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INTEGRATING THE HIV RESPONSE AT THE SYSTEMS LEVEL: EXPERIENCE OF FOUR COUNTRIES IN TRANSITION

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INTEGRATING THE HIV RESPONSE AT THE SYSTEMS LEVEL: EXPERIENCE OF FOUR COUNTRIES IN TRANSITION

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ACRONYMS

AIDS	acquired immunodeficiency syndrome
ANC	antenatal care
ART	antiretroviral therapy
ARV	antiretrovirals
CONAVIHSIDA	*Consejo Nacional para el VIH y el SIDA;* National Council for HIV and AIDS (Dominican Republic)
CSO	**c**ivil society organization
EDT	**e**lectronic dispensing tool (Namibia)
EPHS	Essential package of health services
GVN	Government of Vietnam
HFG	Health Finance and Governance project
HIV	human immunodeficiency virus
HSSP-HIV	Strategic Plan for HIV/AIDS and STI Prevention and Control (Cambodia)
LMIC	low- and middle-income country
MOH	Ministry of Health
MOHSS	Ministry of Health and Social Services (Namibia)
NAA	National AIDS Authority (Cambodia)
NCHADS	National Centre for HIV/AIDS, Dermatology & STDs (Cambodia)
NGO	nongovernmental organization
NSF	National Strategic Framework for HIV/AIDS (Namibia)
NSP	National Strategic Plan for HIV and AIDS (Dominican Republic)
OPC	outpatient clinic (Vietnam)
PACs	provincial AIDS committees (Vietnam)
PEPFAR	President's Emergency Plan for AIDS Relief

PEPFAR TA	Technical Assistance or Technical Collaboration countries
PLWHIV	people living with HIV/AIDS
PMTCT	prevention of mother-to-child transmission
PROMESE/CAL	*El Programa de Medicamentos Esenciales/Central de Apoyo Logístico;* Essential Medications Program/Center of Logistical Support
SAI	*Servicios de Atención Integral*; Integrated HIV/AIDS Units (Dominican Republic)
SHI	Social Health Insurance
SIAPS	Systems for Improved Access to Pharmaceuticals and Services
SUGEMI	*Sistema Único de Gestión de Medicamentos e Insumos;* Unified System for Medicine and Supply Management (Dominican Republic)
TB	tuberculosis
UNAIDS	Joint United Nations Programme on HIV/AIDS
USAID	United States Agency for International Development
VAAC	Vietnam Administration of AIDS Control
VCCT	voluntary, confidential counseling and testing
WHO	World Health Organization

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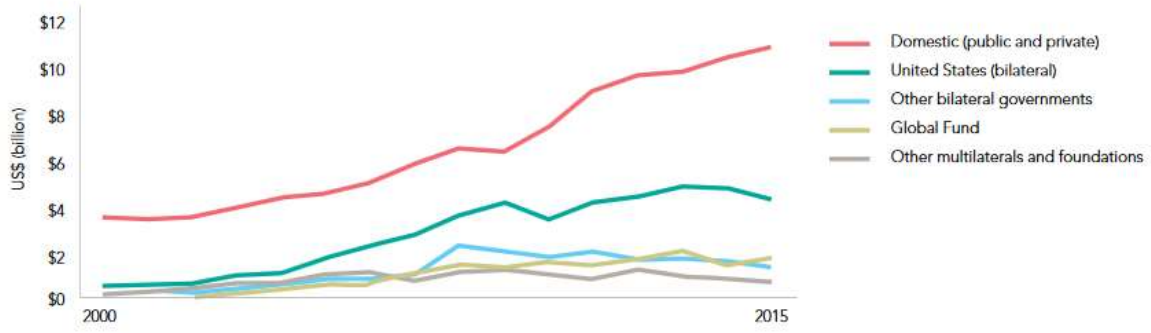
1. INTRODUCTION

The global response to combat the acquired immunodeficiency syndrome (AIDS) epidemic scaled up considerably in the early 2000s with the establishment of key institutions, notably the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund) and the United States President's Emergency Plan for AIDS Relief (PEPFAR) (AIDS.gov 2018). In response to high global rates of AIDS-related morbidity and mortality, the internationally supported rapid scale-up of human immunodeficiency virus (HIV) prevention, testing, treatment, and drug development is widely credited with curtailing a global epidemic, thereby limiting the human and financial costs of the virus (Bekker et al. 2018). Still the Joint United Nations Programme on HIV/AIDS (UNAIDS) estimates that 1.8 million people were infected with HIV in 2017, and there are nearly 37 million people living with HIV (PLWHIV) worldwide (UNAIDS 2018a).

In many countries, financing and governance of HIV services is transitioning from international donors to national governments. Figure 1 shows the trend of financial resources available for HIV responses around the world (UNAIDS 2016).

Figure 1. Resources Available for HIV by Source of Funding, 2000-2015



Source: UNAIDS estimates, June 2016; UNAIDS-Kaiser Family Foundation reports on Financing the Response to AIDS in Low- and Middle-Income Countries till 2015, OECD CRS last accessed June 2016.

This funding transition has major implications for the governance, management, and implementation of the HIV response. One legacy of the rapid emergency response is that many of the systems and processes for monitoring for, preventing, testing for, and treating HIV were implemented as separate health systems and processes. These interventions worked in parallel and with varying degrees of cooperation with existing local health systems to deliver primary care and/or other essential health services. This approach is sometimes referred to as vertical programming, in contrast to the concept of horizontal programming, in which there are more-shared and better integrated systems and processes (De Maeseneer et al. 2008). The concept of a diagonal approach has been coined as a way of using disease-specific funding for broader health system strengthening (Avila et al. n.d.). Examples of how a funding and governance transition could affect a country's HIV response are numerous. One is that under donor financing, the administrative costs of governance (such as staff salaries or office and conference costs for a governing body) might be covered by that external funding. Upon a funding

transition these administrative costs would need to be absorbed in government budgets, and the transition of these costs might disrupt the former HIV governance systems and processes. Another example of how financing transitions can affect the national HIV response is in the use of nongovernmental organizations (NGOs). In many countries with weak health systems, NGOs or faith-based organizations have been contracted to implement campaigns for targeted prevention, testing, and surveillance. Upon transition to domestic financing, this approach might not be viable for a host of reasons, such as regulations that prevent the government from contracting out such services. Procurement and importation of HIV drugs and supplies is another example; these systems and processes are often different when supported by external funding. When government agencies procure commodities, they often need to comply with different procurement and importation regulations imposed by their government.

Governments undergoing funding transitions for the HIV response are integrating aspects of the response into systems and processes for governing, managing, financing, and delivering other essential health services. But this phenomenon has not been systematically studied, and documentation on how governments achieve this is limited. Understanding how some governments are navigating an HIV funding transition may help other countries and the global health community to better design and plan future or ongoing efforts to transition national HIV responses to domestic resources for health.

USAID's Health Finance and Governance (HFG) project is helping to fill this gap. In particular, this study helps build an evidence base by exploring whether and how four countries in the process of transitioning to greater domestic financing of their HIV response are integrating HIV programming with local systems and processes for other essential health services.

System integration concerns the extent to which rules, policies and support systems are aligned (Valentijn et al. 2013).

This study applies the concept of system integration to examine the alignment of rules, policies, and support systems to address HIV and other essential health services in four low- and middle-income countries (LMICs). Specifically, the study explores the current extent of integration, the decisions faced by policymakers, and potential barriers/facilitators to integration in four countries. The analysis allows HFG to share lessons learned by each of these countries attempting to optimize rules, policy, and support systems for HIV and other essential health services.

In addition to systems, integration can occur at other "levels," including professional, service, and cultural levels (Valentijn et al. 2013). These levels overlap to some extent and may prove difficult to distinguish in practice. However, this study focuses on the system level, where the largest knowledge gap lies. According to Mounier-Jack et al. (2017), research in LMICs has focused on the inclusion of specific clusters of services for specific populations (often at the behest of donors), whereas little has been conducted at the system level.

HFG conducted a comparative case study on the experiences of Cambodia, Dominican Republic, Namibia, and Vietnam to describe their commonalities and differences, and developed recommendations for governments and partners of other LMICs confronting HIV funding transitions. We provide an account of the ways in which interests, ideas, and institutions are combined through social contracts in the health sector.

Study research questions:

1. How integrated are countries' national HIV responses with the local systems and processes of other essential services?

2. What are the key decision points that governments use to move toward integration of the country-led HIV response with other essential services?
3. What are the barriers and facilitators to integration of HIV and other essential health services?

HFG applied the key concepts and frameworks described in the next section to develop country-specific case studies in Annexes A–D. Annex E presents the detailed methodology and Annex F presents the sources referenced in the report. In the findings section we provide a comparison of whether and how different components of the HIV response are integrated across the countries within health system components that govern, manage, finance, or deliver other essential services. The discussion section presents an analysis of those findings, and discusses implications for other countries confronting similar challenges.

2. METHODS

2.1 Key Concepts and Framework

2.1.1 Local Systems and Processes That Help Governments Govern, Manage, Finance, and Deliver Health Services

Governments worldwide have assumed the responsibility of ensuring that their populations can access health care services. Several systems and policies are needed to enable governments to meet that goal. According to the World Health Organization (WHO), health systems are responsible for "ensuring strategic policy frameworks exist and are combined with effective oversight, coalition-building, the provision of appropriate regulations and incentives, attention to system-design, and accountability" (WHO 2007). This definition is included in what has come to be known as the health systems building blocks framework.

HFG initially drew on the building blocks framework to identify key health system components that ensure that essential health services are available to the population. This guided approach document review and data abstraction to broadly characterize the health system in each country. This involved assessment of service delivery, human resources for health, health information, medicines and technology, financing, and governance. We further tried to assess governance by exploring the organizations/actors involved, the presence of legislation, and civil society participation. While these were important conceptual underpinnings of the research, the health systems building blocks were somewhat insufficient for assessing a national HIV response.

2.1.2 Components of a Sustainable National HIV Response

UNAIDS and partners launched the 90-90-90 targets in 2014 with the goal of diagnosing 90 percent of all positive persons, providing antiretroviral therapy (ART) for 90 percent of those diagnosed, and achieving viral suppression for 90 percent of those treated by 2020. These targets, whether realistic for a particular country or not, are useful for understanding the aim of a country's national HIV response—which is ultimately to end AIDS in the country by diagnosing a large proportion of the positive population and effectively treating them. To reach these targets, the national HIV response operates within a **system.**

To explore and assess the study countries' national HIV responses, we adapted the categories identified in the PEPFAR sustainability index (PEPFAR 2017a-d). A national HIV response has many components, all of which are necessary to ensure that it meets its goals. We selected from the index the categories and subcategories that were most relevant for this study. The resulting list of categories represents a framework under which we presented key findings of the study.

1. Governance
    a. HIV policy and governance
    b. HIV policy and planning
    c. Civil society engagement
2. National health system and service delivery
    a. Service delivery
    b. Human resources for (HIV) health
    c. Commodity supply chain
3. Strategic investment, efficiency, and sustainable financing
4. Strategic information and health information systems

These components of an HIV response may be integrated within the health system component that functions to govern, manage, finance, or deliver other essential health services, or they may operate in a vertical (non-integrated) manner. An important caveat is that our research is strongly biased in favor of public stewardship of the national response, for two reasons. First, integration is largely a function of harmonizing practices that governments are designated to execute. Second, the private sector is diverse. We did not have adequate detail in our data to sufficiently characterize the private sector's role in the national HIV response. While civil society was well represented in this study, we were not fully able to assess the role of the private for-profit segment of the health system in our case studies.

2.1.3 Defining Integration

There exists little research on integrating health systems in LMICs, and there is a lack of consensus on what exactly constitutes "integration" (Mayhew et al. 2017a). For this study, we adopted a new definition by Watt et al. (2017) that combines the work of previous scholars (i.e., Briggs and Garner 2006; Atun et al. 2010b; Legido-Quigley et al. 2013). According to Watt et al. (2017), integration refers to "**managerial or operational changes to health systems to bring together inputs, delivery, management and organization of particular service functions as a means of improving coverage, access, quality, acceptability and (cost)-effectiveness**." This study focuses on the **system level** (rules, policy, and support systems), where relatively little integration research has been conducted in LMICs (Mounier-Jack et al. 2017).

We present a simple classification of systems-level integration below. While we understand that integration is a dynamic process, our study design is cross-sectional in nature. We sought to identify the health system components that governments might consider when moving toward integration of HIV and other essential health services. Some understand integration as operating on a continuum from no integration to complete integration, of software (people, knowledge, attitudes, values, practices, etc.) and hardware (equipment, infrastructure, etc.; Sheikh et al. 2011). While much of the integration literature on LMICs focuses on the hardware, there is a need to also better understand the software features of integration (Mayhew et al. 2017b). Nevertheless, our data were not specific enough to disaggregate hardware and software integration. For this reason, each researcher interpreted case study data and made a qualified judgement as to whether systems for HIV and essential serves were parallel,

partially integrated, or completely integrated. Throughout this report, we visually represent this simple form of integration with the following symbols:

2.2 Study Design

This study used well-established qualitative methods (Marshall and Rossman 2011), including literature review and semi-structured interviews, to explore how integration is understood, pursued, and refined in four LMIC health systems.

The study team included four HFG researchers. One researcher was assigned to lead each country case study, and the three provided technical peer review. A common analytic framework was applied to each case study; it included the methodology for the literature review and semi-structured interviews as well as data abstraction and written organization of findings.

Annex E contains a detailed summary of the study design and methods, as well as the tools employed.

2.3 Country Selection

We followed two principles in selecting case study countries:

1. To maximize potential for global learning, selected countries should be those with a robust government-led HIV response rather than those more reliant on a vertical HIV prevention and treatment program financed by PEPFAR.
2. To reflect diverse experiences, selected countries should vary in population size, HIV epidemic and response characteristics, and government effectiveness.[1]

HFG selected the countries from those listed in PEPFAR's Country/Regional Operational Plan Guidance 2016 that are Technical Assistance or Technical Collaboration countries (PEPFAR TA). HFG excluded Long-Term Strategy countries, to align with the first principle. We purposively selected Cambodia, Dominican Republic, Namibia, and Vietnam. Table 1 includes key indicators from each country. The selected countries represent diversity with respect to population size, income, region, and epidemiological characteristics.

[1] Government effectiveness is defined and measured in many ways. For the purposes of this paper, we use the World Governance Indicators measurement, which "captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies. Percentile rank indicates the country's rank among all countries covered by the aggregate indicator, with 0 corresponding to lowest rank, and 100 to highest rank. Percentile ranks have been adjusted to correct for changes over time in the composition of the countries covered by the WGI."

Table 1. Profile of Case Study Countries

	Cambodia	Dominican Republic	Namibia	Vietnam
Income group	Lower Middle	Upper Middle	Upper Middle	Lower Middle
Population (mil)*	15.7	10.6	2.4	92.7
Government effectiveness (percentile rank)**	25	42	64	55
Prevalence of HIV (percent of pop ages 15-49)*	0.6	1.0	13.3	0.5
Antiretroviral therapy coverage (percent of people living with HIV)*	74	46	69	42
Relevant USAID categories	PEPFAR TA	PEPFAR TA; Sustainable Financing Initiative	PEPFAR TA (co-finance)	PEPFAR TA (co-finance); Sustainable Financing Initiative

*Source: World Bank Databank for year 2015.

**Source: Worldwide Governance Indicators for year 2015.

3. COMPARATIVE CASE STUDY FINDINGS

This section presents comparative findings from the four country experiences and identifies emerging themes. For detailed findings by country, refer to the country-specific case studies in Annexes A–D.

Integration of the national HIV response into a country's health system, including processes that support other essential services, is a major theme at the policy level. Policy documents across all four countries discussed or alluded to integration of HIV services in some form. Cambodia's *Strategic Plan for HIV/AIDS and STI Prevention and Control in the Health Sector in Cambodia 2016-2020 (HSSP-HIV)* lays out clear strategies for integrating HIV services with delivery of certain other essential services. In 2017 the government released "test and treat" standard operating procedures for its publicly managed health facilities that require providers to conduct screening during antenatal care (ANC) visits, and for each hospital unit to refer suspected cases of HIV. In Dominican Republic, the government has been considering the integration of HIV services at the primary health level. In Namibia, according to the *National Strategic Framework for HIV/AIDS Response in Namibia 2017/18 to 2021/22*, the integration of HIV services into broader health care services is a key strategy to achieve targets for reducing new infections and AIDS-related deaths by 75 percent. In Vietnam, the government recently adopted "test and start" and officially included HIV under the Social Health Insurance (SHI) benefit package, although implementation of both has lagged.

Across the four countries, integration of HIV response components differs. Table 2 identifies whether an HIV program component is integrated, partially integrated, or not integrated. The current level of integration is often different than the vision stated in policy documents. The table denotes certain examples where initiatives are under way in the country to increase integration. Throughout, the table refers to systems-level integration (as defined above) and largely focuses on the public sector.

