quality not achieved by training alone.

- **Facility-level support must be coordinated** within district structures to be effective and sustainable over the long term. ICAP has helped reinforce districts' mandate and capacity with a combination of joint mentoring and supervision of health care workers and direct financial support to districts in the form of subgrants.
- **Partnership with a wide range of stakeholders**—government, academic organizations, associations of people living with HIV—is critical to transforming good implementation practices into replicable technical successes at national level.
- **Investing in human resource development** (e.g., leadership skills, conflict management, communication skills, goal setting)—both at ICAP and within district health management teams—has paid off in the form of measurable improvements to communication and cooperation.
- **Collaboration with the Ministry of Health** during all phases of planning and implementation contributes to more strategic, more sophisticated, more successful programs. Regular meetings and formal agreements with MOHSW have helped determine plans for program approaches, support, activities and assessments. This collaboration helps all parties to plan for the future.

Moving Forward in Tanzania

As ICAP begins to transition program management responsibilities to local partners, its focus is on consolidating the gains made in Tanzania over the past eight years. ICAP has established itself as a respected source of HIV technical expertise and has earned a reputation for strategic, visionary program design and implementation.

ICAP will continue to work closely with MOHSW at national level to assist in adapting and adopting new technologies, tools, and guidelines in HIV care and treatment. Building on its contributions in the areas of TB infection control, early infant diagnosis, male circumcision, and adherence and psychosocial support, ICAP will continue to help MOHSW integrate the latest scientific evidence and research findings into national HIV policy in a timely fashion.

At the decentralized level, ICAP will continue to support regional and council health management teams in taking on an expanded role in managing HIV services. This support will involve strengthening the teams' capacity to test new approaches to service delivery and patient support and to evaluate their effectiveness on patient outcomes. Via technical and management capacity building at regional and district levels, ICAP will continue to strive for the right balance between the speed of transition and enduring benefit to patients in terms of continued availability and quality of care and treatment services.

Working to ensure that a culture of continuous improvement and of learning through objective quality assessment becomes truly embedded in the culture of teams that are providing or managing care and treatment services will be an important priority moving forward.

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Zanzibar women © Tineke Speelman

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