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OPPORTUNITIES ABOUND: PUBLIC PRIVATE PARTNERSHIPS FOR LABORATORY SERVICES IN EAST AFRICA

DISCUSSION PAPER

SEPTEMBER 2015

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WORLD BANK GROUP
Health, Nutrition & Population

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Health, Nutrition and Population (HNP) Discussion Paper

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Health, Nutrition and Population (HNP) Discussion Paper

Opportunities Abound: Public Private Partnerships for Laboratory Services in East Africa

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This document was prepared under the East Africa Public Health Laboratory Networking Project (EAPHLNP), which is funded by the World Bank and coordinated by the East, Central, and Southern Africa Health Community (ECSA-HC).

Abstract: This document presents findings from a study conducted to identify and document ongoing public-private partnerships (PPPs) for improving access to quality laboratory services, especially for the poor, in the East Africa region. The East, Central, and Southern Africa Health Community (ECSA-HC) coordinated the study along with the partner states in the East African Community participating in the World Bank funded East Africa Public Health Laboratory Networking Project (EAPHLNP). The authors implemented key informant interviews in Kenya, Rwanda, Tanzania and Uganda, and analyzed the information gathered from the interviews which is presented in this report.

The study finds that while there are numerous examples of public-private collaboration across all four countries, the number of formal PPPs remains scarce. The most common form of PPP is placement, whereby privately owned laboratory equipment is leased by public facilities. Most other instances of collaboration between public and private partners did not meet the formal definition of a PPP. Key stakeholders from both public and private institutions showed a keen interest in learning about and setting up more, diverse kinds of PPPs. The numerous informal and semi-formal arrangements that currently exist represent opportunities for establishing formal PPPs in accordance with global best practices.

Keywords: Laboratory services, diagnostics, public-private partnerships, outsourcing, leasing.

Disclaimer: The findings, interpretations, and conclusions expressed in the paper are entirely those of the authors, and do not represent the views of the World Bank, ECSA or its member countries.

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List of Acronyms

BMC	Bio Medical Centre, Kigali: A private standalone laboratory
CHUK	Centre Hospitalier Universitaire de Kigali: Rwanda National Referral Hospital
CPHL	Central Public Health Laboratory, Uganda
CSR	Corporate Social Responsibility
EAC	East African Community
EAPHLN	East African Public Health Laboratory Network
ECSA- HC	East, Central, and Southern African Health Community
EID	Early Infant Diagnosis of HIV
FBO	Faith-Based Organization
HIPS	Uganda Health Initiatives for the Private Sector
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome
KAPTLD	Kenya Association for the Prevention of Tuberculosis and Lung Diseases
IFC	International Finance Corporation
IHK	International Hospital of Kampala
KNH	Kenyatta National Hospital: Kenyan National Referral Hospital
MoH	Ministry of Health
NTRL	National TB Reference Laboratory
MoU	Memorandum of Understanding
PEPFAR	The U.S. President's Emergency Plan for AIDS Relief
PHSP	Uganda Private Health Support Program
PPP	Public Private Partnership
PPP HK	PPP Health Kenya: Dialogue Platform
EQA	External Quality Assurance
RDB	Rwanda Development Board
TB	Tuberculosis
TB PPP	Tuberculosis Public-Private-Partnership Working Group, Kenya
SHOPS	Strengthening Health Outcomes through Private Sector project
UHMG	Uganda Health Marketing Group

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Executive Summary

This study, which was commissioned under the East Africa Public Health Laboratory Networking (EAPHLN) Project, examines the role of public private partnerships (PPPs) to strengthen laboratory services in East Africa. The objective of EAPHLN is to establish and strengthen a network of efficient, accessible and high quality public health laboratories¹ in the region. Exploring how PPPs can be leveraged by public and private actors in East Africa to achieve this goal as well as to improve access to high quality laboratory services more broadly is critical for regional policymakers. Consequently, the study sought to gather information through interviews with key stakeholders and experts in Kenya, Uganda, Rwanda and Tanzania about: (1) the existing landscape of PPPs for laboratory services, (2) what challenges impede the further use of PPPs for laboratory services and recommendations for how these might be addressed, and (3) opportunities for new PPPs related to laboratory services in the region.

The interviews revealed that a wide range of public private collaborations are already in place in East Africa. The study identified approximately 36 partnerships in the four countries. Table 1 below summarizes the number of partnerships and collaborations identified that strengthen various aspects of laboratory service delivery. A majority of these are ongoing, while some occurred in the past or are planned for the near future.

Table 1: Number of Laboratory-Specific Partnerships/Collaborations identified by Country

Aspect of Laboratory Services Strengthened	Number of Partnerships Identified*			
	Kenya	Tanzania	Uganda	Rwanda
Infrastructure, Equipment	7	1	3	4
Human Resources	3	1	1	1
Operational Services	8	2	7	1
Information Systems	2	0	3	0
* A total of 36 partnerships were identified. Some strengthen more than one aspect of laboratory services.				

Placement of privately owned laboratory equipment in public facilities is the most commonly used form of PPPs. It adheres to the conventional definition of PPPs which emphasizes a formal written contract and the transfer of significant risk and responsibility from the public actor to the private actor. In this model, a private manufacturer or distributor makes equipment available at no cost, trains staff to operate it, and provides free maintenance services. In exchange, the public sector provider commits to the regular purchase of an agreed minimum volume of specific reagents from the same company. Placement is used in several national referral hospitals and most national referral laboratories, as well as secondary referral public hospitals in the East African countries. It is considered to be highly successful by all professionals interviewed.

Most of the remaining public-private collaborations do not meet the aforementioned strict definition of a PPP. This includes donor-financed partnerships for training local laboratory technicians and expanding the reach of national disease control and treatment programs, informal and semi-formal instances of collaboration between the public and private sectors, and private actors donating assets or services to the public sector as part of their corporate social responsibility (CSR) agenda. Some of these

¹ The term “public health laboratories” refers to laboratories offering diagnostic services and disease surveillance in order to improve public health. Such laboratories are typically financed and operated by the government. In this study, we looked at medical laboratories more broadly, spanning both public and private sectors. Some of them provide diagnostic services but do not serve a surveillance function. The term “medical laboratory” is defined below.

are long-standing partnerships that are documented in formal memoranda of understanding (MoU). The extent to which risk and management responsibility are transferred from the public sector to private actors varies across these arrangements. Collaborations that work without any written agreement represent opportunities for the establishment of formalized PPPs.

In all four countries, respondents had a very favorable view of PPPs. They reported broad support for PPPs among national and industry leaders and professionals. All respondents without exception agreed that PPPs have great potential to improve access, efficiency and quality of laboratory services in East Africa, and expressed an interest to see more PPPs implemented. Moreover, most East African governments have already or are in the process of implementing PPPs for health policies or frameworks.

Despite the widespread support for PPPs, all four East African countries face challenges in implementing more PPPs for laboratory services. One of the key issues identified was that there is no platform to share and discuss experience from public-private collaborations. As a result, key actors are often unaware of existing partnerships and models. Financial constraints prevent ministries of health from committing to partnerships where they will be required to pay private institutions. Greater technical expertise and political will within ministries of health in the region would go a long way in promoting more PPPs.

Study participants offered diverse recommendations for how EAPHLN and other stakeholders could assist East African countries to overcome these challenges. These include setting up national and regional platforms for experts and stakeholders interested and/or experienced in laboratory PPPs to interact and share their experience; creating a practical manual with models of laboratory PPPs, contract templates, etc.; and setting up prototype laboratory PPPs in each EAPHLN country. Respondents identified a wide range of areas related to laboratory services where PPPs could add value, including pooled procurement of laboratory consumables; formalizing ad-hoc referrals between public and private sector entities; outsourcing the management of public sector laboratories to private vendors; mentorship and training programs to transfer skills between sectors; and exploring ways in which donor financing for making services available to the poor can be channeled effectively through the private sector.

Introduction

The past decade has seen a growth in interest for and use of public private partnerships (PPPs) in the health sector [1, 2, 3]. Such arrangements feature long-term contracts between governmental and private sector actors that leverage the skills, expertise and resources of the respective parties. PPPs at the national-level have taken a variety of forms, ranging from greater communication and cooperation between public sector, private for-profit, and private not-for-profit actors on the one hand to more formal PPPs such as contracting-out arrangements, outsourcing, leasing, concessions, and private financing initiatives on the other [1,4,5].

The use of PPPs to improve the delivery of the clinical laboratory services is the focus of this study commissioned by the East, Central and Southern Africa Health Community (ECSA-HC) in the context of the East Africa Public Health Laboratory Networking (EAPHLN) Project supported by the World Bank. The objective of EAPHLN is to establish and strengthen a network of efficient, accessible and high quality public health laboratories in the region. ECSA-HC and the East African Community (EAC) are supporting regional coordination between ministries of health in the East African countries to achieve this goal.

The Bank-funded EAPHLN Project included financing for analytic work to document the role of PPPs in strengthening laboratory services in the East African region and to support innovative approaches to enhance such partnerships. Correspondingly, the objectives of this study are to:

- Identify and systematically document promising PPP arrangements in clinical laboratory services in Kenya, Tanzania, Uganda and Rwanda
- Analyze the views of both public and private sector stakeholders in these four countries regarding the challenges they face in operationalizing PPPs and provide general recommendations about how EAPHLN and other key stakeholders might address these challenges
- Identify specific opportunities for future PPPs in the four countries

This chapter summarizes the background and rationale for the study, as well as the conceptual framework and methodology used for implementing it. Chapter 2 presents the current landscape of public private collaboration in the four study countries, and presents 5 examples in greater detail. Chapter 3 discusses current challenges identified by laboratory sector stakeholders in relation to PPPs in the sector, general recommendations about how they may be addressed, and specific opportunities for future laboratory sector PPPs in East Africa.

