

# REDEPLOYMENT



## Opportunities to Control HIV and TB in Tanzania Observations from Dar es Salaam, Mbeya and Zanzibar

April 2015

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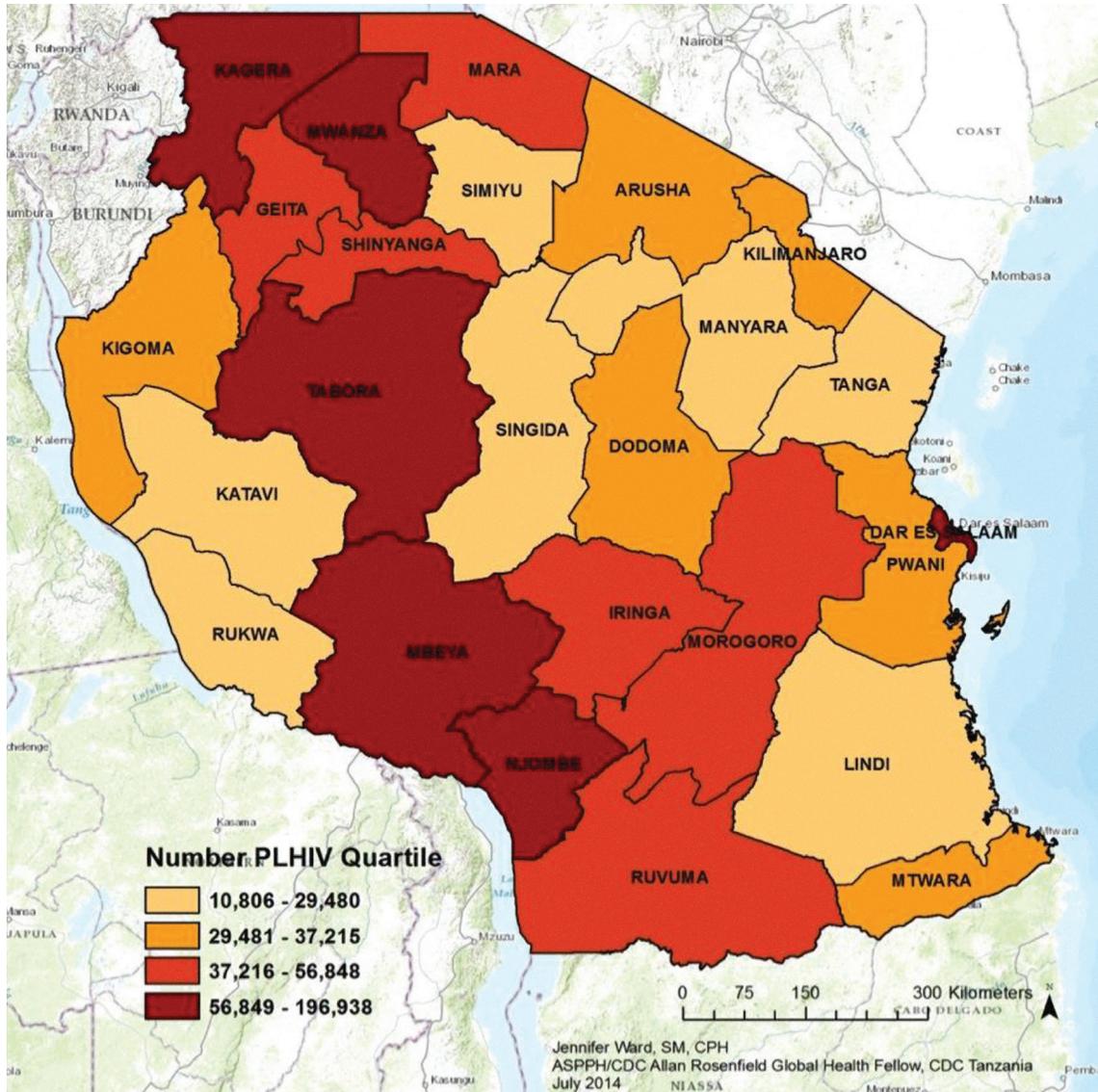
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*“Achieving epidemic control will require delivering the right things to the right places at the right time.”*

United States Global AIDS Coordinator  
Ambassador Deborah Birx, International AIDS Conference 2014





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## INTRODUCTION AND SUMMARY OF FINDINGS

The Infectious Diseases Society of America Education and Research Foundation Center for Global Health Policy hosted five Congressional staff delegates on a visit to Tanzania in October 2014 to witness the impacts of United States investments in responses to the HIV and tuberculosis epidemics there, and to discover obstacles to prevention and treatment of those diseases in the country. The group visited Dar es Salaam, the nation's industrial center and most populous city, Mbeya, in the rural highlands where HIV rates are among the highest in the country and Zanzibar, the semi-autonomous archipelago and tourist destination off the country's east coast where HIV prevalence across the general population is under 1 percent, but concentrated with high incidence and prevalence among people who inject drugs, sex workers, and men who have sex with men.

The visit to these settings came at a time when the United States Office of the Global AIDS Coordinator has emphasized the need to analyze local epidemics, shift limited resources to geographical areas where HIV incidence is highest, and reach populations with high burdens of disease and low access to services.

### Populations with high HIV, TB incidence, low access to services

Tanzania's strategic AIDS plan recognizes the impact of the country's epidemic on people who inject drugs, as well as on other criminalized populations, including men who have sex with men, and people involved in sex work. Punitive and restrictive laws, denial that significant numbers of those populations exist, and limited capacities to gather data, however, all contribute to the challenge of assessing needs.

