OPPORTUNITIES FOR IMPROVING EFFICIENCY OF HIV AND AIDS SPENDING IN THE DOMINICAN REPUBLIC

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The Health Finance and Governance Project
USAID's Health Finance and Governance (HFG) project helps to improve health in developing countries by expanding people's access to health care. Led by Abt Associates, the project team works with partner countries to increase their domestic resources for health, manage those precious resources more effectively, and make wise purchasing decisions. The five-year, $209 million global project is intended to increase the use of both primary and priority health services, including HIV/AIDS, tuberculosis, malaria, and reproductive health services. Designed to fundamentally strengthen health systems, HFG supports countries as they navigate the economic transitions needed to achieve universal health care.

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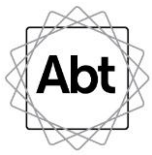

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CONTENTS

List of Figures

ACRONYMS

ARV	Antiretroviral
ART	Antiretroviral therapy
CONAVIHSIDA	National Council for HIV and AIDS
DR	Dominican Republic
GDP	Gross domestic product
GODR	Government of the Dominican Republic
HFG	Health Finance and Governance project
HRH	Human Resources for Health
LNSPDD	National Public Health Laboratory
MSM	Men who have sex with men
MSP	Ministry of Public Health
PLHIV	People living with HIV
NCD	Non-communicable disease
NGO	Non-governmental organizations
SNS	National Health Service
SAI	Comprehensive Care Services for HIV
SENASA	National Health Insurance Agency
SUGEMI	Unified Pharmaceutical System
USAID	United States Agency for International Development
VL	Viral load
WISN	Workload Indicators of Staffing Need

1. INTRODUCTION

Since 2001, the Dominican Republic (DR) has been implementing major health reforms meant to guarantee universal health coverage to all Dominicans, protect the poor from catastrophic expenditures, and improve the efficiency and quality of health care in the country. As part of these reforms, the DR established a public health insurance system that guarantees an explicit package of essential services to the enrolled population and developed a National Health Service (SNS) that oversees public service provision. The public health insurance system consists of two regimes: a "subsidized regime" that covers low-income residents and is administered by a public insurer, the National Health Insurance Agency (SENASA), and a "contributive regime" that covers formal sector workers and their families and is administered by private risk administrators (ARS) and SENASA.

Health reforms have affected how the country responds to HIV and AIDS. The response is coordinated by the National Council for HIV and AIDS (CONAVIHSIDA) and is supported by many public and non-governmental organizations from various sectors. The majority of HIV and AIDS treatment is provided by specialized Comprehensive Care Services (SAIs) located around the country in public hospitals or run by non-governmental organizations (NGOs).

The response to HIV and AIDS is financed by various sources, including the Government of the Dominican Republic (GODR), households paying out-of-pocket, international donors, and private sector enterprises with corporate social responsibility programs. While donors provided nearly half (47 percent) of total expenditure on HIV and AIDS (Valladares Cardona and Valdez 2016), GODR has taken steps to increase its financing commitment to HIV and is working to develop a strategy for ensuring that the country's response to HIV/AIDS is sustained. For example, as of 2015 GODR finances 100 percent of HIV-related commodities, which were heavily reliant on donor funding as late as 2013 (Valdez and Barillas 2015). This transition reflects the increasing priority that the government places on health and HIV—something also reflected in the fact that health accounted for 17 percent of total government expenditure in 2014 (World Bank 2016).

Just as GODR increases its commitment to HIV, however, the HIV program's costs are escalating and donors are reducing their commitments relative to domestic funding. Costs are rising in part because recently-adopted guidelines on HIV care and treatment increase the number of patients who should receive ARV drugs (Panel on Antiretroviral Guidelines for Adults and Adolescents 2016). Also, while the DR has a concentrated epidemic and among the lowest prevalence levels in the Caribbean region (0.8 percent prevalence in 2013[1]), the country has the second-highest number of people living with HIV (PLHIV), behind neighboring Haiti. Further, while the DR has achieved 39% coverage of antiretroviral therapy (ART) for

Box 1. UNAIDS' 90-90-90 Target

"By 2020, 90% of all people living with HIV will know their HIV status. By 2020, 90% of all people with diagnosed HIV infection will receive sustained ART. By 2020, 90% of all people receiving antiretroviral therapy will have viral suppression."

