ALTERNATIVE APPROACHES FOR SUSTAINING THE HIV AND AIDS RESPONSE IN DOMINICAN REPUBLIC

February 2018
This document was produced for review by the United States Agency for International Development. It was prepared by Jonathan Cali, Claudia Valdez, and Nassim Díaz for the Health Finance and Governance Project.

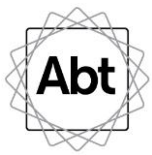
The Health Finance and Governance Project
USAID's Health Finance and Governance (HFG) project helps to improve health in developing countries by expanding people's access to health care. Led by Abt Associates, the project team works with partner countries to increase their domestic resources for health, manage those precious resources more effectively, and make wise purchasing decisions. The six-year, $200 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.

February 2018

Cooperative Agreement No.: AID-OAA-A-12-00080

Presented to: Scott Stewart, AOR
Office of Health Systems
Bureau for Global Health

Recommended Citation: Cali, Jonathan, Claudia Valdez, and Nassim Díaz. February 2018. *Alternative approaches for sustaining the HIV and AIDS response in Dominican Republic.* Rockville, MD: Health Finance and Governance Project, Abt Associates.



Abt Associates Inc. | 6130 Executive Blvd | Rockville, Maryland 20852
T: 301.347.5000 | F: 301.652.3916 | www.abtassociates.com

Avenir Health | Broad Branch Associates | Development Alternatives Inc. (DAI) |
| Johns Hopkins Bloomberg School of Public Health (JHSPH) | Results for Development Institute (R4D)
| RTI International | Training Resources Group, Inc. (TRG)

ALTERNATIVE APPROACHES FOR SUSTAINING THE HIV AND AIDS RESPONSE IN DOMINICAN REPUBLIC

CONTENTS

List of Tables

List of Figures

LIST OF ACRONYMS

AIDS	acquired immune deficiency syndrome
ARS	risk administrators
ART	antiretroviral therapy
ARV	antiretroviral medications
CNSS	National Social Security Council
CONAVIHSIDA	National HIV and AIDS Council
DIDA	Directorate of Information and Defense of Members
DIGECITSS	General Directorate for the Control of Sexually Transmitted Infections and AIDS
DIGEPRES	Directorate General of the Budget
GODR	Government of Dominican Republic
HFG	Health Finance and Governance Project
HIV	human immunodeficiency virus
LNSPDD	National Public Health Laboratory
MAP	Ministry of Public Administration
MOF	Ministry of Finance
MSP	Ministry of Public Health
NGO	non-governmental organization
PEN	National Strategic Plan for HIV and AIDS
PEPFAR	The U.S. President's Emergency Plan For AIDS Relief
PLWH	people living with HIV
PrEP	pre-exposure prophylaxis
SAI	Comprehensive Care Service sites
SENASA	National Health Insurance
SFS	Family Health Insurance Scheme
SIAPS	Systems for Improved Access to Pharmaceuticals and Services
SISALRIL	Superintendence of Health and Labor Risks
SNS	National Health Service
SRS	Regional Health Services
TB	tuberculosis

UNAIDS	Joint United Nations Programme on HIV and AIDS
UNAP	primary care unit
USAID	United States Agency for International Development
VL	viral load

1. INTRODUCTION

Following concerted efforts by the Government of Dominican Republic (GODR), civil society, and other partners, Dominican Republic has demonstrated notable advances in stabilizing its HIV epidemic. Between 2014 and 2016, the number of new infections decreased from 2,700 to 2,500 (UNAIDS 2017). Between 2015 and 2016, the percentage of people living with HIV (PLWH) knowing their status increased from 62 to 69. The country has not, however, achieved a corresponding increase in treatment coverage. The percentage of diagnosed PLWH in treatment declined from 75 to 66 during this time period (UNAIDS 2017).

In order to meet its commitment to attaining the 90-90-90 targets by 2020, more than 20,000 PLWH will need to be identified, put on treatment, and provided follow-up care. GODR is already financing 100% of its needs for antiretroviral medications (ARVs), and it spent an estimated RD$ 527 million (US$ 11.4 million) in 2017 on ARVs and other HIV-related supplies (Valdez, Cali, Diaz, and Avila 2017). The rapid scale-up in activities and associated increases in costs will require a reexamination of the structure of the HIV program, improved efficiency of HIV-related supply chains and delivery of HIV services, and the identification of new sources of financing for the HIV response. Moreover, the escalation of the HIV response will need to be sustained into the future until the epidemic is brought under control.

UNAIDS's 90-90-90 Targets

"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 antiretroviral therapy. By 2020, 90% of all people receiving antiretroviral therapy will have viral suppression."

UNAIDS 2014

A broad coalition of GODR institutions, civil society organizations, and international organizations, working under the auspices of the HIV Sustainability Technical Group (*Mesa de Sostenibilidad*),[1] has been working to chart out a path for guaranteeing the sustainability of the HIV response. The Sustainability Group is led by the National HIV and AIDS Council (CONAVIHSIDA) and supported by the Joint United Nations Programme on HIV and AIDS (UNAIDS) and the USAID-funded Health Finance and Governance Project (HFG). It was convened to review evidence and reach consensus on approaches for (1) improving efficiency of the HIV response, (2) increasing the financing of the response, (3) integrating the HIV response with the rest of the health system, and (4) preventing new cases of HIV.

This report details the alternative approaches explored by the Sustainability Group and suggests next steps should the relevant authorities decide to implement them.

[1] The HIV Sustainability Technical Group is an informal group of stakeholders convened by the USAID-funded Health Finance and Governance Project and UNAIDS in February 2017. The group consists of Dominican government entities (including the National HIV and AIDS Council, Ministry of Public Health, National Health Service, Ministry of Finance, Superintendent of Health and Labor Risks, Dr. Defillo National Laboratory, National Health Insurance, National Social Security Council, PROMESE/CAL, Directorate of Information and Member Defense), non-governmental organizations (including INSALUD, Coalición ONGSIDA, ASOLSIDA, ASA, REDOVIH, Fundación Plenitud, IDCP, COIN) and international organizations and bilateral donors (UNICEF, UNFPA, UNAIDS, PAHO, USAID, CDC, PEPFAR, APC Project, SIAPS Project). The Sustainability Group participated in three workshops in 2017 to review and discuss evidence relevant to the sustainability of the HIV and AIDS response. In August 2017, the National HIV and AIDS Council assumed responsibility for convening the Sustainability Group to decide on the approaches to sustaining the response proposed in this document.

The approaches presented here are recommendations agreed upon by the HIV Sustainability Technical Group and most have not been considered or adopted as official policy by the relevant authorities. Furthermore, they do not represent all possible interventions for increasing the sustainability of the HIV response. Other approaches were discussed by the group but not at the level of detail required to include them in this document. Still others might have been discussed or disseminated through other forums.

The purpose of this report is to capture and consolidate the suggestions of the Sustainability Group for consideration by the GODR and other relevant stakeholders. GODR will be able to draw from this report when developing its HIV sustainability strategy, revising the National Strategic Plan for HIV (PEN), and developing other planning and policy documents.

The next section of this report explains the process for developing the approaches. The following sections summarize the 15 approaches for sustaining the response discussed in this document and then discuss each approach in more detail.

2. PROCESS FOR DEVELOPING THE APPROACHES

The approaches for sustaining the HIV response discussed in this report are the result of a participatory process that included reviews of existing literature and evidence on inefficiencies in Dominican Republic's HIV response, studies commissioned by HIV Sustainability Technical Group members, and stakeholder workshops for validating the results of the studies and brainstorming strategies for ensuring the sustainability of the HIV response.

Throughout 2017, the USAID-funded HFG project contributed several studies to this process. HFG conducted a review of opportunities to improve efficiency of the HIV response in Dominican Republic based on previous studies conducted in the country and the project's experience supporting other countries around the world to improve efficiency of efforts to address HIV and AIDS (Nakhimovsky, Cali, Valdez, and Avila 2017). HFG also conducted a financial gap analysis that compared estimations of the cost to implement the PEN to actual spending on the response to determine the funding shortfall (Valdez, Cali, and Avila 2017). To address this shortfall, another HFG study identified several potential sources of new financing for the health sector and estimated the revenue that these sources could generate for health and HIV (De Peña Peralta 2017). Finally, HFG assisted CONAVIHSIDA, the Ministry of Public Health (MSP), the U.S. President's Emergency Plan for AIDS Relief (PEPFAR), the UNAIDS, and UNICEF to update and complete an investment case analysis that compared the financial and epidemiological returns of the Fast Track Strategy to ending the AIDS epidemic with other strategies (Adesina and Avila 2017).