The IDSA ERF Global Center delegation focused on responses targeting people who inject drugs. Tanzania is one of just a few sub-Saharan African countries experiencing the double impact of injecting drug use and HIV epidemics (others include Kenya, Nigeria, and South Africa). It is a challenge for which evidence-based responses, including medically assisted opioid substitution therapy, sterile needle and syringe provision, HIV and TB testing and treatment have proven successful. Tanzania has seen an increase of HIV among people who inject drugs and has received support from the President's Emergency Plan for AIDS Relief to explore, and then implement medication assisted therapy, or opioid substitution treatment, for injecting drug use addictions.<sup>1</sup> In addition to visiting one of those

<sup>1</sup> Needle, Richard H. and Zhao, Lin, HIV Prevention among Injection Drug Users, Center for Strategic and International Studies, April 2010

*A possibly uncounted and untended population living with HIV in a region considered to have a controlled epidemic underscores the vulnerability that failures to reach children poses to efforts overall.*

programs, the IDSA ERF delegation found local civil society organizations targeting outreach, particularly for TB screening, to people who inject drugs. But the funding those groups received was inconsistent. Lacking the resources to produce data that would make a case for more support, they face the challenge of attempting to meet unquantified need with unpredictable support.

While data on the numbers of people who inject drugs in Tanzania remains inadequate, estimates have doubled in recent years from 25,000 to 50,000, with a reported HIV prevalence among female drug injectors as high as 71 percent.<sup>2</sup>

### **Mbeya, an overlooked “hot spot”**

Proximity to the borders of Zambia and Malawi, a remote and vast rural setting, migrant fishing and mining populations, as well as an urban center with a transient population, combine to make Mbeya a “hot spot” of high HIV prevalence. With nearly one in 10 people in the region living with HIV, it is home to some of the highest rates of the virus in the country, and some of the lowest rates of treatment coverage. A U.S. Military HIV Research Program Center, which is part of the HIV Vaccine Trials Network, receives PEPFAR funding to provide care and services, build local laboratory capacities and provide training and mentorship to build staffing for these efforts in Mbeya. Human resource deficits, however, challenge the development of research capacities as well as sustainable service provision there. Mbeya’s remote location may have contributed to it not receiving the overall attention that it needs. The President’s Emergency Plan for AIDS Relief program’s Tanzania country director, who is posted in Dar es Salaam, told our delegation that he has never visited the region.

### **Children lost to follow-up**

Children’s access to HIV treatment and services lag well behind that of adults globally, and some of the factors contributing to that disparity were highlighted in civil society meetings in Zanzibar. With an estimated 0.6 percent of people in Zanzibar living with HIV, the semi-autonomous archipelago off the

coast of Tanzania has enjoyed relative success in controlling an epidemic considered “concentrated” among marginalized people. That may have factored into the gaps in responses to children there, with HIV infection highly associated with sexual transmission and drug use, and risks of parent to child transmission receiving less attention. The role of stigma also was emphasized here, with consumers and providers of HIV services noting that a positive HIV test indicated “you were one of those people.” While that stigma discourages seeking or disclosing a child’s HIV diagnosis, records were still kept on paper in the settings we visited, challenging efforts to follow patient care. A possibly uncounted and untended population living with HIV in a region considered to have a controlled epidemic underscores the vulnerability that failures to reach children poses to efforts overall. Zanzibar, it was noted to us repeatedly in our time there has found success to be both illusory and elusive before, beating back malaria not once, but twice. The second time was necessary because the disease rebounded with a vengeance when efforts lagged.

### **Gaps and weaknesses**

Shortages of health care facilities, of trained health workers and of resources to train and hire workers, were cited as obstacles to HIV and TB prevention and treatment provision in all three settings. The Tanzanian government’s failures to live up to pledges to build, train, and fund staffing, facilities and programs to provide and expand services were frequently noted by longtime HIV responders, from both within and from outside the country. But external pressures on the government to slow spending and wage growth also were noted, and are reasons that the government seems unlikely to soon be in a position to build the workforce or supply higher levels of funding.

In the meantime, inadequate access to tuberculosis screening and diagnosis make the country vulnerable to a growing burden of the disease, with disproportionate impact on people living with HIV, criminalized populations, and those least able to bear the costs associated with successfully completing treatment for tuberculosis.

As in many sub-Saharan African countries, traditional healers are the first recourse for the majority of the population. Misconceptions surrounding HIV risks prevent some most at risk from accessing prevention, diagnosis, and treatment.

### **The challenge**

Tanzania is facing ongoing epidemics of HIV and TB and challenges both unique and common to other sub-Saharan African settings. The need to inform and tailor responses in this country for maximum impact is urgent. In October we saw opportunities where local insight, will and ability can intersect with donor resources to inform and support sustainable responses to HIV and TB, among populations that have yet to benefit from a decade of progress against the diseases.

<sup>2</sup> Lambdin, Barrot H. et al, Methadone Treatment for HIV Prevention- Feasibility, Retention and Predictors of Attrition in Dar es Salaam, Tanzania, Clinical Infectious Diseases, May 22, 2014



# 1

## THE RIGHT THINGS

### *Investments and shortfalls*

The first three AIDS patients in Tanzania were reported in 1983. By the end of 2012, an estimated 1.5 million people were living with HIV in Tanzania, with more than 85,000 people becoming infected yearly.<sup>3</sup> Until the nation's first antiretroviral treatment program began at Muhimbili National Hospital, with support from the U.S. President's Emergency Plan for AIDS Relief in 2004, hospitals and clinics had little to offer patients. The first obstacle the program faced was its own untried credibility. In its first months the program enrolled just 100 people living with HIV.

"The big change," Dr. Ferdinand Mugusi, who launched the PEPFAR-funded program at Muhimbili in 2004, said, "is that patients got better." As news spread that treatment was free, available and effective, treatment enrollment rose steeply. Facilities and a workforce adequate to the demand for life-saving treatment are the challenges now.

### Goals and resources don't match

This year, UNAIDS recommended that donors and partner countries aim to ensure in the next five years that 90 percent

of all people living with HIV are aware of their status, that 90 percent of those who know their status are on treatment and that 90 percent of those are treated consistently and correctly enough to achieve viral suppression, greatly reducing the odds of illness and transmission to others. The U.S. President's Emergency Plan for AIDS Relief has voiced support for those goals. But aside from other obstacles, both clinical space and staffing fall far short of what would be needed to accommodate 90 percent of the area's HIV patients, providers in Dar es Salaam and Mbeya say.