UNAIDS 2014

[1] DHS. (2013). República Dominicana: Encuesta Demográfica y de Salud. Retrieved from: http://dhsprogram.com/pubs/pdf/FR292/FR292.pdf

all PLHIV,[2] disparities persist between the general population and vulnerable groups including migrants and men who have sex with men, and much work remains to achieve the United Nation's 90-90-90 targets (Box 1).

Other factors also play a role in the rising costs of HIV care and treatment in the DR. Inflation in the costs of medical goods and services is increasing in the DR and globally (Hewitt 2016). Moreover, the largest contributor to medical inflation (Hewitt 2016) is care for non-communicable diseases (NCDs), which accounted for 64 percent of total disability-adjusted life years in the DR in 2015 (IHME 2016). This percentage is likely to rise as life expectancy increases and the population grows older (Euromonitor 2013). These factors are causing health and HIV care costs in the DR to increase, which raises questions about the country's capacity to sustain current levels of HIV financing.

In this context, GODR is looking for ways to increase fiscal space for HIV spending by mobilizing additional domestic resources and by improving efficiency. This brief summarizes the findings of the United States Agency for International Development (USAID)'s Health Finance and Governance project (HFG) in assessing the major sources of inefficiency in the DR's HIV programs, and how to address them. The brief includes some recommendations for improving quality of and equitable access to HIV service delivery. Their inclusion is based on authors' assumption that the HIV program will only achieve optimal efficiency in its spending with sufficient penetration of effective preventive and treatment interventions among high-risk groups. Section 2 of this brief reviews the methodology used, and Section 3 presents sources of inefficiency and proposes potential solutions for improving the efficiency of the DR's HIV spending to improve the program's sustainability. Section 4 draws conclusions about the implication of these findings for Dominican health system stakeholders.

[2] The World Bank. (2016). World Development Indicators. Retrieved from: http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators#

2. METHODS

2.1 Data Collection and Analysis

To understand the sources of inefficiencies in the DR, HFG reviewed reports and documents from international agencies, government, and independent researchers. HFG also conducted key informant interviews with 25 individuals from 16 organizations identified by partners as having local knowledge and representing a wide range of perspectives on the HIV response. They represent government agencies, civil society organizations, and international agencies, including the Superintendence of Health and Labor Risks (SISALRIL), Ministry of Public Health (MSP), and *Amigos Siempre Amigos*, among others. HFG conducted the interviews between October 31 and November 4, 2016 as part of a scoping visit to understand the political and economic context for financing the HIV response in the DR. HFG drew on its research in allocative and technical efficiency at the global level to identify interventions that have proved successful in other locations and seemed appropriate to the DR.

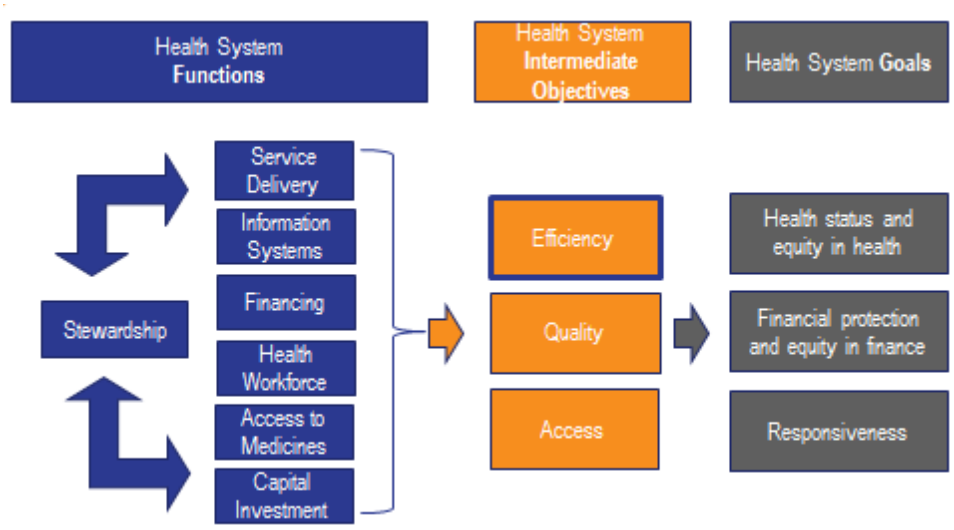
2.2 Definitions of Efficiency[3]