The HIV Stakeholder workshops were attended by a broad group that included representatives from GODR, international organizations, development partners, and civil society, including those outside of the health sector such as the Ministry of Finance (MOF) and Superintendence of Health and Labor Risks (SISALRIL). After several months of reviewing evidence and engaging in discussions, the stakeholders presented the recommendations described here during a workshop in August 2017.

3. OVERVIEW OF APPROACHES FOR SUSTAINING THE HIV RESPONSE

Table 1: Summary of the Approaches

Approach		Responsible	Next Steps
1. Improve Efficiency			
1.1	Improve adherence to clinical guidelines	• DIGECITSS • SNS • Mesa de Medicamentos	• Conduct supervision visits • Expand provider training • Establish regular mechanism to substitute for less costly ARVs
1.2	Enforce "Health Career Law"	• MSP • MAP • SRS	• Develop staff performance evaluation frameworks and sanctions guidelines • Develop tools, guidelines, and training for oversight of SAIs
1.3	Decentralize processing of CD4 and VL tests	• SNS • SRS	• Implement CD4 and VL decentralization strategy • Develop integrated samples and results transport system
1.4	Transfer storage and distribution of ARVs to PROMESE/CAL and SRS	• MSP • MOF • PROMESE/CAL	• PROMESE/CAL requests budget for managing ARVs • MSP issues communication to transfer management of ARVs to PROMESE/CAL
1.5	Improve coordination of HIV response actors	• CONAVIHSIDA • MSP	• CONAVIHSIDA studies and identifies overlap of roles and investments • MSP issues directives to clarify roles, as needed
2. Increase Financing of HIV Response			
2.1	Develop an HIV/AIDS program with dedicated funding within the national budget	• CONAVIHSIDA • MSP • SNS • DIGEPRES	• Restructure HIV and AIDS program budget to align with legal mandate and include results
2.2	Establish taxes or corporate social responsibility to raise revenue for health system	• Dominican Congress • MOF • MSP • CONAVIHSIDA	• MSP and CONAVIHSIDA present options for new revenue to MOF and Congress; advocate for more funding for health sector
2.3	Enforce law that government institutions dedicate budget to HIV prevention	• CONAVIHSIDA • MSP • SNS • NGOs	• Design HIV prevention programs geared towards specific populations (students, military, migrants, farm workers, tourism industry) • Pitch ideas to relevant ministries for funding to comply with HIV law requirements

Approach	Responsible	Next Steps
3. Integrate the HIV Response with the Health System		
3.1 Integrate HIV services into primary health care	• MSP • SNS • CONAVIHSIDA	• Conduct feasibility studies and integration planning • Update guidelines, regulations, and protocols • Select pilot primary care centers • Modify information and referral systems, supply chain structure • Train primary care staff on HIV care and guidelines • Explore ways to reduce stigma • Pilot integration in selected sites • Monitor pilot and document lessons learned • Expand to additional sites
3.2 Include the coverage of ARVs in the SFS	• CONAVIHSIDA • SISALRIL • MSP	• Approve a plan for maintaining central procurement of ARVs while financing and delivering ARVs through SFS • Identify and address legal and regulatory barriers • Build information systems that accommodate integration of ARVs into SFS • Approve coverage of ARVs in Basic Health Package • Modify SFS per capita, if needed • Identify and accredit additional ARV providers, if needed
3.3 Integrate NGOs into the health system as service providers	• CONAVIHSIDA • NGOs • SNS • MSP • SENASA	*SNS direct contracting:* • Provide contracting training to SNS and NGO staff • Expedite NGO registration to enable receipt of government contracts • Define contract activities and performance measures *SFS contracting:* • Disseminate information to NGOs on services covered by SFS and procedures for billing • Provide technical assistance to accredit NGOs to receive SFS funds • Provide resources and technical assistance to develop NGO billing systems
3.4 Transfer ARV purchasing responsibilities to PROMESE/CAL	• MSP • PROMESE/CAL • CONAVIHSIDA	• Create international procurement unit in PROMESE/CAL • Train staff and provide budget to PROMESE/CAL to carry out new functions • MSP issues directive passing responsibility for ARV procurement from CONAVIHSIDA to PROMESE/CAL

Approach	Responsible	Next Steps
4. Prevent New Cases of HIV		
4.1 Adopt combination prevention strategy	• CONAVIHSIDA • MSP • SNS	• Conduct systemic evaluation of HIV transmission • Fully implement national condom strategy • Adapt regulations and implement promotion activities for PrEP • Implement promotion activities for voluntary male circumcision
4.2 Expand the "Treatment for All" strategy nationally	• MSP • SNS	• Monitor and document lessons learned from "Treatment for All" pilots • Develop "Treatment for All" expansion plan, including estimation of costs, actions for implementation, responsibilities, timeline • Update national HIV treatment protocol • Disseminate implementation plan to stakeholders
4.3 Widen efforts for testing, prevention, and outreach at the community level	• MSP • SNS • NGOs	• Provide UNAPs with training and resources needed to increase HIV testing • Establish incentives for UNAPs to identify and test at-risk populations for HIV • Provide technical assistance to NGOs to comply with MSP norms • Contract or provide grants to NGOs to expand outreach and testing activities

4. APPROACHES FOR SUSTAINING THE HIV RESPONSE

4.1 Improving Efficiency of the HIV Response

The HIV Sustainability Technical Working Group and other stakeholders have recognized that the HIV program cannot expect to receive significant increases in funding without making a concerted effort to improve the efficiency of current expenditures. In March 2017, the Sustainability Group commissioned a study to identify sources of inefficiency in the HIV response and options for addressing those inefficiencies (Nakhimovsky et al. 2017).

Building on previous studies conducted in Dominican Republic and on international experiences, the study highlighted potential sources of inefficiency through duplication of efforts between private non-profit and public providers, misallocation and mismanagement of human resources for health, poor adherence to treatment guidelines, inefficient supply chain practices, and inadequate processing of diagnostic tests. For each area identified, the report offered several options for improving efficiency.

Through discussions in workshops in March and August 2017, the Sustainability Group and other stakeholders agreed upon a series of interventions that the country should implement to improve the efficiency of the HIV response.

4.1.1 Update and monitor adherence to clinical guidelines and protocols for ARV

The Sustainability Group agreed that updating and improving monitoring of adherence to clinical guidelines for ARV provision has a significant potential to produce cost savings for the country's HIV response. Group members agreed that poor adherence to HIV treatment guidelines has resulted in the unnecessary migration of patients to second- and third-line ARVs at a high cost for the national HIV response. A study published in 2016 about ARV prescription practices in comprehensive care service sites (SAI)[2] reported that 5% of the newly initiated population is prescribed third-line ARVs without authorization. It also found that 27% of patients migrated to second- or third-line drugs within three months of initiation, instead of the international standard of five years of first-line treatment before migration (Valdez, Barillas, Diaz, Ledesma, and Marte 2016). The study found that advancement to second- and third-line treatment was not supported by evidence. These practices increased the cost of purchasing medications by RD$ 126,000 (US$ 2,734) per patient per year (Valdez et al. 2016).

The report also found that health workers often did not prescribe the correct medications stipulated by current guidelines. Only 60% of providers prescribed the proper second-line treatment, and 28% prescribed a third-line treatment that abided by clinical guidelines. Finally, the guidelines themselves do not necessarily include the most cost-effective treatment regimens. In the year of the study, the country acquired first-line drugs at a cost of US$ 130 per patient per year, second-line drugs for US$ 195 per patient per year, and third-line drugs at $3,800 per patient per year (Valdez et al. 2016). Third-line drug

[2] SAI, or *servicios de atención integral,* are Dominican Republic's specialized HIV clinics.

costs for 2018 declined 48% from the previous year due to the addition of two new drugs (dolurtegravir and GENVOYA®) that could be acquired at lower prices.