While the United States has roughly one doctor for every 350 people and one nurse for every 100 people,<sup>4</sup> in Tanzania one doctor serves about 300,000 people. In 14 regions of Tanzania, only one doctor is available to serve at least 100,000 people.<sup>5</sup>

By 2014 about half a million people in Tanzania were receiving antiretroviral treatment. In Dar es Salaam and in Mbeya, where rates of HIV are among the highest in the country, we were told that there were not enough facilities, and "there are definitely not enough health care workers to provide care and treatment at an acceptable standard to everybody."<sup>6</sup> It is a problem of long standing that Mugusi says has been met with promises, but no action.

One HIV clinic serves each of the country's districts, Mugusi said. Populations served by the country's 132 districts range

<sup>3</sup> Tanzania Third National Multi-Sectoral Strategic Framework for HIV and AIDS

<sup>4</sup> Global Health Service Partnership, 2014

<sup>5</sup> Kwasigabo, G. et al, Tanzania's health system and workforce crisis, *Journal of Public Health Policy*, 2012, Vol. 33

<sup>6</sup> Interview, Klaus Sturbeck, Mbeya



*“For you to provide that kind of care, you had to have facilities.”*

**Dr. Ferdinand Mugusi**

from 1.4 million people to 46,000 people.<sup>7</sup> “The government needs to put more effort to open more clinics,” Mugusi says. He is not expecting that to happen in the near future. “The projection was the government had to employ at least 10,000 more healthcare workers,” he says. “I’m not sure the government has been able to do that.”

PEPFAR and Tanzanian government documents indicate that need is unlikely to be met in the near future. PEPFAR’s 2013 Tanzania Country Operational Plan notes an approximately 65 percent vacancy rate for health care positions in

the public sector that “threatens to impede efforts to scale up and maintain care and treatment services. A health workforce reorganization and hiring freeze in the mid-1990s contributed to that vacancy rate, but poor work conditions and pay also have contributed to a growing problem in the years since.<sup>8</sup> Tanzania’s current AIDS planning document refers to a 2007 report saying that health workforce capacities steadily declined from 1994-95 at 67,000 workers, to 2002 at 54,245 workers and were projected to drop further to 48,000 by 2015.<sup>9</sup>

Tanzania, with a per capita gross national income of \$550 US, is ranked No. 152 of 187 countries on the United Nations Development Programme’s Human Development Index. While the PEPFAR Operational Plan report for Tanzania refers to a “symbiotic relationship,”<sup>10</sup> between PEPFAR, the Global Fund to Fight AIDS, Tuberculosis and Malaria and the Tanzanian government, it also acknowledges that foreign donors currently support 97 percent of mainland Tanzania’s AIDS response, with 74 percent of that support coming from PEPFAR and the Global Fund. The report also notes that the country is hobbled by weak management and planning capacities as well as shortages of health care workers. The development of that workforce is slowed by similar gaps in the country’s education capacities, with large classes and poorly trained teachers leading to students leaving secondary school without adequate study, problem solving, and analytic skills. At the same time

International Monetary Fund requirements to reduce public spending, by cutting a wage bill that would increase budgeting for teachers’ and nurses’ salaries prevents the government from filling those gaps.<sup>11</sup>

*According to community workers, the requirement to pay for confirmatory TB diagnostics means many of the people they identify with probable tuberculosis never make it to the clinic for treatment.*

In light of these challenges the contributions of the Global Health Service Partnership volunteers are essential. Tanzania is one of three countries (with Malawi and Uganda) to benefit from the program, which was launched two years ago, and which sends experienced American doctors and nurses to serve as faculty members in medical education institutions. The volunteers bring expertise and provide support for medical school faculties stretched thin as they address health care and training needs. But, as one volunteer put it, “With education, it takes a long time to learn you made a difference. I’m expecting, 10, 15, 20 years from now, to see a difference.”

### **Lack of TB diagnostic access risks hidden epidemic**

Tanzania is one of the 22 high burden countries for tuberculosis that account for 80 percent of the tuberculosis in the world<sup>12</sup> and TB is one of the top ten causes of death in the country. An estimated half of all people diagnosed with TB in the country are co-infected with HIV.<sup>13</sup> Differing access to diagnostics could skew an accurate assessment of TB prevalence, though. In Zanzibar, for example, we were told that patients with suspected TB but who are not infected with HIV must pay for their own X-rays or GeneXpert diagnostic testing to confirm the diagnosis. According to community workers, the requirement to pay for confirmatory TB diagnostics means many of the people they identify with probable tuberculosis never make it to the clinic for treatment. Additional resources for TB diagnostic access could have a major impact on Tanzania’s present and future TB epidemic.

<sup>7</sup> Kwesigabo, Gideon, 2012, Tanzania’s health system and workforce crisis, Journal of Public Health Policy, Vol. 33, S1, S35-S44

<sup>8</sup> Ibid

<sup>9</sup> Ibid

<sup>10</sup> PEPFAR Tanzania Operational Plan Report, FY 2013

<sup>11</sup> Interview, Klaus Sturbeck, Mbeya

<sup>12</sup> World Health Organization, WHO Global TB Report, 2014

<sup>13</sup> PATH, Case Profile: Health Systems Strengthening Integrating tuberculosis and HIV services in Tanzania

Research has shown that people who are sick with tuberculosis who are not infected with HIV are more infectious than people who are co-infected with HIV and TB and show majorities of people with HIV acquiring TB through exposure to people who are not infected with HIV.<sup>14</sup> Among countries where rates of resistance to tuberculosis treatment drugs have recently been estimated, Tanzania has one of the lowest rates. Researchers have attributed this in part to the absence of private sector tuberculosis treatment, but have also noted that recently, rates of multidrug resistant tuberculosis have begun to rise.<sup>15</sup>

### New threats underscore fragility of health system grappling with long-standing challenges

In October, while the West Africa Ebola epidemic continued to spread in Liberia, Sierra Leone and Guinea, travelers infected with the virus had been diagnosed and infected others in Nigeria and Senegal, as well as the United States, highlighting a need for global Ebola preparedness. By then an Oxford study<sup>16</sup> had also included Tanzania, home to a bat that carries the virus, as one of the countries with risks of a new outbreak. In Dar es Salaam, the public health system was preparing for the event of a local Ebola outbreak with tents on the grounds of the national hospital. Emergency medicine is

new in Tanzania, a young physician charged with coordinating the effort noted. If Ebola does break out in Tanzania, he said, “there will be a lot of challenges.”

