To get to Kisumu, Kenya’s third largest city from Nairobi, you must travel over the very birthplace of humanity: Olduvai Gorge. From the air in late May, you can see glittering lakes, the winding path of the Athi River, and the rift valley turned emerald by seasonal rains before descending over the milk-chocolate shallows of Lake Victoria. Lakeside Kisumu, in the Nyanza region, may lie close to where human-kind got its start, but it’s also in the heart of a region where tens of thousands have met a premature death from HIV/AIDS. The region has the highest prevalence of HIV in Kenya with more than one in seven people infected. In the district of Siaya, it’s one in four.

The skeptics were wrong. Bit by bit, the fight against HIV/AIDS is being won in sub-Saharan Africa. Here’s how ICAP is spreading hope and health in Kenya and Tanzania.

by CLAUDIA WALLIS

photographs by GEORGINA GOODWIN, JAMAL KALUMNA, AND CLAUDIA WALLIS
1 The rolling green hills of Kenya’s Nyanza region, on the equator. 2 A mother waits near the gates to the Siaya District Hospital. 3 Women—along with their mostly HIV-free children—who belong to a support group that meets monthly at Kenya’s Nyando District Hospital. 4 Moms wait for their babies to be vaccinated at the ICAP-supported Kashai Dispensary in Western Tanzania. 5 A lab worker at Kenya’s Katito Health Center, which has received essential equipment from ICAP. 6 Two shipping containers have been converted into a clinic with a well-ventilated central waiting area.
Solace and Sanctuary for the Young and HIV-Positive

You might think that 30 years after the HIV epidemic began, and 20 years after the miracle of antiretroviral treatment was introduced, some of the shame and stigma associated with the disease would have loosened its grip. You would be wrong. That becomes painfully clear when ten young people living with HIV—participants in an adolescent/young adult support group—tell their stories. The group meets monthly at the Siaya District Hospital, about an hour’s drive from the northeastern shore of Lake Victoria in Kenya. The program is a relatively new one for ICAP, which supports five adolescent programs in Nyanza Province. The goal is to help an age group that has been hard to reach, and it’s key to stemming the spread of HIV, says Mark Hawken, MD, ICAP’s country director in Kenya.

Judith* is 22 and lives with her parents. She was diagnosed with HIV and began treatment last year. What brought her into the clinic? “I was weak,” she says, using a common euphemism for being deathly ill. “Now I am fine,” she says, thanks to the drugs she is taking. She insists that she never forgets to take them promptly at 9 p.m.

Robert, 24, is an apprentice mechanic working in a garage. He, too, has been “weak,” and had an embarrassing outbreak of shingles sores on his face. His parents still do not know that he has HIV, and he doesn’t plan to tell them. He lives with his “auntie,” who reminds him to take his medication. The nightly start of a televised soap opera called Triumph of Love serves as his daily cue to take his medicines.

Because of these new realities, this summer’s International AIDS Conference in Washington, D.C.—the first to be held in the United States in 22 years—was one of the most optimistic since the epidemic began 30 years ago. The upbeat mood was reflected in the conference theme: “Turning the Tide, Together.” In 2003, when President George W. Bush launched the five-year, $15 billion commitment called PEPFAR (President’s Emergency Plan for AIDS Relief), skeptics were everywhere. Africa’s lack of health infrastructure would doom the project, they argued, and poorly educated patients would be unable to manage the drug regimens or make the changes in behavior needed to control the spread of the virus from pregnant women to their babies from about 30 percent to less than 5 percent. Using modern antiretroviral drugs in various combinations, one can wrest an AIDS patient from death’s very doorstep back to productive work, caring for children, and living in good health for many years. And applying a variety of other tactics, such as outreach to adolescents as they become sexually active, campaigns to encourage male circumcision (which provides 60 percent protection against HIV), and programs to prevent transmission of the virus in “discordant couples” (where one partner is infected and the other is not), it is possible to radically slow the rate of new infections. In fact, effective treatment in itself is now known to be a powerful way to stop the spread of HIV because it reduces the amount of virus to non-transmissible levels—a discovery the journal Science hailed as the 2011 “breakthrough of the year.”

“Now I am fine,” she says, thanks to the drugs she is taking. She insists that she never forgets to take them promptly at 9 p.m.

Antiretroviral drugs have essentially resurrected her.
"Yes," he replies. She knows he is HIV-positive, and they are delaying sexual activity. Does his boss know? No, says Robert, "I am afraid he will fire me [if he finds out]. He will think I am weak."