Policy research draws on universal concepts of efficiency and adapts them to the health system. One concept is efficiency in selecting what to purchase, and distributing resources in a way that maximizes population health and aligns with what is considered fair and equitable. This type of efficiency is sometimes called "allocative efficiency" and summarized as "doing the right things" (Chisholm and Evans 2010). Another concept is efficiency in the process of producing those things – that is, producing the most health outputs (e.g., number of services delivered) or health outcomes (e.g., lowest mortality rates) for a given set of inputs (e.g., human, financial, and physical capital), including by selecting the inputs used to deliver services to minimize costs, all with awareness of service quality (Heredia-Ortiz 2013). This type of efficiency is sometimes called "technical efficiency" and summarized as "doing things right" (Chisholm and Evans 2010).

The framework in Figure 1 illustrates how improving allocative and technical efficiency can play a role in connecting health system interventions or reforms with the overall goals of the health system. These goals include good health status for all, including the poor; good financial protection for all, including the poor; and responsiveness of the health care system to the legitimate expectations of patients. Some reforms directly improve efficiency, which in turn contributes to achieving health system goals by increasing the value of health system investments.

[3] This section was adapted from a previously published report by authors (Nakhimovsky et al. 2016).

Figure 1. Improving Efficiency to Achieve Health System Goals



Source: Authors, adapted from Kutzin (2013) and WHO (2000)

3. OPPORTUNITIES TO ADDRESS INEFFICIENCIES IN CURRENT HIV AND AIDS SPENDING

3.1 Greater Coordination with Private Actors to Ensure Access to Needed HIV Services

3.1.1 Sources of Inefficiency

Currently, GODR's National Strategic Health Plan indicates that insufficient coordination between NGOs and public sector actors has resulted in the duplication of HIV treatment and prevention services in some communities and shortages of services in other communities (PEN 2015-2018). Even in areas where services are available, discrimination and stigma may be preventing PLHIV from accessing services or remaining on treatment. Barriers to care due to discrimination are especially acute for key populations. For example, a 2012 survey found that nearly 17 percent of gay, transsexual, and men who have sex with men (MSM) in Santo Domingo reported experiencing discrimination in health facilities, while 21 percent and 49 percent experienced discrimination in health facilities in La Altagracia province and Santiago, respectively (CONAVIHSIDA et al. 2012).

Establishing formal purchasing relationships between with NGOs could create opportunities for the DR to harness existing capacity in the HIV response and reduce barriers to access due to stigma, thus improving health outcomes with the same level of inputs. Formal relationships with NGOs would be particularly beneficial in regions where the public sector has less of a footprint, or for specific types of services (e.g. certain lab test capabilities, see below) (SHOPS Project 2012). Reducing barriers to access through relationships with NGOs would be most effective with key populations—stakeholders suggest that primary health care clinics run by NGOs may be more welcoming to key populations. Data support their statements: a forthcoming study found that 25 percent of health personal surveyed in the public sector were afraid to touch a key population patient compared to 6 percent in NGOs, 25 percent of those working in public facilities had heard someone in the facility speaking disrespectfully to someone from a key population, compared to 3 percent in NGOs, and 97 percent of public health facility personnel surveyed responded that they prefer to not provide services to someone they consider was involved in immoral activities, while only 1 percent of those working in NGOs answered the same way (Valdez et al. 2017).

In addition to leveraging existing capacity and reducing barriers to access, international literature points to several ways in which establishing contracts in particular can help improve efficiency: i) the process of defining the purpose of services delivered can help stakeholders align resources with priorities; ii) greater flexibility among non-governmental actors can avoid bureaucratic delays; and iii) managerial autonomy of non-governmental providers allows them to respond adeptly to local needs (World Bank 2008).