Tanzania’s AIDS response planning document highlights systemic weaknesses that already hinder routine care. It notes that only 5 percent of facilities in the country had met all requirements for infection prevention, including soap, water, gloves, and disposable boxes for used needles and lancets. More than 30 years into Tanzania’s HIV epidemic, the country has yet to reach universal screening for HIV infection of donated blood, with only a little more than 35 percent of donated blood in the country screened for HIV in a quality assured process.<sup>17</sup>

With diagnostic technology and treatment capacities for illnesses related to HIV, including TB, hepatitis B and C, and cancers out of reach for most patients, efforts to confront HIV in Tanzania face a repeat of the challenge the first PEPFAR program in the country faced: if clinics can’t offer the services and treatment patients need, patients have little reason to seek care at those clinics.

“There are things when you work in the U.S. that you take for granted,” Mugusi says now, “Sometimes you wonder if you should take that biopsy or send the patient home to die in peace.”

<sup>14</sup> Kwan, C and Ernst, J. HIV and Tuberculosis: a Deadly Human Syndemic, Clin Microbiol Rev. 2011 Apr; 24(2): 351-376

<sup>15</sup> Maghimbi, A. Et al, 15th Annual Meeting of the Institute of Human Virology

<sup>16</sup> eLife 2014;10.7554/eLife.043955

<sup>17</sup> Tanzania Third National Multi-Sectoral Strategic Framework for HIV and AIDS6



*“There will be a lot of challenges.”*

**Dr. Juma A Mfinanga, emergency physician**



Mbeya

## 2 THE RIGHT PLACES

### *Where the epidemic is*

#### 1. Local challenges

In October, the Tanzania PEPFAR country office was in the midst of following a directive from the office of the U.S. Global AIDS Coordinator to redirect resources to geographical regions and populations showing the highest impacts of the epidemic.

PEPFAR's Tanzania Country Director Brian Rettman, who is based in Dar es Salaam, referred to the change as "refining the investment." While noting the Tanzanian government has voiced concerns over the plan to withdraw services from some areas, Rettman said, "We think we're going to be able to get more on treatment than ever before."

But he also told us that he had never visited Mbeya, home to about 2 million people, as well as to one of the highest HIV prevalence rates in Tanzania, where close to 10 percent of the population live with the virus that leads to AIDS.

A primarily rural farming region, with migrant fishing and mining populations in the Southern Highlands of Tanzania, it borders Zambia and is near the border of Malawi. Nestled in a valley surrounded by high mountains, it is geographically isolated from the rest of Tanzania. Now a two-hour flight from Dar es Salaam, until recently it could be reached from the capital city only by a 10-hour drive or a 21-hour train trip.

Mbeya has one of the lowest rates of male circumcision in Tanzania, with just an estimated 38 percent of men between the ages of 15 and 49 in the region circumcised, while rates in the eastern regions are generally more than 90 percent. Rates of prevalence among pregnant women across the region range from 4.9 to 15.7 percent. In HIV testing of couples to prevent parent to child transmission in the city of Mbeya, 15 percent of men and women tested positive for HIV, while rural Mbeya reflects the "feminization of the epidemic," with 16 percent of women testing positive and about 9 percent of men. With an

estimated 40 percent of people with HIV who are eligible for treatment receiving it, coverage is considered well below the national average.<sup>18</sup>

### *A Military HIV Research Program struggles to fill the gaps*

Mbeya is the site of a PEPFAR-funded Military HIV Research Program that provides HIV testing, treatment, and circumcision while conducting biomedical HIV prevention research.

MHRP staff members are familiar with limitations that include the shortages of clinic space and trained personnel noted in the previous section. A waiting room for prenatal care was claustrophobically crowded, with a staff member noting the resulting atmosphere was not an inviting one for frequent returns. Migration also challenges efforts to follow prenatal care with appropriate pediatric services.

MHRP staff members say the numbers of healthcare workers at lower level health facilities are insufficient to cope with reporting requirements and to understanding the impetus for interventions critical to reducing incidence, including Option B plus and treatment as prevention. While offering competitive salaries, the research programs have difficulties finding adequately trained people, affecting the scope of research conducted in the region.

In this, one of the areas most heavily impacted by HIV in the country, we saw the critical need for the PEPFAR country coordinator to visit the hardest hit areas, observe programs in action, and witness challenges on the ground to better make a case to the Tanzanian and U.S. governments for the investment needed to make efforts in HIV “hot spots” sustainable.

## **2. Populations with high impact, low access to services**

In its national AIDS response planning document for the next five years, the government of Tanzania has shown its support for reaching people suffering the highest impacts of HIV and TB and the lowest access to service. The document recognizes and urges meeting the needs for HIV prevention and care among those traditionally referred to as “key populations” and defines key populations as those at high risk of HIV exposure or transmission. That includes “all People Living with HIV, as well as serodiscordant couples, sex workers and their clients, men who have sex with men, women who have anal sex and people who inject drugs.” Other population groups the document recognizes include prisoners, long-distance truck drivers, people with any form of disability, people who fish, mine, and women and children.<sup>19</sup>

<sup>18</sup> Presentation, interviews in Mbeya

<sup>19</sup> Tanzania Third National Multi-sectoral Strategic Framework for HIV and AIDS, 2013/14-2017/18, The United Republic of Tanzania, Prime Minister's office.

The document stresses “the importance of [people who inject drugs] not sharing needles should remain a key component of the comprehensive harm reduction package in Tanzania, together with education about the risks of sexual transmission and the need for protection through consistent and correct use of condoms.”

In doing this, members of civil society organizations we met with in Dar es Salaam and Zanzibar said, the government has given them a policy to help them support and, if necessary defend their efforts to reach populations that are criminalized. These include people who inject drugs, as well as men who have sex with men, people involved in sex work and others who continue to be marginalized, not only by Tanzania's laws and cultural stances, but by donor restrictions.