Table 2: Comparative Findings of Integration by HIV Program Component

Key: ○ No Integration ◐ Partial Integration ● Complete Integration

HIV Program Component	Cambodia	Dominican Republic	Namibia	Vietnam
1. Governance				
a. Policy and governance b. Policy and planning	◐ • HIV governed as a vertical program at national level • HIV recently integrated in local government planning	◐ • Partial systems integration with essential services • Cross-sectoral coordination	◐ • Relatively vertical governance structure • Multisectoral coordination emphasized in recent years	◐ • HIV covered by law under SHI, but implementation has lagged due to external funding for vertical HIV activities
c. Civil society engagement	○ • The work of NGOs and community health workers in HIV service provision has historically been funded externally, and they have worked largely without central oversight.	◐ • Well-organized network of NGOs, and engaged media, but largely focused on HIV as a standalone issue	◐ • Sector Steering Committees link the public sector with civil society organizations (CSOs) and ensure coherence; some committees update the National AIDS Executive Committee annually.	● • Vietnam Union of Science and Technology Associations connects HIV-related organizations into networks of national branches and local associations.
2. National health system and service delivery				
a. Service delivery (HIV testing and treatment)	◐ • Standalone voluntary, confidential counseling and testing sites • Initiative to expand test and treat to public health facilities • Initiative to expand test and treat to public health facilities • Plans for integration of treatment for people stable on ART with community structures	○ • Few elements of integration • Standalone HIV service providers deliver HIV services and ART.	◐ • HIV testing services are delivered primarily through public health sector facilities. • Scaling up model for integrating HIV services into sexual and reproductive health care • ART initiated primarily through public health sector facilities • "Treat all" guidelines in place	○ • Few elements of integration • Testing and treatment integration: test and start adopted officially in 2015, but coverage is low • Initiative to transition to full integration for treatment
b. Human resources for (HIV) health	◐ • Medical students learn about HIV in classroom. • Special HIV in-service training required	○ • Not integrated • HIV service provider staff trained and deliver services separately	○ • Not integrated • External partners mainly supporting pre- and in-service training for HIV	◐ • Training for HIV care is not integrated with other training. • Physicians sometimes seconded from other

	• Data entry workforce for HIV not integrated with the civil service			departments for HIV care; others are direct hires and work on HIV full-time
c. Commodity supply chain	• Not integrated	• HIV commodities supply chain fully integrated with supply chain for all other commodities	• HIV commodities supply chain fully integrated with supply chain for all other commodities	• Drugs for opportunistic infections integrated in main supply chain • Antiretrovirals (ARVs) are procured vertically with plans to integrate.
3. Strategic investment, efficiency, and sustainable financing				
	• Domestic funding for facilities providing essential health services and HIV testing and referral services • Exclusion of HIV services from health equity funds (that pay facilities for provision of free care to the poor) creates concern for long-term sustainability.	• Currently few elements of integration, but possibly to change through social contracting	• ART provided to patients for treatment and prevention of mother-to-child transmission (PMTCT) free of charge	• Elements of integration present • Donor funds go directly into HIV programming
4. Strategic information and health information systems				
	• Not integrated	• Various public and private sector Health Management information System systems integration	• Not integrated	• All clinical and billing information is integrated in the main medical record system. • HIV quality of care indicators are recorded in a separate database.

A look across the four main HIV response components across the four countries does not reveal a clear trend toward or away from integration. Within the same country, the level of integration of different HIV response components varies. Across countries, the level of integration for any given HIV response component varies as well.

The level of integration of HIV response components with the overall health system is mixed, with no clear trend emerging through a cross-country comparison.

HIV incidence in **Cambodia** has dropped below 1,000 new cases per year, although there remain approximately 71,000 PLWHIV in need of ART. Given that new cases of HIV are occurring within the general population, the government's strategy for reaching people unaware of their status is the integration of HIV testing and treatment services into public health facilities and community structures already delivering other essential health services. This integration is aspired to, but only partially implemented at this time.

Dominican Republic lacks concrete plans to integrate the delivery of HIV services with delivery of other essential health services, but partners are advocating for contracting NGOs to provide services instead of HIV service providers. These services are delivered through service providers that exclusively offer comprehensive HIV services, and do not offer other essential health services. Dominican Republic experts found this arrangement to be important because the HIV facilities dedicated to providing HIV services can better support PLWHIV, who often face barriers to treatment, as well as stigma, in Dominican Republic.

In **Namibia,** where HIV prevalence in the total population is over 13 percent, the public health sector is the primary supplier of HIV prevention, treatment, and chronic care services. Integration at the service delivery level in Namibia has been increasing over time. In 2014, Namibia was selected as one of seven countries to pilot a new model for the integration of HIV and sexual and reproductive health care service delivery, which was jointly developed by the Ministry of Health (MOH), WHO, UNFPA, and UNAIDS. The ministry decided to scale up the model in 2017 and has now rolled it out across most public facilities in the country.

In **Vietnam,** although PLWHIV are a small proportion of the total population, over half have not yet started ART, due in large part to the challenge of reaching people in remote areas. Vietnam has stated its intention to financially integrate HIV services under the country's SHI program, but has not yet begun. One challenge is that to be paid by the government as contracted providers in the SHI scheme, health facilities must be accredited under a process that requires them to demonstrate that they provide the full range of HIV services. However, HIV services have historically been delivered in standalone, donor-funded, and donor-operated clinics.

Across the four countries, human resources for the national HIV response are the least integrated with those that support delivery of other essential services. In Vietnam, for example, training has historically been paid for by external donors, and was not integrated or coordinated with other clinical training. Now, as facilities seek to become contracted SHI providers, their staff need to become certified in delivery of HIV services.

The Dominican Republic and Vietnam boast well-integrated information systems, while Cambodia and Namibia's HIV data are handled in a vertical manner. In Dominican Republic, the *Sistema Único de Gestión de Medicamentos e Insumos* (SUGEMI; Unified System for Medicine and Supply Management) is well regarded among health systems experts and the HIV community. The system is credited for allowing Dominican Republic to make important gains in coordinating the HIV response. The Government of Namibia finances and manages all HIV-related commodities through the Central Medical Stores, showing strong integration with the supply chain of commodities for delivering other essential health services (although it is bracing for a large increase in HIV commodity needs with the recent adoption of "treat all" and the scale-up of community-based HIV services). By contrast, in Cambodia the government is still exploring how to pay salaries of the HIV data entry staff that have been so integral to monitoring the epidemic. In Vietnam, viral load tests and ARVs are still funded by donors through a parallel supply chain that does not share resources or coordinate with the national system. PEPFAR has announced it will cease its procurement and payment of ARVs in 2019, at which point these commodities may be integrated in the national supply chain.

In the two upper middle-income countries, Dominican Republic and Namibia, the supply chain for HIV is well-integrated into the supply chain for other essential medicines.

A look across the country cases shows that integration of financing (referenced in the framework as strategic investment, efficiency, and sustainable financing) varies widely across the four countries. This category includes purchasing of HIV services (e.g., using out-of-pocket payments, financing schemes that purchase services on behalf of members, or directly financed service provision); this category also refers to financing of other HIV-related activities for prevention, governance, information systems, supplies, and more. In Cambodia and Vietnam, financing will be more integrated once these countries fully integrate HIV services under key health financing mechanisms such as health equity funds and SHI respectively.[2] In the Dominican Republic, most resources dedicated to countering the HIV epidemic are targeted for this purpose and do not flow through systems and processes that finance other essential health services. Financing for HIV services in Namibia can be considered integrated with financing for other essential health services, given that the public health facilities are the primary suppliers of HIV services, and are financed by the government.

Governance is a broad category and includes governing bodies/organizations/actors, legislation and less-formal mechanisms, and civil society. Cambodia provides an example of less integration of governance over the HIV response with systems and processes for governing other essential services; its National AIDS Authority (NAA) operates with financing from external funders and outside the purview of the MOH. In Dominican Republic, governance of essential health services requires strong coordination, because different agencies manage different areas of service delivery. The National Health Service is responsible for managing hospitals, and the MOH has to certify the services provided. For purposes of coordinating service delivery for the HIV response, the National AIDS governing body interacts with both of these institutions.

[2] Health equity funds are managed by government operational districts, and hospitals in Cambodia and financed through external or domestic sources. Under the scheme, facilities provide a package of health services free to poor patients in exchange for payments under the funds.

4. DISCUSSION AND CONCLUSION

This study examines the degree to which different components of an HIV response are integrated at a systems level with other essential health services. This unique lens allows us to better understand how the HIV response fits with the broader health system. It can also help identify opportunities and challenges for a country to assume more governance, management, financing, and service delivery responsibilities for the HIV response in the long term by integrating aspects of the HIV response in the broader health system and service delivery system it already governs, manages, and finances.

The legacy of vertical disease programming remains quite observable in the four case study countries. Along with the epidemiological shift and the pressure to take over many components of the HIV response, countries appear to generally favor a transition from a vertical to a more horizontal response. Integration of components of the HIV response in the governance, management, financing, and delivery of other essential health services appears to be an aspiration, as evidenced by legislation, policies, and plans.

A desire for more integration is not the case across all components and all countries, however. The starkest illustration of this is in the Dominican Republic, where efforts to integrate delivery of HIV services with general health service delivery are constrained due to concerns that such integration may create additional barriers for PLWHIV to access services (due to stigma and other factors). While respondents would like to see HIV service providers slowly absorbed into the health system, the approach of the Dominican Republic to increasing service-level integration underscores that there may be valid reasons for maintaining the vertical nature of certain components of the HIV response.

The study countries are in different stages of HIV donor transition, and the stage of transition is likely associated with the nature of the epidemic in the country and expectations by HIV donors of the country to increase domestic resources. As new infections in Cambodia approach virtual elimination, Cambodia's national HIV response is shifting toward greater emphasis on treatment initiation, adherence, retention, and viral load suppression through the public health system or existing community structures. In Vietnam, HIV services are part of the SHI benefit package by law, but only recently has the country started setting up the processes required to make it a reality for enrollees. Because a broad spectrum of HIV services are provided at no charge to the patient through donor-financed and managed clinics, the SHI program had avoided implementing HIV-related benefits to avoid costs related to payment of public (and/or private) providers for such services.

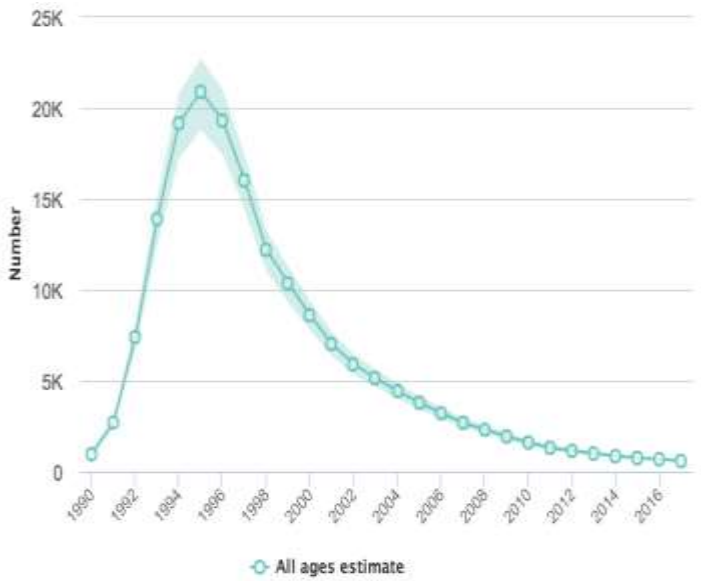
A key concern surrounding any transition of HIV programs or services from vertical programming to a more horizontally planned and implemented HIV response is the potential for disruption of safe services for PLWHIV. For this reason integration of HIV financing or planning across levels is a complex and lengthy process. It remains a challenge to integrate HIV services into health systems, including at the level of policy, primary care line ministries, clinical protocols, and delivery of essential services at facilities. In countries facing transition toward domestic resourcing of their national HIV response, governments may look to the examples of these case study countries to aid planning for more-efficient responses and to reduce future shocks to national health systems, HIV care, and PLWHIV.

ANNEX A: CAMBODIA CASE STUDY

Introduction

Due to a strong and sustained response to the HIV epidemic, new HIV infections in Cambodia are estimated to have dropped to below 1,000 from their peak of 21,000 in 1995. HIV prevalence is estimated to be at 0.5 percent by 2020 (National Centre for HIV/AIDS, Dermatology & STDs (NCHADS 2016a)).

Figure A.1: Estimated Trend of New HIV Infections, Cambodia



Source: UNAIDS 2018b.

Although new infections were thought to occur primarily among individuals from at-risk populations, improved surveillance in 2015 revealed that nearly two-thirds of new infections were from the general population, complicating prevention efforts (PEPFAR 2017a). The leaders, managers, and supporters of the national HIV response remain optimistic, and the HSSP-HIV calls for virtual elimination of new HIV infections by 2025 (NCHADS 2016b).

With the approaching elimination of new infections, the Royal Government of Cambodia and its partners are focused on ensuring that high-quality care can be provided to the estimated 71,000 PLWHIV in the country. An estimated 80 percent of infected people are being treated with ART and the number of AIDS-related deaths annually have been on a steady decline (UNAIDS 2018b). Historically, certain aspects of the national HIV response have been managed or delivered in a largely vertical manner and mainly with external funding. In recent years, some aspects of the response have moved toward more integration within routine systems and processes when appropriate and feasible. With the decline of external funding for the HIV response in Cambodia, the government and its partners have explored ways to restructure the

response in a manner that achieves the objectives of the national HIV response (including effective case detection, case tracking, care quality, and access to comprehensive care) with less external funding.

This case study explores the different aspects of Cambodia's national HIV response that are moving toward integration with the routine systems and processes for delivery, management, and governance of other essential services, and the aspects of the response that remain relatively vertical.

Methodology

This case study is part of a larger research study on the ways in which the HIV response is integrated with other essential services. The methods for the larger study are described elsewhere. This includes a structured document review, key informant interviews, and comparison with three other countries (Dominican Republic, Namibia, and Vietnam). For the purposes of this case study, aspects of data collection and analysis specific to Cambodia are described in greater detail.

The document review included a systematic search of the peer-reviewed literature using three simple search terms. All potential peer-reviewed original research related to Cambodia was screened for relevance by title, abstract, and full-text. This yielded three articles on the integration of HIV in Cambodia.

The review also included a document review using a standard data abstraction form to synthesize findings from country reports; government policy documents, political speeches, and press releases; and project materials from agencies providing funding for HIV activities in Cambodia. This online search yielded a total of 21 documents. Information was collated and presented internally to HFG researchers working on the larger study. This data served two purposes. First, it helped to provide the contextual basis for the case study. Second, it helped to identify key gaps that were explored in subsequent key informant interviews.

In Cambodia, HFG conducted three interviews with four key informants: one from service delivery representation, and three from funding agencies. All interviews were conducted over the telephone/Skype. Respondents gave consent to participate in this study, their responses were audio recorded, and key ideas were captured in detailed notes. These responses helped to further explore emerging themes identified in the document review above. Key informants from government agencies did not respond to requests for an interview; elections in July likely prevented their participation. HFG relied heavily on written government documentation to incorporate this viewpoint. All data were collected and analyzed between April and June 2018.

Findings

Overall, there is a clear trend toward integration of the national HIV response in Cambodia with delivery and management of—and governance over—other essential health services (such as prevention and treatment of noncommunicable diseases, reproductive health services, maternal health services, newborn health services, and child health services). Some aspects of the response remain vertical for a variety of reasons.

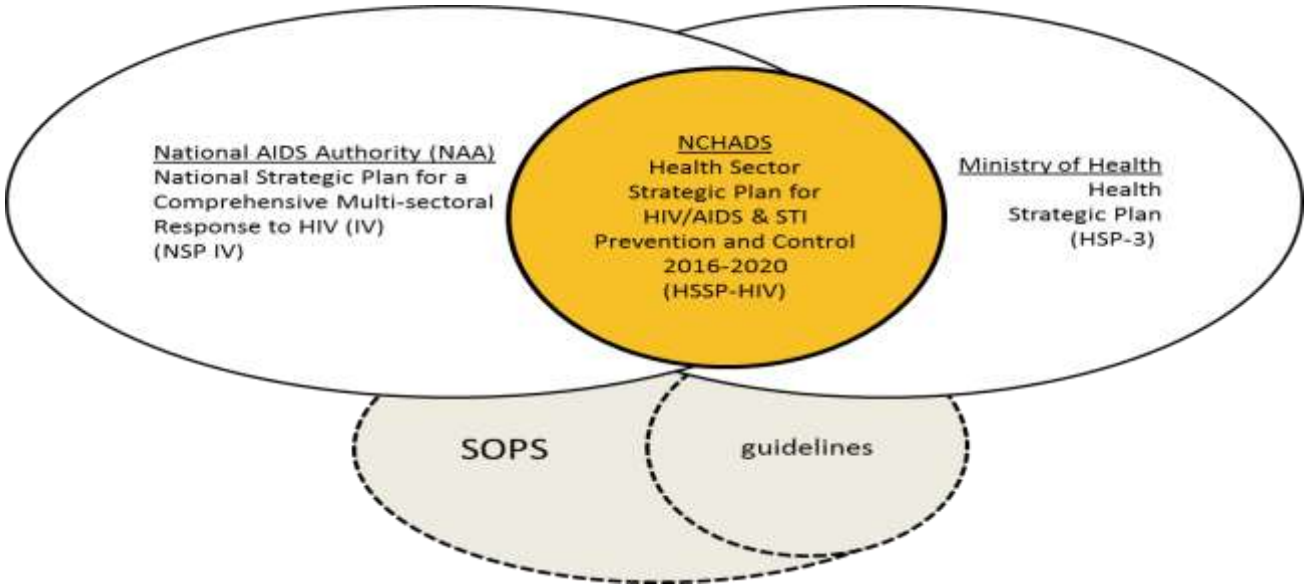
Governance

HIV Policy and Governance

Governance over Cambodia's national HIV response is relatively vertical—that is, it is not closely integrated with the systems and processes that govern the delivery of other essential health services. A high-level body called the NAA, comprising senior officials from 28 ministries and other agencies, provides overall stewardship and leadership for the national HIV response (NAA 2018).

