

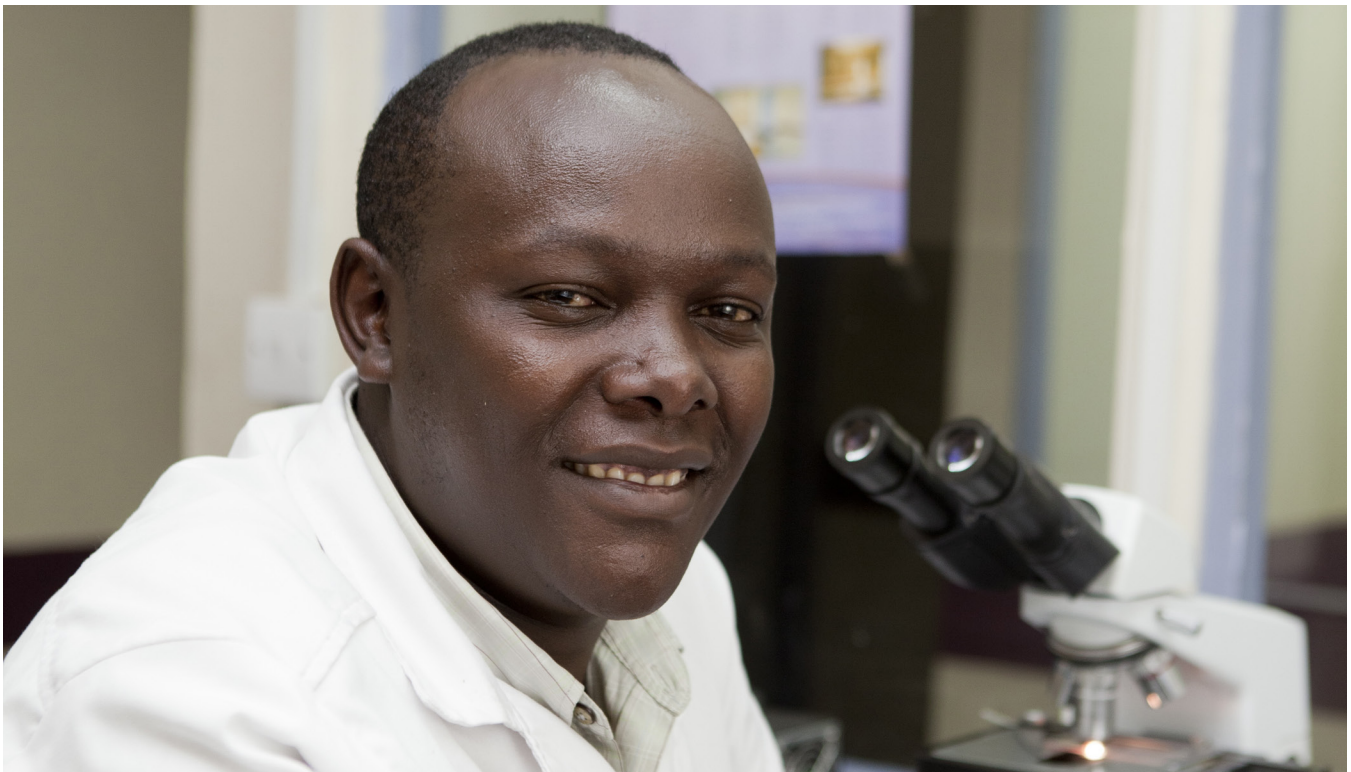


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Estimating the Untapped Capacity of the Private Sector to Deliver Antiretroviral Therapy in Kenya



REPORT

June 2014

This publication was produced for review by the United States Agency for International Development. It was prepared by Kathryn Banke, Stephen Resch, Jorge Ugaz, Jonathan Jackson, Minki Chatterji, Aisha Talib, and Emily Sanders for the SHOPS project.

SHOPS
Strengthening Health Outcomes
through the Private Sector

Abstract: Private commercial providers represent a growing source of health care in Kenya, serving people from all socioeconomic classes. While half of commercial providers in Kenya offer HIV testing and counseling, just 3 percent provide antiretroviral therapy (ART). Increasing the role of the commercial sector in ART provision could help reduce unmet need, easing the burden on the public sector. To stimulate a more informed discussion about the potential role of the private sector, we estimated the magnitude of the potential private sector contribution in Kenya and identified barriers to expansion of the private sector's role in ART delivery. We developed a series of equations to estimate the number of additional people living with HIV who could plausibly receive ART if commercial sector involvement were strengthened. Facility surveys and stakeholder interviews were conducted to measure interest in providing ART, the capacity to provide it, and perceived barriers to its provision. We used these data—along with publicly available secondary data—as the main inputs for the estimations, and found that commercial providers have substantial slack capacity that could be used to provide ART. Facility managers and key informants reported that the primary barriers to scaling up ART provision were inadequate provider expertise, laboratory capacity, and financing the cost of treatment. If these barriers were removed, the commercial sector could fill 85 percent of the estimated unmet need for ART in Kenya. Strengthening the capacity of private providers to meet the needs of people living with HIV offers a promising path to achieving universal ART coverage in Kenya. To accomplish this, it will be necessary to overcome the challenges of capacity and funding that private providers face in providing ART.