To improve adherence to guidelines and ensure that protocols incorporate the most cost-effective ARV options, the country can:

1. Mandate the General Directorate for the Control of Sexually Transmitted Infections and AIDS (DIGECITSS) to conduct unannounced supervision visits and audits to SAIs to observe ARV prescription practices and their compliance with national guidelines and protocols. DIGECITSS can coordinate with National Health Service (SNS) and SAI leadership to introduce or strengthen mechanisms for sanctioning providers who do not follow guidelines and protocols and cannot justify deviations from protocols.
2. Expand provider training opportunities, including peer learning, e-learning, and dissemination of pamphlets and flyers to reinforce knowledge of guidelines and protocols. The 2016 study found that only 72% of providers were able to select the recommended first-line drugs and 62% were able to describe the proper criteria for migrating patients to a second-line regimen (Valdez et al. 2016).
3. Establish a mechanism, through the *Mesa de Medicamentos,* to review international ARV reference prices on an annual basis and update protocols to substitute more cost-effective options for costly drugs.

4.1.2 Enforce the Health Career Law, including the implementation of a performance evaluation regime for human resources for health

The members of the Sustainability Group expressed concern that low health worker productivity is still a significant source of inefficiency in the health sector. Although Dominican Republic has made considerable progress in formalizing and regulating the health workforce, stakeholders claim that limited working hours and poor adherence to treatment guidelines and standards reduce the efficiency of the HIV response by reducing the quality of care and of data. Poor adherence to treatment guidelines and mismanagement of infections result in higher costs for the same or worse health results, while low data quality complicates health facility management.

Dominican Republic's Health Career Law (395-14) came into effect on September 2, 2014. The law formalized the health sector's civil service, defined worker categories, established standard recruiting processes, determined training requirements, and set rules for remuneration. The Health Career Law established "incentives for performance and results" as one component of health workers' remuneration (Art. 14). In the years since, the MSP established working groups and developed an action plan to operationalize the new mechanisms called for in the law (Brito-Anderson et al. 2015). The Sustainability Group, however, expressed that performance evaluation frameworks and guidelines for sanctions have not yet been implemented adequately. The group suggested that MSP should approach the Ministry of Public Administration (MAP) to initiate discussions on adopting additional regulations that define performance evaluation processes and sanctions for poor performance or non-compliance with national protocols.

More-involved management efforts are also needed to enforce compliance with protocols and guidelines and ensure the quality of HIV care and productivity of staff. In 2018, the USAID-funded HFG project will begin providing technical assistance to selected Regional Health Services (SRS) to improve oversight of SAIs. With this assistance, SRS will produce tools, guidelines, and training to assist health zone coordinators to provide additional oversight of SAIs.

4.1.3 Decentralize processing of CD4 and viral load tests

The Sustainability Group expressed interest in following earlier recommendations to decentralize processing of CD4 and viral load (VL) testing in order to improve efficiency and increase the timeliness of returning results. A 2015 study found that the country's National Public Health Laboratory (LNSPDD) is responsible for processing more than two-thirds of the country's CD4 tests and all VL tests (George, Valdez, Moquete, and Barillas 2015). The centralized arrangement for analysis of testing samples, coupled with lack of adherence to schedules and safety standards, likely delays the return of results. As of 2015, LNSPDD took an average of 20 days to return CD4 test results, compared to an average of 11 days in a non-governmental organization (NGO) that was also analyzing CD4 tests (George et al. 2015). Rapid return of results is required for health care workers to make informed decisions about the clinical care of patients with HIV (George et al. 2015; Nakhimovsky et al. 2017).

The USAID-funded Systems for Improved Access to Pharmaceuticals and Services (SIAPS) project, CONAVIHSIDA, and the Global Fund have already developed a national strategy for decentralizing analysis of CD4 and VL tests (Mira, Valdez, Barrillas, and Moquete 2016). SIAPS and SNS have conducted an analysis of the system for transporting VL and CD4 samples. The SNS and SRS could contribute to the sustainability of the HIV response by implementing the national strategy for decentralization and creating an *integrated samples and results transport system*. The SNS might need additional technical assistance from international partners to complete implementation.

4.1.4 Transfer responsibility to store and distribute ARV and HIV commodities to PROMESE/CAL and Regional Health Service

PROMESE/CAL is Dominican Republic's legal entity responsible for warehousing and distributing all medicines and supplies needed for the country's public health system, according to presidential decrees 608-12 and 168-13. PROMESE/CAL currently carries out this function for public hospitals and primary health care centers, but does not warehouse or distribute pharmaceuticals and supplies for specialized health programs such as the HIV program. CONAVIHSIDA contracts a private warehouse to store ARVs and other supplies, and it pays PROMESE/CAL for specialized distribution services. Regional warehouses are intended to serve as intermediate storage areas with responsibility for distributing supplies to health centers in their region. Currently, only six of the country's nine health regions are storing and distributing HIV-related pharmaceuticals and supplies (Valdez, Cali, Diaz, and Avila 2017).

In addition to not complying with the country's legal framework, existing arrangements for storing and distributing ARVs and other HIV-related supplies are inefficient and cost more than necessary. A 2017 report by the HFG project found that the country could save approximately RD$ 7.5 million (US$ 163,115) per year by transferring warehousing responsibilities to PROMESE/CAL and integrating distribution with PROMESE/CAL's distribution network for hospitals and primary care centers.

Table 2: Comparison of Warehousing and Distribution Costs

Service Category	Current Model (YOBEL + PROMESE)		Public Model (PROMESE)		Estimated Savings		%
	Annual RD$	Annual US$	Annual RD$	Annual US$	RD$	US$	
Warehousing (634 m^3)	13,800,000	300,000	9,500,000	206,163	4,300,000	93,837	31%
Transport (annual total)	4,800,000	104,000	1,600,000	34,722	3,200,000	69,278	67%
Total	**18,600,000**	**404,000**	**11,100,000**	**240,885**	**7,500,000**	**163,115**	**40%**

Source: Replicated from Valdez, Cali, Diaz, and Avila (2017) with permission from the authors.

The Sustainability Group recognizes the potential efficiency gains from transferring warehousing and distribution responsibilities to PROMESE/CAL and SRS. The USAID-supported SIAPS Project developed a detailed plan for implementing the transfer; in 2018, the HFG project will be providing technical assistance to support the remaining regional warehouses to begin storing ARVs and other commodities (Espinoza and Acosta 2015). To formally initiate the transfer, the MSP would need to issue a formal communication calling for the progressive handover of ARVs and other HIV-related supplies from customs or from the private warehouse to PROMESE/CAL warehouses. The MOF will also need to approve the appropriation of additional funding to PROMESE/CAL to cover the administrative and logistical costs of the new products. This increase can be offset with the expiration of the private warehouse contract and elimination of funds paid by CONAVIHSIDA to PROMESE/CAL for distribution.

4.1.5 Improve coordination among actors contributing to the HIV and AIDS response to clarify roles and responsibilities

Dominican Republic's HIV response benefits from the joint efforts of many institutions and organizations, both within and outside of the health sector. CONAVIHSIDA, MSP, SNS, PROMESE/CAL, Instituto Dermatólogico y Cirugía de Piel Dr. Humberto Bogaert Díaz, the social security institutions and health insurers, NGO service providers, civil society and community organizations, MOF, and the Ministry of Education, among others, all support the HIV response. Furthermore, a plethora of international organizations finance and provide implementation assistance to the national response, including PEPFAR, the Global Fund, the Pan American Health Organization, United Nations agencies, private foundations and NGOs, and other international implementing partners. The breadth of institutions contributing to the HIV response can complicate efforts to ensure that investments are coordinated, duplication of efforts are avoided, and all critical areas of the response receive the funding and attention they need.