HIV policy is well integrated in Cambodia. HIV policy is guided by the NAA's *National Strategic Plan for a Comprehensive Multi-Sectoral Response to HIV (IV)*, the NCHADS's *HSSP-HIV,* and an array of standard operating procedures and guidelines. These policies are aligned with the MOH's strategic plan (see Figure A.2). The "Test and Treat" Standard Operating Procedures released by the MOH in 2017 is one example of how government regulation integrates the national HIV response with other essential health services. It explicitly states that HIV testing and treatment is under the purview of public health facilities, to be performed as part of the regular standard of primary and essential health care.

Figure A.2: Governance of the National HIV Response in Cambodia



SOPS= standard operating procedures.

Source: NCHADS 2016b.Further integration at the legislation level may be possible. In one example, an expert cited no knowledge of any statute or other mechanism allowing the leaders and managers of the national HIV response to channel government funding to local NGOs and CSOs, something that would be helpful for HIV operations. In another example, an expert cited

that HIV services were not included in the original benefits package of the health equity funds.[3] Modifying the benefit package requires a more formal regulatory process and agreement by government agencies, including the Ministry of Economics and Finance, which is proposed to take over financing of the health equity funds.

In addition to formal legislation and regulation, technical actors can play a role in determining what aspects of the national HIV response are appropriate to move toward more-integrated systems and processes, and which aspects remain unique to HIV and should remain vertically programmed. The National Technical Working Group on Sustainability, which was forming at the time of data collection for this study, is one such example.

HIV Policy and Planning

Planning and operations for the national HIV response is also relatively vertical compared to planning and operations for delivery of other essential health services. NCHADS is an operational unit within the MOH and cites its primary purpose as responding to the HIV epidemic through the implementation of HIV/AIDS Strategic Plans. It also manages the National Dermatology and Sexually Transmitted Diseases Clinic. NCHADS includes staff in provincial health departments who assist with managing NCHADS activities (such as Voluntary Confidential Counseling and Testing clinics) (NCHADS 2018). While they are under the same umbrella national and provincial governance structures as other essential health services, the HIV activities remain relatively independent. As one expert explained, "HIV has been part of the [minimum package of activities], but that covers a very minimum level. The detail is not really included, that's why the national program uses its own management system to get it implemented."

Aspects of HIV service delivery have recently been integrated in local government planning mechanisms called the Commune Development Plan/Commune Investment Plan (Senior Minister 2017). One expert explained that this is mostly related to awareness at the local level; no HIV-related funding is flowing to the local government level at this time. The expert explained that HIV planning by the Commune is in its *"first stage of making sure that there is attention at the political level and increasing awareness to ensure that somebody [at the Commune level] is taking care of these issues. This is a perfect example of taking funding out of national level and integrating it at local level through community health workers or others …"*

Other actors involved in the operations of the national HIV response include NGOs conducting service delivery in the north and south zones of the country, community support organizations and other community-based organizations, public facilities providing certain services such as finger-prick tests and routine ARV delivery, funding agencies, technical assistance partners and technical work groups, and the agency procuring and importing HIV-related commodities and supplies.

Civil Society Engagement

Civil society has historically played an important role in the national HIV response. Because of the efforts of CSOs, one key informant described Cambodia as a global leader in

[3] Health equity funds are managed by government operational districts and hospitals and financed through external or domestic sources. Under the scheme, facilities provide a package of health services for free to poor patients in exchange for payments under the funds.

community/peer-initiated testing and counseling and partner notification, tracing, and testing. Such organizations have been externally funded, but as donor funding for these organizations has declined, future financing for many of these actors is in flux. In the 2017 Country Operational Plan, PEPFAR identified a need to work with the government to ensure it assumes the role of financing payments for community health workers so that these workers can continue providing important HIV case detection and treatment services.

National Health System and Service Delivery

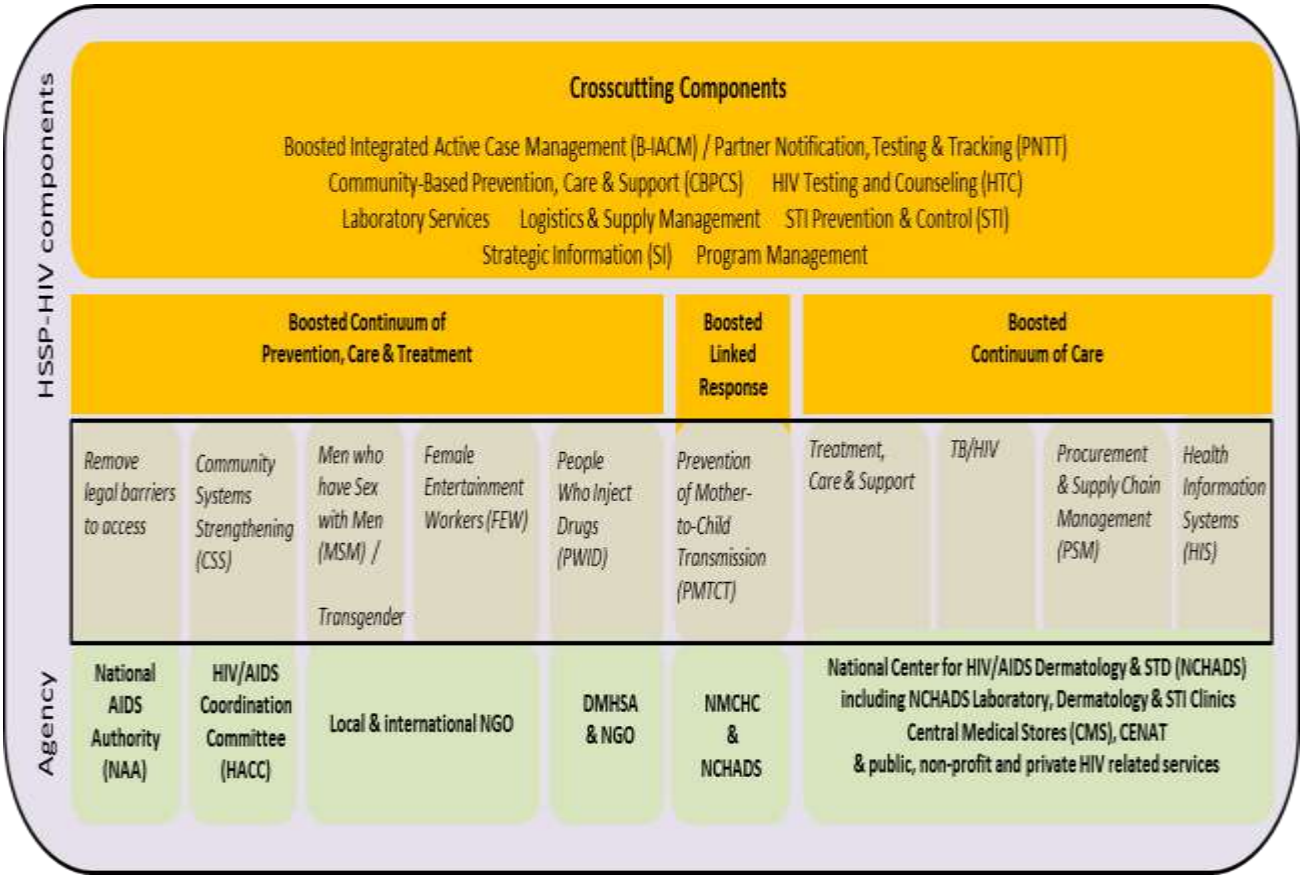
Service Delivery

HIV prevention, testing, and treatment services have historically been delivered vertically but have steadily become more integrated with delivery of other essential services over time. Leaders and managers of the national HIV response appear to favor service-level integration of HIV with delivery of other essential services in cases that make sense for the patient. The HSSP-HIV lays out clear strategies for integrating HIV services with certain other essential health services, and designates responsible government agencies (see Figure A.3). The current level of integration differs by type of service.

Active case detection among subpopulations considered to be at high risk (such as injection drug users, sex workers, and men who have sex with men) is primarily vertically organized and done by NGOs. Given that Cambodia is closing in on detecting remaining cases, one key informant did not anticipate any further integration of active case detection of these high-risk populations in local systems and processes. Once an NGO identifies an HIV-positive individual, a case management assistant helps the individual access public treatment services.

For the general population, HIV testing and counseling appears to be moving toward more integration with the routine delivery of other essential services. Voluntary, confidential counseling and testing (VCCT) sites conduct testing and counseling. In 2015, there were 67 VCCT sites in operation. An initiative to expand the capacity of other facilities to offer these services brought that number to 1,159 sites by the next year (NCHADS 2016b); and one expert cited that this testing is now available at almost all public health facilities in the country. The goal is for family health clinics, methadone maintenance treatment clinics, hospital wards, and prisons to conduct finger-prick point of care testing and refer positive cases to the VCCT sites for confirmation. One expert discussed how, as of 2017, newly-released test and treat" standard operating procedures established mandatory HIV screening during ANC and that each hospital unit should refer suspected cases.

Figure A.3: Components of the HSSP-HIV and Responsible Government Agencies



DMHSA – Department of Mental Health and Substance Abuse, MOH
NMCHC – National Maternal Child Health Center, MOH
CENAT – National Center for Tuberculosis and Leprosy Control
Source: NCHADS 2016b.

The Boosted Continuum of Prevention to Care and Treatment component seeks to increase prevention, case detection, and referrals to health services for key populations considered to be at high risk. This component calls for integration of HIV services with sexual and reproductive health services and services for testing and treating sexually transmitted infections. Another component—the Boosted Continuum of Care—also discusses integration. The component was introduced by the government in 2014 to improve PLWHIV access to comprehensive care and calls for better linkages for PLWHIV with community-based care and health facility-based care, as well as better integration between HIV and tuberculosis (TB) and viral hepatitis B or C service delivery.

The Boosted Linked Response component tackles mother-to-child transmission. Follow-up among HIV- positive pregnant women and their exposed infants has been cited as a challenge in Cambodia (Sim et al. 2015). The component calls for ANC service delivery across the country to include HIV and syphilis rapid testing and ANC care with a plan for an HIV test during labor at referral hospitals that are co-located with opportunistic infection-ART clinics. Pre-ART/ART services include: maternal ART (Option B+); positive prevention and birth spacing; partner

notification, tracing, and testing; and pre-registration and referral to maternity services. At hospitals, maternity services include labor and delivery, HIV test at labor (at hospitals with ART sites), ARV prophylaxis of HIV-exposed infants, and pre-registration and referral to opportunistic infection-ART clinics.

Finally, plans are under way to increase integration of HIV treatment services with community-based care. In 2015, a new model called community-based prevention care and support was introduced to implement specific strategies for targeted general populations, PLWHIV with the greatest need (poor PLWHIV and PLWHIV not yet stable on ART), and PLWHIV stable on ART. Leaders and managers of the national HIV response are exploring the feasibility of using existing community support mechanisms to conduct community-based delivery for those PLWHIV who are stable on ART. They also identified a need to initiate discussions with the MOH on the potential and process for integrating community-based prevention care and support into local primary health care structures (NCHADS 2016b).

One expert identified challenges with delivering HIV services primarily through the national health system. For example, the operating hours of the facility may not be suitable for all patients, and vertical service delivery for PLWHIV may be preferable in some cases. Careful consideration of the impact on patients is important.

Human Resources for Health (Workforce)

The HIV workforce is integrated with the general health workforce in some but not all ways. One expert explained that the national HIV program trains general practitioners through in-service training or continuing medical education to deliver ART. In pre-service training, medical students learn about HIV but do not develop full competencies for ART delivery unless they train specifically for it during residency. Another expert cites a lack of standardized guidelines for in-service training.

One expert flagged the private sector workforce as a potential resource for the national HIV response. Due to limited regulation over the private sector, this resource remains untapped. Additionally, another expert explained that financing and implementation through large external funding sources is not structured to allow access to certain types of private providers such as private primary health providers and private pharmacies. Another expert thought that not many people in Cambodia are currently seeking HIV treatment in the private sector because HIV testing and treatment is legally free in the public sector. It is possible that higher-income individuals are accessing ART in the private sector without donors' or government awareness. If well-regulated and enabled through mechanisms such as health insurance or government grants, the private sector could make a larger contribution to the national HIV response by providing lab services, social marketing, and extended clinic hours.

Ensuring quality of HIV services uniformly across the country is also a challenge. One expert discussed how the provider credentialing system needs further strengthening. Relatedly, national capacity for regulation and oversight needs to be augmented. These are broader health sector challenges in Cambodia that affect the national HIV response. In one example, reuse of an infected needle in a remote area caused an HIV outbreak in the community.

Finally, other experts flagged risks to the national Health Management information System and HIV data strategy, given that donors fund the workforce of information technology specialists working on the national HIV response. A Global Fund grant currently supports the salaries of information technology specialists at the national and subnational level in reporting HIV data and conducting HIV monitoring and surveillance. These types of positions need continuous funding

due to the time it takes to train people and the specialized knowledge needed to consistently monitor the epidemic. Unfortunately, staff turnover in such positions is high, because information technology specialists build skills in data management that are highly valued in other sectors. Leaders and managers of the national HIV response are concerned that as the Global Fund reduces support for these and other positions, they may face challenges in incorporating these positions into the government payroll.

Commodity Supply Chain

The supply chain for the national HIV response is largely vertical. ARVs, drugs for opportunistic infections, and other HIV-related supplies have been and continue to be imported in bulk by a non-governmental purchaser. In recent years, changes to the structure of the Global Fund grant have resulted in the government increasing its funding for all HIV commodities. One expert expressed a concern with a donor-initiated transition away from direct support for the function of forecasting commodities, suggesting that the MOH should be initiating this transition.

Strategic Investment, Efficiency, and Sustainable Financing

Financing pathways help shape the level of integration between the national HIV response and delivery of and governance over other essential services. They may inhibit or facilitate integration of delivery, planning, and governance. While delivery of and governance over other essential health services is largely financed by the MOH, the national HIV response has historically been primarily financed through external funding mechanisms. In recent years, the Royal Government of Cambodia has been financing an increasingly larger proportion of the national HIV response, and donor funding is declining. However, one expert explained that government funding for the HIV response will remain fragile until the government budget includes an explicit line item for ARVs.

Governance over and management of the national HIV response is following a similar pattern. While much of governance and management has been vertical and its financing has historically been externally funded, this is changing. The government is increasingly incorporating the administration and management of the national HIV response into local systems and processes. For many years the salaries of national HIV managers were paid through the Global Fund grant; the government is now incorporating many of these positions into the civil service.

As more public health facilities adopt the HIV rapid test, financing for this service becomes more integrated with financing for diagnostic services within the MOH's budget as existing government-paid providers increasingly deliver HIV testing services.

Financing for HIV versus other essential health services has been separate in many ways, given that funding for HIV commodities and service delivery has flowed through vertical channels. In recent years there has been policy dialogue among government and its partners that may affect this. Policymakers discussed the feasibility of incorporating HIV services under the benefits of health equity funds for the very poor (Senior Minister 2017). HIV services were not included in the benefit package when it was originally developed. As one expert explained, doing so would improve integration of financing for HIV services with financing for other essential health services, and would not be too costly given that the number of beneficiaries of HIV services would be limited. However, this integration has not yet occurred, and precise numbers of PLWHIV eligible for enrollment in health equity funds are currently unknown (Health Policy Plus 2018). The integration of HIV services under health equity funds is complicated because by law,

HIV services are supposed to be provided free, but the health equity funds provide payments to providers for free provision of a package of services that otherwise requires user fees. But one expert thought that the integration should still occur so that service providers can earn additional revenue for treating the limited number of PLWHIVs who are also eligible for enrollment in the funds.

Financing for other parts of the national HIV response, such as that for CSOs that conduct outreach, prevention, and support services, is vertically financed and has historically been supported by external donor funding. As donor support for such assistance declines, stakeholders are advocating for government or alternative financing strategies to ensure these CSOs—and the vast number of community health workers they employ—can continue operating (Health Policy Plus 2018).

Strategic Information and Health Information Systems

The data system used for managing program-level data on HIV activities is not integrated into Cambodia's public health information system. One expert discussed how integration of these systems has met with many challenges in recent years. One reason is that ART clinics and staff have historically been funded through vertical programs that require detailed reporting. As the Global Fund now transitions away from paying for data entry staff, local governments are being asked to absorb the salaries of those workers to maintain data reporting.