Keywords: AIDS, Africa, antiretroviral treatment, HIV, HIV counseling and testing, health financing, Kenya, policy, provider access to finance, public-private partnerships

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Project Description: The Strengthening Health Outcomes through the Private Sector (SHOPS) project is USAID's flagship initiative in private sector health. SHOPS focuses on increasing availability, improving quality, and expanding coverage of essential health products and services in family planning and reproductive health, maternal and child health, HIV and AIDS, and other health areas through the private sector. Abt Associates leads the SHOPS team, which includes five partners: Banyan Global, Jhpiego, Marie Stopes International, Monitor Group, and O'Hanlon Health Consulting.

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1. BACKGROUND

Despite substantial growth in donor funding for HIV treatment since 2002 (Bernstein, 2007) and the rapid scale-up of antiretroviral therapy (ART) to 6 million people by the end of 2011 (Joint United Nations Programme on HIV/AIDS, 2012), the majority of countries in sub-Saharan Africa have yet to achieve universal ART coverage. In 2009, the World Health Organization revised its ART guidelines to increase the CD4 threshold for ART from 200 CD4 cells/mm³ to 350 cells/mm³ (World Health Organization, 2009), which increased the number of people defined as needing ART by 50 percent (Granich et al., 2012).

In Kenya, national guidelines recommend ART in all HIV-infected adults and adolescents with a CD4 cell count of less than or equal to 350 cells/mm³ or who have what the World Health Organization considers stage III or IV disease (National AIDS and STI Control Programme, 2011). The most recent Kenya AIDS Indicator Survey found that, among all HIV-infected persons aged 15 to 64 who were aware of their HIV infection and eligible for ART, 88 percent were on ART (National AIDS and STI Control Programme, 2013). While Kenya has achieved very high ART coverage, most treatment is concentrated in the overburdened public sector in a small number of facilities.

National governments and donors have begun exploring the potential contribution of commercial health care providers to expand access to testing and treatment, integrate and mainstream HIV care, build a broader base of clinical expertise in HIV care, and potentially facilitate greater domestic financing of HIV care. The Strengthening Health Outcomes through the Private Sector (SHOPS) project selected Kenya as a case study to stimulate a more informed discussion about the role of the private sector in ART provision in this region.

In Kenya, the private commercial sector is a growing source of health care that serves Kenyans from all socioeconomic classes, operating mainly at the clinic and dispensary level. The most recent available data indicate that there are a total of 2,602 private commercial health facilities across the country (Kenya Ministry of Health). Most of them (79 percent) operate as small medical clinics (classified by the government as level 2 facilities), many with just a single health care provider. Recent data show that 45 percent of Kenyans in the lowest wealth quintile and 61 percent in the highest wealth quintile receive care from private commercial providers (International Finance Corporation, 2008).

A recent service provision assessment in Kenya estimated that about half of all commercial providers offer HIV counseling and testing services as well as HIV care and support (National Coordinating Agency for Population and Development et al., 2011). Analysis of the most recent Demographic and Health Survey shows that about 40 percent of men and 25 percent of women received their HIV test through the private sector (SHOPS Project, 2012). However, ART service delivery has remained

largely a public sector activity. Only an estimated 3 percent of private commercial providers prescribe ART or provide ART medical follow-up services (National Coordinating Agency for Population and Development et al., 2011). In many countries in sub-Saharan Africa, a shortage of skilled health care workers is the key health system constraint to scaling up HIV treatment (Chen and Hanvoravongchai, 2005; Kober and Van Damme, 2004). Additional challenges faced by the public sector include inadequate service delivery infrastructure and financing (Schneider et al., 2006). Encouraging the private commercial sector to become more involved in providing ART could help Kenya reach the remaining patients who need ART but are not receiving it. This could also ease the burden on the public sector and enable patients to receive care closer to home. In addition, wealthier patients being served by the public sector may be able to shift to the private sector and allow the public sector to serve additional patients who are not receiving treatment.

To our knowledge, no systematic effort has been made to estimate the potential impact of a greater engagement of the private commercial sector in ART service delivery in Kenya. This study uses data from multiple sources for an analysis that aims to stimulate discussion about the potential expansion of ART service delivery through the private commercial sector in Kenya. We explored two questions:

1. What is the estimated untapped capacity of commercial private providers to scale up ART provision?
2. What barriers hinder the ability of commercial private health providers to start or expand ART delivery?