A 2017 study on the HIV funding gap in Dominican Republic suggests better coordination of actors could increase the efficiency of the HIV response. The study found that "education and prevention" activities were projected to be underfunded by RD$ 829 million (US$ 18 million), while activities to "strengthen the response" received about RD$ 304 million (US$ 6.6 million) more in funding than needed (Valdez, Cali, and Avila 2017). This is only one example of how limited funding for the HIV response might not be appropriately aligned with national priorities. In other instances, a lack of clarity and coordination on responsibilities for carrying out functions of the response results in inefficiencies. For example, CONAVIHSIDA purchases, stores, and takes responsibility for distributing ARVs despite

the existence of PROMESE/CAL, the national entity with the legal responsibility for purchasing, storing, and distributing medications in the public health system. Finally, some NGOs are overstocked with donated condoms for preventing HIV and other sexually transmitted infections, while some public facilities do not have enough condoms to meet patient demand (Valdez, Espinoza, Ledesma, and Barillas 2017).

Improving coordination and clarifying roles and responsibilities of actors could increase the efficiency of the HIV response, reduce duplication, and allow resources and financing to be redistributed to activities where they would be better used. As the entity responsible for coordinating the HIV response, CONAVIHSIDA should take the lead to prevent duplication of technical assistance and donations from international entities. The MSP, with its regulatory and enforcement role in the health sector, should further define and, where necessary, enforce existing responsibilities of entities for carrying out functions essential to the HIV response.

4.2 Increase Financing of the HIV Response

Improving the efficiency of the HIV response will be essential for ensuring that available resources produce maximum impact. However, the entire shortfall in financing for HIV will not be overcome only through more efficient spending. A study of the HIV health financing gap presented to the Sustainability Group by HFG analyzed the difference between the level of resources needed to implement the PEN and the amount of money being spent on the HIV response by government entities and international donors from 2015 to 2018 (Valdez, Cali, and Avila 2017).

The 2017 study identified an HIV financing gap of RD$ 1.05 billion (US$ 22.5 million) in 2016 and RD$ 654 million (US$ 14.2 million) in 2017. It estimated that RD$ 2.54 billion (US$ 55.12 million) was needed in 2016 to implement the PEN, and that RD$ 2.61 billion (US$ 56.59 million) would be needed in 2017. GODR and international donors only spent a combined RD$ 1.5 billion (US$ 32.5 million) in 2016 and were estimated to spend RD$ 1.94 billion (US$ 42.2 million) in 2017. The largest financing gap in 2017 was expected to be in the area of education and prevention, followed by human rights (Valdez, Cali, and Avila 2017).

After reviewing revenue projections from various taxes and corporate social responsibility schemes and discussing options with national stakeholders, the Sustainability Group outlined the following approaches for raising additional revenue for the HIV Response:

4.2.1 Develop an HIV/AIDS program with dedicated funding within the national budget

Members of the Sustainability Group, including those from the MOF, have expressed concerns that activities for addressing HIV and AIDS could be receiving higher levels of funding if budget requests were better organized, transparent, and results-oriented. Members of the group suggest that past budget requests did not link specific requests for funding to desired results, did not make clear how the value of requests were determined, and that requests did not correspond to the legal responsibilities of the entities making the requests. For example, the administrative budget for CONAVIHSIDA is not linked directly to expected results, there is not a link between the value of requests and the costing of the National Strategic Plan for HIV and AIDS, the budget for purchasing ARVs is requested by DIGECITSS instead of by PROMESE/CAL, and CONAVIHSIDA requests for funding for health services are made through MSP instead of SNS.

To ensure that HIV and AIDS activities receive the full amount of money requested, the Sustainability Group suggests that those responsible for preparing budget requests in CONAVIHSIDA, MSP, and SNS

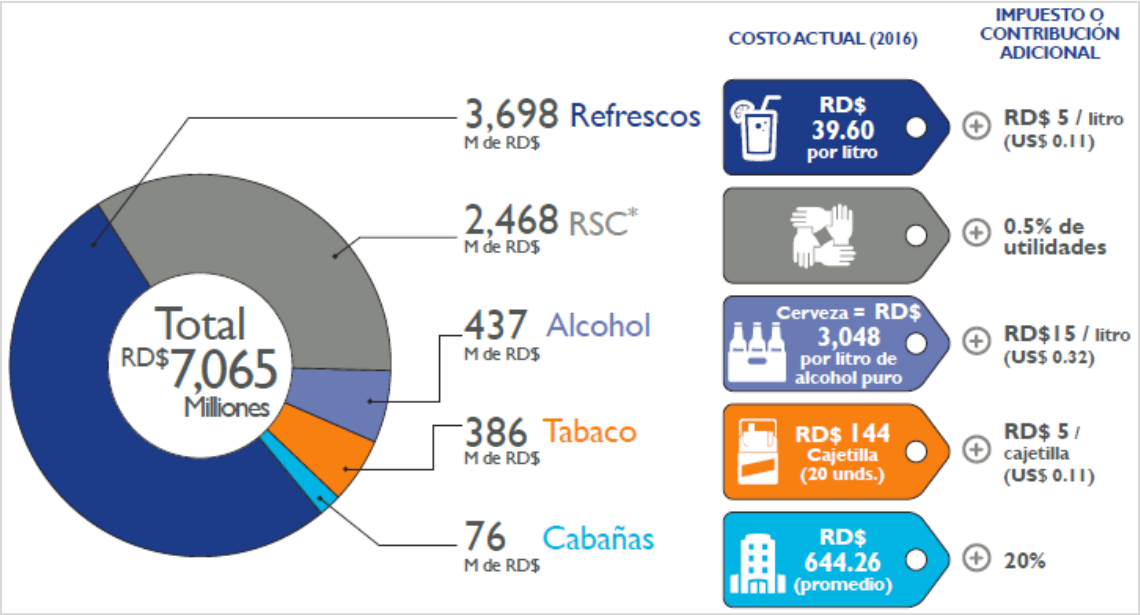
engage more regularly with the Directorate General of the Budget (DIGEPRES) from the MOF to jointly restructure the budget requests. DIGEPRES expressed its preference that budget requests for the HIV and AIDS response be presented as part of an organized HIV program with specific activities and expected results. The activities and expected costs should be linked to the PEN, and activities should be assigned to the institutions that have a legal mandate to carry them out. Restructuring of the HIV and AIDS budget has the potential to lead to an immediate increase in resources available for the HIV and AIDS response.

4.2.2 Establish a tax or corporate social responsibility program dedicated to the health system

A 2017 study conducted by the HFG project estimated potential revenue dedicated to the health sector from establishing new taxes, increasing existing taxes on unhealthy products, and developing a corporate social responsibility scheme (De Peña Peralta 2017):

- ***New Tax on Soft Drinks*:** The study found that a RD$ 5.00 (US$- 0.11) tax per liter of sugar-sweetened soft drinks could raise RD$ 3.70 billion (US$- 78.2 million) for the health sector in 2018, of which some of this money could be directed towards the HIV response. A tax on sugar-sweetened beverages would have the added benefit of discouraging the consumption of these products, which are known to contribute to obesity and diabetes.
- ***Tax on Cabañas:*** Finally, the study examined the impact of instituting a national tax on short-stay *cabañas* as a means for collecting additional revenue for the health sector and the HIV response. Local governments currently collect a 10% tax on short-stay *cabañas*, but the national government does not tax these establishments. A 20% tax on the final price of a room could add RD$ 75.83 million (US$ 1.6 million) to the health budget.
- ***Increased Tax on Alcohol*:** The study projected that increasing the existing tax on alcohol by an additional RD$ 15.00 (US$ 0.33) per liter of pure alcohol could raise RD$ 437 million (US$ 9.2 million) for the health sector in 2018. Resources for the health sector could also be increased by allocating a larger share of the revenue currently collected from alcohol taxes to there. For example, allocating 70% of total revenues from alcohol taxes to the health sector would provide RD$ 89.34 billion (US$ 1.89 billion) for health in 2018.
- ***Increased Tax on Cigarettes:*** The study also examined potential revenue that could be collected from increasing taxes on cigarettes by RD$ 5.00 (US$ 0.11) per 20-cigarette pack. This increase would bring in an additional RD$ 386.3 million (US$ 8.2 million) to the health sector. Furthermore, committing to allocate 70% of the existing cigarette tax to health would provide RD$ 74.50 billion (US$ 1.57 billion) in 2018 to the health budget.
- ***Corporate Social Responsibility:*** The study explored the creation of a corporate social responsibility scheme for companies that are registered to provide services to the government. Companies would be required to donate 0.5% of their gross profits in order to participate in certain bids for government contracts. The study found that assuming half of the companies participated, the government could raise RD$ 2.47 billion (US$ 52 million) for the HIV and AIDS response in 2018.