Conclusion

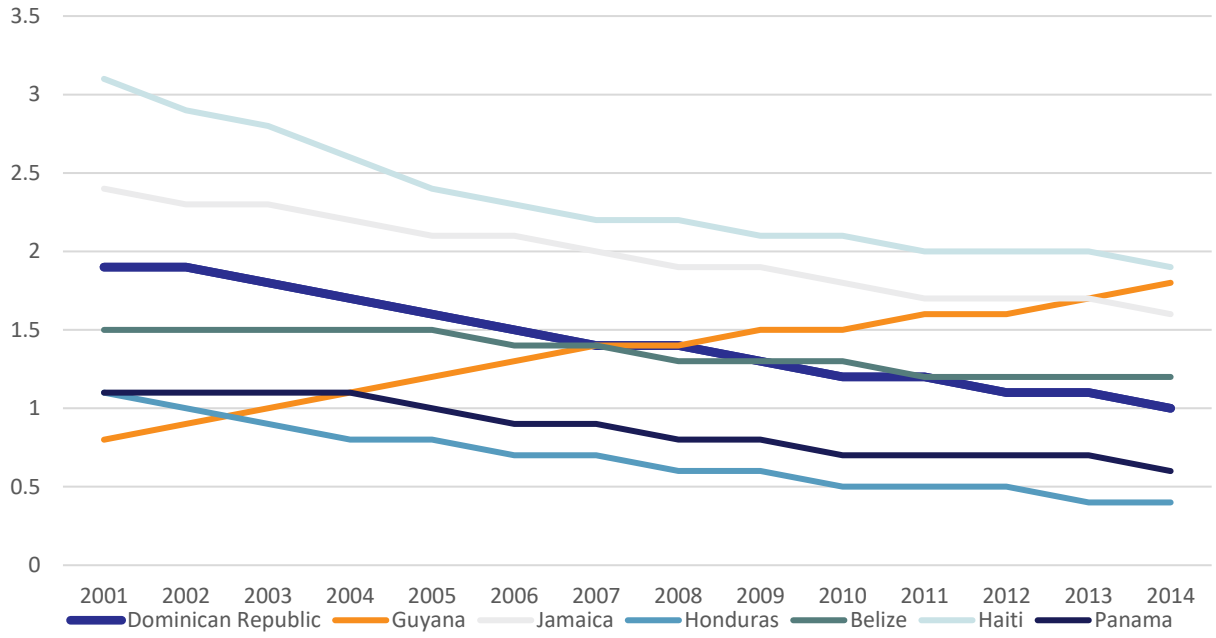
Shifts in the nature of the epidemic and shifts in financing are major factors driving an overall trend toward more integration of the national HIV response with the routine systems and processes supporting delivery of other essential health services. Some aspects of the national HIV response remain vertical for different reasons; certain aspects of service delivery, management, or governance may require or benefit from a vertical program design. How the government of Cambodia restructured and continues to restructure certain aspects of the national HIV response can be instructive to other countries as they experience similar shifts in the nature of their epidemic and its financing.

ANNEX B: DOMINICAN REPUBLIC CASE STUDY

Introduction

The government of the Dominican Republic has made progress in addressing the HIV epidemic. Though the majority of HIV infections in the Caribbean are found on the island of Hispaniola, the Dominican Republic accounts for a smaller share of cases (Rojas et al. 2011) (see Figure B.1). The incidence of HIV infection in the Dominican Republic has declined to just 0.9 percent in 2017, with approximately 67,000 PLWHIV (UNAIDS 2018c). This progress is attributable to a variety of factors including a sustained and increasingly integrated response from a network of dedicated actors. This case study explores some of these factors in greater detail with the goal of providing policy lessons for countries seeking to address what has become a chronic condition, particularly among high-risk communities.

Figure B.1: Prevalence of HIV in Selected Latin American Countries, 2001–2014 (Source: World Bank Development Indicators)



While international and domestic stakeholders have levied a variety of interventions to counter the growing threat of HIV in the Dominican Republic, the focus of this case study is on the governance of the HIV response. We identify several strategies that the Dominican Republic has used to integrate routine systems and processes for essential health services delivery and management. Some of these strategies include the evolution of integrated HIV/AIDS Units,

called *Servicios de Atención Integral* (SAIs), the development of a centralized procurement agency (PROMESE-CAL; *El Programa de Medicamentos Esenciales/Central de Apoyo Logístico;* Essential Medications Program/Center of Logistical Support), an integrated system for medicine and supply chain management, called (SUGEMI), a centralized patient registry system, *Formulario de Aplicación a Programas de Políticas Sociales* (FAPPS), and new strategies for sustainably financing the HIV response. In addition, the Dominican experience is marked by strong civil society engagement as well as sustained political attention in recent years.

In the following sections, this case study explores these themes by components of the health system, using the HIV Sustainability index framework (PEPFAR 2016). We then introduce some of the political elements of the integrated response, including legislation, policy, and other less formal ways of directing attention and resources to HIV services. Next, we highlight the active role of civil society and ways in which engagement has led to stronger, more deliberative forms of governance. Finally, we conclude with some persistent challenges and global lessons learned from the Dominican experience.

Methodology

This case study is part of a larger research study on the ways in which the HIV response is integrated with other essential services. The methods for the larger study are described in greater detail in Annex E. This includes a structured document review, key informant interviews, and comparison with three other countries (Cambodia, Namibia, and Vietnam). For the purpose of this case study, aspects of data collection and analysis specific to the Dominican Republic are described in greater detail.

The document review included a systematic search of the peer-reviewed literature using three simple search terms. HFG screened all potential peer-reviewed original research related to the Dominican Republic for relevance by title, abstract, and full-text. This yielded no relevant research on the integration of HIV in the Dominican Republic and thus we were unable to include any peer-reviewed articles in the document review.

Instead, the document review included country reports, government documents, and project materials from implementing partners working on HIV programming in the Dominican Republic. This online search yielded 22 documents of varying degrees of relevance for this study. HFG researchers used a standard data abstraction form to synthesize findings and present internally to HFG researchers working on the larger comparative case study. This data served two purposes. First, it helped to provide the contextual basis for the case study. Second, it helped to identify key gaps that HFG explored in subsequent key informant interviews.

HFG researchers conducted key informant interviews with three individuals representing different segments of the coordinated HIV response in the Dominican Republic. This included an individual working on the National Commission of HIV and AIDS, a supply chain and procurement specialist, and a member of a network of NGOs that helps to coordinate the HIV response at the national level. As a result, this case study is informed by key segments of the national response including government, commodities management, and civil society. All interviews were conducted over the telephone/Skype. Respondents gave consent to participate in this study, their responses were audio recorded, and key ideas were captured in detailed notes. These responses helped to further explore emerging themes identified in the document review above. All data were collected and analyzed between April and June 2018.

Findings

The data broadly suggest that the HIV response in the Dominican Republic is partially integrated. At the planning level, forecasting and budgeting is performed by a joint committee, involving an array of stakeholders. At the warehouse and distribution level, the HIV response is well integrated, with all HIV commodities and supply chain management shared with commodities for other essential services. At the service level, the system is somewhat fragmented, but international stakeholders and others have recently tried to further integrate testing, treatment, and viral load suppression.

Governance

HIV Policy and Governance

The National HIV response in the Dominican Republic includes few elements of systems- level integration with other essential services. The response is governed by the National Strategic Plan for HIV and AIDS (NSP) (2015–2018) that was developed with technical input from a core group of health system stakeholders (Ministerio de Salud Pública 2014). This includes the Ministry of Public Health, the General Directorate for Sexually Transmitted Diseases and AIDS, the National Health Service, the National Council for HIV and AIDS, called *Consejo Nacional para el VIH y el SIDA* (CONAVIHSIDA), the Institute for Dermatology and Skin Surgery, and is supported by international development partners. When the NSP was formed, there were an estimated 44,547 PLWHIV, and 21,388 individuals were receiving ART in the Dominican Republic (Valdez et al. 2017). Though the NSP has not formally endorsed the 90-90-90 goals of UNAIDS, the NSP aims to eliminate detectable viral loads by 90 percent.

The NSP is organized into four areas that prioritize different elements of the national HIV response. These include 1) education and prevention, 2) comprehensive care, 3) human rights, and 4) strengthening the national response. These domains are further disaggregated into 10 work streams and 46 sub-areas and/or products (Ministerio de Salud Pública 2014). While the coordination and scope of the national HIV response, as highlighted by the NSP, is impressive, it does not represent an overt effort to integrate the response into routine systems, but rather to execute HIV programming with excellence. Further, the government of the Dominican Republic recently adopted the WHO-recommended "treatment for all" strategy, which extends coverage of ART to all PLWHIV regardless of their viral status (Health Finance and Governance Project 2018).

In addition to the NSP, the Dominican government has worked with a variety of organizations to coordinate service delivery for HIV. The Presidential Commission against AIDS was formed in 2000 to help implement HIV-related health policy. While surveillance has been challenging in rural areas, the coordinated approach appears to be working. In this respect, foreign assistance has been productive. For example, PEPFAR, the United Nations Population Fund, the World Bank, and the Global Fund to Fight AIDS, TB, and Malaria have all invested heavily in strengthening surveillance and treatment programs. Nonprofit organizations such as Catholic Relief Services, Caritas network, and the Batey Relief Alliance assist with service delivery for both medical and social services. Despite this, however, weak national surveillance, poor perceived quality of care, and fragmented reporting systems have created uncertainty about the effectiveness of the national response. For this reason, legacy vertical programs such as for HIV pose unique challenges for systems level integration, as explored in subsequent sections below.

HIV Policy and Planning

HIV policy and planning in the Dominican Republic has been strengthened to address the epidemic, but contains few elements of integration at present, though respondents suggested this may change in the near future. The national response is underpinned by a strong legal framework. Furthermore, political attention has resulted in health system improvements through legislative reform. Respondents suggested that expanding the national HIV response potentially overshadowed the desire to move toward systems-level integration.

In 2001, the government of the Dominican Republic embarked on a sweeping overhaul of the health system. This involved decentralization of core capabilities and augmented linkages with the private sector through managed competition. The General Health Law (Law no. 81-01) helped to coordinate stakeholders in the health system. The Health Career Law (395-14) was implemented in 2014 and formalized the health system's civil service, defined worker categories, set recruiting procedures, and established training requirements, as well remuneration criteria. One positive sign that systems-level integration may be achieved in the near future is the passage of the Law on Regulation and Promotion of non-profit associations (Law no. 1222-05) and the Law on Procurements and Contracts of Good Services, Works, and Concession (Law no. 34006, 339-06), which together allows the government to contract with NGOs (Maceira et al. 2017). The Dominican Social Insurance System (Law No. 42-1) does not include clear provisions for HIV, but development of a universal benefit package remains a key feature. The essential package of health services was formed in 2005, updated in 2015, and includes 1,444 procedures that fall within 12 categories, and were reorganized into broader sections (Cañón et al. 2014).

All interview respondents highlighted the origins of legislation to support the national HIV response in the Dominican Republic. In 2002, an advocacy group brought a legal suit against the government of the Dominican Republic, before the Inter-American Commission on Human Rights in Washington, D.C., an autonomous branch of the Organization of American States. The lawsuit charged the government with violating international norms by failing to provide ART for PLWHIV. After four years and mounting international pressure, the government of the Dominican Republic complied with the Commission's order. Respondents suggested that this gave rise to the Dominican Republic's AIDS law, which is unique in the Caribbean for preventing discrimination against PLWHIV. In fact, many of the laws and organizations mentioned above can trace their origins to the international ruling and the subsequent political attention paid to redressing the growing HIV epidemic in the Dominican Republic. This demonstrates how civil society and the international community of rights activists can serve as catalysts for larger systemic change.

Despite a strong legal framework and political commitment, however, some respondents cautioned that there is still significant work to do with respect to HIV policy and planning. In fact, some suggested that implementation, not policy formulation, is the greater barrier to implementing an effective national response. Respondents cited monitoring of existing laws as a persistent problem, often perpetuating existing stigma. For example, practitioners struggle with confidentiality of HIV-positive serostatus, and reports of discrimination in accessing health services remain, despite the AIDS law. Nevertheless, respondents felt that the planning and policy underpinning the national HIV response has made important progress, though it largely remains isolated and vertical.

Civil Society Engagement

Civil society is active and has played a crucial role in the national HIV response in the Dominican Republic. This is somewhat integrated at systems level in that, for the national HIV response, civil society has developed a shared business plan to harmonize service delivery through the primary health care system, including formal contracts with a network of CSOs. Moreover, CSOs appear to be a catalyst for systems-level integration of HIV and primary health care services, with respondents suggesting that there has been significant growth and attention in this area recently. Also, this appears to be something that international development partners, including the U.S. government, have actively promoted (Advancing Partners and Communities 2018).

While developments in systems-level integration of HIV and essential services through CSOs are encouraging, they demonstrate the complexity of implementing such arrangements. For example, contracting CSOs using public funds would require training on ways to manage the contracting process, including registration, licensing, and formal designation of services to be delivered. Also, CSOs would need to receive information on the accreditation process and payment through state-sponsored health insurance plans. In addition to this, capacity-strengthening in data management, including the flow of health information and billing processes, would need to occur for them to effectively be integrated in a systemic way. While this approach shows promise, it underscores the complexity of integrating the national HIV response and provides insight into strategic entry points for management and operations institutionalization.

National Health System and Service Delivery

Service Delivery

In the Dominican Republic, HIV services are affected by the legacy of targeted programs for testing, treatment, and viral load suppression. These programs were designed in response to the rapidly escalating threat of HIV in the 1990s. Furthermore, the stigma associated with high-risk populations led to a service delivery structure that attempted to meet their needs.

A foundational element in the delivery of HIV services is the integrated HIV and AIDS units (SAIs). The name is somewhat misleading in the context of this study in that these facilities are traditionally free-standing and only peripherally connected to the larger health system. Patients do not receive other essential services when seeking treatment at SAIs. Rather, they are referred to as 'integrated' simply because they accommodate the full spectrum of HIV support, including testing, treatment, and viral load suppression. This one-stop-shop approach was developed to harmonize the associated activities and support for high-risk populations into a single point of contact. Respondents felt that this was important as these subgroups often face barriers to access treatment and consistently maintain contact with the health system.

SAIs originally were established in four hospitals and a small number of NGOs in 2004. Today, there are more than 72 SAIs throughout the country, with 14 under the responsibility of NGOs. As mentioned, SAIs provide a comprehensive package of HIV services including testing and counseling, regular provision of first-line ARVs, and consultations for patients. But they do not provide other essential services. SAIs are a remnant of an urgent call to provide services to all PLWHIV by presidential decree. Recently, the Ministry of Public Health released new National Care Guidelines, called "treatment for all," that significantly ease clinical restrictions for the

initiation of treatment. This is an important step in achieving UNAID's 90-90-90 goals through earlier treatment to help facilitate viral load suppression (HFG 2018).

While SAIs were seen as an important first-line response in stemming the HIV epidemic, they are increasingly seen as problematic by respondents. First, respondents felt that many PLWHIV experience stigma with accessing services specifically dedicated to HIV treatment. Many travel long distances to access SAIs further from their home, hoping not to be recognized by members of their community. This approach to seeking care creates further barriers to consistent contact and follow-up.

HIV is generally considered to be a chronic condition, and effective management can take place as part of a broader package of primary care services. While some fear that stigma at public health facilities might cause many to avoid seeking care at local primary care facilities, NGOs might be better positioned to treat PLWHIV. Currently, several stakeholders are involved in feasibility studies to document required changes to practice, clinical guidelines, laws, and regulations to effectively integrate HIV services to primary care facilities (Nakhimovsky et al. 2017). Finally, use of health care incurs a variety of costs, including transportation, lost time, and wages. Respondents felt that it would be more efficient to treat HIV as a chronic condition when it is included with other routine health services.

CD4 and viral load testing is an example of one service delivered by SAIs for which further efficiency gains can be achieved through increased coordination, if not integration. In 2015, roughly two-thirds of CD4 tests and all viral load tests were processed by the National Public Health Laboratory in the Dominican Republic. This centralized arrangement led to routine delays, which prevented health care providers from making timely clinical decisions about HIV treatment. Inefficiencies related to the transport of CD4 and viral load samples to the National Public Health Laboratory and results back to SAIs are widely acknowledged (Nakhimovsky et al. 2017). Currently, CONAVIHSIDA and development partners are working together to implement a national decentralization strategy to streamline diagnostic testing. This illustrates the difficulty of working through dedicated HIV treatment facilities such as SAIs, which require coordination with other actors.

Human Resources for Health

The health workforce devoted to delivering HIV services is employed within the SAIs and is therefore not integrated into the wider health system. Moreover, detailed clinical guidelines, strict treatment protocols, and reporting requirements mean that often these health workers require additional administrative support. This is not uncommon in vertical modes of service delivery characteristic of donor-financed disease control programs and HIV programming, in particular. This fragmentation of the health workforce leads to several problems that stakeholders in the Dominican Republic are actively attempting to address.

According to respondents, all personnel that staff the SAIs are required to undergo HIV-specific training. As contracted employees of the National Health Service, they receive training through a short course on HIV clinical guidelines and treatment protocols. The training and support health workers receive is somewhat variable. Respondents understood that this has led to poor adherence to HIV treatment guidelines. As a result, 27 percent of the newly-initiated population migrate to second- or third-line drugs within three months as opposed to the international standard of five years. Moreover, the same study found that just 60 percent of providers prescribed the appropriate second line treatment and 28 percent prescribed the appropriate third line treatment (Valdez et al. 2016). These inefficiencies increase the cost of care for HIV in addition to affecting the quality of HIV management for patients.