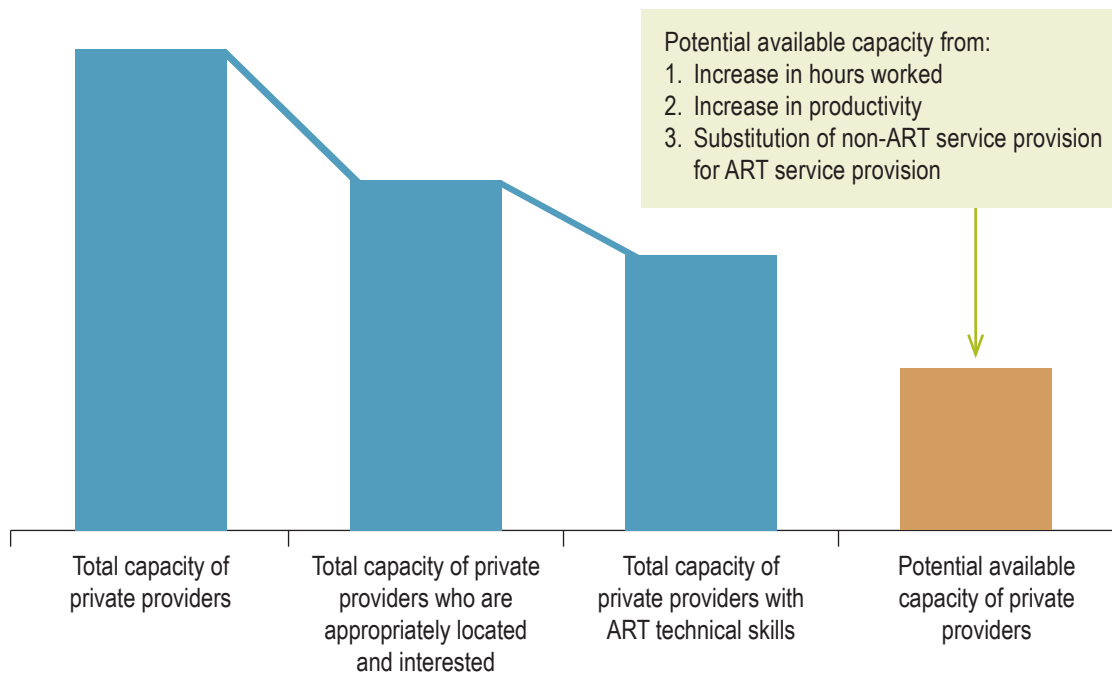
For the purposes of this report, “capacity” refers to resources needed for the delivery of HIV services, including number of employees, available staff time, staff skills, and equipment. “Private”—as in “private sector” or “private providers”—refers to “commercial.”

The next section presents the methods used to estimate the capacity of the private sector to increase the number of adults with HIV or AIDS who receive ART. Given the complexity and specificities of pediatric HIV care, the study scope was limited to adult HIV treatment. Section 3 highlights the findings from surveys of private facilities and includes estimates of the potential private sector capacity to deliver ART services. Section 4 discusses the implications of our findings and their relevance for policymakers.

2. METHODS

As seen in the figure below, the maximum plausible amount of private sector capacity that could be made available for ART scale-up is limited by the number of private sector providers who have the expertise and capacity to scale up ART (for instance, certain groups of private providers, such as radiologists, would not be expected to play a role in ART provision) and those who are interested in either starting or scaling up ART provision. The potential impact may be further constrained by the location of providers relative to the HIV-positive population distribution within a country, and by the abundance or lack of options for ART in the areas where they live. Further, potential providers may have variable levels of readiness. Some may be trained and equipped to deliver ART, while others may have the potential but require some investment in the form of ART-specific training, information systems, laboratory access/capacity, or other technical needs essential for delivery of high-quality ART services. Of these providers, a portion of their work day is already spent delivering non-ART care to private patients (and possibly those in the public sector as well, among providers who practice in both sectors). Therefore, the potential amount of private sector effort available for ART among existing providers who are interested in starting or scaling up ART provision can come from three sources: (1) increases in hours worked, (2) increases in productivity, which includes decreasing downtime and increasing relative output, or (3) substitution of non-ART service provision for ART service provision.

Potential of the Private Sector in Kenya to Provide Antiretroviral Therapy



This report uses the term “slack capacity” to describe both the resources (human or physical) and time not being used that could be employed to provide ART to additional patients without adding any extra resources. This concept is important because it helps donors, policymakers, and program implementers understand how much flexibility any facility has to increase the number of patients it can treat relative to the facility’s patient volume.

Data Collection and Analysis

We conducted a mixed-methods analysis with four components: a literature review and data analysis, a survey of facility managers, interviews with stakeholders, and estimation equations. We conducted a thorough literature review of existing reports and policy documents related to ART in Kenya and reviewed relevant national data sets to identify information that could be incorporated into our analysis.

In April 2012, we surveyed a sample of 57 managers of private facilities (16 of the facilities were providing ART at the time of the study) to collect information on their HIV-related service provision, interest in providing ART, the capacity to provide it, and perceived barriers to its provision. Facilities were selected to cover a variety of facility types across several provinces, and based on the accessibility to the data collectors. A survey was administered at private facilities in all of Kenya’s provinces except the North Eastern province, due to low HIV prevalence and limited presence of private providers. Table 1 shows the distribution of surveyed facilities by province and facility type. We determined the number of facilities to be surveyed in each province primarily based on HIV prevalence and the number of private providers. We asked managers for information at the facility level on staffing, services provided, patient volume, perceived barriers to ART provision, the capacity of their facilities to deliver ART services, and their interest in providing the treatment.