Figure 1: Options for Raising Additional Revenue for the Health Sector



Source: HFG (2017)

Any new taxes or increase in taxes earmarked for health would have to be instituted through legislation. The MSP and CONAVIHSIDA can advocate to the MOF, Congress, and President for increased revenue for health and share evidence of the revenue that would be generated through the proposed taxes and the corporate social responsibility scheme presented here.

4.2.3 Enforce the law mandating that all government institutions dedicate a portion of their budgets to HIV prevention

A new law establishing additional mechanisms for raising resources for health could be a promising approach for funding the HIV response. Health authorities can also advocate for the implementation of existing laws that would bring additional resources to the HIV and AIDS response. The HIV/AIDS Law (135-11) specifically requires all public entities to include resources in their budgets for actions that contribute to the national HIV and AIDS response. The law also empowers CONAVIHSIDA to coordinate with ministries and other public institutions to facilitate the inclusion of funding for HIV and AIDS prevention activities in each of their budgets. According to members of the Sustainability Group, most ministries and public entities outside of those specifically responsible for health are not contributing to the HIV and AIDS response.

To improve compliance with the HIV/AIDS Law and mobilize resources for the response, CONAVIHSIDA can work with local NGOs, the MSP, and SNS to identify the greatest gaps in HIV prevention, design prevention programs to fill the gaps. It then can pitch these ideas to other ministries and public entities that have the most potential to contribute to funding the programs, based on their missions and the size of their budgets. Some potential contributors might include the Ministry of Education; Ministry of Higher Education, Science, and Technology; Ministry of Youth; Ministry of Women; Ministry of Tourism (for financing prevention geared towards the tourist industry); Ministry of the Interior and Police and the Ministry of Defense (for prevention targeted at migrants, the police, and the military); Ministry of Labor (for prevention geared towards workers), and Ministry of Agriculture (for programs for people working in *Bateyes)*.

Working closely with their counterparts in these ministries, and with the backing of the President, CONAVIHSIDA might be able to direct additional funding towards the HIV and AIDS response without the need to pass new laws.

4.3 Integrate the HIV Response with the Health System

Thanks to increased affordability and effectiveness of ARVs, HIV and AIDS care has become more similar to the management of a chronic disease than an infectious disease emergency. As international donors begin to reduce emergency funding for controlling the epidemic, recipient countries are reevaluating the sustainability of operating vertical HIV programs in parallel to the rest of the health sector. The Sustainability Group supports the integration of at least some aspects of the HIV response into the health system in order to reduce costs, improve patient experiences, and guarantee the sustainability of the HIV response in the country.

4.3.1 Integrate HIV services into primary health care

Members of the Sustainability Group have recommended that routine HIV services, such as testing and counseling, regular provision of first-line ARVs, and consultations for stable patients could be conducted at primary health care centers rather than at specialized HIV centers. In theory, providing routine HIV services at primary health care centers would expand the geographical reach of HIV services, making it easier for patients to be tested and to receive their ARVs. Integration might also reduce costs of providing HIV services, relieve the burden of overcrowded SAI and increase the health system's capacity to test and treat more patients, and allow SAI to focus on addressing complicated cases.

While integration of HIV services with primary care might be ideal, there are several practical barriers to be overcome before integration can be pursued. Firstly, primary care staff will need to be trained to conduct tests, manage HIV patients, prescribe the proper treatment regimes, and refer complicated cases. Secondly, evidence suggests that PLWH face stigma at public health facilities, and patients might be unwilling to receive treatment at local primary health facilities where staff members they know personally could find out about their condition (Valdez, Barillas, Cepeda, and Ledesma 2017).

SNS, CONAVIHSIDA, and MSP will need to complete feasibility studies to formally document the changes to practices, guidelines, laws, and regulations necessary to integrate HIV care into primary care facilities. The feasibility studies should include surveys of the willingness of PLWH to receive HIV treatment at local primary care centers. They also should document the staff training and referral systems that SNS and MSP will need to implement before initiating integration. The SNS and MSP can build upon previous experience integrating HIV and tuberculosis (TB) services in Puerto Plata to identify some potential barriers to integration (Maceira, Bonfert, Parsons, and García de León 2017). NGOs currently providing integrated primary care and HIV services can also serve as a rich source of lessons learned for integration. After proper preparation, SNS, CONAVIHSIDA, and MSP can begin integrating care in several facilities as a pilot and evaluate the cost-effectiveness of the integration.

While preparations for integration will take time and require substantial investment, expanding access to HIV testing and treatment and improving the use of limited resources will help to ensure the sustainability of the HIV response over the long term.

4.3.2 Include the coverage of ARVs in the Family Health Insurance Scheme

The Sustainability Group recommends that the SFS begin covering comprehensive HIV care, including ARVs, in order to provide a sustainable source of financing for the HIV response and to improve the

efficiency of the procurement, distribution, and financing of HIV medicines and commodities. In 2016, the SFS spent only RD$ 207 million (US$ 4.49 million) on the HIV response, in comparison to more than RD$ 460 million (US$ 10 million) spent by MSP and RD$ 204 million (US$ 4.43 million) spent by CONAVIHSIDA (Valdez, Cali, and Avila 2017). While MSP and CONAVIHSIDA need to advocate to the MOF each year for budgets to support the HIV response, social insurance spending responds to actual utilization of services. Therefore, once ARVs are included in the benefits package, financing will automatically increase or decrease in response to the number of people on treatment. Including ARVs among the package of benefits of the SFS will protect financing for ARVs regardless of future political priorities.

To ensure that ARVs are included in the SFS benefits package, CONAVIHSIDA and MSP can develop a plan for making the necessary changes to procurement, financing, and distribution of ARVs, working with international partners, National Health Insurance (SENASA), employers' associations, trade unions, private insurers, and other affected stakeholders. SISALRIL will be responsible for projecting the impact of including ARVs on the per capita cost of providing the package of services. The plan will then need to be approved by the National Social Security Council (CNSS).

According to some stakeholders, the inclusion of some ARVs in the benefit package is subject to contradictory laws and regulations. Some ARVs are included in the Basic Medicines Framework, which the SFS is mandated by law to cover. However, other regulations exclude coverage of ARVs due to their cost. USAID, through the HFG project, has commissioned a review to determine which laws and regulations would need to be changed to allow for inclusion of ARVs in the package of services. USAID is also offering technical assistance for the development of the operational plan, and reviewing needs for updating information systems.

4.3.3 Integrate non-governmental organizations into the health system as service providers through public contracts using public and private mechanisms

Dominican Republic's network of SAI for HIV includes 61 sites attached to public hospitals and 11 run by NGOs. The Sustainability Group suggested that one alternative for sustaining the HIV response might be contracting NGOs to provide services to key populations and expand their reach to accommodate the scaling up of case identification and HIV treatment.

Many NGOs rely heavily on international donors such as the Global Fund and PEPFAR for financial support, although some receive funding from private donations and through copayments for health services (Maceira et al. 2017). These organizations are unlikely to be able to continue providing HIV services as international donors begin reducing their investments. Compounding this situation, evidence suggests that NGOs are the least stigmatizing health service providers for key populations, such as female sex workers, men who have sex with men, and the trans population. A 2017 study found that only 6% of health workers in NGOs were afraid to touch a person from a key population compared to 25% of health workers in public facilities; only 1% of NGO health workers preferred to not provide services to someone involved in immoral activities compared to 97% in public facilities (Valdez, Barillas, Cepeda, and Ledesma 2017).

Given Dominican Republic's goal to achieve the 90-90-90 targets by 2020, NGO services must not only be maintained—they should be expanded to meet the need for identifying new patients and placing them on treatment. There are several options for integrating NGOs into the health system to sustain key population-friendly services and expand availability to meet the needs for scaling up "Treatment for All" strategy.