Integration and support of the health workforce is an issue that recently was addressed by the Dominican Republic's Health Career Law, which came into effect in 2014. This law categorized the health workforce, standardized recruitment, established training requirements, and developed guidance on remuneration. While it envisions performance-based incentives, clear mechanisms for performance evaluation and sanctions have yet to be implemented (Nakhimovsky et al. 2017). Nevertheless, this law represents an encouraging avenue of formally integrating the staff of SAIs into the health system's routine service delivery apparatus, and ensures that they receive the same training and support as other healthcare providers. This also highlights the need for public health professionals with skills in monitoring and evaluation to accurately assess and work to strengthen the quality of HIV service delivery in the SAIs.

Finally, the respondents felt that more training and sensitization of health workers should be provided to reduce persistent discrimination in the SAIs. In the past, health workers discriminated against Haitian migrants, who tended to have a higher prevalence of HIV than the general population (Rojas et al. 2017). Now, however, respondents reported that LGBTQ patients and commercial sex workers often feel stigmatized when receiving HIV care. Respondents felt that this is in part a result of poorly integrated service delivery, where HIV patients are seen as different from patients seeking care for other chronic conditions. Both the structure of treatment facilities (SAIs) and the training of health care providers need to be altered to reduce barriers to care-seeking and adherence to outpatient disease management regimes.

Commodity Supply Chain

The Dominican HIV response is highlighted by the presence of a sophisticated and highly integrated supply chain and management system. This includes PROMESE/CAL and SUGEMI (discussed below). The Dominican Republic has used external investment in HIV supply chain and logistics to further drive systems-level improvements through integration.

PROMESE/CAL is the primary public entity responsible for procurement of all medicines and supplies in the health sector. This mandate was established through a Law on Public Purchasing and Contracting (340-06) and two Presidential decrees (608-12 and 168-13). In addition to procurement, PROMESE/CAL also stores all medicines and supplies for the Dominican health system and distributes them. While PROMESE/CAL manages domestic supplies, it does not interact with international vendors and specialty programs, such as for HIV, who thus remain beyond its purview (Nakhimovsky et al. 2017).

This arrangement may change in the future, with respondents suggesting that HIV medicines and supplies be managed actively by PROMESE/CAL. Currently, CONAVIHSIDA is responsible for managing procurement of ARVs, testing supplies, and other commodities using funds from the Ministry of Public Health. CONAVIHSIDA works closely with donor-funded programs in all supply chain functions including placing orders, issuing payments, and working through domestic customs and regulations (Cali et al. 2018).

This represents one area for further integration, which some respondents see as a priority. While the Dominican Republic has achieved admirable systems-level integration for supply chain management through PROMESE/CAL, the legacy of vertical programs has created a parallel supply chain for HIV, managed by CONAVIHSIDA. Furthermore, some pointed to a recent study conducted by HFG that demonstrated annual efficiency gains of USD 163,115 through transferring warehousing and distribution of HIV commodities from CONAVIHSIDA to PROMESE/CAL (Valdez et al. 2017). While this involves intragovernmental politics that would require regulatory changes and significant adjustments in budgetary allocations, respondents

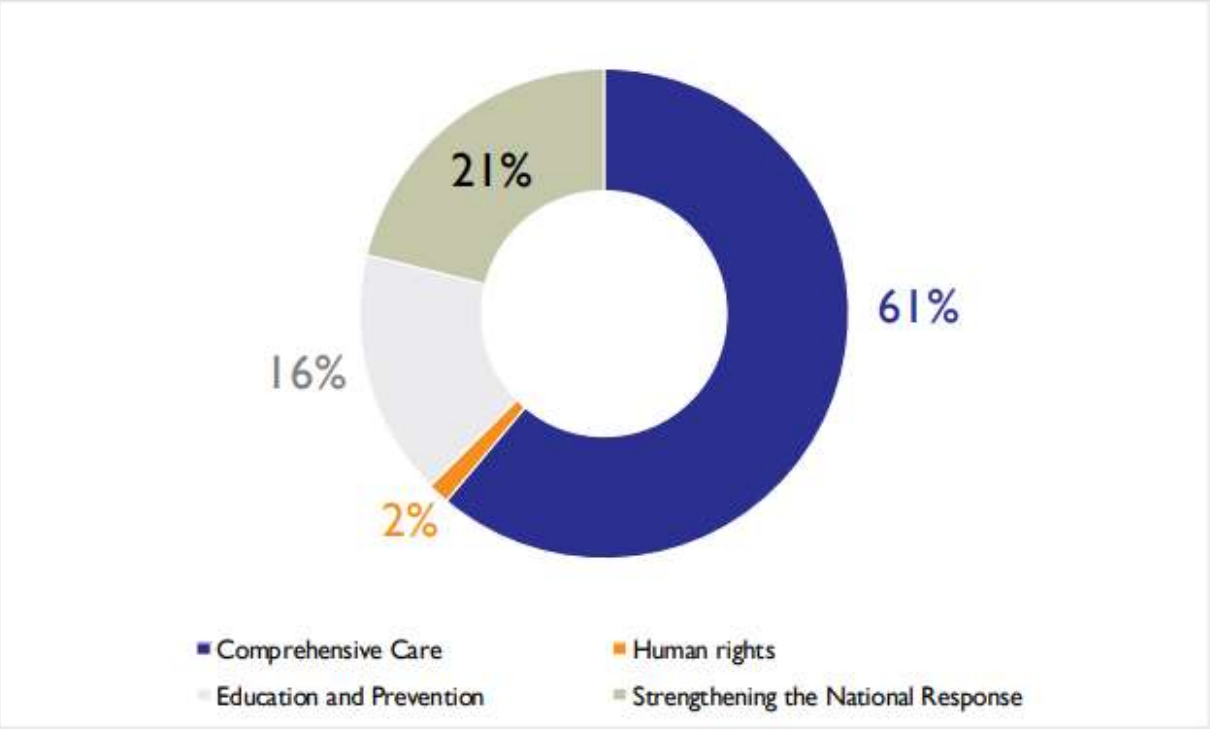
viewed this move as one potential avenue to further systems-level integration in the Dominican Republic.

Strategic Investment, Efficiency, and Sustainable Financing

Financing of the HIV response in the Dominican Republic is one area where significant changes continue to be made. This partially reflects broader developments in the health sector, where donor support is gradually being replaced by domestic financial resources. While the vast amount of resources dedicated to countering the HIV epidemic are targeted, there is evidence that funding transitions will eventually lead to systems-level integration.

Currently, expenditures for the national HIV response are funded by a mix of domestic sources and international development partners. In 2016, this included contributions from the Ministry of Public Health (32 percent), PEPFAR (31 percent), CONAVIHSIDA (13 percent), Social Security (13 percent), the Institute for Dermatology and Skin Surgery (8 percent), and multilaterals, including UN agencies (2 percent) (Valdez et al. 2017). Under the NSP, the area of comprehensive care, which includes commodities procurement, receives the most funding (Figure B.2).

Figure B.2. Percentage of Expenditures for National HIV Response, by NSP Category



Source: Valdez et al. 2017.

Unfortunately, work by HFG and others has demonstrated that the HIV response in the Dominican Republic is insufficiently financed (Valdez et al. 2017). A financing gap of USD 22.5 million in 2016 and USD 14.2 million in 2017 was identified, with the largest areas of

underfunding being education and prevention, followed by human rights (Valdez et al. 2017). Several approaches have been identified by international partners for increasing financing of the national response, including 1) Secure national budgetary allocations specifically for an HIV program, 2) Develop innovative revenue generation instruments, such as new and/or increased sin taxes (i.e., alcohol, tobacco, and sugar-sweetened beverages) or corporate social responsibility programs, and 3) Strengthen enforcement of the HIV/AIDS Law (No. 135-11) that requires public entities dedicate a portion of their budget to HIV prevention (Cali et al. 2018). While each of these strategies could help close the financial gap, it is important to note that none provides for an integrated systems-level integration of HIV and essential health services.

Strategic Information and Health Information Systems

The health information system in the Dominican Republic appears to be fairly well-organized, with an integrated structure. In this regard, two systems, the HIV Patient Monitoring System (FAPPS) and SUGEMI, help coordinate the HIV response. The development of both represents an interesting point of comparison as well as tensions that arise between developing an effective HIV response catered to meet the needs of specific high-risk groups and sustaining the response through program integration.

As with all effective infectious disease control programs, surveillance and patient monitoring have been a hallmark of the HIV response in the Dominican Republic. With assistance from the U.S. Centers for Disease Control and Prevention, all SAIs have adopted an electronic HIV patient registry and monitoring system (FAPPS) (PEPFAR 2017b). Once a patient initiates treatment, he/she is assigned a case number, and key sociodemographic and clinical data are recorded. While these records are accessible and portable across SAIs, patients do not change facilities frequently.

Respondents felt that FAPPS represents a strong example of how technology could assist with the integration of health information systems. FAPPS allows systems-level analytics to help forecast demand and utilization of services. For example, in 2015, 47 percent of all people living with HIV were known to be on ART, and of these, 76 percent were retained through the first 12 months of treatment (PEPFAR 2016). Recently, FAPPS began classifying patients by population group, which helps officials to further understand the epidemic and identify key populations that require additional outreach support (PEPFAR 2017b).

Through the development of a sophisticated system for tracking supply chain and logistics (SUGEMI), the Dominican Republic has made important efficiency gains in sustaining the HIV response. A study conducted in 2009 showed that many inefficiencies and stock-outs in the health system were caused by highly vertical and fragmented supply chains (Barillas and Valdez 2009). In 2012, the availability of ARVs was just 71 percent. For this reason, the government of the Dominican Republic requested technical assistance through a USAID project called Systems for Improved Access to Pharmaceuticals and Services (SIAPS) to help develop SUGEMI (SIAPS 2017).

SUGEMI brought the procurement, distribution, and storage mechanisms of primary health centers, hospitals, and HIV and TB drug procurement programs into one system. SUGEMI significantly strengthened governance of the health sector by organizing a unified pharmaceutical system, improving quantification and procurement processes, and developing information systems to manage pharmaceuticals. While the Ministry of Public Health maintains a regulatory role, service provision was transferred to the National Health Service and Regional Health Services. This required a ministerial decree, harmonizing the functions of vertical disease-specific

programs, and established training requirements for using SUGEMI, including courses in pharmaceutical management and the rational use of medicines. Quantification was strengthened through a national exercise using a standardized methodology. Procurement was strengthened by delegating authority to national logistics operator PROMESE/CAL and revising price and financial data associated with commodities. Finally, the SUGEMI Pharmaceutical Management Information System was established by international partners to complement operations research, and was distributed through a quarterly bulletin to key decision-makers throughout the health system (SIAPS 2017).

The development of SUGEMI illustrates how donor-financed health programming can be institutionalized and sustained with political commitment. Now, SUGEMI is completely financed by the Ministry of Public Health and stock-outs are less frequent. More importantly, HIV, TB, and reproductive health supplies are integrated with essential medicines under SUGEMI. This systems-level integration was universally acknowledged as a key innovation that helped not only to strengthen the HIV response, but also to reduce systems-level inefficiencies, which increase transaction costs in the health system.

Conclusion

The national HIV response in the Dominican Republic can be characterized as vertical and disease-specific, but with elements of systems-level integration throughout. This is somewhat unsurprising, as the government pursued the response aggressively only after international attention, and to date has focused largely on gaining technical and allocative operating efficiencies. Systems integration appears to be the next phase of the HIV response as actors consider the prospect of donor transitions. The Dominican Republic has demonstrated significant systems-level integration in commodities/supply chain management and health information systems. There are signs that the epidemic may be sustained through integration in the future in CSO engagement, service delivery, and human resources for health. If this is to occur, greater systems-level integration of HIV policy and planning as well as financing will be important. In conclusion, though full systems-level integration remains a somewhat distant goal, the Dominican Republic has made incremental progress, which holds lessons for other countries. Moreover, encouraging signs exist that the HIV response in the Dominican Republic will be sustained following funding transitions and through the gradual processes of integration.

ANNEX C: NAMIBIA CASE STUDY

Introduction

Namibia has made significant progress in recent years in reducing the burden of HIV—one recent assessment found that, compared to in 2012, the adult incidence rate in Namibia has decreased by 50 percent (PEPFAR 2018). Namibia also recently reported that 77 percent of adults in Namibia who are PLWHIV have achieved viral suppression, exceeding the UNAIDS 90-90-90 target (73 percent) (PHIA project 2018). An increased focus on community-level engagement and outreach, and the expansion of treatment services, have helped realize these gains.

Looking forward, the *National Strategic Framework for HIV/AIDS Response in Namibia 2017/18 to 2021/22* (NSF) aims to continue this progress and sets a goal of reducing new infections and AIDS-related deaths by 75 percent by 2022. According to the NSF, the integration of HIV services into broader health care services is a key strategy to achieve these targets, along with an increased focus on priority populations, particularly adolescent girls and young women, and high-impact prevention programs such as pre-exposure prophylaxis PMTCT. Moreover, Namibia recently achieved upper middle-income country status, with external financing expected to drop as a result. Ensuring the government can sustain the gains made in partnership with donors over the past several years is paramount to ending HIV as a public health threat in Namibia by 2030.

This case study describes the level and extent of integration of various aspects of Namibia's HIV response within the delivery, management, and governance of other essential health services.

Methodology

This case study is part of a larger research study on the ways in which countries integrate their HIV response with other essential services. Annex E describes the methods for the larger study, which included a structured document review, key informant interviews, and comparison with three other countries (Cambodia, Dominican Republic, and Vietnam). For the purpose of this case study, we describe aspects of data collection and analysis specific to Namibia

The document review included a systematic search of the peer-reviewed literature using three simple search terms ("HIV/AIDS", "integration," and "Namibia") and related derivatives. One HFG researcher screened all potential peer-reviewed original research related to Namibia for relevance by title, abstract, and full-text—three documents were relevant and reviewed in detail by another researcher. The second researcher excluded one of the articles upon review of the full text of the article for irrelevance. We also found two additional peer-reviewed articles in reference lists during the review of gray literature documents.

The HFG researchers used a standard data abstraction form to synthesize findings from these four peer-reviewed documents, as well as 16 documents found via an online search. This gray literature included country reports, government strategies/guidelines, and project materials from implementing partners working on HIV programming in Namibia. The researchers collated and presented information relevant to Namibia among all HFG researchers working on the comparative case study. Data culled from published and gray documents served two purposes.

First, it helped to provide the contextual basis for the case study. Second, it helped to identify key gaps that we explored in subsequent key informant interviews.

Following the document review, HFG researchers conducted two key informant interviews with three individuals (one interview included two informants) representing different segments of the coordinated HIV response in Namibia. One key informant currently works for an implementing partner, but previously worked for the Directorate of Special Programs; one holds a leadership position within the Department of Family Health, a key government agency involved in HIV integration with primary health care services; and the other was a funder/implementing partner. The experiences of key segments of the national response including government, donors, and implementing partners informed this case study. All interviews were conducted over the telephone and all respondents gave consent to participate in this study. Interviews were audio recorded, and the lead researcher captured key ideas in detailed notes. These responses helped to further explore emerging themes identified in the document review above. Data collection and analysis occurred between April and June 2018.

The primary limitation is that the team was unable to speak with a key informant who currently works with the Directorate of Special Programs. We relied heavily on written government documentation.

Findings

In general, delivery of HIV services in Namibia has been through vertical programs, though the government has recently advanced integrated delivery of HIV services with other essential services, particularly primary health care services such as sexual and reproductive health care. Governance of the HIV response, in particular, remains vertical though coordination and integration within primary health care are increasing. Shifts in funding and continued progress toward integrated information systems may affect this in the coming years.