According to key informants, stakeholders in the DR, including SENASA and private risk administrators, are well aware of this opportunity, and have explored the possibility of contracting NGOs to deliver HIV and AIDS services as part of government programs. Moreover, the General Health Law explicitly allows public actors to establish formal contracts with NGOs (General Health Law 42-01, Chapter II,

article 6),4 and MSP has some prior experience contracting with the NGO Profamilia to process CD4 count samples. Unfortunately, public sector actors currently lack sufficient mechanisms to initiate or manage purchasing relationships with NGOs. NGOs may also require some additional capacity building, product development, and better costing and pricing structures to handle contractual agreements.

3.1.2 Opportunities

Building sufficient capacity for formal or contractual alliances between the public health network and NGOs to provide HIV and AIDS services is possible in the DR, though it will take long-term investment and interest. Such capacity for initiating and managing formal alliances with NGOs for HIV service delivery can be done by the SNS or directly through nine Regional Health Services. Initial steps that government actors can take to advance towards this goal include:

1. **Create a focal point and/or technical working group** within the SNS to spearhead dialogue with NGOs on establishing purchasing relationships.
2. **Commission an options paper on public-private purchasing designs** that might make the most sense for the DR and discuss with a wide range of stakeholders.
3. **Review examples from Latin America and the Caribbean of similar purchasing relationships** to identify lessons learned and best practice. For example, contracting arrangements in Bolivia and Guatemala have both achieved improvements in service coverage, although they have also faced some challenges in implementation (World Bank 2008).
4. **Develop an action plan**, including technical and financial resource needs, timeline, and roles and responsibilities for further developing a context-specific design for contracting HIV services (potentially among others) that will yield improvements in service coverage, service quality, and efficiency of spending.

3.2 Improving Alignment between Need and Allocation of Human Resources for Health

3.2.1 Sources of Inefficiency

GODR is engaged in a wide range of reforms to its human resources for health (HRH) policy platform. In 2013, GODR specified five key HRH commitments, including strengthening laws, policy monitoring framework, and oversight mechanisms within the government to provide better stewardship over HRH issues. It also includes creating additional opportunities for training and building the skills of the clinical health workforce and of staff involved in HRH policy, planning and management at all levels of government (Brito-Anderson 2015).

A core component of these commitments is the goal of improving productivity of the workforce, which has been a challenge. Many health workers, who feel underpaid, work few hours in the public sector in the mornings before switching to private practice in the afternoon. This phenomenon is particularly detrimental to the HIV response because it limits access to key populations, who may not be able to access services at public facilities during the narrow window when they are open. Instead, some receive the care they need from NGOs, which are open much longer despite the fact that their workers are paid similar incomes.

[4] Ley General de Salud 42-01 (2001). Santo Domingo, República Dominicana.

To address these issues, the Dominican Congress passed the Health Career Law in 2014. This law "serves as a legal, regulatory, and administrative framework detailing the employment relationship between the government and health workers, and classifying and ranking salary and wage structure and job functions. As such, the Law provides a solid foundation and increased authority for the Ministry [of Public Health] to press for needed policy changes and resource allocations to enable a more effective management system" (Brito-Anderson 2015). Following this law, MSP drafted an action plan and established working groups to implement it. Separately, it has developed a manual for recruitment, selection, and hiring of health workers in the public health system (Brito-Anderson 2015).

Despite these considerable accomplishments, key informants indicated that this policy level work has yet to affect real change for public health workers providing HIV services. Additional steps are needed to build on the passage of the Health Career Law.