Background and Rationale

National and international stakeholders have increasingly embraced PPPs as an effective way to boost health system performance and in turn improve health outcomes [2]. This follows from the recognition that greater collaboration between public and private sectors is both a necessity and good strategy. It is necessary given that private health actors already play a large role in a range of health system functions, be it in the manufacturing of medical technologies, training of medical personnel, the delivery of services, or financing health. Hence, good governance in the health sector requires communication and collaboration between the government and private entities. Partnership between public and private actors is a good strategy since, much like in other sectors, PPPs for health can benefit public systems for service delivery in multiple ways [5]. For example, PPPs can create a channel for private capital to flow into the health sector, thereby supplementing government spending on health or freeing up government resources for other purposes. PPPs can leverage private partners' operational efficiency or good management practices, thereby leading to greater efficiency in the delivery of health services. PPPs also offer a way for superior technology, technical expertise, skills, and clinical practices to flow from the private to the public sector, thereby resulting in quality improvements. To be successful, PPPs have to be planned and managed effectively [5]. This includes the clear articulation and implementation of a contract

that allocates financial risks and rewards, stipulates roles and responsibilities, and describes processes for oversight, regulation, and conflict management.

The global literature on PPPs for health offers a range of examples of innovative and successful PPPs related to different aspects of healthcare, such as the design and construction of facilities, the management of entire health facilities or a network of facilities, training of health personnel, and the delivery of clinical services, clinical support services (such as laboratory analysis and diagnostic imaging) as well as non-clinical services (for example, IT support, facility maintenance or cleaning, and billing). A few examples of health PPPs from around the world are highlighted below:

- In 2003, the Government of Romania engaged private providers to upgrade, expand and operate dialysis services at public hospitals. Service contracts were awarded to private contractors through a tendering process for an initial period of four years. The operators took on the full responsibility for renovating and refurbishing the facilities, renewing the equipment, employing and training staff, maintaining and operating the equipment, and delivering all services. The Ministry of Health determined the prices for the services based on regional standards and provided continued monitoring for quality. Independent evaluations of the projects have shown that the PPP arrangement generated €28.6 million in private sector investment for dialysis services and that the privately-managed clinics have delivered higher-quality and less-expensive care to the public than their public sector counterparts [5,7].
- The Government of Bihar, a state in India, has contracted two private providers to provide clinical laboratory services in government-owned health facilities. Under the arrangement, private providers were required to set up the necessary infrastructure in the space provided inside the health center. They are responsible for providing all pathology, biochemistry, and microbiology laboratory services. Initially, the test charges were being paid by patients. Subsequently, the Government decided to make the tests free for patients and started reimbursing the private providers at fixed rates. The coverage under this partnership has been extended to 25 district hospitals, 23 sub-divisional hospitals, 76 referral hospitals and 398 primary health centers across the state [8, 9]. State governments in several Indian states have implemented similar service contracts for a range of laboratory, radiology, and emergency care services.
- The State of Punjab in Pakistan is using a PPP to address the shortage of nurses in the state. Under the arrangement, the Provincial Government provides resources to the Fatima Memorial Hospital, a renowned private sector nursing school, to train nurses in the region. Since 2007, an equivalent of 740 million Pakistani Rupees (close to US \$9 million) has been provided by the Provincial Government for the purpose of training various categories of nurses [10].
- Netcare, South Africa's largest private hospital company, signed a 17-year concession agreement with the Provincial Government in the Eastern Cape region of the country to equip and maintain two facilities that co-locate public and private hospitals. Together, Port Alfred Hospital and Settlers Hospital have 140 public beds and 60 private beds. Under the terms of the contract, Netcare renovated Settlers hospital, and provides maintenance and all ancillary services (gardening, catering, laundry, etc.) on an ongoing basis. The Eastern Cape Provincial Government employs the clinical staff and pays Netcare a monthly fee for the space and services provided. In Port Alfred, Netcare is responsible for maintenance and all soft services for which the Government pays Netcare a monthly fee [11].
- The Government of Lesotho established a health PPP for the private operation of public clinics as well as a new \$100 million national referral hospital in 2006. The Lesotho PPP has been cited as

the first of its kind for Africa for its size and scope. A private consortium led by Netcare, the South African firm, won the contract to design, build, and operate the facilities. The new clinics began providing services to public patients in May 2011 [12].

While the existing literature on PPPs for health has documented the experience from around the world, this study is focused on assessing the landscape of PPPs for laboratory services in East Africa. The purpose is to, firstly, understand what is currently happening in this area. What are the most common forms of PPPs for laboratory services? How have they been structured? Are they considered successful? What challenges have they faced? Secondly, the study synthesizes lessons learnt from the experience of existing PPP arrangements as well as the views and recommendations from experts and key stakeholders to offer recommendations for how EAPHLN and other key laboratory sector stakeholders in the region can enhance the use of PPPs for strengthening laboratory services in the future.

Methodology

As per the objectives of the study, the following questions were the focus of the investigation:

1. What PPPs involving health laboratories are known to exist in each country?
2. How can these partnerships be categorized?
3. What other ideas for PPP in the laboratory sector are considered promising by stakeholders?
4. How can EAPHLN and ministries of health provide support to catalyze existing or new PPPs?
5. What are key challenges and opportunities for the public and private sectors to work together?
6. How well have partnerships been implemented, and what results are said to have been attained?
7. What are the key challenges and lessons learnt in various partnerships?

These questions were addressed by conducting in-depth key informant and stakeholder interviews in Kenya, Uganda, Tanzania, and Rwanda. The sample of key informants was chosen purposefully to include representatives from the private sector and the public sector, as well as third-party experts. An initial list of participants was developed in collaboration with the EAPHLN country teams for each of the four countries; additional participants were identified according to a snowballing methodology during the interviews. One member of the study team spent 5 working days in the capital city of each country conducting face-to-face interviews. The exception was Kenya, where the interviews were completed over a 3 week timespan due to the fact that all members of the study team reside in Kenya. The sample size in each of the four countries was between 11 - 20 participants. The total sample size was 62 participants. A list detailing the number of participants of each type is in Annex B.

Semi-structured interviews based on a discussion guide designed to address the research question were conducted at a time and location of the participant's preference, usually at their workplace. Interview durations ranged from 25-60 minutes each. All interviews were audio-recorded with a digital recorder, except when respondents preferred not to be recorded; in such cases, the team took detailed notes. The recorded interviews were transcribed. Then the team analyzed the written transcripts and notes.

Definitions of key terms

Medical Laboratories

Throughout this report, the term "medical laboratory" or "laboratory" is used to include all types of laboratories that are relevant in public health and clinical health service provision. It is therefore an umbrella term for public health laboratories, clinical laboratories, and - where applicable - health research laboratories. The terms covers all laboratories, both situated within a hospital or stand-alone, that examine materials derived from the human body for the purpose of providing information on the diagnosis, prognosis, prevention, or treatment of disease.

Public Private Partnerships

Private entities were defined as all non-state organizations, including for-profit and not-for-profit entities such as faith- and community based organizations and non-governmental organizations (NGOs) [13,14]. This initial categorization notwithstanding, it became clear during the interviews that the proximity of the faith-based organizations (FBOs) to the government varied greatly between countries; in Tanzania and Rwanda FBOs are considered quasi-public institutions, while in Kenya and Uganda they are considered to be part of the non-profit private sector. In the case of some NGOs, the classification is not entirely clear either; they are seen as representing a public interest, taking on a public sector role [1,15]. For the sake of this assessment, a pragmatic approach was used. A partnership between a NGO and a private for-profit company was considered to be a PPP if more than one study participant considered them as such.

From among a broad range of definitions of PPP offered in the literature, the following definition from the World Bank Public-Private Partnerships Reference Guide [16] was initially adopted for the study:

“A written formal agreement between a private partner and a government agency for providing a public asset or service, in which the private party bears significant risk and management responsibility.”

According to this definition, both the public and the private partners may be responsible for all or some project operations, and likewise financing can come from either one or both sides. The definition applies to PPPs related to assets and services, both new and existing. It includes arrangements where the private party is paid by service users as well as cases where the government pays, fully or in part, the private entity. This formal definition emphasizes the importance of “significant risk and management responsibility” being transferred from the public sector to the private agency [16].

The aforementioned definition was used as a starting point for the study and presented to all key informants interviewed. Early on during data collection, it became clear that the number of public-private partnerships in the laboratory sector in East Africa that meet the requirements of the definition of PPP described above is low. Moreover, the term “PPPs” is used very broadly in East Africa to refer to any kind of collaboration between public and private actors. A placement contract, wherein a private manufacturer of laboratory equipment places laboratory equipment in a facility and takes full responsibility for its maintenance in return for the facility purchasing reagents from the manufacturer, is an arrangement that is commonly used by public facilities in several East African countries and meets the requirements of the definition. However, most other instances of collaboration between the public and private sector in the laboratory sector in East Africa, which were described as “PPPs” by study participants, differ from the traditional PPP model implied by the definition. Moreover, many of the terms used in the broader health policy literature such as contracting, outsourcing, leasing, concessions, etc. were not commonly used by study participants.

For example, partnerships between donor governments and private companies or facilities for the delivery of goods or services in developing countries are often called PPPs. However, these partnerships do not meet the requirement of a traditional PPP in that there is minimal transfer of risk from the public to the private actor and the public partner in question is not the government of the country where the services are being delivered. There are also PPPs between developing country governments and local private actors where donors are financing what the government would have normally paid. Similarly, there are instances of corporate social responsibility (CSR), where private actors donate goods or services to the public sector. These are often referred to as PPPs, but are not bound by formal written contracts and do not entail a transfer of risk.

Participants in the study emphasized that these kinds of collaborations as well as informal arrangements between public and private players exist in all four East African countries covered by this study and that these partnerships are important. Based on these observations, the study team decided to discuss and enlist all forms of collaboration between public and private actors that the key informants deemed relevant and that in a broader sense can be considered as public private collaborations, even if they do not adhere to the strict definition of PPP provided above. For the purposes of this study, we refer to all these collaborations as PPPs even though they do not meet the strict definition of PPPs.