One option is for MSP and SNS to integrate NGOs into the service provision network by issuing contracts to NGOs for identifying new HIV cases and providing HIV services to people who are not enrolled in the SFS, especially members of key populations. Dominican Republic's Law on Regulation and Promotion of Non-Profit Associations (122-05) and Law on Procurements and Contracts of Goods, Services, Works, and Concessions (34006; 449-06) provide a legal framework through which MSP and the SNS can contract or enter into agreements with NGOs for this purpose (Maceira et al. 2017). Putting these agreements into practice would require engagement among the MSP, SNS, and Center for the Development and Promotion of Non-Profit Associations for expediting NGO registration, training government officials and NGOs on how to manage the contracting process, and defining the specific activities that NGOs will be asked to implement (Maceira et al. 2017).

A second option for integrating NGOs into the health system is to strengthen their ability to contract with SENASA and private ARS to provide services to affiliates of the subsidized and contributive regimes. Some NGOs are already billing public and private ARS for services provided to their members, but others have not received the accreditation required to be reimbursed, do not properly bill the ARS, or do not realize that services they are providing are covered by the SFS. For example, two NGOs interviewed in 2017 assumed that no services for HIV patients were covered by the SFS and thus did not bill for consultations, basic lab tests, or diagnostic tests—losing as much as RD$ 440,000 (US$ 9,550) per year (Valdez, Cali, Diaz, and Avila 2017). NGO service providers need to be provided with clear information on the services covered by the SFS and the accreditation process. They also need investments in information and billing systems to integrate fully into the SFS.

MSP and CONAVIHSIDA can facilitate the sharing of information and capacity among SENASA, private ARS, and NGO service providers to ensure that NGOs are fully integrated into the SFS.

4.3.4 Transfer responsibility to purchase ARVs to PROMESE/CAL

Dominican Republic's Law on Public Purchasing and Contracting (340-06) and Presidential decrees 608-12 and 168-13 require that the public entity established for medicine and supply procurement, PROMESE/CAL, purchase all supplies for the health sector. Currently, PROMESE/CAL manages public procurement from domestic suppliers, but does not procure supplies from international vendors. For the HIV program, CONAVIHSIDA manages procurement of ARVs, testing supplies, and infant formula with funds from the MSP. CONAVIHSIDA works with international intermediary USAID Global Health Supply Chain Program-Procurement and Supply Management to place orders, make payments, and receive supplies from customs (Valdez, Cali, Diaz, and Avila 2017).

While CONAVIHSIDA has adequately managed the purchase of ARVs and other HIV commodities, there are several reasons to transfer purchasing responsibilities to PROMESE/CAL. First, Dominican law establishes PROMESE/CAL as the entity responsible for purchasing medicines and supplies in the country. The purchase of medicines and supplies by CONAVIHSIDA contradicts current law. Secondly, PROMESE/CAL is already managing purchases of medicines and supplies for public hospitals and primary health care centers and can receive funds directly from the MOF for medicine purchases, reducing the time needed to prepare for purchases. CONAVIHSIDA, by contrast, does not currently receive funding directly from MOF. Instead, it receives a transfer from MSP. CONAVIHSIDA's inability to receive funding directly from MOF creates inefficiencies and delays in preparing the money needed to pay international suppliers. Under the current arrangement, purchases require 12 months of preparation before payments can be made to suppliers (Valdez, Cali, Diaz, and Avila 2017).

Finally, medicines and supplies for other special health programs such as the TB program and high-cost-medicines program are purchased by MSP. Transferring ARV purchasing responsibilities to PROMESE/CAL would set a precedent and establish the capabilities needed for consolidating

procurement for special health programs under the government's public medical procurement entity. Other special health programs could later transfer procurement responsibilities to PROMESE/CAL, streamlining health care procurement in the country as required by the law.

Due to PROMESE/CAL's status as legal procurement entity for the health system, relatively few legal or regulatory changes would be required for PROMESE/CAL to assume responsibility for HIV medication and supply purchasing. The largest barrier to PROMESE/CAL assuming this responsibility is its lack of experience and expertise with managing international procurement. PROMESE/CAL will need to develop an international procurement unit with a dedicated budget, standard operating procedures, and a qualified staff with the skills and knowledge required to manage international procurement. CONAVIHSIDA and MSP possess this knowledge and experience and they could provide capacity-building support to PROMESE/CAL. USAID's HFG project is slated to provide technical assistance to PROMESE/CAL in 2018 to prepare for the development of an international procurement unit.

4.4 Prevent New Cases of HIV

Ultimately, reducing new cases of HIV, which require lifetime treatment and care, will have the most impact on sustaining the HIV response. Preventing new cases of HIV will allow Dominican Republic to focus resources on the most vulnerable populations and ensure that resources are available to treat everyone infected with HIV.

Evidence suggests that prevention is among the components of the HIV response that receives the least attention and investment in Dominican Republic. HFG's financial gap analysis estimated that "education and prevention" activities had the largest health financing gap in 2017. GODR and international donors combined to spend RD$ 198 million (US$ 4.3 million) in 2017 when the PEN estimated that RD$ 1.04 billion (US$ 22.6 million) would be needed to implement planned prevention activities (Valdez, Cali, and Avila 2017). Furthermore, funding for the prevention activities, especially community-based prevention, is heavily reliant on funding from the Global Fund and other international donors (Maceira et al. 2017).

The following activities to prevent new cases of HIV were recommended by the Sustainability Group.

4.4.1 Adopt "combination prevention" as the principal strategy for HIV prevention

UNAIDS defines *combination prevention* as "rights-based, evidence-informed, and community-owned programmes that use a mix of **biomedical**, **behavioural,** and **structural** interventions, prioritized to meet the current HIV prevention needs of particular individuals and communities, so as to have the greatest sustained impact on reducing new infections" (UNAIDS 2010).

Adopting an effective combination prevention strategy requires policymakers to understand the common modes of transmission of the disease, the populations most affected, geographic variations in prevalence, the size of the population affected, and structural determinants of infection (AVERT 2017a). With this information, policymakers can choose the biomedical, behavioral, and structural interventions that will combine to have the greatest impact on reducing the spread of the epidemic. Examples of biomedical interventions include condoms, pre- and post-exposure prophylaxis, and male circumcision. Behavioral interventions include mass media and community-level communications about reducing risky behavior and increasing use of biomedical interventions, counselling, sex education, and anti-stigma and anti-discrimination programs (AVERT 2017a; AIDS-Free 2017). Structural interventions include increasing girls' access to education, interventions to address economic inequality, decriminalization of same-sex relationships and sex work, community empowerment interventions, and others that address structural determinants of infection (AVERT 2017a).