3.2.2 Opportunities:

- **Keep health facilities open longer**: The GODR could consider conducting an in-depth assessment of health worker motivations and preferences and use this information to design an appropriate incentive package that would motivate health workers to work longer hours in public facilities and remain engaged throughout the work day. This would allow PLHIV to receive quality care at a time that was convenient to them. One such tool for assessing health worker motivations is the Rapid Retention Survey Toolkit developed by USAID's CapacityPlus Project (Jaskiewicz and Deussom 2015).
- **Consider initiating a pay-for-performance incentive program for delivering quality HIV prevention and treatment:** The World Bank and Inter-American Development Bank have supported the GODR in implementing a pay-for-performance project among Regional Health Services of the SNS. This project gives an additional bonus to health facilities that achieve certain indicators related to the quality and timeliness of chronic care services at the primary care level. While the project faced challenges in using the clinical management system effectively, target indicators have improved since implementation (World Bank 2012). Given the large scope for learning between HIV and chronic disease care platforms (Rabkin and Sadr 2011), HIV stakeholders can learn from this project's experience and implement a similar program for public providers, or units within providers, who provide HIV prevention, care and treatment services.

3.3 Better Adherence to Treatment Guidelines for HIV Drugs

3.3.1 Sources of Inefficiency

New HIV treatment guidelines were approved in 2015 and 2016. They include eleven adult and two pediatric treatment regimens. A 2016 study, however, found that many providers do not prescribe the ART regime specified by the guidelines or do not follow proper protocol for moving a patient to second- and third-line regimes. For example, 28 percent of providers sampled did not select the first-line regime called for by the guidelines, 38 percent did not adhere to criteria for advancing a patient to a second-line regime, and only 28 percent prescribed the correct third line regime (Valdez and Barillas 2016). A review of patient files found that nearly one third of patients (31 percent) were not prescribed the drugs stipulated in the guidelines and five percent of new patients were immediately given third line drugs. The study estimated that $DOP 126,000 (US$2,704) was wasted per patient due to noncompliance with the guidelines (Valdez and Barillas 2016).

This study also considered the reasons why providers did or did not adhere to the guidelines. Most providers (80 percent) had attended training on ART treatment within the last year. This finding indicates there is a gap in coverage of training, and also that the trainings are insufficient in their current form to promote effective use of the guidelines (Valdez and Barillas 2016). Instead of using the Dominican Republic's national guidelines, 42 percent of sampled physicians either consulted with colleagues or referred to international guidelines. This finding indicates either a lack of awareness, or a preference for other types of guidance. Finally, the study also found that more than 50 percent reported that the no supervision had occurred within the last year, which points to a clear gap in government oversight of ARV prescription practices (Valdez and Barillas 2016).

3.3.2 Opportunities

- **Establish mechanisms for monitoring and enforcement**: First, GODR should initiate routine supervision visits to SAI to monitor adherence to ARV guidelines. Additionally, GODR can consider building a system for monitoring the use of ARVs that includes an early alert for irrational prescription practices (Valdez and Barillas 2016). Such monitoring and supervision practices can be accompanied by incentive programs. For example, GODR could establish sanctions for those who do not comply with the guidelines. In Brazil, reimbursement to patients for some high-cost drugs through the National Health System (SUS) occurs only if the prescription meets national guidelines (Costa et al. 2016). Similarly, Kyrgyz Republic established a program which paid outpatient drug costs only when their use aligned with standard treatment guidelines (Kadyrova et al. 2004 in MSH 2012).

Beyond supervision, evidence indicates that a multi-pronged approach is more likely to achieve desired changes in provider behavior (Costa et al. 2016). Some options for GODR to consider include the following:

- **Expand training programs for prescribers**: Consider revising and expanding the reach of the educational tools currently used to promote correct prescription with adherence to the national therapeutic guidelines (Valdez and Barillas 2016). GODR can also consider initiating "educational outreach visits," whereby trained professionals visit one-on-one with other providers to promote adherence to the guidelines. This mode of dissemination has been tried in Brazil for other types of prescriptions in ambulatory care with some success (Valdez and Barillas 2016).
- **Create additional dissemination materials:** providers surveyed in the study above supported the idea of disseminating "visual instructional materials"—for example, desktop brochures and posters—to clearly communicate the national guidelines for ART treatment (Valdez and Barillas 2016).
- **Consider a review of the process for guideline development:** In some countries, providers do not adhere to national guidelines in part because they do not trust them, or because they are overwhelmed by guidelines. Moreover, evidence indicates that guidelines developed with participation from providers also gain more acceptance among them (Costa et al. 2016). GODR can consider ways to increase the participation and feedback loops during the next round of guideline development to encourage more ideas and also explain and justify the process for the guideline's development, building trust and awareness among target audiences.