With little financial investment, though, the government's actual will to support people marginalized by punitive laws has been left to the imaginations of the members of the Tanzania Council for Social Development, Dar es Salaam, who try to fill the gaps.

We focused on interventions to reach people who inject drugs for several reasons. While HIV prevalence in Tanzania across the general population has dropped in recent years, it has increased among people who inject drugs. The estimated numbers of injecting drug users also has risen -- from 25,000



*Outreach performers in Zanzibar.*

in 2010 to 50,000 in 2013. A recent survey found about 60 percent of people who inject drugs reporting that they did so three times a day, and more than 40 percent reporting they shared needles. While male injecting drug users reported an average of two sexual partners in 30 days, female injecting drug users, among whom HIV prevalence was found to be as high as 71 percent, reported an average of 25 sexual partners, with condom use reported by only 42 percent.<sup>20</sup>

This data also implies risks for sexual partners of people who inject drugs, and in turn to the general population. For all of these reasons Tanzania, as well as partners, have invested in measures to reduce harms from drug use, including opioid substitution therapy, sterile needle and syringe supplies, and integrated health screening and treatment provision, that have been shown to reduce HIV incidence.

### Approaches to addiction risks constrained by funding sources

#### *A medically based program that supplies methadone for people who inject drugs offers partial solution*

A clinic housed under the mental health services department at Temeke Regional Referral Hospital provides medically assisted therapy with methadone to treat addictions to injected drugs, and is run by the Tanzanian government with support from PEPFAR. Clients at the clinic predominately inject heroin. With overall estimated HIV prevalence from 46 percent to 51 percent, and hepatitis C prevalence estimated at more than 75 percent among people who inject drugs in Tanzania, nurses test patients for both viruses and screen for tuberculosis. Of 209 clients tested, 30 were found to be HIV-infected, 13 infected with hepatitis (B, C, or both) and eight were found to be sick with tuberculosis (all of these rates are lower than cumulative rates of two other clinics that opened earlier). Clients who tested positive for HIV, hepatitis and tuberculosis were referred for treatment. Female clients also are referred for reproductive health and family planning services; other than condoms no commodities are available on site. Clients are encouraged to bring partners in for testing. All clinicians have undergone training in dealing with addicted patients, includ-



*Mukikute volunteers help support the drop in center with sales of sugar cane juice from a window of the building.*

ing in delivering services respectfully. Clients emphasized the benefit of being freed from the struggle to find ways to pay for drugs, which had included stealing and transactional sex.

Open six months in October, the clinic's retention rate for medically assisted addiction treatment was 90 percent. Although two other clinics in Dar es Salaam also offer medically assisted addiction treatment, staff members at the Temeke site were concerned the demand for the services it provides, at a hospital that serves nearly one and half million people, would outstrip its resources.

#### *Syringe, needle exchange, showers and room to rest eases TB outreach*

Mukikute is an organization of former tuberculosis patients established in 2005 to help TB and TB/HIV patients to access and complete treatment, to enhance community awareness of TB and TB/HIV, and to address stigma surrounding the diseases. With outreach efforts in bus stations, marketplaces and other gathering places, they have sought to do this by spreading word, and demonstrating that TB is curable. In recent years they have made specific efforts to reach men who have sex with men, people involved in commercial sex work, and people who inject drugs. "They are hiding and need to be reached," a staff member said. People who inject drugs are at particularly high risk for tuberculosis, even in the absence of HIV infection. Mukikute staff took us to a drop-in center where people who inject drugs can pick up clean needles and condoms, get a shower and a room in which to rest. The center, where clients who stop in for those other services also can be screened for TB, makes a hidden population accessible. A client of the center spoke of the value of the services she found there: "We drug

<sup>20</sup> Lambdin, Barrot H. et al, Methadone Treatment for HIV Prevention- Feasibility, Retention and Predictors of Attrition in Dar es Salaam, Tanzania, Clinical Infectious Diseases, May 22, 2014



A mural at the Detroit Recovery House in Zanzibar.

users are not considered human beings. But if you continue giving education, we can hear what you're saying." Mukikute volunteers make accessing TB services easier for this high risk population by collecting sputum samples in the community and transporting them to health facilities for analysis. The center can supply syringes to clients who still are using drugs because it does not receive U.S. government support for that effort. While the center we saw was able to fill this need, it offers no direct health services. Mukikute volunteers help support the drop in center with sales of sugar cane juice from a window of the building.

### *A recovery community helping itself*

Harm reduction services to people who inject drugs have limited support in the orthodox religious environment of Zanzibar.

Detroit Recovery House, an alcohol and drug recovery center for men, is modeled on 12-step programs and relies on peer support nearly entirely on a volunteer basis. Volunteers also go out into communities to reach people who, because of drug or alcohol addictions, would likely not otherwise be reached with tuberculosis and HIV screening. The challenges those volunteers face in reaching potential clients and people who need treatment for HIV and TB include meeting the costs of food and transportation. In recent years, the government of Tanzania has paid a portion of the recovery center's rent. Men at the house create and sell art to pay for expenses.

### *Training needed to meet needs of marginalized people*

Healthcare provider training was cited as critical to meeting the needs of marginalized people. "Send volunteers with experience working with people who are different. We are not reaching them. They need help for themselves and to avoid putting others at risk," said Dr. Jessie Mbwambo, a physician at Muhimbili Hospital who started Tanzania's first MAT program.

### *Fill the data gap*

"The predominant mode of HIV transmission is heterosexual contact between HIV-infected and uninfected individuals, accounting for approximately 80% of infections, vertical transmission from the mother to the newborns accounts for about 18% of infections and medical transmission through unsafe blood accounts for approximately 1.8%." The 2013-2018 National Strategic Plan for the national nonprofit Benjamin Mkapa HIV/AIDS Foundation in Tanzania

This math, in a plan produced in 2013, leaves just .2 percent of HIV infections in Tanzania the result of shared syringes between people who inject drugs, and of unprotected anal sex between men, although the probability of acquiring HIV through those acts is from two

to-more than 10 times higher than through heterosexual sex.<sup>21</sup> Information on the numbers of people who use injecting drugs in sub-Saharan African countries has been characterized as "extremely limited," but as cited earlier estimates have doubled in recent years, as well as estimates of HIV prevalence among people who inject drugs, to more than 70 percent among women.