Governance

HIV Policy and Governance

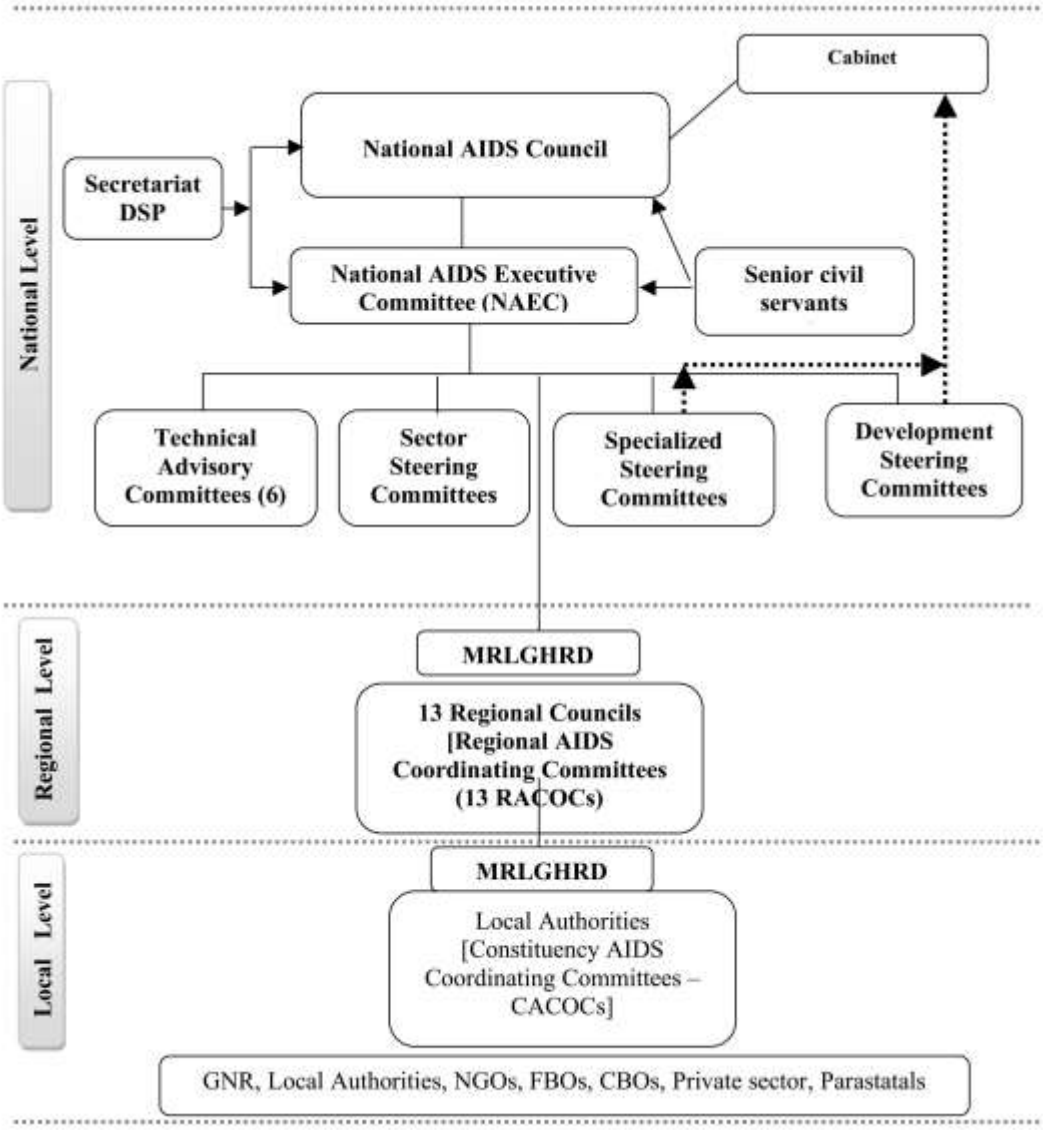
Governance of the national HIV response in Namibia is relatively silo-ed, though the government has emphasized greater multi-sectoral coordination in recent years. The Directorate of Special Programs, which is situated within the Department of Health and Social Welfare Policy of the MOH and Social Services (MOHSS), is chiefly responsible for leading and coordinating the national HIV response. National-level Directorates exist for Tertiary Care and Clinical Support Services, Developmental Social Welfare Services, Primary Health Care Services, Health Information and Research, and Atomic Energy and Radiation Protection. In addition to HIV services, the Directorate of Special Programs is responsible for reducing the burden of TB and malaria within Namibia, and consists of two divisions: a Health Sector Response division, and an Expanded National AIDS Response Coordination division (MOHSS 2018b).

According to one expert, the Primary Health Care Directorate is the lead and advocate for integration (as opposed to the Directorate of Special Programs). The Primary Health Care Directorate oversees family and child health and has overseen the integration of other services at the clinical level prior to the push toward integrating HIV services. An expert noted that a technical working group has been created to support the collaboration of the two directorates, but it has not yet met. Previously, the deputy permanent secretary of the Directorate of Special

Programs led coordination efforts with the other directorates; however, this position is currently vacant.

The *Revised National Strategic Framework for the HIV and AIDS Response in Namibia 2013–2017* called for the creation of sector steering committees that promote non-health sector coordination and implementation, and report to the National AIDS Executive Committee. Regional AIDS Coordinating Committees and Constituency AIDS Coordination Committees also exist, but participation in and coordination of these committees has been poor, due to underfunding (MOHSS 2017). Figure C.1 illustrates the intended relationship between Directorate of Special Programs (DSP in the figure) and the National AIDS Executive Committee, Constituency AIDS Coordination Committees, and Regional AIDS Coordinating Committees and Constituency AIDS Coordination Committees. Though the terms of reference of each of these groups exists, implementing this framework in practice has proven challenging.

Figure C.1: Namibia's National Coordination Response Framework



HIV Policy and Planning

Several policy documents on integration of health services (including HIV) in Namibia exist—namely the *National Guidelines on Health Services Integration*—but no formal law or regulation mandates or governs integration processes. *The National Strategic Framework for HIV and AIDS Response in Namibia 2017/18 to 2021/22* lists HIV integration in the health care system and with other services, particularly with TB and noncommunicable diseases, as a key operational strategy (MOHSS 2017). Namibia does not have an essential package of health services but does have standard treatment guidelines. Currently the HIV treatment guidelines are distinct from other health service guidelines.

In addition to laws and statutes, stakeholders involved in the management and coordination of the HIV response—such as the Sector Steering Committees and Directorate of Special Programs and Primary Health Care—are already shaping and will likely continue to shape which aspects of the HIV response remain vertical and which become integrated. One key informant noted that top-down legislative actions tend not to lead to sustainable change in the health sector in Namibia; technical actors are more likely to have the power and political capital to support integration of HIV services into the broader health system.

Civil Society Engagement

CSOs in Namibia play an important role in the delivery of community-based programs supporting treatment adherence for PLWHIV (MHSS 2016). As described by one expert, the Sector Steering Committees are responsible for linking the public sector with CSOs (usually represented by the Namibian Network of AIDS Service Organisations) and assuring coherence across sub-sectors. The expert noted that the transportation sector is an exception—the Ministries of Work and Transport lead Sectoral Steering Committees and report progress to the National AIDS Executive Committee on an annual basis. Involvement of CSO representatives in other sectors is a work in progress.

National Health System and Service Delivery

Service Delivery

Namibia's public health sector is the primary provider of HIV prevention, treatment, and chronic care services. Until relatively recently, the HIV care and treatment clinic within a health facility was the primary location of HIV service provision, with other clinics providing other primary health care services (ANC, Child Health and Immunization, etc.).

Efforts to integrate HIV services with other essential health services have been steadily increasing in recent years. Namibia first integrated HIV services in ANC and TB clinics to prevent mother-to-child transmission, given Namibia's high co-infection rate of HIV and TB. In 2014, Namibia became one of seven countries to pilot a new model for the integration of HIV and sexual and reproductive health care services. Jointly developed by the MOHSS, WHO, UNFPA, and UNAIDS, with financial support from the European Union and the Swedish International Development Authority, the integrated "person-centered" model is akin to the "one-stop shop" model. This model mirrors features of primary care, allowing a patient to receive multiple primary health care services from the same provider, usually in same room, and to receive specialty services through referral if needed. Patients also see the same provider each time they visit.

As a result of the pilot, which saw reduced waiting times and improved health worker productivity, the MOHSS decided to scale up this model. In July 2016, the MOHSS published the *National Guidelines on Health Services Integration: Sexual and Reproductive Health and Rights, HIV and Other Services*. Figure C.2 below describes the integrated care model approach. The guidelines also address the challenges of service integration, proposes possible solutions, and outlines the steps facilities should take to implement the new model.

Figure C.2: Namibia's Minimum Package of Services under New Integrated Care Model

Source: MOHSS 2016b.

Furthermore, in April 2017, Namibia adopted the new WHO standard to "Treat All" (also referred to as test and start), which is reflected in the *National Guidelines for Antiretroviral Therapy – Fifth Edition*. It is not yet known how or to what extent these guidelines will affect implementation of the new integrated model for service delivery.

At the community level, Community ARV Refill Groups do treatment outreach, and adherence clubs support retention of care. PEPFAR also supports the implementation of community-based mobile outreach services that offer integrated multi-disease screening (hypertension, diabetes mellitus, lipid profile, liver diseases, etc.) to reach and test men and their sex partners in the community (PEPFAR 2017c).

Several different modalities, including provider-initiated testing and counseling, voluntary care and treatment, and various community-based outreach mechanisms, are used to provide HIV testing services. PEPFAR supports the integration of HIV testing into community case management activities for key populations.

Human Resources for Health

Namibia has one of the most serious public health workforce shortages in the world. In 2007, it had 37 doctors per 100,000 people (WHO 2007); moreover, 80 percent of the doctors in Namibia work in the private sector, posing potential challenges to access. Demand for HIV services continues to grow, fueling demand for service providers. In the last four to five years

and with PEPFAR support, the MOHSS has worked to increase the health workforce as well as train existing and new health workers on the latest treatment guidelines.

With PEPFAR support, the MOHSS launched medical school and pharmacy degree programs at the University of Namibia and enhanced its nursing and public health training at its National Health Training Centre. PEPFAR's "Treatment Acceleration Plan" (COP 15/16) also aimed to address dire human resource gaps, but faced challenges obtaining work permits and registration with the appropriate health professions authority due to a huge backlog of applicants. Staffing remote areas also remains a challenge due to lack of staff accommodation or transportation.

One expert described the integration of HIV services into the pre- and in-service training of health workers as "mixed," with external partners supporting in-service training but not in a standardized way. In 2012, the government created a paid, community-based health extension worker cadre and a national Health Extension Program. PEPFAR and implementing partners such as the Maternal and Child Survival Program have supported the training of these health extension workers to provide an integrated package of services including HIV testing and counseling (Maternal and Child Survival Program 2017). The most recent PEPFAR Country Operational Plan for Namibia indicates plans to continue to provide support to train approximately 500 health care workers on the new "Treat All" guidelines (PEPFAR 2017c).

One concern raised by an expert with integration of HIV services into pre-service training for health workers is the different skill sets required for HIV services and whether integration "dilutes" specialty skills or overburdens staff. Planning the human resources required to deliver integrated services is a main component and exercise within the *National Guidelines on Health Services Integration,* but the document describes integration primarily as a facility-based process—if the staff at the facility are insufficient to carry out integrated services, the guidelines instruct the facility leadership to contact the regional management team. It is unclear whether this is occurring on a regular basis and what the outcomes are at this stage.

Commodity Supply Chain

As service provision increases with the implementation of "Treat All" and expanded community-based services, the demand on the procurement and supply chain in Namibia also goes up—a review of the 2011–2016 National Strategic Framework estimated the increase in workload at 300 percent (MOHSS 2017). This has led to a need for strengthened human resources, financial support, and management of the supply chain system, which informants noted as one of the most integrated aspects of the HIV response. The government of Namibia finances all HIV-related commodities and the Central Medical Stores manage them. The increased demand has put a strain on the financial and human capacity of the overarching system. For instance, as of the publishing of the NSF there was a backlog in the pharmaceutical product registration system of 490 applications, 10 of which were for ARVs (MOHSS 2017).

A Pharmaceutical Information Dashboard allows health managers at the central, regional, and facility level to track essential health commodities and clinical supplies, including ARVs (MOHSS 2018a). Within the web-based tool, there is a unique dashboard for ART data, essential commodities and clinical supplies, and pharmaceutical service performance indicators. The Electronic Dispensing Tool (EDT) feeds the ARV data into the Pharmaceutical Information Dashboard. The government is planning to incorporate the Dashboard into the overall government data management system as part of the Prime Minister's broader e-Governance strategy. The hope is that the MOHSS National Medicine Policy Coordination unit will also take steps to align its systems with the dashboard in the future (Phulu et al. 2017).

Strategic Investment, Efficiency, and Sustainable Financing

At the patient level, public health facilities have provided ART and PMTCT free of charge since 2003 (MOHSS 2016).

The health sector experienced significant budgets cuts overall this fiscal year as compared to in previous years as well as other sectors. An overall reduction in available public resources led to a 10 percent reduction in funding for the health sector, compared to a 4–5 percent decrease in funding for other sectors. One key informant noted that those outside of the health sector often assume resources for health are available from external sources. Fewer domestic resources coupled with the decline in external assistance from PEPFAR and the Global Fund may serve as an additional nudge to the MOHSS to implement the integration agenda as a way to "do more with less."

Strategic Information and Health Information Systems

The National Strategic Framework 2017/18 to 2021/22 notes the integration of health data systems as a key strategy to achieving its goals in the next five years. In contrast, the overall health management information system collects HIV service data (epidemiological data and patient record data including pharmaceuticals) on a standalone basis. All three key informants noted that information systems were the component where the HIV response had been least integrated into the overall health sector. There are robust HIV service data capture systems in place—there is a separate national database for HIV testing, and an electronic Patient Management System captures initial ARV distribution information at the patient level. An EDT captures ARV refill data and feeds into a national pharmaceutical database used to report and quantify needs at the facility and community levels.

The EDT also records pharmaceuticals related to other HIV co-morbidities such as TB, but integration to date has mainly focused on connecting the various data capture systems along the HIV continuum of care to each other, rather than integrating them within the broader health information systems. As one key informant explained, only recently has DHIS2 emerged as an integrative platform across HIV and other health services. The MOHSS has worked with several implementing partners on a nationwide hospital information system that will pull data from the EDT (Sumbi et al. 2013).

Conclusion

The HIV response in Namibia was initially set up as a vertical, largely donor-driven system. There seems to be a conscious effort toward integrated systems, though implementation of these policies and guidelines remains in the early stages and is donor-driven. Governance structures exist but are limited in functionality. The continued transition from a donor-led to government-owned and sustained HIV response should accelerate the integration agenda in Namibia.

ANNEX D: VIETNAM CASE STUDY

Introduction

A thorough review of the calculation methodology with PEPFAR, UNAIDS, and the Government of Vietnam (GVN) in 2017 revealed the approximate number of PLWHIV to be 247,357 in 2017—roughly 0.34 percent of the population. These cases are concentrated among three key populations: people who use injectable drugs, men who have sex with men, and female sex workers. The largest of these groups is of people who use injectable drugs.

Vietnam's response to HIV is frequently described within its broader context as a country transitioning to middle-income status, and receiving reduced external funding as a result. This transition to greater domestic financing has been the focus of the GVN for the last several years, with stated goals to reduce need for external funding to less than 50 percent by 2015 and less than 25 percent by 2020 (PEPFAR 2017d).

Historically, Vietnam has heavily relied on external funders for its HIV response—particularly PEPFAR and the Global Fund. Thus, while the provision of HIV services has long been documented in Vietnam's government-provided basic package of health services, funded through the SHI scheme, separate donor-run programs had precluded the need for the government to operationalize (deliver and pay for) HIV services under SHI.

Vietnam's recent growth to middle-income status, however, meant that these donor agencies would be cutting back support, and the government began transitioning the financing of the national HIV response to itself. This transition has been the focus of the GVN for the last several years, with stated goals to reduce need for external funding to less than 50 percent by 2015 and less than 25 percent by 2020 (PEPFAR 2017d).

A notable characteristic of the HIV response is that over half of PLWHIV have not yet started ART, in spite of test and start being adopted by the MOH in 2015 (PEPFAR 2017d). This is primarily due to the challenge of reaching PLWHIV in remote areas; in the MOH's *Plan for people's health protection, care and promotion 2016-2020,* the GVN listed the stagnant, high rate of HIV infections in rural northern provinces as one of its main challenges, along with implementation of interventions in remote areas. Addressing this has been a priority during the operationalization of HIV services under SHI.

This case study explores aspects of Vietnam's HIV response by components of the health system, using the HIV Sustainability index framework. We examine which are moving toward integration with the routine systems and processes for delivery, management, and governance of other essential services, the SHI program, and the aspects that remain relatively vertical. We conclude with an assessment of challenges and lessons learned from Vietnam's experience.

Methodology

This study used well-established qualitative methods (Marshall and Rossman 2011), including literature review and semi-structured interviews, to explore how integration is understood, pursued, and refined in four LMIC health systems.

The study team included four HFG researchers. One researcher led each country case study and the three other researchers provided technical peer review. HFG applied a common analytic framework to each case study. The common analytic framework included the methodology for the literature review and semi-structured interviews as well as data abstraction and written organization of findings. The literature review was conducted between April and June 2018.

In Vietnam, HFG conducted interviews with two key informants. One key informant currently works for an implementing partner, but previously worked for the government, and one holds a leadership position within a large HIV CSO. In addition, information was drawn from discussions with government experts within the Vietnam Administration of AIDS Control (VAAC).

Limitations: The team was unable to hold a formal interview with any key government informants due to their time constraints. HFG relied heavily on written government documentation to incorporate this perspective.

Findings

Integration of the national HIV response with delivery and management of, and governance over, other essential services in Vietnam is almost complete. The main aspect that remains vertically organized is the procurement of and payment for ARVs, but planning is under way to ensure this is integrated into the SHI scheme in 2019.

Governance

HIV Policy and Governance

The GVN acknowledges the importance of HIV and commits to financing and implementing a holistic response program that includes prevention and treatment goods and services. These are reflected in the *National Strategy on HIV/AIDS Prevention and Control to 2020, with a vision to 2030*, written by the National Committee for AIDS, Drug and Prostitution Prevention and Control (National Committee) through coordination by the VAAC. The National Committee consists of members from several branches of government, as well as representatives of civil society. In addition to writing the National HIV Strategy, the National Committee also engages in advocacy and institutional capacity-building activities such as leading conferences and trainings (National Committee for AIDS, Drugs, and Prostitution Prevention and Control 2012).

The VAAC, which is housed within the MOH, leads governance over the national HIV response. The VAAC is charged with guiding the implementation of the National HIV Strategy and coordinates with other branches of the government to ensure the strategy is executed properly. Responsibility for direct implementation is decentralized to the People's Committees of each

province and city (Socialist Republic of Vietnam 2004, National Committee for AIDS, Drugs, and Prostitution Prevention and Control 2012).