PPPs can take a variety of different forms, and there are multiple ways of classifying them. As a heuristic tool during the interviews, as well as for developing the case studies and the detailed listing of PPPs in table 4 and annex A, the partnerships were categorized along four dimensions:

- a. Objective, which refers to the key goal of the PPP
- b. Structure, which looked at the contractual arrangement, the role and investment of the private partner, and reimbursement model
- c. Geographic scope
- d. Outcome

It was, however, not possible to assess the *outcome* of the partnerships in a meaningful and exact way based on the level of knowledge of study participants. There was no formal monitoring or impact evaluation for most of the partnerships. The dimension “outcome” was, therefore, dropped from the analysis. For the analytical dimensions, several themes were identified at the inception stage of the study, which are shown in Table 2.

Table 2: Themes and Potential Codes

Dimension	Theme
Objectives of PPP	Main public sector aspect to be strengthened
	Expected private sector benefits
Structure	Type of contractual arrangement
	Role of the private partner
	Financial reimbursement
	Types of partners involved
Geographical scope	Geographic scope

Study Limitations

The study methodology was qualitative in nature, and aimed to gain a deep understanding of the mechanisms and risks involved in the use of PPPs to strengthen laboratory services in East Africa. The sampling was designed to cover important experts and essential stakeholders in each country. The underlying assumption was that their combined knowledge and networks was likely to lead to the identification of a large proportion of PPPs for laboratory services to interview within the scope, timeline and methodology of this study. Arrangements between local governments and small private sector entities at locations distant from the capital cities may not have been adequately captured.

PPPs for Laboratory Services in East Africa

As a general rule, public sector health facilities in East Africa keep diagnostic services for their patients in-house or refer them to the next level public health facility or reference lab. Larger health facilities in the private sector (typically large private hospitals) similarly have in-house diagnostic laboratories. In all four countries, there are stand-alone private laboratories that serve clients on a walk-in basis.

Below, we first describe the health system context as it relates to public private collaboration in each of the four countries. Then we discuss the PPPs identified in the course of the landscaping exercise.

The PPP Climate in East Africa

Rwanda

Rwanda has a nascent private health sector, which only started developing in the last decade after being virtually non-existent in the years that immediately followed the genocide. The number of private facilities is relatively low, and they are heavily concentrated in the capital, Kigali. In contrast, the public sector is well distributed throughout the country and covers remote areas. Facilities operated by FBOs, mostly providing primary healthcare, are formally accredited by the Ministry of Health and are not considered to be part of the private sector by most stakeholders. Private health facilities are categorized into 3 groups: clinics for basic primary care, polyclinics for comprehensive primary care, and hospitals. There are three private hospitals: *La Croix Du Sud*, King Faisal Hospital (which is owned by the state, but run as a private company) and a specialized eye hospital (Agarwal eye clinic). The only well-known private stand-alone laboratory is the Bio Medical Centre (BMC), which has less than 20 staff members; the remaining private laboratories are typically small and embedded within clinics.

As a result of Rwanda having a reputation for efficiency and the Government of Rwanda enacting a new policy to leverage the private sector to spur development, international firms are interested in investing in the country. The Rwanda Development Board has a key role in supporting and enabling investment, and more generally in building a favorable market climate. Making Rwanda a destination for medical tourism by 2020 is a key component of the Board's vision for the health sector. Despite the Government's recognition of the important role the private health sector and strong political will at the highest levels of Government to engage the private sector, the implementation of PPPs in the health sector is moving slowly.

Private sector stakeholders interviewed expressed the view that greater openness on the part of the Ministry of Health to ideas and initiatives originating in the private sector could foster a larger number of PPPs in the future. The Rwandan government's collaboration with the private sector for the national HIV and TB programs could be further enhanced. Public hospitals often refer patients to private laboratories when they have a stock-out of reagents or when equipment is down. Respondents working at facilities expressed an interest to formalize these relationships to comply with accreditation requirements.

In terms of human resources, qualified laboratory personnel in Rwanda generally prefer to work in the public sector, which makes it difficult for private laboratories to attract talent. Rwandan private health facilities, including the stand-alone laboratories, operate within the context of Rwanda's health financing system, which presents a few additional challenges. A majority of Rwandans are covered by government-managed health insurance schemes (the Rwanda Medical Insurance Scheme with the French acronym RAMA that covers state employees; the Military Medical Insurance scheme; and *Les Mutuelle de Santé*, the community-based public health insurance program). Private facilities stated that they see themselves in a situation where they do not have the market power to negotiate tariffs that they deem adequate, and

therefore need to operate with inadequate resources. This prevents them from investing in infrastructure and equipment.

A flagship project in Rwanda that is likely to influence the future perception of PPPs is the recent privatization of King Faisal Hospital. Whilst being fully owned by the government, the hospital will be run as a private for-profit company (see case studies for more detail).

Uganda

A large number of private clinics, hospitals and stand-alone laboratories operate in Uganda. The private sector includes both for-profit and a range of not-for-profit facilities. Facilities run by Protestant, Catholic and Muslim FBOs are coordinated by their respective umbrella organizations in Kampala, which also organize the participation of secondary facilities in testing services for national TB and HIV programs. Human resources in the public laboratory sector are viewed as being better trained than their counterparts in the private for-profit sector. However, average service quality in faith-based facilities was seen as being higher than in public facilities by some respondents. Highly specialized laboratory tests, especially histopathology, are referred out of the country by both the public and the private sector.

Whilst traditionally the relationship between decision makers in the public sector and the private for profit sector has not been close, it has been improving over the past 5 years. Some respondents mentioned that there is some rivalry and competition between the two sectors, which can have positive effects like improvements in quality (for example, by leading laboratories to acquire quality certification). However, respondents also emphasized that greater non-competitive collaboration and coordination of resources would lead to more efficient operations and lower prices. Leading private facilities are eager to collaborate with the public sector for specialized referral services that they could offer at reduced rates provided the volumes are high. Two of the respondents interviewed, who are key decision-makers for laboratory services in the public sector, have in the past been – or still are – private sector entrepreneurs and therefore appreciate the perspectives of both public and private sector actors.

Uganda has a history of memoranda of understanding (MoU) between the government and faith-based facilities. Typically, the national Ministry of Health has signed agreements with the umbrella organizations for FBOs such as the Uganda Protestant Medical Bureau, Uganda Catholic Medical Bureau and Uganda Muslim Medical Bureau, whilst MoUs with health facilities are often signed at the district-level between district officials and individual faith-based facilities. Beyond such arrangements, formalized public-private partnerships are rare, although some respondents considered the provision of emergency healthcare to the population, which private facilities are constitutionally obliged to do, as a form of PPP. There are several successful placement arrangements involving Mulago National Referral Hospital, central public health laboratories, regional referral hospitals, and FBO hospitals. Despite the limited use of formal PPPs currently, they are widely seen as an important vehicle for improving the quality and scope of public services in the future. PPPs are officially part of the government's strategy as highlighted in the current health sector strategic and investment plan.

Like other countries in East Africa donor-funding takes an important role in supporting the health sector in Uganda. There is an important category of donor-funded research laboratories that, through their extensive activities especially in laboratory services for HIV and TB, have shaped the current market situation. They provide high-quality services at a relatively high cost, which raises concerns regarding sustainability of the services should the program be taken over by the Government of Uganda. Since the World Health Organization introduced more stringent regulations for evidence-based care, especially for HIV treatment, the volume of tests needed as part of standard clinical protocol has risen. To meet the increased demand for testing, donors are increasingly recognizing the need to build the capacity of private laboratories. There are several donor-financed initiatives for networking small private facilities to provide better quality service to the poor. For example, the Ugandan Health Marketing Group (UHMG), a

donor-funded NGO, has built a network of over 200 private facilities that provide quality HIV testing and treatment. The Uganda Health Initiatives for the Private Sector (HIPS), a USAID-funded program, accredited 100 private clinics for HIV services; the program ended in early 2013 and will be succeeded by the Uganda Private Sector Support Project (PHSP). Reach Out, a government accredited, nonprofit specialized HIV facility is working with a small network of 5 private clinics in Kampala for HIV testing and treatment.

Kenya

Kenya has one of the largest private health sectors in the region. Consequently, there are a large number of private health facilities with laboratory facilities and stand-alone private laboratories, both in the capital, Nairobi and elsewhere in Kenya. Moreover, the private sector is more attractive to laboratory professionals, as it offers better salaries and more exposure to new technology. Kenya is to some extent a pioneer of PPPs in the region. Equipment placement contracts for laboratory equipment in public facilities were started in Kenya by Roche and Becton, Dickinson and Company, and have now spread to other countries in the region. While other forms of *written* PPP arrangements related to laboratory services are not widespread, Kenya offers several examples of public-private collaboration. The two largest private health providers, Aga Khan and Nairobi Hospital, are officially not-for-profit private enterprises and are therefore beneficiaries of public subsidies. For example, they benefit from the “public sector” subsidized pricing for the Cepheid GeneXpert equipment and reagents. There are agreements for quality control and training between public sector entities and specialized private providers. Finally, there is considerable collaboration between private and public entities for service delivery within vertical health sector programs for TB and HIV/AIDS through initiatives like Kenya Association for the Prevention of TB and Lung Diseases (KAPTLD) that can be considered formal, despite not being signed on paper. Some respondents saw the provision of TB cultures for multi-drug resistant TB testing as a promising avenue for partnerships, as the National TB Laboratory is struggling with a high workload, and there are two private hospitals that are able to offer TB culture services.

Despite there being a large number of private laboratories, both stand-alone and within private facilities, only three facilities were mentioned during the interviews as offering highly specialized tests: Lancel Kenya and the clinical laboratories of Aga Khan and Nairobi Hospitals. The private facilities are generally open to collaboration with the government for specialized referral services, and are willing and able to offer tests at lower rates if high volumes are guaranteed. Private sector respondents expressed the view that donor support to laboratories (especially from PEPFAR) is not necessarily based on criteria and procurement procedures that are transparent to local stakeholders, and instead tend to be biased towards institutions with whom they have established links.