Elizabeth, 23, is a beautiful young woman, with fine braids in a tasseled topknot, and sad eyes. She was diagnosed in 2007, when she was pregnant. When she learned she was infected, "I wanted to die," she murmurs. She swallowed rat poison. Her parents found her and rushed her to the hospital. They beat her for attempting suicide. She remained ill, and eventually told them the truth about her HIV status. Her father, a driver for an HIV research program, was able to accept her situation. Her son was, unfortunately, born HIV-positive. He takes medication each morning, she says quietly: "He is doing well."

Marianne, at 17, is the youngest in the group, but she lacks a youthful glow. One can tell at a glance that she’s seen many trials in her young life. She was only about 10 when she became extremely sick, and was brought to the hospital, a herpes sore near his left eye. He has no idea how he became infected. The shame and isolation he felt in having to leave his boarding school still visibly pain him. The support group, he says, has given him strength and a chance to share his secret: "It used to be only me and all these old people" coming in for regular health checks. What did he get from this group, Hawken asks. "I got that I am never alone."

"All names have been changed."
Making testing, prevention, and treatment more accessible is a key part of what ICAP does in sub-Saharan Africa. It takes precision planning and management as well as intensive partnership with local and national authorities. It was no small task for ICAP to renovate the hilltop Andingo Dispensary and equip it with HIV test kits, registries to track patients, a delivery bed, infant-weighing scales, a blood pressure machine, an autoclave, and other critical supplies. With support from PEPFAR, ICAP also trained additional clinic staff (there used to be just one nurse) and a team of community health workers who fan out into the villages to spread the word about newly available HIV services and promote such public health essentials as child immunization, safe drinking water, and prenatal care.

**AT THE TREE-SIDE MEETING,** a young community health worker offers a progress report to ICAP visitors and a government dignitary, Dr. Ibrahim Mohamed, head of Kenya’s National AIDS and STI Control Program. It quickly becomes clear that ICAP’s work is not only helping in the battle against HIV/AIDS, it is improving health care and health awareness across the board for this community. More households are treating their water to make it safe for drinking, the health worker reports; more women are giving birth at the dispensary; fewer HIV patients are “defaulting”—missing treatment by skipping their clinic visits. He describes efforts to encourage hand washing, use of latrines, coming to the dispensary for early prenatal care. He’s also ready with a list of what’s needed: more first aid kits, more training for the community health workers, and a motorcycle to help outreach workers get around and transport goods. “The terrain is not very much easy,” he notes; bicycles aren’t doing the trick.

A local government administrator who works closely with the clinic has a few additional requests, including a refrigeration unit for medicines. ICAP personnel take careful note of the requests, which are by no means unusual, and thank those as-

---

**Targeting Another Epidemic: Cervical Cancer**

The Ocean Road Cancer Institute in Dar es Salaam is Tanzania’s only hospital specialized for treating cancer. Set on the shores of the Indian Ocean in a Moorish-style building with breezy courtyards, it serves about 4,000 patients a year. A stunning 65 percent of female patients here—and 40 percent of patients overall—have cervical cancer, according to Dr. Julius Mwaiselage, head of cancer prevention and research. Many of them arrive with the disease already too advanced to be cured.

The prevalence of this cancer in sub-Saharan Africa is largely due to widespread infection with human papilloma virus (HPV)—an established cause of the disease—and the absence of Pap tests and other kinds of screening. “Precancerous lesions are not being detected and treated early, so they progress to cancer,” explains ICAP’s Linda Andrews, a Vermont-born nurse-practitioner who has worked in Asia and Africa for more than 25 years. If the woman is also infected with HIV, she faces an added risk: Precancerous lesions develop more rapidly to invasive cancer in such women.

Andrews is working with Tanzania’s Ministry of Health to establish a cervical-cancer screening and treatment program in the regions where ICAP operates—one that could become a national model. Passionately committed to women’s health, she relishes this mission as “a dream come true.” Luckily, a simple methodology exists that can make the dream a reality even in a resource-poor country. VIA, or visual inspection with

---

1 Proud graduates of an ICAP-designed program that encourages men to assist their wives during pregnancy and in child rearing.
2 At the rural Kaigara Health Center in Tanzania, a peer educator talks with patients about symptoms of tuberculosis—a common co-infection with HIV.
3 A nurse weighs a child to assess growth.
acetic acid (5 percent white vinegar), is an evidence-based method of early detection of precancerous cervical lesions. The vinegar turns a lesion white, making it easy to spot. It can then be treated with cryotherapy—freezing with liquid carbon dioxide. This is usually done in a single visit, making it an efficient strategy for preventing cancer.

“Start-up costs are fairly high,” Andrews explains: “You need, at minimum, an examining table, carbon dioxide tanks, and a delivery system. And you need to train personnel. But once you’ve begun, maintaining it is relatively inexpensive.” The hardest part, says Andrews, is competing with soda companies and breweries for a steady supply of carbon dioxide from the country’s only distributor.