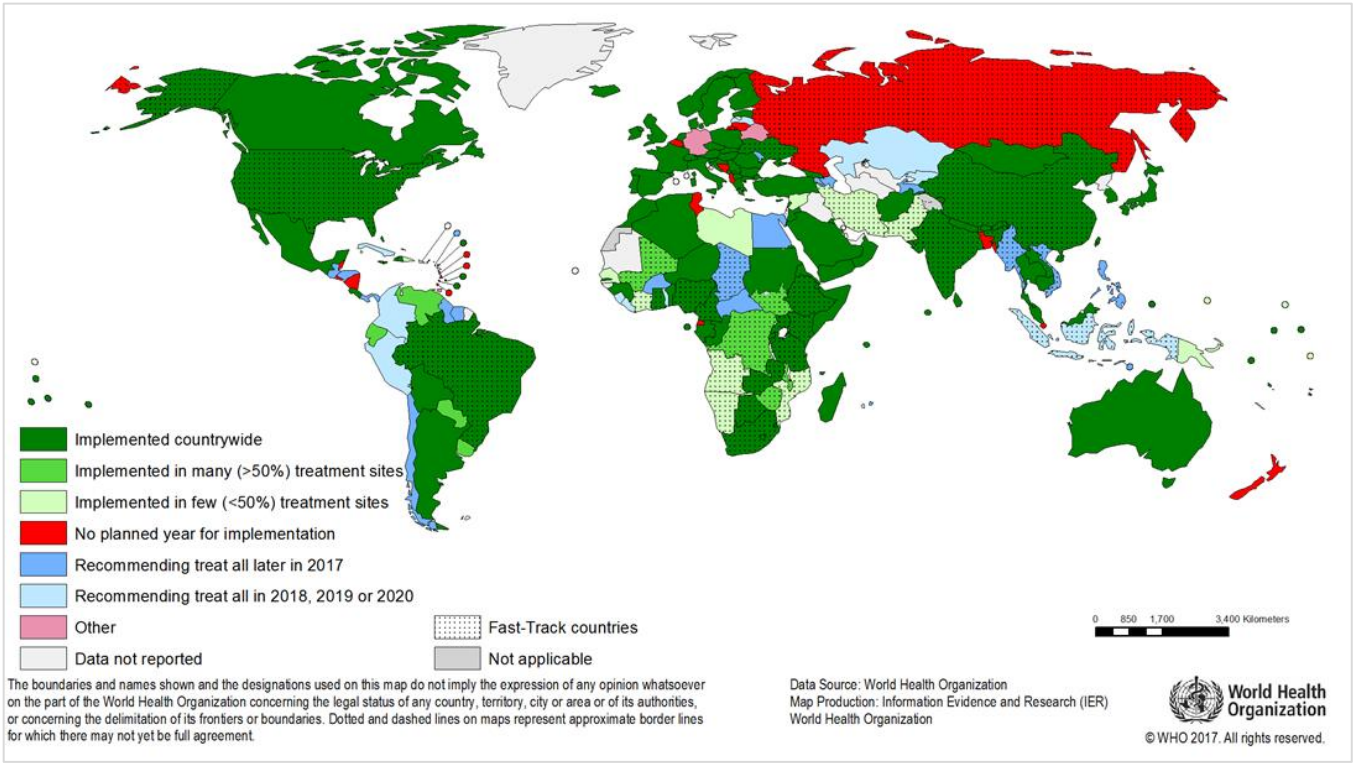
The Sustainability Group highlighted several prevention interventions that needed strengthening as part of a combination prevention strategy in Dominican Republic. The group called for the updating and implementation of a national condom use strategy, adapting the national regulations on pre-exposure prophylaxis (PrEP), a communications campaign to promote access to PrEP, and promotion activities to communicate the benefits of voluntary male circumcision for HIV prevention. A systematic evaluation of HIV transmission in the country would help identify other interventions and target populations for a combination prevention strategy.

4.4.2 Expand the "Treatment for All" strategy nationally

PEPFAR is currently supporting a "Treatment for All" pilot program in 11 SAIs in Santiago, Puerto Plata, Santo Domingo, and La Romana. The "Treatment for All" strategy—also known as "Test and Start," "Test and Treat," and "Treat All"—states that all people should be given antiretroviral therapy (ART) as soon as possible regardless of CD4 count (WHO 2015). Studies show that people with HIV who are initiated on ART earlier have better clinical outcomes (WHO 2015). Furthermore, a series of studies found that early treatment that resulted in suppressed VL was an extremely effective method for preventing HIV transmission (AVERT 2017b).

"Treatment for All" has been adopted by the WHO, UNAIDS, and PEPFAR as an essential strategy for achieving the 90-90-90 targets and eliminating HIV as a public health threat by 2030. The strategy has been implemented or will be soon implemented in the vast majority of countries (Figure 2).

Figure 2: Implementation of "Treat All" Recommendation among Adults and Adolescents Living with HIV as of November 2017

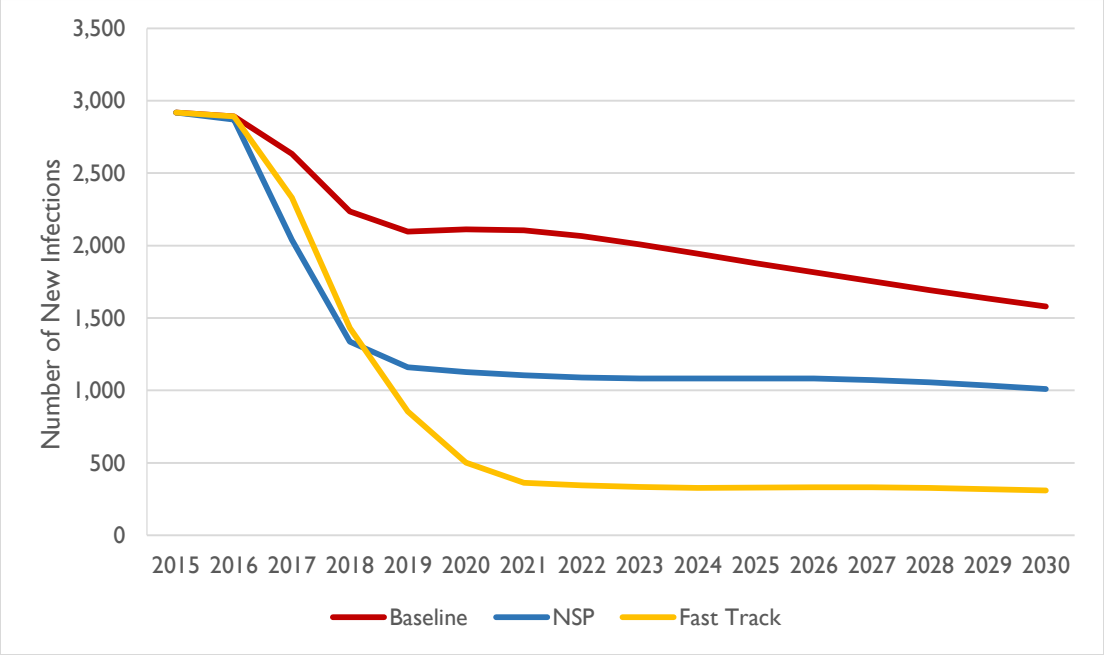


Source: WHO 2017

An HIV Investment Case Analysis conducted in 2017 by UNAIDS, CONAVIHSIDA, MSP/DIGECITSS, UNICEF, USAID, PEPFAR, and HFG determined that immediately adopting the Fast Track approach,

which includes "Treatment for All," would reduce new HIV infections in Dominican Republic to 310 per year by 2030. In contrast, delaying the adoption of "Treatment for All" would result in 1,010 new infections per year by 2030. The analysis found that adoption of Fast Track would result in 8,300 fewer deaths and 7,900 fewer new infections than does implementing the existing guidelines (Adesina and Avila 2017).

Figure 3: Number of New Infections for HIV Treatment Strategy Scenarios



Source: Adesina and Avila (2017)

HFG is currently providing the MSP with technical support to develop a plan for expanding "Treatment for All" nationally. The plan will provide estimations of the resources needed, options for expanding access, and recommended sequencing for scaling up.

4.4.3 Widen efforts for testing, prevention, and outreach at the community level through non-governmental organizations and public facilities

The Sustainability Group expressed the need to expand access to prevention services in order prevent future cases of HIV and sustain the country's HIV response. One method that the group discussed would assist with the expansion of the "Treatment for All" strategy by increasing access to HIV testing in primary health care centers and communities. Public primary care units (UNAPs) could be provided with additional testing supplies and training and encouraged to increase testing in facilities and in surrounding communities. Those testing positive would be referred to SAIs and other specialized centers for treatment. As discussed in Section 4.3.1, encouraging an expansion of testing by primary health centers would relieve the burden on SAIs for testing and would encourage early diagnosis and initiation of ART, which reduces transmission. Increasing testing by UNAPs would also allow access to new populations that SAIs are not reaching with testing campaigns.

The Sustainability Group also proposed strengthening NGOs to conduct testing, outreach, and prevention activities in communities. Studies show that NGOs are friendlier than the public sector to

key populations that have a higher risk for acquiring HIV, but some NGOs lack the resources to expand prevention activities among high-risk communities (Valdez, Barillas, Cepeda, and Ledesma 2017). Many NGOs also do not comply with MSP norms, preventing them from receiving public funding and being integrated fully into the national health system. The national health system can take advantage of NGOs' existing networks and connections with key populations to expand prevention activities to hard-to-reach populations.