Table 1: Survey Sample Summary

Province	Adult HIV prevalence*	Population (in millions)	Universe of private providers **	Number of facilities surveyed			
				Total	Clinics	Health centers	Hospitals
Central	4.6%	3.3	756	8	5	2	1
Coast	4.2%	5.7	436	6	2	3	1
Eastern	3.5%	3.1	435	9	8	1	0
Nairobi	7%	4.4	233	10	3	3	4
Nyanza	13.9%	5.4	161	12	8	1	3
Rift Valley	4.7%	10.0	421	6	5	1	0
Western	6.6%	4.3	114	6	5	1	0
Total	N/A***	36.3	2,556	57	36	12	9

*Source: Kenya National Bureau of Statistics and ICF Macro (2010)

**Source: Kenya Ministry of Health

***Adult prevalence data not available for these seven provinces combined. National adult HIV prevalence estimated to be 6.3% among adults aged 15–49 years (Kenya National Bureau of Statistics and ICF Macro, 2010).

We conducted open-ended interviews with 18 representatives of key stakeholder groups about their perceptions of ART quality in the private sector, referral mechanisms, provider business models (including payment and reimbursement mechanisms), and barriers to the expansion of ART provision.

We developed a series of equations to estimate the plausible number of additional ART cases that could be served by increasing the involvement of the private sector. To do so, we used information compiled through the interviews and the survey of private facilities, coupled with publicly available secondary data. A detailed presentation of the set of equations, variables, and assumptions is included in the annex. We relied on primary data collected for this study to inform assumptions about the likelihood of participation, ART service volume, and barriers to implementation.

3. FINDINGS

The surveys of private facility managers and interviews with key informants revealed that most facilities (81 percent) were interested in either expanding ART services or starting to provide ART services, and our estimates suggest that the private sector has ample capacity to scale up ART services to reach the estimated 205,000 people in Kenya who have unmet need—the number of people living with HIV (PLHIV) who are eligible for ART but not receiving it. At the same time, inadequate provider expertise, insufficient laboratory resources, and other barriers impede greater ART provision at many private health facilities. This section discusses findings from the private facility survey, the results of estimating potential private provider capacity to deliver ART, and relevant findings from the key informant interviews.

Sample Overview

We interviewed 57 managers of private facilities—36 clinics, 12 health centers, and 9 hospitals. A total of 210 medical doctors worked at these facilities in a full- or part-time capacity. Roughly 30 percent of these doctors worked at least part-time in the public sector. Table 2 summarizes the main characteristics of the facilities included in our survey. ART was provided at 28 percent of the facilities

Table 2: Characteristics of Sample Facilities, by ART Status

	ART providers	Non-providers of ART	All providers
Number of facilities	16	41	57
Total FTE employees	350	146	496
FTE clinicians	146	15.5	161.5
General FTE medical staff	204	131	335
Average FTE employees by facility type	21.8	3.6	8.7
Clinics	2.4	2.0	2.1
Health centers	9.0	5.9	6.7
Hospitals	38.8	30.0	37.8
Percent of clinicians who also work in public sector*	26.1	53.8	29.5
Average annual outpatient volume	28,864	4,513	11,348
Average ratio of annual outpatients per FTE clinician	5,233	5,568	5,400

Note: FTE = full-time equivalent

*It was not possible to know whether clinicians working in the public sector were working there in a full- or part-time capacity. Therefore, the percentage of clinicians also working in the public sector is expressed as a fraction of the total number of clinicians, not FTE employees.

The number of full-time equivalent (FTE) medical doctors, specialists, clinical officers, and resident nurses were estimated by counting any employee reported as full-time as one FTE employee, and by counting any part-time employee as one-half of an FTE employee. There were a total of 496 FTE employees in the surveyed facilities, with 161.5 of these FTE employees representing clinicians (i.e., medical doctors and specialists) and 335 representing general medical staff (clinical officers and resident nurses). Facilities providing ART had a much greater average number of FTE employees than those facilities not providing ART (21.8 and 3.6, respectively). Facilities providing ART also had a higher annual average patient volume.

Potential Capacity of Private Sector to Provide ART

We used data from the private facility survey and secondary data sources to estimate, at the province and national levels, the potential number of additional PLHIV who could receive ART if the slack capacity of the private sector were fully used. Table 3 summarizes key inputs into the equations.

Table 3: Private Facility Potential Additional ART Contribution

Province	Total private health facilities*	Private facilities sampled	Sampled facilities willing to expand or start ART service (number)	Sampled facilities willing to expand or start ART service (%)	Potential additional outpatient visits per workday among sampled facilities willing to expand or start ART service	Potential additional ART cases per year among sampled facilities willing to expand or start ART service
Central	703	8	8	100%	144	1,256
Coast	431	6	4	67%	60	667
Eastern	458	9	8	89%	146	1,022
Nairobi	204	10	5	50%	158	1,053
Nyanza	147	12	11	92%	108	467
Rift Valley	384	6	4	67%	39	260
Western	112	6	6	100%	40	222
Total	2,439	57	46	81%	695**	4,947**

*The number of private health facilities was obtained from the Kenya Ministry of Health's master facility list at www.ehealth.or.ke/facilities/downloads.aspx. All other figures in the table were obtained through our private facility survey.

**These numbers represent overall totals for Kenya (excluding the North Eastern province). However, all estimations relied on numbers at the province level separately for providers currently delivering ART or not currently delivering ART.