Supporting PPPs is a key component of Vision 2030, Government of Kenya’s long-term national development roadmap. A PPP Bill was passed in 2012. The Ministry of Health has a PPP Unit that is meant to provide leadership and guidance in fostering PPPs in the health sector. Several respondents noted that historical mistrust from decision-makers in the public sector towards the private sector seems to have dwindled, and two existing dialogue platforms, PPP Health Kenya and the TB PPP Mix, bring together public and private sector actors. Outside the laboratory sector, the Ministry of Health has MoUs with FBO health facilities, primarily related to the seconding of health professionals to these facilities. In addition, there are several MoUs between private training institutions and public health facilities to enable internships for trainees. Respondents in Kenya were hopeful that with the new government structure and the PPP framework in place, more PPPs would emerge and prosper in the future.

The EAPHLN country team has been discussing various PPP options for one or more of the regional referral laboratories that the network is building. Contracting a private vendor for the management of the referral laboratories was actively discussed and EAPHLN reached out to technical experts at the

International Finance Corporation (IFC) for advice and technical support. With the recent devolution process underway, any PPP options will require buy-in from the new county governments.

Tanzania

In Tanzania, the private health sector is relatively new; the private sector as a whole was non-existent until the mid-1980s when socialist economic controls against private ownership were relaxed. A large and diverse private sector for health has significantly grown since 1991, when the ban against private practice was removed. The private health sector is often categorized into private not-for-profit facilities (which include facilities operated by FBOs, civil society organizations, and NGOs) that have traditionally played an important role in service delivery, and a small but rapidly growing number of private for-profit health facilities.

Tanzania has an advanced policy environment for public-private collaboration in the health sector. The 1994 proposals for health sector reforms highlighted the need for the public sector to effectively engage with the private sector in order to improve delivery of health services in Tanzania. These proposals were adopted and have been integrated in a number of health sector policies and strategies. For example, the country's National Health policy of 2003 explicitly states that public and private actors will jointly mobilize and share resources for the efficient delivery of well-regulated health services while ensuring accountability to the public. The health policy of 2007 also acknowledges the contribution of the private sector in health service provision. The important role that PPPs play in the health sector is also emphasized in the country's strategic plans for the health sector, which highlights the effective operationalization and enhancement of PPPs for the provision of health and nutrition services as strategic focus areas. In 2008, the Ministry for Health and Social Welfare appointed a national PPP steering committee whose role is to promote effective PPPs, with the specific objectives of coordinating stakeholders, formulating and refining service agreements between government and service providers, and addressing all legal requirements for PPPs.

In contrast to the highly developed health policy environment for PPPs, the legal framework for PPPs in Tanzania requires greater refinement. With the exception of the private hospital act and private health laboratories act, most of the laws neither articulate the role of the private sector nor provide for their engagement. This is because most of these laws were enacted before the policy push for PPPs in the country. However, recent reviews of health legislation in the country propose to expressly empower specific government authorities to establish and sustain PPPs for the purpose of improving services to the people.

Despite a supportive policy environment and an improving legal environment, actual implementation and use of PPPs remains low. This is especially the case with partnerships involving private for-profit entities. In contrast, the Government of Tanzania has a very close relationship with the private not-for-profit sector. The Ministry of Health has a long history of service-level agreements with FBO facilities which are called schemes of service, wherein the government provides a range of inputs including infrastructure, equipment and commodities, while the private partner provides human resources and management of the facility or vice versa. An estimated 40 percent of districts in Tanzania have a "designated district referral hospital" that is run by a FBO. Another example of a successful PPP in Tanzania is the support that the Abbott Fund has provided the Government for modernizing laboratories and mentoring laboratory staff. Apart from these arrangements, however, *formal* PPPs in the health sector, especially with respect to laboratory services, are few.

Landscape of Existing Collaborations

In the course of conducting key informant interviews in Kenya, Uganda, Tanzania, and Rwanda, the study team learnt about 36 distinct PPPs. Table 3 summarizes the partnerships identified. The names of the partnerships shown in the second column were assigned by the study team and, as such, are unofficial.

Placement of laboratory equipment by private companies in public facilities is the most common form of PPP in East Africa. In this model, a private manufacturer or distributor makes equipment available to a facility at no cost, trains staff to operate it, and provides free maintenance services. In exchange, the public sector facility commits to the regular purchase of an agreed minimum number of reagents from the same company. In Kenya, several respondents used the term “leasing” interchangeably with the term “placement” to describe such an arrangement.

Apart from placements, the most typical mode of collaboration for laboratory and diagnostic services can be described as extension of public services through the private sector. The public sector provides in-kind subsidies to private providers (for example, free test kits, reagents etc.) so that private providers may deliver public services to patients. This is often done to expand the reach of national programs, especially for priority diseases like HIV/AIDS and TB, by leveraging existing private providers. The private partner is often allowed to charge a small administrative fee from patients, though in some instances they also provide services for free. The private provider is contributing their infrastructure and staff time. In part, this is a donation as they do not recover these costs, or at a minimum they are not making profits from such an arrangement. Using the free or low-cost services to “market” themselves to new clients, as well as receiving free government quality control, staff training, and supportive supervision, are the benefits that the private providers derive from such an arrangement. In table 3, which lists all the identified public-private collaborations in the four countries, this type of collaboration is categorized as public service extension in the third column.

In addition to these two types of arrangements, public service providers have engaged with private sector counterparts for the following type of partnerships:

- Specialized referral services, where specimens or patients managed in a public facility are referred, typically on an informal basis, to private laboratories for tests that are unavailable in a secondary public hospital,
- Transport of specimen, where a private company is contracted for courier services,
- Management contracts, where a private partner takes on responsibility for the operations of a laboratory that is physically set in the premises of a public clinical facility,
- Procurement pooling, where the acquisition of supplies and management of reagents are centrally coordinated and logistics optimized across institutional boundaries, and
- Training, where public sector technicians are provided training by private institutions or vice versa.

In the case of some of the training partnerships, where private sector staff receive training organized by government agencies (for example, numbers 33 and 34 in the table below), it is not entirely clear whether an aspect of public sector service provision is strengthened.

Some of the partnerships identified in table 3 combine several objectives. For example, the partnership in Voi District Hospital (number 13) involves a private contractor managing the laboratory of the public health facility, as well as a placement arrangement for the equipment. The informal collaboration in Makueni Hospital (number 20) entails a private partner providing referral laboratory services, contracted sample transport, and the electronic transmission of test results. In example 35, Thika Referral Hospital and Mount Kenya University have an MoU whereby students of the private university get internship placement in the hospital, whilst the Hospital benefits from equipment and infrastructure provided by the training institute.

All the placement arrangements are grounded in a formal contract. Of the remaining 24 PPPs identified, only 6 featured a formal contract. An additional 6 PPPs were based on some sort of MoU, while the remaining 12 were informal. A number of the partnerships were a product of CSR initiatives on the part of

private companies (see annex A). The logic of such partnerships is quite distinct from the traditional PPP model, and they face distinct issues around their implementation. They are often "one-offs," representing a bi-lateral relationship between one particular company and the government. While there were a number of places where patients were being referred from a public facility to private laboratories, these were typically informal arrangements. In such situations, patients need to physically go to these facilities to deliver samples and pick up test results, which they then take to their doctor. Payments in such cases are typically made out-of-pocket. While there were reports of informal sample delivery arrangements in Kenya between doctors in public hospitals with a private laboratory, formal outsourcing arrangements that would increase convenience and reduce costs for clients are still rare.

The informal nature of many of the existing PPPs in East Africa means that a majority of them do not adhere to principles that are considered "best practice" in the implementation of PPPs, such as competitive tendering, neutrality, transparency, and public accountability. On the upside, they represent "low hanging fruit," situations that are ripe for the introduction of formal PPP arrangements.

Table 3: Master list of PPPs in the laboratory sector (Details in Annex A)²

No	Name	Type	Formalization	Risk Share	Status
Equipment/Infrastructure					
01	Centre Hospitalier Universitaire (CHUK) (Rwanda)	Placement*	Contract	Yes	Ongoing
02	Rwanda Military Hospital (Rwanda)	Placement	Contract	Yes	Ongoing
03	Mulago National Referral Hospital (Uganda)	Placement	Contract	Yes	Ongoing
04	Central Public Health Laboratory (Uganda)	Placement	Contract	Yes	Ongoing
05	National Referral Laboratory (Rwanda)	Placement	Contract	Yes	Ongoing
06	Kenyatta National Hospital (Kenya)	Placement	Contract	Yes	Ongoing
07	Moi Teaching and Referral Hospital (Kenya)	Placement	Contract	Yes	Ongoing
08	Temeke Regional Hospital (Tanzania)	Placement	Contract	Yes	Ongoing
09	Secondary Public Hospitals (Rwanda)	Placement	Contract	Yes	Starting
10	Regional Hospitals (Uganda)	Placement	Contract	Yes	Ongoing
11	Secondary Public Hospitals (Kenya)	Placement	Contract	Yes	Ongoing
12	Machakos County (Kenya)	Placement	Contract	Yes	Discussion
Operational Services					
13	Laboratory Management Voi (Kenya)*	Management Contr. ³	Contract	Yes	Ongoing
14	EAPHLN Gulu Lacor (Uganda)	Management Contr.	Informal	Yes	Starting
15	EAPHLN planned PPP (Kenya)	Management Contr.	Contract	Yes	Discussion
16	Rwinkwavu Hospital Referral System (Rwanda)	Referral Service	Contract	No	Ongoing
17	Nyahururu Hospital Referrals (Kenya)	Referral Service	Informal	No	Ongoing
18	Nyeri Hospital Referrals (Kenya)	Referral Service	Informal	No	Ongoing
19	Makueni Hospital Referrals (Kenya)	Referral Service	Informal	No	Ongoing
20	ReachOut Network (Uganda)	Service Extension	Contract	No	Ongoing
21	UHMG Network (Uganda)	Service Extension	Informal	Yes	Ongoing
22	Private HIV Reference Lab (Uganda)*	Service Extension	Informal	Yes	Starting
23	Partnerships with FBO Facilities includes Laboratory Aspect (Uganda)	Service Extension	MoU	Yes	Ongoing
24	Schemes of Service with FBO Facilities includes Laboratory Aspect (Tanzania)	Service Extension	MoU	Yes	Ongoing
25	Malaria Diagnostics Subsidy (Tanzania)	Service Extension	Informal	Yes	Ongoing
26	Tuberculosis Reagent Subsidy (Uganda)	Service Extension	MoU	Yes	Ongoing
27	KAPTLD Tuberculosis Reagent Subsidy (Kenya)	Service Extension	Informal	Yes	Ongoing
28	Post Office Sample Transport (Uganda)	Specimen Transport	Contract	No	Closing
29	G4S Specimen Transport (Kenya)	Specimen Transport	Contract	No	Ongoing
30	Centralized TB reagent supply (Kenya)	Supply Logistics	Informal	No	Discussion
Human Resources					
31	Mentorship/ Training (Aga Khan Kenya)*	Training	MoU	No	Ended
32	Informal Knowledge Exchange (Kenya)	Training	Informal	Yes	Ongoing
33	Private Sector Staff Training (Rwanda)	Training ⁴	Informal	No	Ongoing
34	Private Sector Staff Training, Kampala (Uganda)	Training ³	Informal	No	Ended
35	Thika Hospital & Mount Kenya University	Training	MoU	Yes	Ongoing
36	Regional Laboratory Modernization (Tanzania)*	Training ⁵	MoU	No	Ongoing

² Partnerships marked with an asterisk (*) are described in more detail in the next section on case studies.

