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PRIVATE SECTOR BRIEF
RWANDA HEALTH SYSTEM STRENGTHENING (RHSS) PROJECT

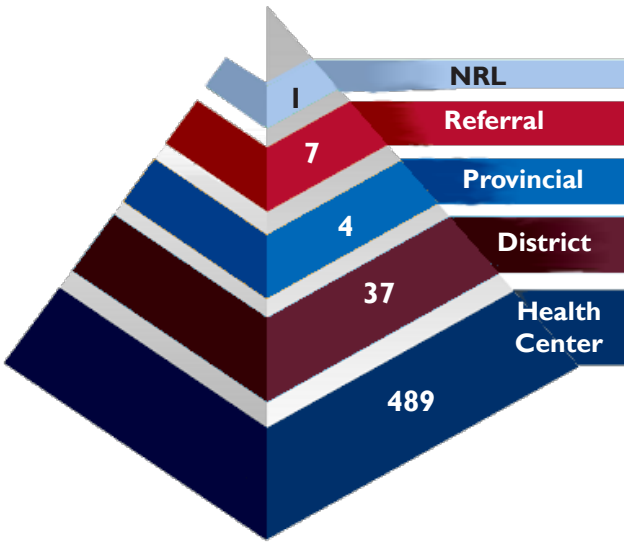
PRIVATE-SECTOR ENGAGEMENT FOR LABORATORY SERVICES IN RWANDA

This Private-Sector Brief examines the environment for laboratory services in Rwanda and discusses business models that have been tested in Africa, which may be applicable to the Rwandan context. These business models were identified through a literature review.

I. THE RWANDAN CONTEXT: LABORATORY SERVICES

Despite tremendous achievements in the last 15 years, the Rwandan health sector will continue to face challenges as the country moves to middle-income status. The demand for diagnostic services, such as specialized imaging or laboratory testing, will continue to grow and exceed the existing public infrastructure supply.

In Rwanda, the laboratory subsector consists of small public and private laboratories. There are 538 public laboratories distributed throughout the country, including remote areas. The National Reference Laboratory (NRL) oversees public and private laboratories and is at the top of the referral chain (see figure). The NRL performs laboratory tests that other laboratories in the country are not able to conduct.



There are two large, stand-alone, private laboratories: the Bio Medical Centre and the recently inaugurated Lancet Laboratory. The remaining private laboratories are small and typically embedded within private clinics.

Overall the laboratory subsector in Rwanda performs well in terms of accessibility, but it still faces several challenges[1], including:

- stockouts of reagents
- lack of specialized medical laboratory equipment and maintenance services
- long turnaround times on some specialized tests
- underutilized equipment[2]
- inadequate reimbursement from Rwanda's public health-insurance system

Among these challenges, the most critical are the lack of equipment (and resources) to provide specialized diagnostic services (which often have to be performed abroad[3]) and the stockout of reagents. The former is the result of the unavailability of equipment in the country and the lack of maintenance services; the latter is the result of procurement delays and a cumbersome procurement process.

Photo Credit: http://healthreportereastafrica.com/2016/03/03/

Other countries in the East African Community (EAC) share similar challenges. For instance, highly specialized laboratory tests in Uganda, such as histopathology, are referred out of the country by both the public and the private sector.[4] Burundi often refers patients to Rwanda for specialized laboratory testing.[5] And a common problem in all the EAC countries is the lack of laboratory equipment in public facilities, which creates delays in treatment.[6]

II. Summary of International Literature Review

A literature review of private-sector engagement in diagnostic services in Africa identified a number of strategies to engage the private sector to alleviate some of the aforementioned challenges. These strategies include referral arrangements to expand the availability of laboratory services for clients without requiring additional investments by a facility in equipment or other infrastructure, pooled procurement of laboratory consumables to negotiate discounted prices for quantities of reagents, outsourcing by the public sector to private providers to increase access to essential health services, and placement.[7] Placement is a common private-sector strategy used in the EAC, whereby a private manufacturer or distributor makes equipment available at no cost to the laboratory, trains staff to operate it, and provides free maintenance services.[8] In exchange, the public sector commits to the regular purchase of an agreed minimum volume of specific reagents from the same company. This model solves both the lack of equipment and diagnostic delays that affect all of the EAC countries. Placement currently occurs in Kenya, Uganda, Tanzania, and Rwanda (see text box).