HIV Policy and Planning

The legal foundation for Vietnam's HIV response is strong. The *Law on HIV/AIDS Prevention and Control* (Law on HIV) was passed in 2006, and included rights of protection for PLWHIV. In 2011, additional legislation passed to support the enforcement of the Law on HIV and provide guidance on conditions for the recipients and delivery of methadone maintenance therapy, and integration of HIV testing and counseling into the *National Standards and Guidelines for Reproductive Health Care Services* (National Committee for AIDS, Drugs, and Prostitution Prevention and Control 2012).

Financing of HIV services is legislated to be included in the basic health services package, but this has not been implemented on a large scale due to sustained donor presence. Once the decision to transition was made, the MOH drafted Government Circular 15 of 2015 to explicitly state that PLWHIV are covered by SHI when receiving related goods and services (Ministry of Health, Vietnam2015).

Civil Society Engagement

Civil society is represented in the National Committee by the Vietnam Union of Science and Technology Associations. This committee helps connect HIV-related organizations into networks of national branches and local associations, and coordinates their work to align with the National Strategy on HIV espoused by the National Committee.

One of the largest civil society groups is the Vietnam Network of PLWHIV, a network of over 150 groups of PLWHIV. This network gives a voice to the concerns of PLWHIV during the transition process of HIV services being redesigned to become eligible for SHI reimbursement. An expert gave an example of how not all PLWHIV are willing to enroll in SHI (and therefore receive covered services). Some are missing ID cards, or other documentation needed to get a health insurance card. Additionally, some PLWHIV are working for government entities and are already enrolled in SHI, but they are afraid to use their SHI benefits for HIV-related services due to stigma surrounding HIV.

National Health System and Service Delivery

Service Delivery

Historically, HIV services in Vietnam have been delivered vertically in standalone, donor-funded and operated outpatient clinics (OPCs) that otherwise provide only preventive health services such as vaccinations and routine annual exams. Now that Vietnam is transitioning the financing of HIV services to its SHI scheme, OPCs must become accredited (contracted) providers in the SHI scheme in order to become reimbursed for the provision of HIV services. These requirements include elements of software and hardware integration: facilities must use the same electronic medical records system, they must provide preventive and curative services, and they must provide HIV Care and Treatment Training to employees.

Four pathways have emerged for OPCs to become participating providers in the SHI scheme: 1) provide proof of meeting SHI accreditation requirements; 2) join an accredited (contracted) SHI facility; 3) implement changes to meet accreditation requirements to contract with the SHI scheme; or 4) cease offering HIV services (Johns and Hartel 2018). When OPCs have followed the third pathway and make operational changes to comply with SHI requirements, the integration of HIV services with routine health services has received both support and criticism. On one hand, patients' physicians feel that the integration of preventive and curative services can provide a more holistic, improved treatment experience for patients, but many patients feel a loss of confidentiality now that their HIV-related services are included in their main medical record and they see the same clinicians for both HIV and non-HIV services.

Due to the decentralized implementation of the National Strategy on HIV as described in the previous section, there are few coordination mechanisms between provinces, particularly between those that are donor-funded and those that are not. Similarly, provinces that are donor-funded have higher levels of both software and hardware integration with other health agendas such as for TB and MCH (Fugita et al. 2012).

Human Resources for Health

In Vietnam, training has historically been paid for by donors, funneled through the provincial AIDS committees (PACs). It typically is not integrated or coordinated with other clinical training, and consists of a combination of didactic and periodic clinical training.[2] As facilities integrate HIV prevention and treatment services to become accredited as providers for SHI, providers need to become certified in HIV services; this training is also paid for by external donors via the PAC.

Because OPCs have not yet become accredited as providers for SHI and do not provide other curative services, their clinicians focus almost exclusively on HIV services, giving patients an entire "HIV care team." In contrast, those that have gone through the SHI accreditation process must have clinicians provide a variety of clinical curative services, of which HIV services comprise only a small proportion. Patents may see this as a drawback, because they feel that they used to have an entire team working for them and now have shorter visits with fewer providers present. One expert described this dynamic by suggesting that "it is easy to move from a three-star hotel to a five-star hotel, but to move from five stars down to three can be a problem."

Commodity Supply Chain

Purchasing, storing, and delivery of drugs for opportunistic infections is integrated with the same for other drugs. These medicines are stored at the same warehouse, and patients can go to their main pharmacy to pick up their medicines. Viral load tests and ARVs are still funded by donors, however, and therefore are in a parallel supply chain that does not share resources or coordinate with the national system. As a result, patients pick up their ARVs and opportunistic infection drugs separately from any other medicines.

PEPFAR has announced it will cease its procurement and payment of ARVs in 2019, at which point the GVN will take over. At this time, the national supply chain will be used and ARVs will be integrated into the main supply chain system.

Strategic Investment, Efficiency, and Sustainable Financing

As mentioned in Vietnam's Health Financing Plan 2015–2020, the shift in financing the HIV response from donors to the national government has been a driving force of the integration occurring in other health system components. When making this transition, the GVN chose to use its SHI program as its primary mechanism, in effect forcing integration of HIV services into the national basic health services package. This package is offered to citizens free of charge and is financed by Vietnam Social Security through the SHI scheme.

The GVN had always planned the financing of HIV services to be executed through SHI, as stated in legislation dating back over a decade. In provinces with lower HIV prevalence that are not supported by the Global Fund or PEPFAR, this integration has been in place for years. In donor-supported provinces, however, the legislated financing mechanism of reimbursing HIV services through the SHI scheme was never operationalized, because external donors provided standalone financing directly to the VAAC, PACs, or OPCs themselves. One expert spoke of this dynamic, highlighting how provinces that had always had HIV-related services integrated into the basic health services package (and thus reimbursed through the SHI scheme) did not experience the transition pains that donor-supported provinces were currently experiencing.

Strategic Information and Health Information Systems

HIV information in Vietnam exhibits a high level of integration into the main health information system. HIV services/clinical outcomes used to be documented completely separately due to being the only treatment provided at OPCs, but an expert explained how now HIV-related clinical information is entered into the main electronic medical records system used at all facilities, and billing information uses a central system as well. A caveat to this integration presents, however, in three ways where information remains isolated: data related to the quality of care received by PLWHIV, data related to TB/HIV coinfections and PMTCT, and referrals by providers to other clinics or facilities (Fugita et al. 2012).

In addition to the central medical records system, the VAAC requires facilities to record process indicators to evaluate the quality of care of HIV services through a national program called HIVQUAL. The HIVQUAL software is standalone, and data are collected twice a year from 30 provinces, with plans to expand the program nationwide (Healthqual 2018). There are no plans to integrate the data reporting into the electronic medical records system, or with any other element of health reporting.

Hardware integration is also absent between disease elements. While HIVQUAL data includes whether PLWHIV have been tested for TB, standard ART registers do not. Similarly, there is no space in the antenatal records to record HIV status for pregnant women.

Lastly, the system to monitor referrals between facilities is not coordinated tightly. Procedures dictate that when a patient is referred, the patient will transport his or her medical record by hand, and the referral facility will input the record into its system. The referring facility will record information about the referred patient and his/her follow-up with the referral facility after a week to confirm that the referral facility saw the patient. In practice, however, referrals are sometimes verbal and follow-up can be sporadic (Fugita et al. 2012).

Conclusion

At a high level, the GVN had always planned for its HIV response to be integrated into the country's basic package of health services. This integration was implemented in low-HIV-prevalence provinces, but use of external funding for the nation's most beleaguered areas resulted in a parallel, donor-driven system. Vietnam is now transitioning those provinces to integrate with the integrated national program, using eligibility for SHI accreditation as a tool to ensure both hardware and software integration. Vietnam has also long used legislation to push hardware and software integration, circulating decrees that detail conditions for coordination across disease elements (e.g., HIV, TB, and MCH), and, more recently, changing the law to allow centralized procurement of ARVs to integrate them into the national supply chain system. The decentralized nature of Vietnam's HIV strategy also means that some provinces implement these policies more thoroughly than others. Other gaps include voluntary testing, counseling, and access to remote areas.

ANNEX E: STUDY PROTOCOL

Research Design & Procedures

This study will use document review and in-depth interviews to capture the dynamic aspects of integrating HIV and other essential services in four countries. Qualitative methods will enable the study team to extract and organize data in a systematic fashion from key documents as well as the peer-reviewed literature. In addition, semi-structured interviews will allow us to capture narrative data that can reveal the actors' understanding of how integration has been pursued, key features of the decision making process, as well as further identify some of the barriers and facilitators to integration that were not captured in the document review. This study, therefore, adopts an open exploratory approach using a mixture of inductive and deductive reasoning (also known as abductive reasoning) to meet the study aims (Marshall & Rossman 2011).

Document Review

This research will use well-accepted methods for conducting rapid literature reviews, as outlined in a recent technical guide (Tricco et al 2017). The goal of this review is to provide a systematic way of synthesizing knowledge related to the integration of HIV and essential services in four LMICs. In addition to abstracting data specific to these countries from the peer-reviewed literature, the approach can be applied to the synthesis of knowledge from grey literature and government sources. This review process is also particularly useful in identifying any gaps which may serve as the basis for future research, including qualitative analysis of key informant interviews. One notable difference from the approach proposed here, however, is that unlike systematic reviews, we will not be conducting a risk-of-bias assessment. This is because much of the phenomena under investigation in this activity concerns governance, a social process, which is subject to different principles of rigor than research in the natural sciences. Instead, we understand that this approach is sufficiently systematic to be reproduced and understood by users, but also flexible and largely relying on narrative driven synthesis. Like most research, this approach is interpretive in nature.

Search Strategy

Below we describe our search strategy, including search terms, sources, inclusion/exclusion criteria, and a flow diagram. In addition we will present an outline of our data extraction tool. These features of the search strategy are subject to change upon implementation of the study protocol. It is possible that we will need to adopt a more inclusive strategy in order to identify relevant sources that more accurately represent this relatively restrictive study domain.

Sources

A review of the peer-reviewed and grey literature will be conducted by HFG for research articles and reports that analyze the integration of HIV responses and essential services in four countries. HFG will search three different social science and health databases in December 2017. They are:

- Pubmed (Med-line)
- Web of Science
- ProQuest

In addition to the database search, we will use Google and Google Scholar search engines to identify sources not included in electronic databases. Also, we plan to identify documents on government websites, data repositories (such as Nationalplanningcycles.org), and through professional contacts. An important point of reference will be the EPHS for each country, where information about HIV services may be initially located. Finally, we will conduct hand-searches (using similar search terms) of five health policy journals that publish relevant research on this topic, including: *Health Policy and Planning, Social Science and Medicine, Health Policy*, and *the International Journal of Health Policy and Management*.

Search Terms

The list of terms below will be the basic search strategy for the peer-reviewed literature. The details of the key words, Medical Subject Headings (MeSH) terms, etc. will be refined as we work through the three databases. We suspect that the initial search will reveal few articles published with specific content on integration in these countries. Therefore, the search terms will be refined iteratively and in consultation with other study team members.

("HIV" OR "AIDS" OR "Human Immunodeficiency Virus" OR "Acquired Immunodeficiency Syndrome" OR "HIV/AIDS")

AND

Cambodia OR Namibia OR Vietnam OR "Dominican Republic"/Panama

AND

Integrat* OR Link* OR Coordinat*

Inclusion Criteria

We will apply the following criteria to determine sources to include:

- Three categories of search terms ((HIV service OR essential packages), country, and integration) must be present in the abstract of the article
- Articles that:
    - Describe any type of integration related to HIV services
    - Identify features of policy, guideline development, the policy process, standards of practice, or professional norms
    - Provide clear geographical distinction (one of the four countries)

Exclusion Criteria

We will apply the following criteria to determine sources to exclude:

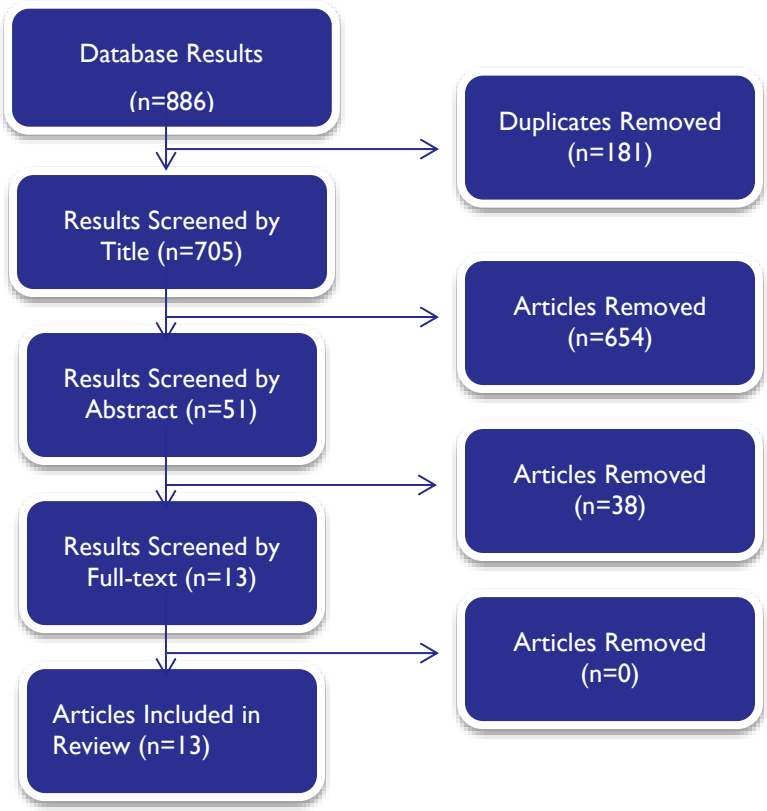
- Articles that:
    - Are published in a language other than in English, Spanish, French
    - Are published before 1990

- Include research on integration of non-HIV or non-health issues
- Focus above nation-state level
- Include Comments/editorials/Advocacy (i.e., arguing for integration as opposed to evidence to support integration)

Flow Diagram

The inclusion/exclusion criteria are applied sequentially at each stage of the process below. Other group members will be consulted for questionable exclusions.

Figure 4: Literature search strategy



Data Abstraction

A process of data 'abstraction' will be initiated by by HFG using the tool shown in Appendix 1. The charting fields will be developed and further refined based on the feedback of researchers as they begin using the instrument. Though this will be systematic, the process of charting will involve some degree of interpretation by the investigators to classify various themes represented in each article. This reflects a growing distinction between systematic and other types of reviews and was in fact one of the motivations for relying on the rapid review. This tool will also be applied for grey literature and internal government documents.

<u>Interview Subjects & Sampling</u>

Study Population

The rapid literature review will be followed by in-depth interviews with national actors involved in promoting HIV/AIDS and essential health service delivery, e.g. MOH, international development organizations, including bilaterals and multilaterals, and other members of the private sector. The research team will purposively select study participants based on their knowledge of the areas of interest for this study and upon the advice of national-level government stakeholders and consultants, and through snowball sampling (Bernard 2011). Considerations of professional affiliation are less important than knowledge of the subject specific domains of inquiry for this study. The study leaves open the possibility of including participants who may not have previously been identified prior to data collection and whose participation is deemed helpful as the researchers' understanding of the study evolves. After obtaining informed consent from study participants, we will ask them to participate in an in-depth interview, during which responses will be audio recorded and interview field notes will be taken. Contact information for study participants will be noted and participants will be asked if they wish to review the output of this research project prior to publication.

Potential study participants will be selected based upon the following eligibility criteria:

- Currently or previously worked in one of the four case study countries (Cambodia, Dominican Republic, Namibia, or Vietnam);
- Has knowledge of, or experience, in the delivery of HIV/AIDS or other essential services;
- Is familiar with the design of health policy in one of the four study locations.

Study Locations

The key informant interviews will be conducted over the telephone or via an online platform (i.e. skype or Webex) by HFG staff based in Bethesda. Interviewees will likely participate from their place of work. It is possible that study participants may be located elsewhere and this does not exclude them from participation in this study.

Sample & Sampling Strategy

This study will use a purposive sampling strategy. Study participants will be recruited from study locations (national and subnational) based on their knowledge of the thematic areas of interest. HFG staff will develop a list of relevant study participants that represent a range of backgrounds. The list will include contact information, current occupation, and area of expertise. Contact information will consist of names, email addresses, phone numbers, and organizational affiliation; however, these lists will be kept confidential and securely stored, separated from any data collected from selected eligible participants (see Section 13 below on human subjects protection).

No prioritization will be necessary for recruitment as it will only involve small number of study participants (a maximum of 20). HFG staff will approach potential study participants by a brief introductory email with a one-page description of the study attached (see Appendix 2). The researchers will follow up these introductory emails with one or two phone calls and emails, if necessary. If these subsequent attempts are unsuccessful, the researchers will not pursue prospective study participants further. Eligible study participants will be asked for their verbal consent to participate in the study. For consenting study participants, the researchers will schedule a time to conduct the interview that is convenient for the study participant.

The researchers aim to interview a minimum of three study participants in each of the four study countries and a maximum of five study participants. Our estimated sample size was determined based on funding and time constraints, but also based on identifying the few stakeholders at who understand the subject matter. While our ability to draw comparative inference is somewhat limited by the small sample size, the sampling strategy allows researchers to read across the data to pick out emerging themes and further explain gaps identified in the literature review. *The sample size of 3-5 interviews per country (approximately 12-20 total)* should allow us to adequately develop insights about the process of integration.