"Donors need to produce evidence of the size of populations, because we don't know where they are," a civil society representative at the Tanzania Council for Social Development said.

The government's national plan emphasizes this gap as well, saying that in addition to limited data on key populations beyond Dar es Salaam, limited coordination among implementers working with key populations also impede service provision.<sup>22</sup>

Finally, our meetings with civil society organization representatives highlighted a gap in services: Efforts to reach incarcerated persons, or even count their numbers are nearly nonexistent. While the greatest champions of reaching marginalized populations come from civil society organizations aware of the need to make the most of limited resources by reaching those who are incarcerated, no mechanism exists for civil society groups to work behind prison walls. A recent assessment of HIV in prisons has taken place, they said, but it has not yet been released. Neighboring Zambia has proven that studies and outreach inside prisons is possible and effective, a civil society representative said, citing the similarly resource-limited neighbor, as one of only two countries that have made efforts to collect and respond to data on health issues in prisons (the other was South Africa). USAID estimates Tanzania's general TB prevalence to be 183 for every 100,000 people, but its prison TB prevalence to be 4,000 for every 100,000 people.<sup>23</sup>

<sup>21</sup> Centers for Disease Control and Prevention, HIV Transmission Risk, July 1, 2014

<sup>22</sup> Tanzania Third National Multi-sectoral Strategic Framework for HIV and AIDS, 2013/14-2017/18, The United Republic of Tanzania, Prime Minister's office.

<sup>23</sup> USAID, Tuberculosis in Prisons, a Growing Public Health Challenge



### 3

## THE RIGHT TIME

### *Reaching children now*

“Where are the children?” a representative of WAMATA, a group of people living with HIV in Zanzibar asked. Children make up a marginalized population living with HIV, pervasively unacknowledged, uncounted and untreated.

A CDC report released just before World AIDS Day 2014 noted that while increased access to antiretroviral treatment for HIV over the last decade has led HIV-related deaths globally to drop by nearly a third since 2005, Tanzania is one of seven African countries where the number of adolescents dying from HIV-related causes has risen by an estimated half again during that time.

The reasons, civil society representatives in Dar es Salaam and Zanzibar say, include stigma that keeps parents from seeking diagnoses of children born with HIV, and gaps in healthcare infrastructure to follow the care of children born to infected mothers. Because HIV is associated with drug use, sex work and gay men, particularly in Zanzibar where the epidemic

*“They believe they will be seen as one of those groups. People will say the parents are not good people.”*

**Member of Zanzibar NGO Cluster**

is seen as concentrated among those populations, parents hesitate to have themselves or their children tested for HIV.

“They believe they will be seen as one of those groups,” said a member of ZANGOC, the Zanzibar NGO Cluster. “People will say the parents are not good people.”

Continued ignorance of how HIV is transmitted, particularly among uneducated populations also leads to isolation and threats against children known to have the virus.

At Mnazi Mmoja Hospital in Zanzibar, a teenage girl struggled to tell the story of how, born with HIV, she grew up sick. She was not diagnosed until her parents were dying, and not told of her diagnosis, or treated until after they had died. A local organization of persons living with HIV finally was instrumental in linking her to treatment, and now on the



A nursery at Mbeya Zonal Referral Hospital.

brink of adulthood, she appears healthy. Telling her story to strangers in October, she buried her face in her hands, her shoulders heaving. Whether she was ready or not to talk about her illness and the loss of her parents, she saw a need to break the silence.

At the same hospital, a record room where folders were jammed into, spilling out of, and stacked on top of broken file cabinets showed challenges to tracking diagnoses and treatment of patients, parents and children with HIV.

Ignorance and bias surrounding HIV diagnoses reflects health work force and training deficits that were cited throughout our tour. In 2012, the Tanzanian government carried out a survey on HIV stigma in healthcare settings and found that 13 percent of people living with HIV were told by healthcare workers not to have children. At the same time 44 percent reported being denied reproductive health information.

The weaknesses that currently challenge HIV and TB responses in Tanzania — inadequate numbers of facilities and trained health workers, failures to acknowledge and integrate marginalized populations into services, and rampant stigma that results, at least in part from both of those — are magnified in Tanzania in their impact on children.

A program provider in Dar es Salaam paused when asked about efforts to support orphans and vulnerable children as they transition into adulthood.

*“If they transition into adulthood,” she said.*

If they do not, the progress that a decade of investment and science has brought is at stake and can’t be sustained. The time to prioritize delivery of diagnostics and treatment to children in PEPFAR’s HIV responses is now.



A medical records room at Zanzibar’s Mnazi Moja Hospital HIV Clinic



## 4

### MAKING THE MOST OF RESOURCES

#### *Toward self-sustaining efforts*

The challenges we saw to sustainable prevention and treatment of HIV and TB in Tanzania were multiple and reflected long-standing failures on the part of both government and donors to recognize and quantify established needs, some of which have only begun to be addressed in the last two years, and will take years to address. A focused reallocation of funding that supports locally based promising and proven programs, while building local capacities, will create a path for lasting progress towards PEPFAR's and Tanzania's goals.

In addition, advances in biomedical HIV prevention demand that reallocation address both the immediate goals of treatment, and the long term goals of research. In a meeting with the IDSA ERF delegation, American Ambassador to Tanzania Mark Childress described the process that has to happen next as "triage." He emphasized that donors must present the Tanzanian government with a strong case for shifts in funding to ensure cooperation in efforts to fill the ensuing gaps.

In a December World AIDS Day piece published in a Tanzanian newspaper, Childress acknowledged "the cruel reality" of persisting, large gaps in treatment access. He also noted those

gaps exist while "the United States is funding sites where there are very few — sometimes only one, two or three — HIV positive patients."

We saw examples of that imbalance in October, particularly in programming for children.