3.4 Improving Pharmaceutical Supply Management Practices for Storage and Purchase of Medicines

3.4.1 Sources of Inefficiency

Since 2004, CONAVIHSIDA has contracted with a private company to store HIV commodities including ARVs and HIV diagnostic supplies. This system is separate from that used to store all other drugs and commodities for the public health system, whereby PROMESE/CAL, a decentralized entity created by presidential decree, serves as the logistics operator for the public health sector. The space available in PROMESE/CAL is underutilized, while private warehousing for HIV commodities costs an additional US$25,000 per month (SNS et al. 2016). In this way, the fragmentation between the HIV response and the rest of the public health system has created inefficient duplication of functions and excess expenditure.

At the same time, SNS forecasts that the number and expected treatment costs for PLHIV on third-line ARVs is expected to rise in the coming years. Between 2015 and 2016, the number of PLHIV on third-line ARVs already rose from 15 to 91 individuals. This increase highlights the importance of identifying ways to obtain ARVs at a lower price, and to promote efficient prescription practices (see Section 3.3).

3.4.2 Opportunities

- **Integration of HIV commodity procurement within the public health system:** GODR should consider transferring the management of HIV commodities to PROMESE/CAL**.** Concentrating the functions of procurement, storage, and distribution in PROMESE/CAL and the Regional Health Services (SRS) will reduce waste and contribute cost savings for GODR. Beyond the procurement process, the MSP and SNS should consider a broader integration of HIV services within the public health system. Such integration will facilitate integration of procurement management, and also open opportunities to capture other cost savings.
- **Introduce cost-effective ARV drug combinations in guidelines and a new international procurement mechanism**: GODR can identify alternative drugs for third-line treatment through a cost-effectiveness analysis. The DR could also explore new procurement mechanisms for third-line medicines, such as the joint purchasing of drugs through the Council of Ministers of Health from Central America and Dominican Republic (COMISCA). Joint purchasing of ARVs with other countries in the region would allow the DR to obtain drugs at lower prices due to the increased volume and bargaining power of a regional purchaser.
- **Greater investment in prevention:** Implementing new models of HIV care and prevention may increase testing and treatment adherence of key populations, thus limiting new cases and the need for second- and third-line drugs and reducing the resources needed for ART.

3.5 Increasing Capacity to Process HIV Diagnostic and Clinical Lab Tests

3.5.1 Sources of Inefficiency

There are significant opportunities for reducing inefficiency in the processes for **HIV diagnostic testing**. Technology for rapid testing and diagnosis of PLHIV has given low and middle income countries a cost-effective intervention that has dramatically increased the effectiveness and penetration of HIV program outreach (Reid et al. 2013). However, in the DR, use of rapid testing technology has remained low. In 2015, the SNS strategic information system and the Unified Pharmaceutical System (SUGEMI) reported that out of 750,000 HIV rapid tests that were programmed and procured, only 502,000 (67 percent) were actually consumed by the public health network (SNS 2015).

Insufficient penetration of rapid testing in DR is a barrier to identifying new cases and linking patients to treatment. One reason for this problem is insufficient investment by government in outreach to key populations with rapid tests. In fact, only international projects are currently conducting outreach and targeted testing in key populations. However, national stakeholders expressed in interviews that these campaigns are typically short-term, while identifying and reaching key populations requires a more sustained effort.

An insufficient supply of health workers authorized to administer rapid tests is another reason for underutilization of rapid tests. Currently, GODR regulation stipulates that only lab specialists, who are not positioned at primary care centers, are authorized to draw blood for HIV testing. In fact, studies from Zimbabwe and Botswana indicate that rapid testing can be as effective and safe when administered by trained nurses and lay counsellors. Those countries revised their regulations accordingly (Alemnji et al. 2011). The Dominican health system in general is over-reliant on doctors and other specialized health care providers to complete tasks which could be performed less expensively by nurses and nurse assistants. In 2013 the DR had 5.3 doctors for every nurse and 1.2 doctors for every nurse and nurse assistant (PAHO and MSP 2014). Meanwhile, the country aims to have four nurses for every doctor (Evangelista 2013).