¹ A facility that provides ART may include clinicians who provide ART and clinicians who do not.

² The number of clinicians interested in delivering ART was calculated by multiplying the number of FTE clinicians by the percentage of doctors the manager of each facility said would be interested. The question did not ask for an exact percentage but rather the following categorical ranges: none, <10%, 10–29%, 30–49%, 50–69%, 70–89%, >90%, and all. With the exception of the first and last categories, we chose the middle points of each option (5%, 19.5%, 39.5%, 59.5%, 79.5%, and 95%), and coded the first and last categories as 0% and 100%, respectively.

³ The average visit figure is based on the assumption that patients follow the national treatment guidelines for a minimum of four visits per year plus an additional two visits because they are new, or not stable, have opportunistic infections, adherence issues, etc. (See National AIDS and STI Control Programme, 2005).

⁴ For facilities that said they could see more patients per day without increasing the hours worked by staff, the provider survey then asked, “How many additional patients do you think could be seen per day?” We calculated the average (weighted by outpatient visits) number of additional patients that could be seen by those facilities.

⁵ In terms of increased workload, assuming that an average of 339 additional ART patients each requires six visits per year equates to a total of approximately 2,050 additional visits annually. Assuming that a doctor can see 20 patients a day for 200 days per year, or a total of 4,000 patient visits per year, then an additional 2,050 visits represents approximately 51 percent of a full FTE’s workload. These data suggest that the providers surveyed are currently working at approximately 49 percent capacity.

According to the managers who were surveyed, the majority of clinicians in their facilities¹ who did not provide ART were interested in providing the treatment (87 percent at facilities not providing ART and 84 percent at facilities providing ART).² We estimated how many additional patients each of those facilities that provide ART could treat. Assuming that each patient pays an average of six ART-related visits to the facility per year,³ we divided the number of extra patients that facility managers reported they could see without increasing the hours worked by staff by the number of FTE clinicians.⁴ Based on this calculation, we estimated that facilities (regardless of ART provision status) could take an average of 339 additional ART patients per year for each FTE clinician.⁵ Further, we calculated that facilities that were not providing ART could treat a larger number of new ART patients (179 per FTE employee) than facilities that were providing ART (61.2 per FTE employee).

When we asked the managers of all 41 facilities that did not provide ART as to whether they would be interested in providing the treatment, only two facilities expressed no interest. All of the 41 facility managers were asked to share why they thought some medical doctors in their facilities would not be interested in providing ART. The most common answers were “lack of training or skills” (23 percent), “concerns that ART would increase their workload too much” (16 percent), “opportunity costs” (13 percent), and “lack of motivation” (10 percent).

In the facility survey, managers were asked to provide information on how many more patients they could treat each day. Most managers (90 percent) stated that they could treat more patients on a daily basis, with 27.5 percent of all facilities reporting that they could see 16 to 20 additional patients per day and 20 percent of all facilities reporting that they could see an additional 20 patients or more per day.

We used this information and the data presented in Table 3 to calculate the number of additional PLHIV who could receive ART services through the private sector if slack capacity were used. This capacity is presented for each province in Table 4, along with our estimate of unmet need for ART in each province. The equations used to produce these estimates are presented in the annex.

Table 4. Estimated Private Sector Capacity to Deliver ART and Fill Unmet Need

Province	A. Estimated unmet need (in number of ART patients)	B. Estimated capacity of private sector	C. Potential number of additional ART cases treated (lower of previous two columns)	D. Estimated proportion of unmet need that could be filled by private sector
Central	15,207	319,865	15,207	100%
Coast	1,092	153,725	1,092	100%
Eastern	15,698	220,138	15,698	100%
Nairobi	11,830	125,902	11,830	100%
Nyanza	50,673	37,957	37,957	75%
Rift Valley	73,287	87,773	73,287	100%
Western	37,036	19,427	19,427	52%
Total	204,822	964,787	174,498	85.2%*

Note: Estimates were obtained using the set of equations displayed in the annex. The specific calculations are available from the authors by request. Numbers may not add up due to rounding.

**This percentage is the total of column C divided by the total of column A.*



Trocaire

Study findings suggest that under optimal conditions, private facilities could treat approximately 175,000 additional persons requiring ART and therefore potentially fill more than 100 percent of the unmet need for ART provision in most provinces and 85.2 percent of overall unmet need nationally.⁶ Our estimates show that private providers could take on about 965,000 additional ART cases, which far exceeds the estimated 205,000 individuals who are eligible but not receiving the treatment. However, at the province level, the distribution of unmet need and of facility slack capacity varies. In four of the eight provinces (Central, Coast, Eastern, and Nairobi), a modest scale-up could more than meet any need not being served. The private sector is particularly capable of adding patients in the Central province, with providers able to take more than 21 times the unmet need. On the other hand, the number of people who are eligible for ART but are not receiving it exceeds the number of cases that could be served by private providers in the Nyanza and Western provinces.

Even when conservative assumptions are made about the proportion of private facilities that are willing to start or expand ART delivery, potential reductions in unmet need could still be substantial. For example, if 50 percent of private facilities were willing to expand or start delivering ART and barriers to do so were addressed, unmet need could be reduced by approximately 60 percent (Table 5). If only 10 percent of facilities were willing to expand or start ART delivery, and barriers to doing so were addressed, unmet need could be reduced by approximately 29 percent.