#### Close pediatric treatment gap with focus on health-related efforts

##### *A program in need of support*

While we could not quantify treatment gaps, we saw locally based programs striving to meet needs they are informed of through their involvement in the communities they serve. One was Pasada, a faith-based program in Dar es Salaam providing a broad range of HIV and tuberculosis services, that includes the direct provision of TB diagnosis and treatment to children—the majority of whom also live with HIV—in a special designated day care center, that lends support to these pediatric patients during their treatment regimens. The program's outreach efforts rely largely on volunteers who are former and current patients. It has lost funding in the last year with the closing of the Diana Princess of Wales Memorial Fund, and its need for future resources include ones as basic as toys for the children's center.

##### *A program poised for independence*

In contrast we visited Pamoja Tuwalee, a five-year program funded by PEPFAR to support orphans and other children made vulnerable by the HIV epidemic that began in 2005. The

program seeks to strengthen households caring for children in that category in Zanzibar, where HIV prevalence estimates remain under 1 percent. We heard testimonials from household heads who have benefited from a microfinance program that allows them to pool resources and borrow funds to start and maintain small businesses that range from produce gardens to poultry enterprises to sewing and selling clothing to their neighbors. The program has provided livelihoods to many poor families that have been channeled into health care and school tuition for children, but, according to program staff, the numbers of children and families served by the program who are directly affected by HIV are unknown and thought to be few in number. Also importantly, the program appears to have the potential to become self-sustaining, with the success of participants providing avenues of support for members of the community. "We do not take handouts," a program leader said.

That independence could allow resources to be redirected to community organizations providing HIV treatment and other health services to children.

## Paths to sustainability lie in capacity building, community, and HIV prevention research

### *Identify, quantify and multiply capacity building opportunities*

The Global Health Service Partnership launched in Tanzania in 2013, posting five physicians and four registered nurses at five medical education institutions across the country. The following year 16 volunteers — seven physicians and nine nurses came. The result, the partnership says, has been improved medical student exam performance, new courses, and training in using new technologies. On World AIDS Day the President's Emergency Plan for AIDS Relief announced that it would "expand the role of the Global Health Service Partnership with Peace Corps and Seed Global Health to increase the number of clinicians available to provide HIV services," an important step toward addressing a significant barrier to sustainable health responses of any kind. In Tanzania



Outreach workers with the Anglican Diocese of Southern Highlands HIV program.

*With survey results indicating HIV prevalence of 41 percent among men who have sex with men, 34.8 percent among people who inject drugs, and more than 31 percent among female sex workers, the Anglican Diocese program in Mbeya has recently re-evaluated the allocation of its resources and shifted focus to those populations, including through door-to-door efforts*

the need for more, better, and appropriate training for doctors and nurses has been presented repeatedly and emphatically.

It is important that PEPFAR conduct an assessment of specific needs and gaps in Tanzania's medical education and service workforce, and set a goal to address it in order to make the investment meaningful and adequate.

*Compensate community members in proportion to value added*

A response run by the Anglican Diocese of Southern Highlands demonstrated the essential role of supported community involvement in Mbeya.

The Anglican Diocese of Southern Highlands began its responses to HIV with a program to support orphans and other children made more vulnerable by the epidemic's impact in the region. With PEPFAR funding it now performs mobile outreach services that include HIV testing, education, and home-based care, providing support for treatment adherence as well as for nutritional, social, psychological and economic support. Most importantly, the program is responsive to the needs of the community, as well as the needs for comprehensive efforts to reach the most marginalized populations. With survey results indicating HIV prevalence of 41 percent among men who have sex with men, 34.8 percent among people who inject drugs, and more than 31 percent among female sex workers, the program has recently re-evaluated the allocation of its resources and shifted focus to those populations, including through door-to-door efforts. With its roots in services for families caring for orphaned children and others made more vulnerable by

the epidemic, the program has continued to provide training for income-generating and entrepreneurial ventures, including through crafts, gardening, and performance.

Sustainable economic growth could be sparked by ensuring all community members involved in outreach efforts that include education, testing, adherence counseling, home-based care and links to other services are fully compensated financially, and proportionately, for the value they add to lasting progress against the epidemic.

*Confront obstacles to TB diagnosis*

We found civil society groups hamstrung by limited resources to transport sputum samples and by policies that only provide free TB diagnostic services to individuals already diagnosed with HIV. These community-based organizations are losing time and opportunities each time a funding cycle ends, or a donor falls back. The delegation visit was brief, and did not allow time to see the full scope of responses to tuberculosis in Tanzania. It was telling, however, that the community-based programs that we visited were focusing TB screening efforts on injecting drug users, individuals they felt would not otherwise be reached, and among whom the risks of interrupted treatment, drug resistance, and transmission to others are high. Support for these TB outreach efforts should be consistent, reliable and adequate.

*Ensure long-term, reliable investments in research, community that has supported research*

Mbeya was one of the Military HIV Research Program sites that had already furthered the fight against the epidemic with participation in clinical trial research toward a vaccine to prevent acquisition of the virus, when large scale rollout of antiretroviral treatment through PEPFAR began in 2004. Recognizing that contribution, as well as the high burdens of HIV in those communities, the MHRP, then under the direction of current U.S. Global AIDS Coordinator Ambassador Deborah Birx, has provided PEPFAR-funded treatment in the sites where it works since then. In 2013 the program opened a specialized tuberculosis laboratory at the Mbeya Referral Hospital, just the second laboratory of its capacity in the country.

Mbeya is currently the site of four vaccine studies. In the future it will be one of the sites to test a vaccine regimen based on the first, and still only, candidate to show efficacy in human trials, first tested in the Thai RV144 trial.

The services MHRP provides in this remote rural area with long distances between health facilities, and the potential the program's work offers for a vaccine that could someday end the threat of HIV, are critical, inseparable investments requiring long-standing and increasing commitments, as the stakes, and the resources needed, continue to grow.