³ The partnership in Voi also entails the placement of laboratory equipment.

⁴ These two cases in Rwanda and Uganda refer to instances where technicians from the private sector received government-sponsored training.

⁵ The Regional Laboratory Modernization Initiative initially built, renovated, and equipped 23 regional laboratories with a private foundation as a donor. Employees of a multinational pharmaceutical company continue to volunteer time for training mentorships.

Case Studies

1 Placement Contracts Kenya, Uganda, Rwanda, Tanzania (ongoing)					
	Purpose: Acquire modern equipment and have them continuously maintained				
Roles	<table border="1"> <tr> <td>Public Partner: Referral Hospitals and Laboratories</td> <td>Private Partner: Equipment Manufacturers and Distributors</td> </tr> <tr> <td> <ul style="list-style-type: none"> • Staff and infrastructure management • Equipment operations in line with training / SOP • Purchase of reagents from manufacturer </td> <td> <ul style="list-style-type: none"> • Provision and installment of equipment • Training on use of equipment • Routine maintenance, calibration and quality assurance • Supply of reagents </td> </tr> </table>	Public Partner: Referral Hospitals and Laboratories	Private Partner: Equipment Manufacturers and Distributors	<ul style="list-style-type: none"> • Staff and infrastructure management • Equipment operations in line with training / SOP • Purchase of reagents from manufacturer 	<ul style="list-style-type: none"> • Provision and installment of equipment • Training on use of equipment • Routine maintenance, calibration and quality assurance • Supply of reagents
	Public Partner: Referral Hospitals and Laboratories	Private Partner: Equipment Manufacturers and Distributors			
<ul style="list-style-type: none"> • Staff and infrastructure management • Equipment operations in line with training / SOP • Purchase of reagents from manufacturer 	<ul style="list-style-type: none"> • Provision and installment of equipment • Training on use of equipment • Routine maintenance, calibration and quality assurance • Supply of reagents 				
How it works	A manufacturer (or their distributor) provides laboratory equipment at no cost to a laboratory that handles a minimum volume of tests per quarter. A contract obliges the laboratory to purchase a minimum number of reagents, usually per quarter, at a pre-determined price from the manufacturer (or distributor) of the equipment. The manufacturer trains facility staff on the use of the equipment and provides refresher trainings when necessary. The manufacturer also assumes full responsibility and costs for equipment maintenance. The price of the reagents is designed such that it allows for the manufacturer to amortize the upfront cost of the equipment and costs associated with installation, training, maintenance and repair, as well as realize a profit within a calculated time period. After the contract duration elapses, the equipment is either replaced with new technology, or ownership is transferred to the facility. This model is widely used by private sector facilities globally and, more recently, by public sector facilities in East Africa.				
Contract	Formal contract with detailed financial specifications, typically valid for 3-5 years.				
Results	Significantly decreased down-time and stock-outs, increased revenue for private wings.				
How it started	The placement model in East Africa has its roots in a 2009 donation of Early-Infant Diagnosis machines to KEMRI laboratories in Nairobi, Kisumu, and the Coast General Hospital by Roche Diagnostics. Roche financed the renovation of the laboratories to meet the required standards for molecular testing. While there was no formal contract, there was an informal agreement that the facilities would buy reagents from the company. The model of placement then emerged naturally and, subsequently, placement with Kenyatta National Hospital was done with a contract. Since there is a lot of donor financing for HIV/AIDS-related laboratory services, Roche ventured into the placement of other equipment, especially routine chemistry equipment in several health facilities in Central Rift in Kenya. After the success of Kenya, the same model was used by Roche in Rwanda, Tanzania and Uganda.				
Challenges, Lessons Learnt	<ul style="list-style-type: none"> • A minimum volume of monthly tests is required. It does not work for smaller facilities on their own. They can benefit from the approach if they pool testing and/or refer samples to a hub facility in their area. • CHUK Rwanda had a placement arrangement where the placed machine did not have the capacity to handle the required test volumes, which was somewhat dissatisfactory. • There is only minimal sharing of information about placement arrangements; key stakeholders in Kenya, Uganda and Rwanda were unaware of the extent to which placement was used as an approach. • Placements are seen by many as preferable to equipment donations by donors, as donated equipment is not well-maintained and recurrent costs associated with the purchase of reagents are not accounted for in the facility budget. • There is the perception that placement arrangements could lead to quasi-monopoly on reagents; this perception is a barrier to a faster uptake of the approach in government institutions. 				
Enablers, Highlights	<ul style="list-style-type: none"> • The Government of Rwanda has recently concluded a placement contract with Roche for HIV/AIDS equipment across the country in a large number of clinical settings. • Roche Regional Office in South Africa was initially skeptical about the plan to extend the scale to new geographical areas and the scope to non-HIV/AIDS equipment; thanks to the insistence and visionary thinking of the Kenya office director, it was successfully introduced. • For vertical programs, donors support for the purchase of reagents has been invaluable. • Decentralization has opened up multiple venues for placement in Kenya; Roche was recently invited for talks about a comprehensive placement solution in Machakos county. • Placement of equipment is the standard business model for both public and private laboratories in the US, Europe, and South Africa. 				

2 Regional Laboratory Modernization Project Tanzania (mentorship ongoing)	
Purpose: To enhance the capacity and quality of laboratories in all 23 Tanzanian regional hospitals	
Public Partners: Ministry of Health and Social Welfare, CDC Tanzania	Private Partners: Abbott Fund, Association of Public Health Laboratories, Design 4 Others
Roles	<ul style="list-style-type: none"> • Coordinate the contribution of the different partners • Contribute technical expertise • Provide comprehensive laboratory services to the public
How it works	Abbott Fund, a philanthropic foundation associated with Abbott Laboratories, funded the construction or renovation of modern, well-equipped laboratories in all 23 regional referral hospitals in Tanzania, which serve over 120 district hospital laboratories for referrals services. After completion of the infrastructure project in 2011, the most important component of the partnership continues to be staff training and mentorship that is provided by Abbott employee volunteers and focuses on improved work-flow, standard procedures and quality assurance. The project is a corporate social responsibility initiative and, as such, is not a traditional PPP.
Results	Improved quality; increased capacity and utilization of lab services; reduced turn-around time; improved staff motivation and productivity.
How it started	In 2001, the Abbott Fund started working with the Government of Tanzania to provide funding and expertise, often based on volunteering, for the public healthcare infrastructure. An early program involved the construction of a modern outpatient care center in Muhimbili National Referral Hospital. Assessments of Tanzania's healthcare system subsequently identified laboratory services as a particularly weak link in providing quality patient care in the country, and in 2007 the regional laboratory modernization project was started with a consortium of public and private partners.
Challenges, Lessons Learnt	Before the modernization project, other projects to strengthen public laboratories were unsuccessful due to a burdensome procurement process, inadequate human resources and weak coordination of multiple partners.

3 Private sector laboratory mentorship to public sector staff Nairobi, Kenya (concluded)			
	Purpose : To enhance the skills of public sector laboratory technicians		
	<table border="1"> <tr> <td> Public Partner: National Referral Laboratories </td> <td> Private Partner: Aga Khan University Hospital </td> </tr> </table>	Public Partner: National Referral Laboratories	Private Partner: Aga Khan University Hospital
Public Partner: National Referral Laboratories	Private Partner: Aga Khan University Hospital		
Roles	<table border="1"> <tr> <td> <ul style="list-style-type: none"> • Provide health / risk insurance to trainees • Pay a fee per trainee to cover costs • Cascade training, acquired skills to sub-national level through peer interaction, mentorship • Continue to provide regular reference laboratory and quality assurance services </td> <td> <ul style="list-style-type: none"> • Host staff from the national referral laboratories for a period of 4 weeks; train them in the use of specialized equipment and workflow in a modern, output-oriented busy private laboratory environment </td> </tr> </table>	<ul style="list-style-type: none"> • Provide health / risk insurance to trainees • Pay a fee per trainee to cover costs • Cascade training, acquired skills to sub-national level through peer interaction, mentorship • Continue to provide regular reference laboratory and quality assurance services 	<ul style="list-style-type: none"> • Host staff from the national referral laboratories for a period of 4 weeks; train them in the use of specialized equipment and workflow in a modern, output-oriented busy private laboratory environment
<ul style="list-style-type: none"> • Provide health / risk insurance to trainees • Pay a fee per trainee to cover costs • Cascade training, acquired skills to sub-national level through peer interaction, mentorship • Continue to provide regular reference laboratory and quality assurance services 	<ul style="list-style-type: none"> • Host staff from the national referral laboratories for a period of 4 weeks; train them in the use of specialized equipment and workflow in a modern, output-oriented busy private laboratory environment 		
How it works	<p>The private sector partner provides staff time of senior laboratory professionals, mostly pathologists, to mentor public sector employees, who spend a few weeks of their time in the private laboratory. This allows them to get exposure to a different range of equipment, and to a different workflow and management system. The public sector employees are expected to cascade the acquired knowledge and skills to their peers within national laboratories and referral hospitals.</p>		
Contract	MoU		
Results	<ul style="list-style-type: none"> • Improved staff knowledge and skills, broader horizon and innovative thinking • Strengthened relationship between the public and private sector labs and professionals 		
How it started	<p>The idea for this partnership came from a CDC-funded laboratory strengthening program and was initially conceived as an ongoing mentorship program. Together with partners in the Ministry of Health, they reached out to Aga Khan Hospital, who was receptive to the idea. The Ministry of Health paid the fee for the technicians for 1 year.</p>		
Challenges, Lessons Learnt	<ul style="list-style-type: none"> • The main challenge with this partnership is that it did not continue after 1 year, as there were no donor and/or Ministry funds available to cover the fees (this was initially paid by the Ministry, but could not be sustained). • A sustainable design for a similar partnership could work without the requirement of financial reimbursement by the public sector side; instead, a design that is based on an in-kind type of exchange (either in terms of expertise, or other lab related services or commodities) might work. 		
Enablers, Highlights	<ul style="list-style-type: none"> • Close ties between consultants from the CDC project and Dr. Revathi, Chief Pathologist at Aga Khan University hospital played an important role in the success of this partnership. 		