⁶ Estimations of unmet need at the province level led to a total estimated unmet need of 205,000 nationally. Other estimation methods may result in somewhat different estimated levels of unmet need, but in general, various estimates consistently suggest that unmet need in Kenya is in the range of 170,000 to 200,000 persons.

Table 5: Potential ART Cases and Reduction in Unmet Need for ART

Province	Unmet need (number of ART patients)	Proportion of unmet need that could be reduced if the following proportion of facilities were willing to expand or start ART service:		
		50%	30%	10%
Central	15,207	100%	100%	100%
Coast	1,092	100%	100%	100%
Eastern	15,698	100%	100%	100%
Nairobi	11,830	100%	100%	100%
Nyanza	50,673	41%	25%	8%
Rift Valley	73,287	64%	39%	13%
Western	37,036	28%	17%	6%
Total	204,822			
% reduction in unmet need		59.7%	44.4%	29.1%

Note: Numbers may not add up due to rounding.

Barriers

Several barriers must be addressed to tap the potential extra capacity for ART in the private sector. First, national ART program guidelines require that only trained health personnel can prescribe and provide ART, and regularly monitor the condition of ART clients to ensure that an effective ART regime is being implemented and that side effects are properly managed. Thus, private sector ART providers must have access to adequate training and continuing medical education, and mechanisms must be in place to ensure that their client monitoring meets minimum standards. Second, there is very little in the way of public-private partnerships (PPPs)⁷ for ART services with commercial providers. There is an existing memorandum of understanding between faith-based facilities and the Ministry of Health on health service delivery that includes HIV services. The government and the private sector could replicate such an arrangement. Existing PPPs—many of which are fragmented—are formed on an individual basis at the facility level. However, a PPP act was passed in March 2013 (Parliament of Kenya, 2013), which provides guidance for PPPs across the entire government and allowed for the formation of a PPP unit in the Ministry of Health. Third, the cost of treatment and services for ART delivery differs greatly between the public and private sectors. The high cost of antiretroviral drugs has been prohibitive to most small-scale private providers, while some larger private providers (e.g., Gold Star Network and large hospitals) have been able to access antiretroviral drugs via Kenya Pharma (funded by USAID) or Global Fund programs and distribute them for free.

In the facility survey, we asked facility managers several questions related to barriers in expanding ART provision. Just 14 percent of all the managers (19 percent among facilities providing ART and 12 percent among facilities not providing ART) reported two or fewer barriers. When asked to name the most important barrier for ART providers, facility managers most commonly cited provider expertise (40 percent of facilities providing ART and 67 percent of facilities not providing ART) and laboratory capacity (33 percent of facilities providing ART and 13 percent of facilities not providing ART, see Table 6). None of the facility managers only reported provider expertise as a barrier. Nearly all (89 percent) of the private facility managers who were surveyed reported that they primarily refer to the public sector for services they do not have; most of these referrals are for laboratory work (32 percent) and outpatient treatment (32 percent).

⁷ A PPP in health is “any formal collaboration between the public sector at any level (national and local governments, international donor agencies, or bilateral government donors) and the non-public sector (commercial, non-profit, and traditional healers, midwives, or herbalists) in order to jointly regulate, finance, or implement the delivery of health services, products, equipment, research, communications, or education” (Barnes, 2011). PPPs include private health sector collaborations with the public sector, and not just partnerships between corporate entities and the public sector.

Table 6. Most Important Barriers to ART Provision Reported by Private Facility Managers (%)

Most important barrier	Non-providers of ART (n=39)	ART providers (n=15)	All providers (n=54)
Provider expertise	66.7	40.0	59.3
Laboratory capacity	12.8	33.3	18.5
Provider time	7.7	6.7	7.4
Financing the cost of treatment	7.7	13.3	9.3
Need additional clinic space	2.6	0	1.9
Need to improve record-keeping systems	2.6	0	1.9
Need to add pharmacy services	0	6.7	1.9



Ericsson Images

Information from 18 key informant interviews corroborated that lack of capacity or training, plus the high cost of running a laboratory, are key challenges to scaling up ART services in the private sector. According to key informants, most training opportunities for providers facilitated by the government are offered to public sector employees. While the private sector is often invited, informants felt they were usually given short notice and could not afford to release staff for the two full weeks that were often required. A few key informants mentioned that meeting the infrastructure requirements to run ART services may be a barrier, especially among lower-level providers. According to these informants, the government does not provide any financial assistance to ensure that appropriate investments are made for the provision of ART, and thus the cost required to implement and provide these services becomes prohibitive.