These inefficiencies result in insufficient penetration of rapid testing. They also create delays in referring HIV positive people to counselling and treatment programs. Referral delays increase the chances that an HIV-positive person will be lost to follow-up before being linked to treatment, and increase the chances an HIV-positive person will infect someone else before getting on treatment (Reid et al. 2013). Both of these situations reduce the value of the investment in rapid testing and increase the costs of responding to the epidemic due to increased treatment costs.

There are also inefficiencies in the processes for **HIV clinical monitoring tests** – specifically, CD4 and viral load (VL) tests. Currently, the DR's National Public Health Laboratory (LNSPDD) processes 71 percent of all CD4 tests and 100 percent of VL tests (George et al. 2015). This concentration puts a heavy burden on the equipment and health workers at this lab. It also likely reduces timeliness of the results, which, for CD4 tests, is lower for LNSPDD than for the NGO that processes the remaining 29 percent of the samples (average 20 vs 11 days) (George et al. 2015). Other factors likely contributing to low turnaround times include insufficient clarity in roles and responsibilities and insufficient monitoring of adherence to schedules. Additionally, poor compliance with safety standards negatively impacts the timeliness and quality of SNS' clinical lab testing (George et al. 2015).

The problems with clinical monitoring tests discussed in this section can create waste. CD4 and VL test results are essential to establishing the correct ART treatment for patients. Delays can result in deviation from national guidelines, which will likely lead to higher ART drug costs. Insufficient adherence to safety protocols can result in medical errors that incur additional expenses.

3.5.2 Opportunities:

- **Revise regulations to allow providers at the primary care level to administer rapid tests:** Sufficient evidence globally indicates that rapid tests for HIV diagnosis do not have to be conducted by lab specialists, but can be provided by other types of health workers at the primary care level. GODR should follow this best practice to reap the most benefit from the rapid testing technology, improving identification rates of HIV positive individuals and reducing loss-to-follow up. This step will also require establishing supervision and training programs to ensure quality in test administration (WHO 2012).
- **Decentralize capacity for processing CD4 and VL test samples:** As George et al (2015) recommend, establishing "hubs" for processing samples below the nine regional centers which currently manage testing can reduce lab result turnaround time and the burden on the LNSPDD.
- **Integrate HIV diagnostic and clinical testing with other vertical programs, or within the public health system:** George et al. (2015) recommend integrating HIV with tuberculosis testing referral systems to improve efficiency in both programs. Alemnji et al. 2011 notes that in some countries, health programs have integrated rapid testing for HIV with testing for pregnancy, syphilis and malaria, making the cost-effective intervention even more cost-effective. GODR can consider whether this approach would help achieve mutual goals across health areas. Given the high burden of NCDs in the DR, further integration of HIV testing into the public health system could create larger gains in efficiency by integrating HIV testing with other testing services across the health system, including those for NCD care.
- **Improve clarity and monitoring of procedures for testing samples and returning results:** After decentralization, this step can reduce turnaround time between administering the test and reporting results, which can reduce loss to follow-up and improve adherence to cost-effective treatments included in national guidelines. Such actions can also reduce unnecessary medical costs that result from poor adherence to safety guidelines.

4. CONCLUSIONS

The GODR has demonstrated a clear commitment to financing the country's HIV response. However, rising costs, unpredictable donor financing, and the imperative of increasing ART coverage threaten the long-term sustainability of HIV programs. If domestic resources allocated to HIV care and treatment do not keep pace with resource needs, the gains in the HIV response could be lost and lead to an increase in infection rates among young people in DR. In combination with efforts to raise new sources of domestic financing to cover costs, GODR also needs to identify areas of waste in its HIV programmatic spending and pursue strategies to improve efficiency. This brief highlights some key inefficiencies in the GODR's spending on HIV and suggests ideas for strategies to reduce waste and promote efficient and effective programming.

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