4 Private supply of equipment to and supervision of a District Hospital Laboratory Voi, Kenya (early phase)	
Purpose: Renovate, equip, and operate a modern district hospital laboratory	
Public Partner: Moi District Hospital, Voi	Private Partners: Pathologists Lancet Kenya Wildlife Works Carbon (WWC)
Roles	<p>Lancet Kenya</p> <ul style="list-style-type: none"> • Advice for the renovation of the lab • Provision of equipment on a lease-basis (financed by WWC) • Training of staff • Supervision, quality assurance • Computerization of the laboratory <p>WWC</p> <ul style="list-style-type: none"> • Renovation of laboratory • Financing of the equipment lease/regents
How it works	World Wildlife Carbon (WWC) is financing the renovation of the hospital laboratory and is investing in improving its internal infrastructure. They are also financing the leasing of laboratory equipment from Lancet Kenya. Lancet provides training, operational supervision, equipment maintenance, computerization and quality assurance services. The hospital will continue to staff and operate the laboratory on a day-to-day basis. The user-fees, which will be at regular government rates, will be shared between Lancet (60%) and the Hospital (40%). The hospital laboratory will typically provide basic/routine tests, while highly specialized tests will be referred out.
Contract	A tripartite agreement was signed, running for 3 years, after which it will be revised and equipment might be handed over to Moi District Hospital.
Results	The laboratory was expected to commence clinical operations in January 2014.
How it started	Representatives of WWC approached the Voi District Hospital to find out how they can provide support as part of a corporate social responsibility initiative. Diagnostic services were identified as a weak point. The medical superintendent of the hospital connected WWC with Lancet Kenya, as they represent an international, experienced, and accredited company that is expected to deliver high quality services. The leasing and renovation arrangements were discussed between WWC and Lancet.

5 Subsidy to increase reach of basic HIV services Kampala, Uganda (ongoing)	
Purpose : To extend the reach of quality HIV testing services to clients of private clinics in Kampala	
Public Partner: Reach Out Clinic (government accredited, nonprofit specialized HIV facility)	Private Partners: 5 private clinics in Kampala
Roles	<ul style="list-style-type: none"> • Supply HIV test kits • Run laboratory (infrastructure, equipment, staff) for HIV monitoring tests • Data management
How it works	<ul style="list-style-type: none"> • Provision of infrastructure, management, staff to enable HIV testing at no cost to clients • Sample collection and referral for CD4 count and viral load tests • Monthly reports on HIV testing and treatment statistics
Contract	Instead of building additional clinics of their own, Reach Out contracts existing private clinics to provide HIV testing and patient management services, which includes sample collection for HIV monitoring. The clinics are obliged to meet quality and reporting standards, and in exchange are compensated by Reach Out for the provision of free services.
Results	Formal service contracts, renewable after one year
How it started	Increased uptake of HIV testing and treatment services by a segment of the population that previously preferred not to use the services in the specialized HIV clinics because of limited geographical accessibility of the Reach Out Clinics and/or fear of social stigma
Challenges, Lessons Learnt	The idea of starting a partnership with existing private clinics to reach more clients came about during discussions by the Reach Out Board, which was able to proceed to test the model. Once it was deemed successful, it was subsequently expanded to include more private clinics.
Enablers, Highlights	<ul style="list-style-type: none"> • The implementation of the partnership with the private facilities requires more staff time on the part of Reach Out for supportive supervision and administration than was originally anticipated. • The volume of tests performed by the private facilities is variable, and sometimes drops to lower than desirable levels. • A model of HIV Test-Kit subsidies to a large number of private clinics by the Uganda Health Marketing Group, a USAID-funded NGO, has similarities with the Reach Out model; however, instead of UHMG compensating clinics for the services they provide to the poor, this model allows private partners to charge a small administrative fee to patients. It would be desirable for the implementers of the two models to compare notes, learn from each other, and discuss how the “decentralization” model could be made independent of donor funding.
Enablers, Highlights	<ul style="list-style-type: none"> • Reach Out is technically not a full-fledged government facility; it is a NGO that has achieved “quasi-public” status through accreditation by the government. This independent status means that the administration does not have to go through the full government protocol for procurement and contracting, which made the initiation of contracts with private facilities possible. Similarly, UHMG acts as a kind of intermediary between government and private facilities for their program, which reduces bureaucratic barriers.

Challenges and Opportunities for Enhancing PPPs in East Africa

In this chapter, we first summarize the challenges preventing greater use of PPPs in the laboratory sector in East Africa as perceived by study participants. Next, we present general recommendations for how the challenges can be addressed in the future as well as concrete ideas for future PPPs to strengthen laboratory services in East Africa.

Key Challenges for Laboratory PPPs

The key informants interviewed by the study team were unified in their support for PPPs in the laboratory sector. They listed many benefits that derive from laboratory PPPs. They also identified a range of barriers inhibiting greater use of PPPs for improving access to good quality laboratory services in East Africa. Some of these barriers were common to all four countries in the study, while others were unique to particular countries. The left column in Table 4 shows the perceived benefits of PPPs, differentiating between views about the benefits accrued to the public sector and benefits enjoyed by the private sector. In the right column, challenges as perceived by insiders in both sectors are listed. The top right cell shows where representatives in the public sector see the biggest challenges, and the lower right box where study participants in the private sector see them. The key challenges are discussed below. Not all challenges apply to all countries. Moreover, challenges as perceived by study respondents may reflect reality to varying degrees.

Table 4: Perceived Benefits and Challenges in relation to PPPs for laboratory services

—	Benefits of PPPs as perceived by stakeholders in the public sector versus the private sector	Challenges impeding PPPs as perceived by stakeholders in the public sector versus the private sector
PUBLIC SECTOR	Greater efficiency and timeliness Increased reach of services Higher staff motivation and performance Improved equipment maintenance Better service quality and accreditation Reduced workload, de-congestion Increased financing	Lack of quality and skills in private sector Lack of understanding of PPP Lack of enabling legislation or policy Need to understand private sector Risk of monopoly Private sector not sharing information Lack of PPP specialists in MoH High charges in private sector
PRIVATE SECTOR	Increased patient volume & added revenue Improved infrastructure and equipment Improved relations with government Enhancement of human resources and skill Increased financing	Government mindset Government bureaucracy Risk of government default Restrictive market environment MoH not easily approachable Lack of private sector leadership Donor-funded programs are biased towards the public sector

Financial barriers

Lack of public funding or budget availability was seen as a core barrier to driving forward certain partnerships that had already started, such as the Central Public Health Laboratory (CPHL) – SIMS partnership in Uganda, the Aga Khan Mentorship program in Kenya, and the organization of meetings of the TB PPP Mix, also in Kenya. Many existing PPPs rely on donor financing and would be hard to sustain in the long-run unless governments in the region take over their financing. Respondents noted that presently ministries of health in the region may not be able to easily enter into partnerships that commit them financially for several years at a time due to procurement rules and budget constraints.

Administrative barriers

Respondents viewed complicated and time-consuming government processes for procurement and contracting as a deterrent to the development of new PPPs. The lengthy process of enacting an MoU or contract as well as the complexity of public procurement laws can discourage public sector officials from attempting PPPs. There is a feeling among private sector stakeholders in some of the study countries that there is no clearly defined, sufficiently empowered point of contact in the Ministry of Health who can be approached with new ideas and who will be in a position to take projects forward by making decisions. Additionally, lack of autonomy at the district- and facility-level to enter into formal contracts with private partners inhibits on-the-ground innovation and problem-solving.

While cumbersome government procedures have discouraged formal PPPs, they have at times had the unintended consequence of promoting informal collaborations between public and private actors. For example, complicated procurement laws lead to delays in the acquisition of consumables. The resulting stock outs at public facilities have worked in favor of informal referrals to the private sector. This could be an entry point to foster organized and formalized collaborations for referrals.

Mindset

In all four countries, respondents reported mistrust between technocrats in the public sector and entrepreneurs in the private sector, although to varying degrees. Some respondents noted that government officials often have the view that the private sector is too profit-oriented, is primarily interested in serving the rich, and might default on contractually agreed maximum price levels. On the private sector side, there is a lack of visionary and long-term thinking beyond institutional boundaries. Respondents noted that private business in the region often think in terms of day-to-day operations and short-term revenue. There is also mistrust within the private sector and, as a result, innovative ideas and experiences related to PPPs are treated as a business secret rather than being openly shared and discussed.