Here at Ocean Road, another piece of the cervical-cancer puzzle is being moved into place. Five doctors are learning a procedure called loop electrosurgical excision procedure, or LEEP, which is used to treat the 1 to 2 percent of precancerous lesions that are too large for cryotherapy. Tanzania’s National Strategic Plan calls for LEEP to be available in each of the country’s 28 regions, but the equipment alone costs $10,000. U.S. PEPFAR funding enables expert partners like ICAP to obtain the equipment for the Ministry of Health. “Without this combined effort,” says Mwaiselange, “we could not tackle cervical cancer.”

Two international figures played a key role in drawing attention to cervical cancer in Tanzania. Jane Goodall, the famed expert on chimpanzees, helped bring funders to the country’s Kigoma region, where she’s conducted most of her research. And George W. Bush has committed his foundation to the cause. “It is heart-wrenching to see ‘Targeting Another Epidemic’”; encouraging pregnant women to come for prenatal-care visits and to get their babies vaccinated; and recruiting HIV-positive patients to serve as peer educators and counselors to others in the community.

Spend time on the ground with ICAP staff members and you see public health creativity in action. They are constantly crafting new programs in partnership with health authorities and tweaking existing ones to tighten the net around HIV transmission and shore up the health system in general.

Later Dr. Mohamed expresses admiration for what he has seen. “The community really has faith in the facilities,” he observes, noting that ICAP is an exceptional partner that sets the standard for collaboration and quality. “We will use these facilities as a benchmark.”

At the very foundation of everything that ICAP does to battle AIDS is expanding access to HIV testing, overcoming both the emotional obstacles—the stigma, fear, and denial that keep people away—and the tangible obstacles—poor roads, inadequate health facilities, poorly equipped labs, test-kit distribution problems—that hinder universal testing. Once people know their HIV status, amazing things are possible. Not only life-saving treatment, but programs known as “prevention with positives”—working with HIV-positive individuals to prevent transmission to sexual partners; integrating treatment and prevention of diseases that often coexist with HIV, such as tuberculosis and cervical cancer (see “Targeting Another Epidemic”); encouraging pregnant women to come for prenatal-care visits and to get their babies vaccinated; and recruiting HIV-positive patients to serve as peer educators and counselors to others in the community.

To address the unique needs of pregnant women who are HIV-positive, ICAP brought HIV treatment into prenatal-care programs, making it possible to get comprehensive care under one roof.

ICAP’s team in Kagera countered cultural resistance to male circumcision by hiring a musical theater troupe to promote the practice. “We’ve been surprised by how well this is working,” says Ayele Zewde, MD, acting country director in Tanzania (see next page).

When school schedules made it hard for HIV-positive teenagers to turn up for support, ICAP opened Saturday youth sessions that have proved popular.

To encourage men to bend tradition and become more supportive of their wives during pregnancy, birth, and child rearing, ICAP created a male involvement program that is changing family dynamics.

Specialized software that ICAP designed to carefully track patient care is one of just four such systems approved by the Kenyan government.

In response to the urgent need for modern but low-cost clinical space, ICAP has perfected the art of converting shipping containers into well-functioning clinics that appeal to patients.

Some examples of ICAP’s problem-solving ingenuity:

- To address the unique needs of pregnant women who are HIV-positive, ICAP brought HIV treatment into prenatal-care programs, making it possible to get comprehensive care under one roof.

- ICAP’s team in Kagera countered cultural resistance to male circumcision by hiring a musical theater troupe to promote the practice. “We’ve been surprised by how well this is working,” says Ayele Zewde, MD, acting country director in Tanzania (see next page).

- When school schedules made it hard for HIV-positive teenagers to turn up for support, ICAP opened Saturday youth sessions that have proved popular.

- To encourage men to bend tradition and become more supportive of their wives during pregnancy, birth, and child rearing, ICAP created a male involvement program that is changing family dynamics.

- Specialized software that ICAP designed to carefully track patient care is one of just four such systems approved by the Kenyan government.

- In response to the urgent need for modern but low-cost clinical space, ICAP has perfected the art of converting shipping containers into well-functioning clinics that appeal to patients.
Preaching Circumcision—
With a Song and Dance

How do you persuade men to undergo circumcision at age 20 or 30 or 40—when the practice is alien to their traditions and when they can’t conceive of it producing anything but pain and humiliation?

Answer: You put on a show. And in the small banana-growing villages in the hills above Lake Victoria in Tanzania’s Muleba district, this surprising tactic is working magnificently.

In the village of Nshamba, a crowd of about 200 people has gathered around an open area. Bouncy, joyful music blares from a truck, and a rubber-jointed man is singing and dancing. He finishes the number, and a drama begins. He acts the role of a husband returning home from the bush.