5. CONCLUSION

Dominican Republic is reaching a critical juncture in its effort to eliminate its HIV epidemic. The GODR has made substantial progress in mobilizing domestic resources to finance treatment of HIV. But it must now accelerate its efforts to meet the 90-90-90 targets, while also taking steps to ensure the sustainability of the HIV response in the future.

Although not comprehensive, this report documents numerous approaches for advancing the sustainability of the response that have been proposed or discussed in several workshops with the HIV Sustainability Technical Working Group. National stakeholders and international assistance partners have been discussing some of these approaches for years but have yet to establish concrete steps for implementation. Others are relatively new and could be supported with additional research and evidence.

This report will be a valuable reference for national stakeholders tasked with planning the critical next steps for ensuring the sustainability of the HIV response in Dominican Republic.

ANNEX 1: REFERENCES

Adesina, A., and C. Avila. May 2017. *Investment Case to Fast-Track and Sustain the HIV Response in the Dominican Republic.* Bethesda, MD and Santo Domingo, Dominican Republic: Health Finance and Governance project, Abt Associates Inc. Available at: https://www.hfgproject.org/investment-case-fast-track-sustain-hiv-response-dominican-republic/

AIDS-Free (The Strengthening High Impact Interventions for an AIDS-free Generation). 2017. *An Overview of Combination Prevention.* Arlington, VA: JSI Research & Training Institute, Inc. Available at: https://aidsfree.usaid.gov/resources/pkb/combination/overview-combination-prevention

AVERT. 2017a. HIV Prevention Programs Overview. https://www.avert.org/professionals/hiv-programming/prevention/overview. Accessed December 21, 2017.

AVERT. 2017b. Treatment for Prevention for HIV. https://www.avert.org/professionals/hiv-programming/prevention/treatment-as-prevention. Accessed December 20, 2017.

Brito-Anderson, S., M. Minaya, W. Jaskiewicz, A. A. Foster, A. Collins, and L. Ramirez. 2015. *Tracking Human Resources for Health Commitments: Progress in the Dominican Republic.* Washington, DC: IntraHealth International. Available at: https://www.intrahealth.org/sites/ihweb/files/resource-other-attachments/hrhcommitmentsdrcasestudy.pdf

De Peña Peralta, V. L. Agosto 2017. *Opciones para reducir la brecha de financiamiento en salud y alcanzar una respuesta acelerada contra el VIH - Análisis de financiamiento para el sector salud.* Bethesda, MD: Proyecto de Financiamiento y Gobernanza en Salud, Abt Associates Inc.

Espinoza H., y K. Acosta. 2015. *Propuesta para el traslado de las operaciones de almacenamiento y transporte de productos de CONAVIHSIDA a PROMESE CAL.* Presentado a la Agencia de los Estados Unidos para el Desarrollo Internacional por el Programa Systems for Improved Access to Pharmaceuticals and Services (SIAPS). Arlington, VA: Management Sciences for Health.

George A., C. Valdez, E. Moquete, and E. Barillas. 2015. *Baseline Assessment of Sample Referral Networks in Vertically Managed Disease Control Programs for HIV and TB in the Dominican Republic.* Submitted to the US Agency for International Development by the Systems for Improved Access to Pharmaceuticals and Services (SIAPS) Program. Arlington, VA: Management Sciences for Health.

HFG (Health Finance and Governance Project). 2017. Opciones y mecanismos innovadores de recaudación de recursos para el sector salud en La República Dominicana. Bethesda, MD: Proyecto de Financiamiento y Gobernanza en Salud, Abt Associates Inc. Available at: https://www.hfgproject.org/opciones-y-mecanismos-innovadores-de-recaudacion-de-recursos-para-el-sector-salud-en-la-republica-dominicana/

Maceira, D., A. Bonfert, D. Parsons, and C. García de León. 2017. *Dominican Republic Country Report: Transition Readiness Assessment.* Washington, DC: Acceso Global. Available at: http://www.acesoglobal.org/blog/2017/9/18/dominican-republic-transition-readiness-assessment

Mira, P., C. Valdez, E. Barrillas, y E. Moquete. 2016. *Estrategia de descentralización de tecnologías para pruebas de monitoreo del VIH en la Red de Servicios de República Dominicana.* Santo Domingo, República Dominicana: Servicio Nacional de Salud y Consejo Nacional del VIH y el SIDA.

Nakhimovsky, S., J. Cali, C. Valdez, y C. Avila. Marzo 2017. *Oportunidades para mejorar las eficiencias de los programas contra el VIH y SIDA en la República Dominicana.* Bethesda, MD: Proyecto de Financiamiento y Gobernanza en Salud, Abt Associates Inc. Available at: https://www.hfgproject.org/oportunidades-para-mejorar-las-eficiencias-de-los-programas-contra-el-vih-y-sida-en-la-republica-dominicana/

UNAIDS (United Nations Joint Program on HIV and AIDS). 2010. *Combination HIV Prevention: Tailoring and Coordinating Biomedical, Behavioural and Structural Strategies to Reduce New HIV Infections.* Geneva: UNAIDS. UNAIDS Discussion Paper 10. Available at: http://files.unaids.org/en/media/unaids/contentassets/documents/unaidspublication/2011/20111110_JC2007_Combination_Prevention_paper_en.pdf

UNAIDS. 2014. 90-90-90: An ambitious treatment target to help end the AIDS epidemic. Geneva: UNAIDS. Available at: http://www.unaids.org/sites/default/files/media_asset/90-90-90_en.pdf

UNAIDS. 2017. AIDSinfo Factsheets. http://aidsinfo.unaids.org/. Accessed September 27, 2017.

Valdez, C., E. Barillas, M. Díaz, J. Ledesma, y Y. Marte. 2016. *Informe Estudio de Línea de Base: Prácticas de prescripción de medicamentos antirretrovirales en los servicios de atención integral de la Republica Dominicana. Santo Domingo, República Dominicana.* Presentado a la Agencia de los Estados Unidos para el Desarrollo Internacional por el Programa Systems for Improved Access to Pharmaceuticals and Services (SIAPS). Arlington, VA: Management Sciences for Health; 2016.

Valdez, C., E. Barillas, I. Cepeda, y L. Ledesma. 2017. *Diagnóstico de la Situación de Estigma y Discriminación hacia Poblaciones Claves, en 15 Servicios de Atención Integral al VIH (SAI) priorizados, en República Dominicana.* Presentado al proyecto del Fondo Mundial del Consejo Nacional del VIH y el SIDA (CONAVIHSIDA) en Santo Domingo, República Dominicana.

Valdez, C., H. Espinoza, L. Ledesma, y E. Barillas. 2017. *Diagnóstico de la cadena de suministro de condones en sector público – Informe final* - Santo Domingo, República Dominicana. Grupo consultor GIS presentado a Population Services International (PSI) y Society For Family Health Dominican Republic (SFH/DR) en el marco del proyecto Support for International Family Planning and Health Organizations 2: Sustainable Networks (SIPFO 2) de la Agencia de los Estados Unidos para el Desarrollo Internacional (USAID).

Valdez, C., J. Cali, y C. Avila. May 2017. *Brechas financieras en la respuesta nacional al VIH y SIDA*. Bethesda, MD y Santo Domingo, República Dominicana: Health Finance and Governance project, Abt Associates Inc. Available at: https://www.hfgproject.org/brechas-financieras-en-la-respuesta-nacional-al-vih-y-sida/

Valdez, C., J. Cali, N. Diaz, y C. Avila. November 2017. *Evaluación de la Gestión de Suministros y Flujos de Financiamiento y Gasto de Antirretrovirales e Insumos para el Diagnóstico de VIH*. Bethesda, MD y Santo Domingo, República Dominicana: Proyecto de Financiamiento y Gobernanza en Salud, Abt Associates Inc.

WHO (World Health Organization). 2015. *Guideline on When to Start Antiretroviral Therapy and on Pre-Exposure Prophylaxis for HIV*. Geneva: World Health Organization. Available at: http://apps.who.int/iris/bitstream/10665/186275/1/9789241509565_eng.pdf?ua=1

WHO. 2017. HIV Estimates and WHO HIV policy uptake. http://www.who.int/hiv/data/en/. Accessed December 21, 2017.

BOLD THINKERS DRIVING
REAL-WORLD IMPACT