Additional barriers reported by key informants included stigma, financing, and flow of patients between the public and private sectors. Stigma is a concern for both patients and providers; people with HIV may tend to seek treatment in the private sector to avoid having others learn of their HIV-positive status. Meanwhile, several key informants mentioned the concern that private providers do not want their facilities to become known as “AIDS clinics” and may thus be reluctant to begin or expand ART provision, particularly due to fears about the potential impact on their revenue stream if patients with HIV are unwilling to pay for services. Lack of governmental financial assistance and the concern that patients who are receiving free ART drugs may not want to pay for laboratory services indicate that financing is indeed a potential barrier to private providers. Finally, insufficient policies and procedures related to referrals (particularly between the private and public sectors) and the inability to monitor patients’ movement between the two sectors is another concern. According to key informants, patients often switch back and forth between the public and private sectors for HIV treatment. High-quality antiretroviral drugs are available free of charge in the public sector, so patients may initiate treatment in the private sector but then access drugs through the public sector, particularly when needing to minimize out-of-pocket expenditures.

Finally, key informants from the public and private sectors noted the need for a PPP policy for health, and stated that Ministry of Health capacity to manage PPPs (particularly legal and business management capacity) should be strengthened.

Opportunities

Despite several barriers, there are still opportunities to tap the potential private sector capacity to meet ART needs in Kenya. Existing policies can serve as a foundation for further private sector engagement. National ART guidelines from 2005 clearly state the goal of universal, equitable ART access to all those in need (National AIDS and STI Control Programme, 2005). The guidelines further state that “public-private partnerships are to be used to expand access in a phased approach” and emphasize the importance of collaboration between the public sector, private sector, nongovernmental organizations, and faith-based organizations. The Ministry of Public Health and Sanitation Strategic Plan 2008–2012 also notes the importance of strengthening PPPs (Kenya Ministry of Public Health and Sanitation, 2008), as does the Kenya Health Strategic Plan III 2012–2017, currently in draft form.

As noted earlier, the Public Private Partnerships Act was recently passed. Under this act, the health sector should create a unit that will guide its PPPs. However, key informants from the public and private sectors suggested that an updated, clear PPP policy for health is still needed. This updated policy should:

- Define which facilities should be engaged
- Address accountability and control
- Set fees (both sides should agree on them)
- Define requirements for reporting and record keeping (including mechanisms for referrals)
- Establish treatment protocols on which both sides agree
- Establish a working group for ongoing discussion and creation of joint activities that leverage each other’s strengths (as well as equipment, resources, and staff)



Jessica Scranton

4. DISCUSSION

While there are certainly challenges to expanding ART provision through the private sector, there is much optimism that such engagement is possible and could expand access to all in need. Still, despite all of the challenges mentioned by key informants, there is a widespread recognition that the private sector is already playing a role in health care service delivery, and that the time is right to begin planning for how to engage more private facilities in the delivery of ART services.

Our findings indicate that the private sector is willing to serve many more ART patients than it does. In fact, our estimation shows that these private facilities could potentially eliminate unmet need for ART services in Kenya, without increasing the length of staff workdays, by capitalizing on existing slack capacity. Under our present scenario, private facilities could serve approximately 965,000 people, which is about 760,000 more than the number of untreated cases. Even if just 10 percent of private facilities start or expand ART, unmet need could be cut by about 30 percent, or about 60,000 cases. However, while many private sector providers are willing to start or expand ART provision, more investigation into what would motivate them to do so is warranted.

Policymakers should consider addressing barriers that private facilities face in starting or expanding ART treatment. While the estimated overall capacity of the private sector is greater than current need for ART, provider willingness to scale up services is not adequate to achieve universal coverage for ART patients in Nyanza and Western provinces. To enable private facilities in these provinces to serve more ART patients, several obstacles as previously discussed must be addressed. Even efforts to expand ART provision by just a subset of facilities, such as those facing the fewest obstacles, could substantially reduce unmet need.

Engaging private facilities at all levels of HIV care is an important strategy for leveraging resources and meeting the demand for HIV treatment services. Strengthening the capacity of private providers to meet the needs of ART patients is critical to scaling up the HIV and AIDS response and to achieving universal coverage in Kenya. This study illustrates that the private sector possesses potential to substantially reduce unmet ART need in Kenya. The findings from this study may be used as a basis for policy discussion at the local level. This is particularly important as Kenya's government and health services undergo devolution.

ANNEX: SYSTEM OF EQUATIONS

This annex provides details on both the methods and sources used to estimate the potential number of ART cases that could be served by private providers in Kenya. Data come from primary and secondary sources. All new information collected directly by the SHOPS team in Kenya is considered primary data. Secondary sources include publicly available data that were incorporated into the estimations.

The estimations presented in this study are based on several assumptions. First, the sample of facilities used for data collection was purposive and not representative, so the results cannot be generalized to all private facilities in the country. In addition, the results are sensitive to how we defined and quantified provider interest in expanding or starting ART services. However, these data are instructive in helping to explain the potential contribution of the private sector to ART provision and the potential barriers to greater engagement.

System of Equations

Equation A

$$C = \sum_j \min(U_j, L_j)$$

Equation B

$$U_j = E_j - \sum_s A_j$$

Equation C

$$L_j = \sum_{a=1}^2 Q_{aj} w_a q_{aj}$$

Equation D

$$q_{aj} = \frac{\sum_i v_i d_i / r}{n_{aj}}$$

Equation E

$$w_a = \frac{\sum_i w_i}{n_a}$$

Equation F

$$E_j = H_j * pe$$

Below is an explanation of each equation, the variables and sources used, and the assumptions made.