Limitations within donor programs

Respondents in Rwanda and Tanzania expressed the wish that the private sector ought to be taken into consideration by international partners as they design their interventions, so that subsidies aimed at serving the poor can be channeled through the private sector as well as the public sector. Donor-financed training interventions should be aimed at technicians in both sectors, especially in places where the most highly trained professionals are already in the public sector. Other respondents were critical of donors who favor equipment donations. Such arrangements invariably overlook critical issues such as equipment maintenance. In the absence of adequate support for the donated equipment, the machines stop operating after a few years, well short of their expected life span. It is common for the public sector to then approach a new donor for financing to purchase replacement equipment. Respondents familiar with placement contracts were quick to point out that donor funds can be more efficiently used for financing reagents within a placement model, instead of the conventional equipment donation approach. There was also a perception on the part of several private laboratory sector representatives that choices made by donors to support particular public or private entities were not transparent. In the absence of this transparency in donor-financed procurement, private sector players criticized donors for favoring higher-

cost service providers and/or setting up new laboratories instead of working with and building the capacity of existing private sector options.

Lack of knowledge

Lack of understanding of the tangible benefits of PPPs, what different models of PPPs look like, and how individuals can get involved in PPPs with their respective organizations were mentioned as important challenges, both on the public and private side. It was evident that there is limited information sharing about the successes and challenges of existing PPPs, mostly due to the lack of interaction between different stakeholders and the absence of communication platforms.

Recommendations

Study participants offered a range of suggestions for how PPPs for laboratory services could be enhanced in the East African region by EAPHLN in particular, but also by Ministries of Health, donors and other stakeholders in the laboratory sector. They are summarized below.

Translate and disseminate PPP Policy

Kenya, Tanzania and Uganda already have PPP-focused policy documents in place, and in Rwanda a general PPP law is being discussed in parliament. Respondents noted that the existence of an official strategic document or policy is, however, not sufficient. It needs to be “translated” into a short version with concrete instructions and recommendations. This more actionable version as well as the original policy should be broadly disseminated in both written form and in oral presentations to all those who can benefit from it. Moreover, a step-by-step instruction manual for private companies that outlines the definition and types of health PPPs, explains what is legally allowed, who needs to be contacted and how long it takes to go through contracting process etc. would be highly beneficial.

Engage key stakeholders within ministries of health

Despite a generally positive mindset and the institutionalization of a PPP focal person in the ministries of health in three of the four countries, study participants felt that constant and repeated engagement with high-level executives of the ministries is important and necessary to keep up the momentum and advocate for the realization of concrete, formal projects. EAPHLN could play this role, advocating to and working closely with key personnel with ministries of health for more PPPs in the laboratory sector. This could be further reinforced by dialogue and advocacy at the ECSA and EAC levels.

Facilitate dialogue between PPP visionaries and champions through a networking platform

The lack of a platform to discuss needs in the laboratory sector and exchange ideas on how PPPs could be designed to address those needs, and to ensure that representatives from the public and the private sectors interact and “compare notes” was seen as an impediment for the development of PPP projects. It was suggested that EAPHLN could take on an active role in the convening and facilitation of such a platform for laboratory partnerships, especially in Uganda and in Rwanda (together with RDB). Individuals in the different countries who are in similar professional positions could be proactively introduced to each other with the express goal to encourage them to exchange information and lessons learnt about PPPs they have been involved in. For example, laboratory managers in all countries face the challenge of having to structure placement contracts, and the laboratory manager of CHUK in Kigali might benefit by comparing his contract modalities with those of Mulago Referral Hospital and Kenyatta National Hospital. The same holds for ministry officials. To start, existing technical working groups could be used as a platform for discussing PPP-related issues.

Create an online repository of PPPs

A simple online repository, starting with the partnerships identified in this study, could be set up and used as a starting point to register all partnerships for laboratory services and their modalities, which can be made accessible to interested stakeholders throughout East Africa. EAPHLN could offer some kind of

incentive (for example, subsidized or free transaction advice, access to contract templates) to encourage people to register any new PPP with the repository.

Advocate for the formalization of existing informal relationships

Existing non formal relationships could be formalized, improved, documented, and eventually replicated. This could start with just one partnership in each country – perhaps with those individuals who are most open to it. Since certain administrative rules and a lack of policy might be a hindrance to the formalization of certain relationships, this may best work in conjunction with the engagement of key stakeholders in the ministry.

Encourage comprehensive needs assessments and the development of a PPP pipeline

In Kenya, a needs assessment and subsequent prioritization was the basis for the decision of the PPP team in the Ministry of Health to launch an Oxygen Plant PPP project. A similar exercise focused on laboratory services for each of the EAPHLN member countries would likely result in added momentum, and possibly the launch of laboratory-focused projects in each country within the next 2-3 years. The method for the exercise could be designed based on work already done in the PPP units in the ministries of health in Kenya, Uganda and Tanzania, and in collaboration with RDB in Rwanda.

Development of a PPP prototype model catalogue and contract templates

Deciding on a feasible and adequate PPP model for a specific purpose and writing a contract that correctly allocates obligations, benefits and risks to all parties is highly complex and requires the expertise not only of a transaction advisor, but also subject matter specialists, in this case the expertise of experienced laboratory professionals. A short catalogue of different PPP models that are particularly conducive for the laboratory sector, with a brief explanation of how each model works and its key benefits would address existing knowledge gaps. The catalogue would contain examples from the health sector globally, contact persons who can help for the replication of the model, and a description of elements and conditions to make it work. Additionally, a catalogue could provide standard, adjustable contract templates that public sector officials can easily modify, customize and use.

Implementation of model PPPs

EAPHLN could attempt to implement at least one model laboratory PPP, working in close collaboration with Ministries of Health and other key stakeholders. Ideally, a model PPP will include one or more public partners (for example a subnational referral hospital) and one or more private partners (for example, a private secondary hospital, a private laboratory etc.). “Bridging organizations” that transcend the public/private categories, such as professional associations and regulatory bodies, could be invited to the management board or steering committee. Such an experimental, model PPP would need to be monitored and documented, so that lessons can be learnt and the model improved and replicated.

Practitioner Training

General training workshops about PPP are not a new idea, and they have been held in East Africa before. However, as long as the training curriculum is purely theoretical, content is likely to be forgotten after a while, and becomes less relevant. Study participants in Uganda and Rwanda encouraged EAPHLN to organize hands-on training with practitioners that de-emphasizes theory, and instead focus on existing needs, practical prototype models, concrete experiences among peers, and guidance on how the models can be put into practice within the local setting. Such practical trainings could serve as a venue for greater interaction, exchange of ideas, and for the initiation of concrete laboratory PPPs.

Opportunities

The fact that there is a sizable number of ongoing relationships, informal or formal, presents a unique opportunity to leverage. Rather than starting from scratch, existing, naturally evolved partnerships can be

taken up, nurtured, and developed. Stakeholders from both the public and the private sector see a large potential in PPPs; this positive perception can be reinforced by re-iterating the potential impact and providing concrete examples. Below, we summarize ideas and opinions about new PPPs for laboratory services in East Africa.

Management Contracts

Leading private sector laboratories are highly interested to engage in this model. Private wings of public referral hospitals would be an ideal avenue for testing this. EAPHLN referral laboratories would be another good opportunity to test the outsourcing of management to existing private laboratories. Private sector stakeholders think that the initiative for such arrangements needs to come from the public sector.

Procurement and Resource Pooling

The advantages of pooling the procurement of consumables have been recognized by a range of actors. Partnerships that facilitate such pooling can therefore be very attractive to both public and private facilities. For example, the PPP TB Mix platform hosted by KAPTLD for greater public-private collaboration for TB service delivery in Kenya has been discussing pooled procurement for GeneXpert TB cartridges in Kenya. Moving this forward at an increased pace through targeted advocacy and support represents a quick win. Pooled testing can drastically reduce the price of laboratory tests in the private sector, an advantage which can directly benefit clients. Networking models that bring together smaller clinics and link them to referral laboratories, such as the UHMG and Reach Out models in Uganda, could be replicated in other countries.

Engaging the Private Sector to deliver subsidized services to the poor

Provision of government or donor subsidies is common for FBO health facilities in all countries of East Africa; however, it has not been conceptualized in terms of PPP. Formalized through contracts, such arrangements could be expanded to the private-for-profit sector. A key challenge is ensuring that public subsidies to the private facilities are used to cater to the poor, which could be done using demand-side financing mechanisms such as vouchers or insurance models that incorporate means-testing to target the subsidies to the poor. Private sector professionals especially in Uganda and Rwanda have a desire to participate in such arrangements, and see it as an opportunity to expand their services to those who cannot typically afford to purchase their services.

PPPs to facilitate referrals

It is not uncommon for public sector facilities to refer patients to large private laboratories when they have a stock-out or equipment breakdown, or specialized tests are necessary; respondents in Rwanda, for example, noted that this is not uncommon in their country. Formalization of such referrals from the public sector to the private sector could lead to greater efficiency, since the public facility can negotiate favorable prices from the private vendors for a certain volume of services. A formalization of the referral system would lead to referral of specimens rather than patients, which would be more convenient and cheaper for patients. PPPs for specimen transportation could further save costs and improve timeliness, both in the case of referrals from the public sector to the private sector, as well as between primary health centers in the public sector to public referral laboratories.

In Kenya and Rwanda, public-sector laboratories have attempted to market their specialized testing services to the private health facilities. Unless tests are part of a national disease control programs (for example, TB, HIV), public sector offer these specialized tests on a fee-for-service basis. For vertical programs where private sector facilities systematically refer samples to public laboratories, a PPP could be designed that formalizes private “sample collection services.” For other programs, PPP programs formalizing referrals between private facilities and highly specialized public laboratories could bring in added revenue to the public sector. CPHL in Uganda already has a very strong hub-and-spoke system for

sample referrals within the vertical HIV/AIDS program; this can be expanded relatively easily to include a broader set of tests and a larger proportion of private facilities.

Building relationships to enable better quality

Collaboration for external quality assessments (EQA) is seen as a natural and important form of partnership, which has not yet been leveraged fully. Public facilities could refer their samples to accredited private laboratories, and vice versa. For example, public facilities in Rwanda currently refer samples to facilities overseas and pay a fee for EQA services to a range of different referral labs. Partnerships with large private labs could drive down these costs. Most small private laboratories do not have any EQA, which results in reduced service quality. They would benefit from collaborating with public reference laboratories.