Data Collection

Data Collection Instruments

Interview Guide

Semi-structured interviews will be a complementary mode of data collection used in this study. Hence the small sample size, brevity of interview (approximately 30 minutes) and cursory analysis. The researchers will use a semi-structured interview guide to conduct interviews with study participants. Socio-demographic information collected from participants will include gender, job title, and organizational affiliation. This information will likely have been collected before the interview, but will be confirmed at the outset of the interview.

The interview guide will begin with a few questions about the study participant's role. This includes a description of his/her current position and subject area expertise. This section will allow study participants a limited amount of space to talk about themselves and settle into the interview. The following section in the interview guide includes a series of questions related to integration including the extent of integration in country x, the key decisions involved, and any potential barriers/facilitators to integration. Finally, the interview guide ends by giving study participants the opportunity to ask researchers questions about the study or describe relevant aspects overlooked in the interview. See Appendix 3 for full interview guide.

The interview guide is written in English and will not be translated unless deemed necessary by the researchers (for Dominican Republic, for example). All interviews will similarly be conducted in English, unless otherwise necessary. Interviews conducted in languages other than English (i.e. Spanish) will be summarized by translators. All interviews will be audio recorded, and brief field notes will be typed with 24 hours of the interview. Audio recordings will be selectively transcribed. Only relevant pieces of the recording, flagged during the interview, will be transcribed. The expected duration of each interview will be approximately 30 minutes (see data collection and management section below).

Pre-Testing of Interview Guide

The study team will pre-test and refine the interview guide prior to the start of data collection to assess the optimal length of the interview and fidelity to the study aims. Pre-testing will be conducted internally with HFG researchers and one or two of HFG's country managers. Informed consent will be obtained from pre-testing study participants. Results of the pre-test will be documented and shared with the study team, and the interview guide will be subsequently modified as needed.

Field notes

Brief field notes will be compiled by data collection teams immediately following the interviews. All information deemed relevant to the interviews will be recorded as accurately as possible by researchers both during and after the interviews. This may include descriptions of the time, location, interview setting, personal characteristics of study participants, as well as features of the interview process that would not be readily apparent in audio recordings. Similarly, the researchers will reflect on the substance of interview responses and highlight aspects that are particularly salient for the subsequent analysis. New questions that arise, persistent gaps in collected data, or problematic lines of questioning will also be recorded in the field notes. Although these are considered a form of data, the field notes will not be coded and analyzed. Instead, they provide a reference point for the interview process and serve to contextualize the overall findings.

Data Collection & Management Procedures

Prior to recruitment and data collection, the researchers will not seek formal approval for study implementation from local authorities because the number of interviews is small and no in-country data collection will occur. Study participants will receive a draft copy of the report and relevant local partners in-country will be notified of the findings of the desk review and interviews.

Training/Orientation

All researchers, including those conducting the interviews will undergo training before data collection begins. Training of interviewers will begin in January 2017, prior to data collection. Interviewers will undergo a full half-day training workshop with HFG staff, which will include an overview of the research context and study objectives, a review of the interview guide, an overview of key integration concepts, research ethics considerations, data security, techniques for conducting semi-structured interviews, probing effectively, compiling field notes, as well as other data collection and management procedures.

In-depth Interview Procedures

Interviews will be conducted in English, and local languages when needed, by the researchers. Only eligible participants who have provided their informed consent will be interviewed.

Interviews will be conducted between one study participant and 1-2 interviewers (HFG researchers). The expected duration of each interview is 30 minutes. An interview guide will be used by all interviewers to ensure that all areas of interest are addressed during the interviews. Interviewers will use the interview guide to guide discussion with study participants around their understanding of integration. With consent from study participants, two audio recording devices will be used to capture responses during the interviews, which will be selectively transcribed for analysis. Two recorders will be used because one recorder may malfunction or exhaust its power supply during the interview. Also, all recorders have different microphone sensitivities and some pick up ambient noise that obscures the spoken audio while others aren't sensitive enough to pick up soft-spoken interview participants. For these reasons, two different recorders will be used. During the interview, researchers will note the time of an illustrative or insightful

quote. These quotes will be transcribed when writing the field notes. Thus these interviews will not be fully transcribed and coded.

Supervision & Quality Assurance

During data collection, the study team will not conduct periodic data quality checks. This is because the recordings will not be transcribed in full and will not be handled by anyone other than HFG research team. The team will convene on regularly to reflect on the study data and ensure that the data align with the intended aims of this research.

Once all interviews have been completed, important quotes recorded, and field notes compiled, the outputs will be uploaded via Huddle (Abt's cloud-based storage system) and securely stored (see section below on proper storing of data). Researchers will have bi-weekly calls to discuss and coordinate around data collection progress and any needed modifications of existing data collection and management procedures.

Storing of Data

Data will be stored on a secure, password-protected, cloud-based storage system, called Huddle, to which only research team members from HFG will have access. Data and information stored will include field notes (with selective quotes), original audio files (two per interview), contact lists, and any other related study materials. Since consent will be verbally given at the onset of the interview, written consent forms will not be stored within the cloud-based storage system.

Audio files and field notes will be assigned a unique identification code. Identifying information may be present in the audio recording and in the field notes but will not be present in the file name. Any data presented in the final report will be de-identified. Audio files will be stored for a period of up to five years following the completion of the study, after which they will be permanently deleted.

Data Analysis & validity

Data Analysis

A coding framework will not be established prior to data collection. This is because the expected volume of data from key-informant interviews should be low. Instead researchers will record any notable quotes in the field notes, as described above. These will be reviewed in order to supplement and further understand gaps in the documentary data.

Coding of Data

Qualitative analytical software will not be used for this study on account of the small sample size, the use of selective quotes, and the lack of a formal codebook. Coding allows analysts to handle large amounts of data and we do not anticipate the brief interviews to generate a significant number of relevant quotes. Therefore, we will not develop a codebook for this study.

Interpretation Workshop

The HFG researchers will conduct an internal interpretation workshop with the team members responsible for conducting the interviews, writing the field notes, and drawing conclusions. The purpose of this workshop will be to engage in a collaborative interpretation of data, where meaning-making is largely seen as interactive and socially constructed (Schwartz-Shea & Yanow 2012). The goals of the workshop will include:

- Identifying trends across the four study locations;
- Exploring shared or divergent understandings of how countries are or can pursue integrated services delivery;
- Identifying the decision points as well barriers and facilitators to integrated HIV/AIDS and essential services delivery.

HFG researchers will engage in collaborative discussion to understand emerging themes from the document review and interview data. As a fundamentally abductive process, the organization of these themes will be developed throughout the process of analysis. Further lines of inquiry and problematic features of the themes that remain unaddressed will be identified for discussion. Similarly, HFG will highlight lessons learned and potential contributions of this research to the global knowledge. As an approach to understanding situated social phenomena, reflecting on collective interpretations of the documentary and interview data is seen as a key component of this analysis.

Comparative Analysis

This study is not significantly powered enough to draw strong comparative inference between the study countries. Nevertheless, some comparisons will be made with the caveat that future research will need to be conducted to more fully tease apart any similarities and differences. Rather, this study will rely heavily on the document review and to a lesser extent on the interview data to form insights that span the four study countries. These will provide a collective understanding of integration, considerations for other LMICs pursuing integration, and areas to explore in future research. Specific examples from the four case study countries will be used by HFG to illustrate features of integration, but will not be used for generalizations. This is consistent with the exploratory, lean study design described here.

Privacy & Confidentiality

The interpretation workshop will rely on the document review and selective quotes from the interview data. None of the identifiable information (such as from key quotes or field notes) will be shared with individuals outside of the interpretation workshop. The interpretation workshop will not be recorded and no identifiable information will be present in the subsequent outputs (such as the final report).

Appendix 4 further discusses regulatory requirements / human subjects research protection as they relate to this study.

There are some limitations with the methods used for this study, particularly with respect to semi-structured interviews and the ability to assess the performance of the subject of inquiry:

Potential for response bias among study participants. Study participants may have responded to questions in ways that may not accurately reflect actual arrangements in practice. While the interpretive nature of the study design accommodates for the ways in which actors may strategically portray issues in a favorable (or even unfavorable) light, the study will also be aware and hesitant to equate understandings with portrayals of various ideas. Similarly, the interview guide is designed in a proper sequence to build up to more contentious issues to ensure a candid and comfortable interview process. Further, the field notes offer a potential venue to identify and discuss any of these shortcomings or insights among researchers.

Ability of the study design to assess the actual prospects of integrated service delivery. This study is not merely descriptive, rather it is analytical in its approach to understanding situated social phenomena which provides the basis for human behavior. This study rests on interviewees' understandings, and the ability of researchers to find the right people to interview, and elicit genuine response to relevant questions. Nevertheless, one expected outcome from interested parties might be the positive associations with the design of integrated service delivery to ensure and promote quality health care. HFG's ability to draw inference as to the success of these initiatives is somewhat limited.

Appendix 1: Data Abstraction Tool

HIV-related component	**What are the key elements of this component in Country X?**	**Who funds this component? Who operates it?**	**Qualitative information about integration of this element in the system delivering essential health services** Examples: • What resources are shared or not shared? • With whom? • Why are these resources shared or not shared? • What change is needed for integration to be attractive/productive/feasible?
Service Delivery			
Prevention, testing, treatment and chronic care			
Health Workforce			
Training & certification, retention, distribution			
Health Information Systems			
Epi surveillance			

HIV-related component	What are the key elements of this component in Country X?	Who funds this component? Who operates it?	Qualitative information about integration of this element in the system delivering essential health services Examples: • What resources are shared or not shared? • With whom? • Why are these resources shared or not shared? • What change is needed for integration to be attractive/productive/feasible?
Patient records			
Access to Essential Medicines			
Drugs and supplies procurement, management and distribution			
Financing			
Patient financing			
Gov't or donor financing			
Leadership/Governance			
Program champions, managers and decision-makers			
Legislation and policies			

Appendix 2: One Page Research Summary

Integration of HIV/AIDS and Other Essential Health Services in Cambodia, Namibia, Vietnam, and Dominican Republic

Background

USAID's Health Finance and Governance (HFG) project helps to improve health in developing countries by expanding people's access to health care. 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. HFG's research portfolio enhances the ability of USAID to assist countries in delivering priority health services while simultaneously contributing to the global pool of knowledge on health systems strengthening (HSS).

Evidence is scarce, scattered, and not widely disseminated on ways to strengthen health system through the integration of service delivery mechanisms. Without this evidence, health systems run the risk of fragmentation and decision-makers often struggle to avoid replication of service delivery arrangements. This study will help address this evidence gap by exploring the strategies pursued by four countries to integrate HIV/AIDS and other essential health services. To accomplish this, we are conducting a comparative case study based on the experiences of Cambodia, Namibia, Vietnam, and Dominican Republic. In so doing, we hope to develop and provide recommendations for the design of similar strategies to integrate services delivery programs in other low- and middle-income countries.

Study Questions

1. How integrated is the HIV/AIDS response?
2. What are the key decision points that government use to move toward integration of the country-led HIV/AIDS response with other essential services?
3. What are the barriers and facilitators to integration of HIV/AIDS and other essential services?

Study Participation

This study will involve document review and brief semi-structured interviews with individuals familiar with the programs to ensure the integrated service delivery in select countries. Interviews will be conducted via telephone or online platforms by project staff. This research was exempt from full review by the IRB at Abt. Participation will be voluntary, confidential, and in no way does this research seek to evaluate the performance of program staff or partners.

Appendix 3: Interview Guide and Consent

Key Informant Interview Guide: Integration of HIV/AIDS and other health services in Cambodia, Namibia, Vietnam, Dominican Republic

Consent script:

For use with adult professionals involved with health care quality and health financing at organizations such as Ministries of Health, parastatal agencies such as public insurance funds, accreditation agencies, professional associations, non-governmental organizations, development partners, and private sector corporations.

Hello, my name is _____ [HFG employee/consultant]. I am working on a study about health financing and quality in health care in [COUNTRY]. The study is being conducted by Abt Associates on behalf of USAID's Health Finance and Governance project.

HFG is conducting 4 case studies, in Cambodia, Namibia, Vietnam, and the Dominican Republic. These countries are working to integrate HIV/AIDS and other essential health services. We are interviewing people who are or have been involved in this process or are familiar with recent related policy developments in their country. As part of this study, we would like to ask you a few questions about the integration of services in [COUNTRY].

The outcome of the work will be a technical report that presents recommendations for policy makers across all countries to promote effective service delivery in health care and achieve universal health coverage. This research is not intended to be about your performance as an individual.

We would very much appreciate your participation in this interview. It will take about 30 minutes to complete. Your participation is voluntary. There is no direct benefit to you for participating. Choosing not to participate will not affect you negatively. You may opt out at any point during the interview and you do not have to answer all questions. There are no right answers; we are just looking for your perspective on these issues.

We will combine the information you provide us with the information provided by about 20 other people we interview. We will keep any personal information about you confidential to the best of our ability. Only authorized researchers will have access to your personal information. We will remove your personal information before we share your de-identified responses with anyone outside of the research team. We will share de-identified responses outside the research team only if they are included in the final report that will be distributed to USAID.

If you have any questions or concerns about your participation in this study, you may contact Adam Koon at Abt Associates. I will give you his contact information to write down at the end of the interview.

Do you want to ask me anything about the interview or study?

- Yes [Answer all their questions as best you can]
- No [Move to next item]

Do you agree to participate?

- Yes [Thank them and ask about audio recording]
- No [Thank them for their time, indicate result in spreadsheet]

Can I audio record the interview? Only authorized researchers will have access to the recording for documentation purposes.

- Yes [Thank them and proceed to the interview questions]
- No [Say it is no problem and proceed to the interview questions]

Consent to Participate

_____

(Study Interviewer Signature)

HFG contact:

Adam Koon

Associate/Scientist

1-301-347-5147

Adam_Koon@abtassoc.com

Respondent's role

1. **Can you tell me about your current position?**
    a. How long have you worked there?
    b. How does your work relate to integrated service delivery?
    c. What is your expertise and/or disciplinary training?

Research Questions:

(Ask as many of the primary questions as is feasible given the time constraints and as are appropriate for the respondent. Ask probe questions as applicable. If running short on time, priority questions are in bold. Questions do not have to be read exactly as written.)

2. **What does integration mean to you?**
    a. Do you think others see it this way?
    b. Is this seen as a priority concept?
    c. What are some of the barriers to integration?

d. What are some of the facilitators to integration?

3. In your view, how integrated is the HIV/AIDS responses integrated in [COUNTRY]?

a. To what extent is knowledge integrated?

b. To what extent are resources integrated?

4. How are other essential services integrated in [COUNTRY]?

a. What are examples of some of these essential services?

b. How did this come about?

5. Can you think of any ways to improve HIV/AIDS and essential services integration [COUNTRY]?

a. Are there any additional ways?

b. What have you or your colleagues learned from this process?

Is there anything else we have not discussed that you would like to share with us?

Do you have any questions for us?

Thank you for your time!

Appendix 4: Regulatory Requirements / Human Subjects Protection

1. Risks and Mitigating Risks: Risks posed to participants by being in this study are minimal and may include mild discomfort over discussing sensitive topics or the loss of productive working time associated with participating in a one hour interview. The study team will respect participants' desires to avoid potentially sensitive questions and to waive their right to participate in the interview. The study team will also work to arrange interviews at a time that is convenient for the participants.
2. Benefits: There are no individual direct benefits to participation in this study. However, the findings from the study will be used to inform and improve the design of integrated HIV/AIDS and essential services delivery arrangements, which could potentially benefit study countries as well as their regional neighbors. Further, this study will offer a vehicle by which study participants may voice their concerns or insights in ways that might be difficult in organizational settings.
3. Consent/Assent Process: Researchers will obtain verbal consent from study participants after approaching them to participate in the study. Researchers will read the paper consent form to the study participants and they will be given time both before and after the interview to ask questions about their participation and the study themes more generally. If they wish, the researcher will be able to sign and email the consent script as well as interview guide for the study participant.

4. Confidentiality and Privacy: For recruitment of participants, the researchers will construct a list of acceptable interview participants. These recruitment lists will include contact information for each of the potential study participants, including their name, telephone number, email address and organization affiliation; however, to protect the privacy of study participants, this list will not be shared with others and interview participants will not be identified in subsequent interviews. Information from the recruitment list will also be kept separate from consent forms (if applicable), as well as, field notes and audio recordings/selective quotes, which will all be labeled with a unique ID code. All data will be de-identified prior to analysis.

   Should written consent be required, forms will be kept separate from audio files, field notes, and transcripts in a locked cabinet at Abt Associates. Following completion of the study all consent forms would be destroyed after the study report has been drafted and dissemination events pursued.

   Study recruitment will be conducted during regular business hours, but the data collection team members will determine an appropriate time that is convenient for the study participant and will minimize potential disturbances. The interview will be conducted over the phone or using an online platform. No colleagues or affiliated professional acquaintances will know the exact nature of questioning (unless they themselves are study participants) or the intentions of this research.

5. Subject Compensation: Study participants will not be compensated for participation in this study.

ANNEX F: REFERENCES

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