## CONCLUSIONS

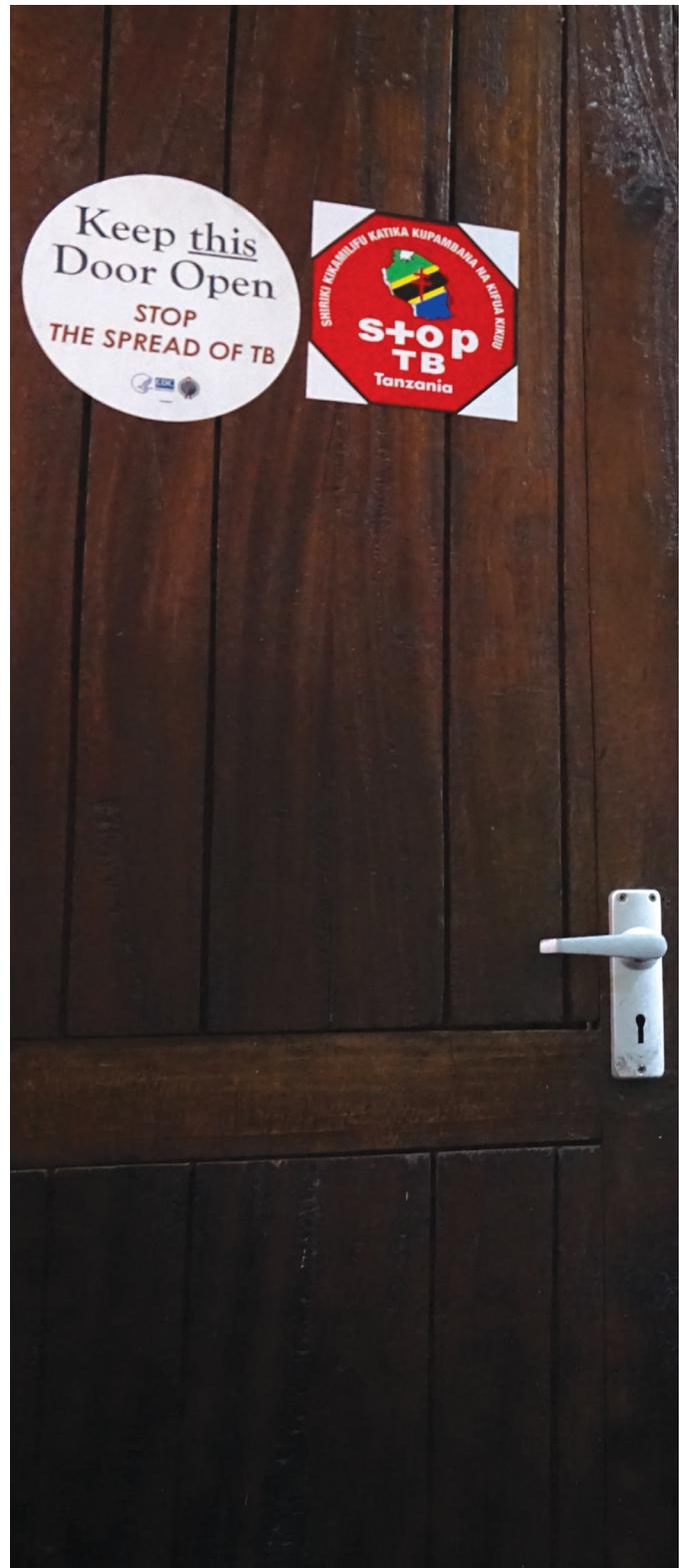
### *The way forward*

In one of the poorest countries in Africa, we saw a health workforce and infrastructure that remains fragile and far short of sufficient to make sustainable advances to overcome the continued toll of HIV and TB across the country. At the same time, we saw the will and recognition of the need to deliver “the right things to the right places, at the right times,” to control the epidemics there. We also saw systemic gaps, shortfalls and failures that prevent donor and government efforts from realizing their potentials.

- It is essential that the Tanzania-based director of PEPFAR programs in the country personally visit geographical regions with high HIV prevalence and incidence to witness programs and needs, and more credibly make a case for allocating resources necessary to meet those needs.
- Data is urgently needed to support and direct efforts to reach people at high risks, who are prevented from fully accessing HIV and TB treatment and prevention services because of criminalization and stigma. Efforts to collect and analyze that data will be made more efficient with the involvement of civil society.

- Continued efforts to build capacities of Tanzania's health workforce and infrastructure should include immediate efforts to digitize patient records. Tanzania is one of the countries selected to participate in the PEPFAR initiative to double the number of children receiving antiretroviral treatment in sub-Saharan Africa over the next two years, a promising and important step towards closing the gap between adult and pediatric HIV treatment access. The \$200 million initiative across nine countries, however, will require efficient use of resources to identify and reach infants and children in environments where stigma remains a significant barrier to seeking healthcare
- Partnership agreements on tuberculosis responses must ensure that the costs of diagnosing cases of a disease that remains a public health threat is not borne by individuals. Tuberculosis diagnostic tests also must be readily accessible to populations whose circumstances expose them to the greatest risks. Resources allocated to identify, reach, screen, and diagnose all populations, including ones that are marginalized, criminalized, hidden and vulnerable will yield long term savings.
- Civil society contributions must be recognized and consistently funded. Adequate resources and compensation are essential to maximize the immediate benefits of reaching populations otherwise neglected, and to realize the potential sustainability that community based efforts offer. Across all the areas of need – in the geographic “hot spot” of Mbeya, among children and criminalized populations, and in tuberculosis control efforts we found the role of civil society and community based programs to be unique, indispensable, erratically funded and under-supported.
- HIV and TB treatment and prevention is needed and lacking in Tanzania's correctional settings. Provision of screening, care and treatment in these concentrated high impact settings would be cost effective and crucial because of gaps in services to criminalized populations.

A redeployment of PEPFAR resources must be informed by realities on the ground. That will require counting the numbers and needs of criminalized populations at high risks for HIV and living with HIV, and of children living with HIV, and identifying gaps in geographical “hot spots.” It will call for the full involvement of community-based groups as well as PEPFAR in-country leadership. It will demand an ongoing effort to analyze and re-evaluate approaches to reach people who, by virtue of who they are or where they live have been missed in the first decade of the most ambitious public health program in history.





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