“Where is our son?” he demands of his long-suffering wife. The prodigal son arrives, and his father begins to beat him with a stick. “Where have you been?” he yells. It soon comes out that the son has gone to the local clinic to be circumcised. His father is furious. He raises his voice. And his stick.

“Let him speak,” says the mother. “He has something to say.”

The boy explains that circumcision will reduce his risk of contracting HIV by 60 percent. It also lowers his risk of other sexually-transmitted infections. He tells his father that circumcision does not mean he’s now a Muslim—a common misperception. The father listens skeptically. Next, the young man explains that circumcision will help protect his future wife from cervical cancer.

That does it. Now the mother flies into a rage, insisting that her husband get the procedure. “Do you want me to get cervical cancer?” she shouts.

The play proceeds, delivering detailed information: The procedure is free. It’s being done by ICAP at a nearby health clinic in Rwantege. The dialogue begins in Swahili and continues in Haya, the local language.

When the drama ends, the actor playing the father turns to the crowd with his microphone: “What are we talking about today?”

The crowd replies, “Male circumcision.”

“What does it cost?”

The crowd: “Free.”

And just to ensure that the message has been absorbed, the actor hands the microphone to an onlooker and asks him to explain what he’s learned.

A few kilometers away on the terracotta roads of the region, another crowd is gathered—on the grounds of the Rwantege Dispensary. These are men who have seen the traveling show, grasped its message, and turned up for circumcision.

A temporary facility of waterproof tents has been set up on the grounds of the small clinic. ICAP has collaborated with local government authorities to offer the procedure in this area for free; the clinic is lending some staff to the project. Men wait under a canopy and on the grass. They are all ages—boys just 15 and men past 40. If anyone is nervous, it doesn’t show. Washed and disinfected surgical instruments glint in the afternoon sun on a low table, awaiting sterilization.

The intake tent is small and efficient. Everyone is offered HIV testing. The few who test positive are immediately referred for further evaluation. All of the men complete registration and wait their turn. A clean operating-theater tent holds eight surgical beds, and all are full. Local anesthetic controls the pain—no one shows any sign of discomfort. The procedure takes just 20 to 25 minutes. The men are observed for another 30 minutes and then instructed to return in 48 hours for bandage removal and in seven days for follow-up.

Head nurse Leonida Rweyemamu says that 129 men were treated here on Monday, and another 108 showed up on this Tuesday. The campaign will continue for a total of 23 days, during which ICAP and its partners hope to circumcise 2,000 men. The health advantages are indeed as impressive as the traveling troupe portrays: a remarkable 60 percent reduction in HIV risk, among other benefits.

Learning that fact from the performance group is what persuaded Osward Evarstes, 23, to come for the procedure. Through a translator he says that he also wants to protect his wife from cervical cancer.

Jovinus Babili, 40, also came after learning from the performers that circumcision will give him 60 percent protection against HIV. “I can maintain the other 40 percent,” he says, “by condom use, reducing my number of partners, and abstinence.”

The traveling troupe couldn’t have scripted it better.
“The innovation just takes your breath away,” says ICAP director El-Sadr, whose work on the front lines of the HIV epidemic was recognized with a 2008 MacArthur “genius” grant. The tireless El-Sadr spends much of her time traveling the globe to observe how programs are implemented in the 21 countries where ICAP works, and then helping to share and perfect them, with input from a staff of about 100 based at the Mailman School. In the world of HIV/AIDS, success begets success. “The philosophy has always been that the work will speak for itself,” says El-Sadr. “Let the people who receive the services speak.”

Luckily, they do just that—to great effect. Patients who commit to treatment and recover their health often want to pay it forward as peer educators or, with a bit more training, as lay counselors—positions that carry just token remuneration, but offer great pride and satisfaction. ICAP’s experience shows that these workers make an enormous difference in reducing stigma and motivating patients to stick with their drug regimens. At the Machakos District Hospital, 40 miles southeast of Nairobi, Elizabeth Njeri, 37, has been paying it forward for six years. A lay counselor who works at the hospital five days a week, Njeri nearly died of AIDS in 2003. She’s faced unspeakable discrimination—including from her own brother, who told her she had no business being alive. Now plump and vigorous, she counsels people who are newly diagnosed. “When I tell them that I am HIV-positive, some do not believe me, because I am fat!” she says, laughing. “I tell them to ask me a question, a personal question. I share my story.”

Felix, a 40-year-old peer educator at Machakos, is equally committed. “I do this work because there was a time when I was very desperate, and I had no hope in life,” he says. “A friend of mine came and supported me in whatever I was in need of. Then I came to join a support group. We were trained. I came to know that to support someone is a good thing. It is a blessing.”