Unmet Need for ART (U_j)

First, the following Equation B is used to estimate provincial unmet need (U_j), where E_j is the number of HIV-infected persons eligible for ART in province j and A is the number of HIV-infected individuals already receiving ART treatment.

Equation B

$$U_j = E_j - \sum_s A_j$$

E_j is estimated using secondary data following Equation F:

Equation F

$$E_j = H_j * pe$$

where H_j represents the estimated count of HIV-infected adults in each province (obtained by multiplying the provincial HIV prevalence by the provincial population between 15 and 49 years old) (Kenya National Bureau of Statistics and ICF Macro, 2010). The second component, pe , represents the proportion of PLHIV who are eligible for ART. Using figures from a report by the National AIDS Control Council and the National AIDS and STI Control Programme (2011), we divided the estimated number of PLHIV who should be on ART (745,000) by the total number of PLHIV in the country (1.6 million), obtaining a pe of 46.6 percent. This proportion pe is assumed to be constant across provinces.

The number of people who are receiving ART in each province is represented by A_j and is broken down by both province and sector (public or private). Data on how many individuals are receiving ART in the public sector come from a national ART report based on District Health Information Software (Government of Kenya). Estimates for Nairobi province were obtained from the Kenya National AIDS Control Council/UNAIDS HIV and AIDS Profile for Nairobi county (UN Joint Program on HIV in Kenya). Data on the number of ART patients receiving treatment in the private sector come from the Gold Star Network, which operates in four provinces: Central, Coast, Nairobi, and Rift Valley. For the other four provinces where Gold Star does not operate, we multiplied the number of PLHIV in those provinces by the average proportion of PLHIV who were receiving ART from private providers based in four provinces for which there is data.

Those inputs were used to estimate provincial unmet need (U_j) by subtracting A_j (both from public and private sectors) from E_j . The total unmet need for ART in Kenya is then calculated by adding unmet need across all provinces.

Potential Number of ART Cases That Could Be Served By Private Providers (L_j)

Equation C below estimates the potential number of ART cases that could be served by private providers in each province, represented by L_j :

Equation C

$$L_j = \sum_{a=1}^2 Q_{aj} w_a q_{aj}$$

where Q_{aj} is the number of private commercial health facilities (i.e., providers) in province j , indexed by their ART provision status (a), which is equal to 1 if the facility is offering ART, and equal to 2 if it is not. In addition, w_a represents the proportion of private commercial health facilities interested in expanding their ART services (if $a = 1$) or starting to provide those services (if $a = 2$). Lastly, q_a equals the average number of potential additional ART patients that could be treated per facility each year, by ART provision status.

The source for Q is the Kenya Ministry of Health, with facilities listed by province and ART provision status. We estimated both w_a and q_a using our survey data. We collected primary data through a provider survey to estimate provider willingness to scale up ART. Out of 57 facilities that were surveyed, 46 (81 percent) were either providing ART and interested in expanding service or not providing ART and interested in starting to provide ART service.⁸

⁸ All facilities can be divided into four groups based in their ART-provider status and their willingness to start or expand ART services. These groups include (1) ART providers interested in expanding service, (2) non-ART providers interested in starting service, (3) ART providers not interested in expanding service, and (4) non-ART providers not interested in starting service.

We considered those facilities where at least 90 percent of medical doctors not providing ART were reported to be interested in starting to provide ART. These doctors worked at facilities that were interested in starting or expanding ART service. After imputing the total number of interested facilities, we calculated the proportion of interested facilities (w_a) by dividing the number of interested facilities (w_i) by the total number of facilities for each ART provider status (n_a). The total number of private facilities, or private providers (n), also comes from the private provider survey. Equation E is presented below:

Equation E

$$w_a = \frac{\sum_i w_i}{n_a}$$

Then to estimate q_a , or the annual number of additional ART patients that a facility could take on, we used Equation D below:

Equation D

$$q_{aj} = \frac{\sum_i v_i d_i / r}{n_{aj}}$$

where v_i represents the number of extra outpatient visits per work day that providers could receive, as reported in our survey. We asked providers, “Without increasing the hours worked by staff, how many more patients could be seen per day?” In addition, d_i is the number of workdays per year (assigned to be 200) and r represents the approximate number of times an ART patient visits a facility each year. This was estimated to be 6, assuming the average patient follows national treatment guidelines in Kenya of a minimum of four visits per year (National AIDS and STI Control Programme, 2005) plus two extra visits to treat side effects, opportunistic infections, etc. Finally, n_{aj} represents the number of private providers interviewed in each province j by ART provision status.

Final Estimation

Using all inputs, we estimated the potential of the private sector to provide additional ART services for each province using Equation A. The smaller of the two estimates (either unmet need or the potential of the private sector to provide ART) was considered for each province⁹ in order to aggregate them and estimate the maximum number of patients who could potentially be treated by the private sector in the country. The result of such estimations for Kenya was 174,498 patients, which is equivalent to 85.2 percent of current unmet need.

⁹ If the potential of the private sector (in terms of patients) is greater than the unmet need in a certain province, then the maximum number of patients who could be seen by the private sector will be determined by the latter, not the former.

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For more information about the SHOPS project, visit: www.shopsproject.org



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