Kenya is a pioneer of placement contracts in the region. Laboratory-equipment placement contracts 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 each of these private-sector strategies provides benefits, they also have some efficiency problems. Referral arrangements do not typically benefit low-income clients because some tests must be fully covered by a health-financing scheme or require the client to pay out of pocket for the service, which may be unaffordable. Pooled procurement requires consistent government coordination with limited resources. Outsourcing demands intense public-sector budget planning as in-kind subsidies to private providers (such as, free test kits or diagnostic reagents) are given so that private providers can deliver services on behalf of the public sector. On the other hand, private providers incur costs (for example, staff time and overhead) that are typically not reimbursed. Placement requires the public sector to accurately forecast the demand for reagents before initiating the agreement that can result in an over or under supply. Also the public sector is dependent on the private sector to provide maintenance.

The literature review identified two proven strategies that can solve the laboratory challenges in Rwanda. These strategies can create efficiencies and sustainability throughout the health sector. Each of these strategies (described briefly herein) meets the definition of a public-private partnership (PPP) whereby a formal, written, long-term, performance-based contract is developed, and a significant amount of risk and responsibility is transferred from the public to the private sector.[9]

1. **Purchasing Agreements or Service-Level Agreements.** Purchasing agreements are less formal than comprehensive, service-level agreements. In both models, a local government authority signs purchase agreements or simple service contracts with private-sector providers to deliver services in exchange for payment from the local government. These two models can be applicable to solve issues related to the lack of specialized testing, lack of maintenance services, and the stockout of reagents.

2. **Specimen Referral Enhanced Access.** This innovative solution was designed to respond to issues of non-standardized specimen-transport logistics, lack of laboratory personnel to transport specimens, lack of standard specimen containers, and long turnaround time (TAT) that hindered access to quality laboratory services. In 2007, this type of PPP was carried out in Ethiopia with great success. The average TAT was reduced from seven days (range, two to 14 days) to two days (range, one to three days) in Addis Ababa and from 10 days (range, six to 21 days) to five days (range, two to six days) in Amhara Region. This PPP established standardized, streamlined specimen logistics, using the Ethiopian Postal Service Enterprise to support a laboratory network in which 554 facilities referred specimens to 160 laboratories. The PPP supported procuring 400 standard specimen containers and the training of 586 laboratory personnel and 81 postal workers.[10]

Photo Credit: http://ozarch.com/portfolio/rwanda-biomedical-center/

III. Summary of Recommendations for Decision-Makers

Various forms of private-sector strategies exist today to strengthen the Rwandan laboratory subsector and increase service and quality. A full assessment of capabilities (private and public) should be performed to determine the right strategy that is suitable for the country. It is understandable that financial constraints may deter the public sector from entering into partnerships where it will be required to pay private institutions. Some strategies, however, such as PPPs, can 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.

1 Sources: National Reference Laboratory; and Health Sector Strategic Plan (HSSP) III July 2012–June 2018.
2 The Rwanda Biomedical Center indicated that the Rwanda Social Security Board owns an idle facility with brand new specialized lab equipment.
3 As stated in the HSSP III "the performance of specialized laboratory tests at the central level has been suboptimal, often with lack of appropriate diagnostic equipment, especially for outbreak investigations and testing for drug resistant pathogens."
4 Ravishankar and Lehmann. (September 2015). Opportunities Abound: Public Private Partnerships For Laboratory Services In East Africa. World Bank.
5 Source: Rwanda Biomedical Center.
6 Ibid. Footnote 4.
7 USAID. SHOPS 2014. Public-Private Partnership to Expand the Reach of Medical Laboratory Services.
8 Idem. Page 2. Footnote 4.
9 Key characteristics of successful PPPs include optimal risk transfer, long-term contract, performance-based specifications and contractual incentives, competitive selection process, and private-sector accountability and high level of public service monitoring.
10 Kebede et Al. 2016. Improved Specimen-Referral System and Increased Access to Quality Laboratory Services in Ethiopia: The Role of the Public-Private Partnership. Oxford University Press.

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