Mentorship and training

The already existing informal exchange of knowledge and expertise among laboratory professionals from the public and private sectors can be officially sanctioned and formalized, for example by allowing a certain number of hours for mutual information sharing and mentoring, and by matchmaking of peers. Additional training PPPs for transferring advanced skills either from abroad to laboratory technicians in the region or between sectors (in Kenya, this would be from the private sector to the public sector, while in Uganda the opposite may be needed) were also welcomed by respondents. For example, the mentorship program between Aga Khan Hospital and the Kenyan National Microbiology Reference Laboratory was deemed a success by both sides. It stopped after one year because funds could not be secured to continue the arrangement. The modality of this exchange could be reviewed with the initiators, and a modified version developed that requires minimal financial investment from the public side. Lancet Kenya is interested to provide short-term internship and mentorship placements within their laboratory for public sector staff, an opportunity that could be explored further.

Other opportunities

Study participants recommended to look beyond the healthcare environment when exploring potential partnerships and formal PPPs. Outsourcing of sample transportation services to private courier companies is the most typical example of partnership with a non-health company; the experience with that in Uganda is somewhat mixed, to the extent that CPHL preferred to build an internal courier service. Other typical third-party service providers and potential partners are technology companies for laboratory information systems and the transmission of results, including telepathology. Private training institutions are also potential partners, as the case of Mount Kenya University demonstrates. In Kenya there are two examples where private non-health companies have provided capital investment for the construction of health facilities on their premises, so that their employees and surrounding community can benefit from improved access to healthcare. The public sector could explore ways in which PPPs could be used to target services to the poor.

Conclusion

All four East African countries covered by this study -- Kenya, Tanzania, Rwanda and Uganda -- have vibrant private health sectors. Additionally, collaboration between public and private actors is on the rise in all four countries, with several of them having policy frameworks in place to guide the design and implementation of health PPPs. In the area of laboratory services, all four countries offered numerous examples of public private collaboration for improved delivery of services. A majority of these initiatives were informal or one-off arrangements. Consequently, they do not meet the definitional criteria for being called PPPs and do not reflect "best practice" principles for PPP implementation such as competitive tendering, transparency, etc.

Both public and stakeholders interviewed for this study expressed keen interest in both formalizing what have hitherto been informal and/or ad-hoc arrangements and initiating new PPPs in the health sector. Study participants identified a number of ways in which PPPs could enhance the delivery of laboratory services. For example, the pooled procurement of laboratory consumables could reduce the cost of services, the formalization of ad-hoc referral between public and private sector entities would lead to improved access to services, and the outsourcing of laboratory management in public facilities to private vendors would result in greater efficiency, lower costs, and improved quality.

The study participants identified a range of challenges that would need to be addressed to pave the way for more PPPs for laboratory services. Many of the existing collaborations are financed and supported by donors, while national and sub-national governments in the region are hesitant to commit public funds to PPPs. This is partly because government procedures for contracting are both time-consuming and onerous. Additionally, government bureaucrats continue to view PPPs with suspicion. EAPHLN, ECSA and other stakeholders interested in promoting PPPs in the region, both for laboratory services and health more broadly, can initiate a number of steps to address these challenges. First, they could put in place a platform or forum where different actors can share and discuss experience from existing public-private collaborations, which would in turn create greater awareness about and support for PPPs. Other measures include creating a practical manual with models of laboratory PPPs, contract templates, etc., and setting up prototype laboratory PPPs in each EAPHLN country.

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ANNEX A: Details for Identified Partnerships

Key to the table entries: See next page

Name	OBJECTIVES OF PPP		STRUCTURE					Geography
	Aspect to be Strengthened	Expected private sector benefits	Contractual Arrangement	Private Sector Role		Re-imbursement	Partners involved	
				Investment	Responsibility			
Placement Contracts (No 01 – 12)	EI	R, Rel	C	PI	S	TP	PuH, MoH, NRL, PrM	N, SN
13. Laboratory Management Voi (KE)	OS, EI	R	C	N	L	RS	PuH, PrL, DP	SN
14. EAPHLN Gulu Lacor (UG)	OS	CSR	(N)	N	L	TBD	FBO, MoH, DP	SN
15. EAPHLN planned PPP (KE)	OS	R	(N)		L	TBD	MoH, DP, PrL	SN
16. Rwinkwavu Hospital Referral System (RW)	OS	R	C	N	S	SF	PuH, PrL	SN
17. Nyahururu Hospital Referrals (KE)	OS	R, Rel	N	N	L	SF	PuH, PrL	SN
18. Nyeri Hospital Referrals (KE)	OS	R, Rel	N	N	L	SF	PuH, PrL	SN
19. Makueni Hospital Referrals (KE)	OS, I	R	N	N	L	SF	PuH, PrL	SN
20. ReachOut Network (UG)	OS, I	R	C	N	S	SF	MoH, PrC, DP	SN
21. UHMG Network (UG)	OS, I	M	N	EI	S	-	PrC, DP	N
22. Private HIV Reference Lab (UG)	OS, I	CSR, M	(N)	EI	L	-	NRL, DP, PrC	N
23. Partnerships w. FBO Facilities includes Laboratory Aspect (UG)	OS	CSR	MoU	EI	L	-	MoH, FBO	N
24. Schemes of Service w. FBO Facilities includes Laboratory Aspect (TZ)	OS	CSR	MoU	EI	S	-	MoH, FBO	N
25. Malaria Diagnostics Subsidy (TZ)	OS	M	N	EI	S	-	FBO, PrC, DP	N
26. Tuberculosis Reagent Subsidy (UG)	OS	M	MoU	EI	S	-	FBO, MoH, DP	N
27. TB subsidy to private sector KAPTLD (KE)	OS	PV	N	EI	S	-	FBO, MoH, DP	N
28. Post Office Sample Transport (UG)	OS	R	C	N	S	SF	NRL, PrNH	N

29. G4S Specimen Transport (KE)	OS	R	C	N	S	SF	PuH, MoH, PrNH	N
30. Centralized TB reagent supply (KE)	I, OS	S	(N)	PI	L	TBD	NRL, FBO, PrM	N
31. Mentorship/ Training, Aga Khan (KE)	HR	Rel	MoU	N	L	-	MoH, NRL, PrH	N
32. Informal Knowledge Exchange (KE)	HR	Rel	N	N	S	-	NRL, PrH	N
33. Private Sector Staff Training (RW)	HR	Rel	N	N	P	-	MoH, PrC	SN
34. Private Sector Staff Training (UG)	HR	Rel	N	N	P	-	PrC, PrL, SN, DP	SN
35. Thika Hospital & Mount Kenya University (KE)	HR, EI	SD	MoU	EI	L	IK	PuH, PrNH	SN
36. Regional Laboratory Modernization (TZ)	HR	CSR, Rel	MoU	PI	L	-	MoH, PrM	N

KEY	Aspect to be Strengthened	HR Human Resources EI Equipment, Infrastructure	OS Operational Services I Information
	Expected Private Sector Benefit	R Revenue PV Patient Volumes M Marketing (Patient attraction/Retention)	R Improved Relationship with Public Sector CSR Corporate social responsibility
	Contractual Arrangement	N None/verbal M MoU	C Formal Contract (N) No contract as yet
	Private Sector Role: Responsibility	L Leading/ Management Responsibility S Service Provision for a fee (outsourcing)	P Passive recipient of support
	Private Sector Role: Investment	PI PPP-related investment EI Provision of pre-existing infrastructure	N None
	Reimbursement	SF Service for a fee MF Management Fee	RS Revenue Share IK In-kind
	Partners Involved	MoH Ministry of Health (central) PuH Public National Referral Hospital PrH Private Referral Hospital PrC Private Primary Clinics DP Donor funded projects or NGOs NRL National Referral Laboratories	PrM Private Manufacturer/Distributor FBO FBO Secondary Hospitals PrL Private Standalone Laboratory PrNH Non-health private companies SN Sub-National Health Authorities
	Geographical Scope	N National	SN Subnational

ANNEX B: Qualitative Sample Composition

	Interviews			
	RW	UG	TZ	KE
Public Sector Representatives				
Senior MoH Officials	1	2	1	1
MoH Official in Charge of PPP	2	1	1	1
Head of regulatory authority in charge of medical laboratories and professionals	-	1	-	1
Senior hospital managers and laboratory in-charge for tertiary public hospitals	1	1	-	1
Managers of National Referral Laboratories	1	3	2	1
EAPHLN Country In-Charges	1	1	-	2
Private Sector Representatives				
CEO or Director(s) of leading private laboratories	2	1	-	1
Senior hospital managers and laboratory in-charge for large private hospitals	2	1	-	1
Chairpersons of relevant professional and business associations	2	2	3	1
Managers of NGO projects related to laboratory services,	-	2	-	0
Manufacturers/Distributors of Laboratory Equipment	1	-	-	2
Experts and Industry Stakeholders				
Individuals in charge of PPP at multilateral organizations and development partners	-	-	2	1
Individuals in charge of laboratory services in multilateral organizations	-	1	1	0
Officers in charge of programs to strengthen the private sector and/or PPPs	2	2	1	0
Medical Insurance Company management	1	1	-	1
Senior medical consultants (medical practitioners)	1	1	-	0
TOTAL	17	20	11	14

This document presents findings from a study conducted to identify and document ongoing public-private partnerships (PPPs) for improving access to quality laboratory services, especially for the poor, in the East Africa region. The East, Central, and Southern Africa Health Community (ECSA-HC) coordinated the study along with the partner states in the East African Community participating in the World Bank funded East Africa Public Health Laboratory Networking Project (EAPHLNP). The authors implemented key informant interviews in Kenya, Rwanda, Tanzania and Uganda, and analyzed the information gathered from the interviews which is presented in this report.

The study finds that while there are numerous examples of public-private collaboration across all four countries, the number of formal PPPs remains scarce. The most common form of PPP is placement, whereby privately owned laboratory equipment is leased by public facilities. Most other instances of collaboration between public and private partners, did not meet the formal definition of a PPP. Key stakeholders from both public and private institutions showed a keen interest in learning about and setting up more, diverse kinds of PPPs. The numerous informal and semi-formal arrangements that currently exist all represent opportunities for establishing formal PPPs in accordance with global best practices.

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