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Of Sustainability and HIV Program in Nigeria

WHAT ARE THE FACTORS AFFECTING SUSTAINABILITY OF HIV PROGRAM IN NIGERIA

EDUN, MARTIN BABATUNDE BABASANMI

Nigeria

57th Master of Public Health/International Course in Health Development

KIT (Royal Tropical Institute)

Vrije Universiteit Amsterdam (VU)

Of sustainability and HIV program in Nigeria

What are the factors affecting sustainability of HIV program in Nigeria

A thesis submitted in partial fulfilment of the requirement for the degree of Master of Science in Public Health

by

Edun, Martin Babatunde Babasanmi

Nigeria

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ABBREVIATIONS

ACHAP – African Comprehensive HIV/AIDS Partnerships

AIDS – Acquired Immunodeficiency Syndrome

ART - Antiretroviral Therapy

ARV – Antiretroviral

BBCA – Botswana Business Coalition on AIDS

BCC - Behaviour Change Communication

BMGF – The Bill & Melinda Gates Foundation

CBO - Community Based Organization

CDC – Center for Disease Control and Prevention

CiSHAN- Civil Society for HIV/AIDS in Nigeria

CSO - Civil Society Organisations

DFID – Department for International Development

FBO - Faith Based Organization

FMoH - Federal Ministry of Health

FY22 - Fiscal Year 2022

GFATM – Global Fund for Tuberculosis, AIDS and Malaria

GHI - Global Health Initiatives

GoB – Government of Botswana

GoN – Government of Nigeria

HCT – HIV counseling and testing

HEAP - HIV/AIDS Emergency Action Plan

HIV – Human immunodeficiency virus

IDA - International Development Association

IEC - Information, Education and Communication

IRB – Institutional Review Board

M&E - Monitoring and Evaluation

MARP – Most-at-risk-population

MPH – Master of Public Health

MS – Microsoft

MTCT - Mother-To-Child-Transmission

NACA – National Agency for the Control of AIDS

NAIIS - Nigeria HIV/AIDS Indicator and Impact Survey

NASCP – National AIDS and STI Control Program

NDRMSS - National Domestic Resource Mobilization and Sustainability Strategy

NEACA - National Expert Advisory Committee on AIDS

NGO – Non-governmental organization

NHMIS - Nigeria Health Management Information System

NiBUCAA- Nigeria Business Coalition Against AIDS

NNRIMS- Nigeria National Response Information Management System

NSF – National Strategic Framework

OAU - Organization of African Unity

OVC - Orphan and Vulnerable Children

PABA - People Affected by AIDS

PBF - Performance-based Financing

PCA - Presidential Council on AIDS

PEPFAR – Presidential Emergency Plan for AIDS Relief

PLWHIV – People living with HIV

PMTCT – Prevention of mother to child transmission

SACA - State Agency for the Control of AIDS

SFI - Sustainable Financing Initiative

SO - Specific Objectives

SRH - Sexual and Reproductive Health

STI - Sexually Transmitted Infection

TBA - Traditional Birth Attendants

UN - United Nations

UNAIDS – United Nations Program on HIV/AIDS

UNGASS- United Nations General Assembly special session

USAID – United States Agency for International Development

USG – United States Government

VCT – Voluntary counselling and testing

WB – World Bank

DHIS	-	District Health Information System
PCRP	-	Presidential Comprehensive Response Plan
US	-	United States
WHO	-	World Health Organization

GLOSSARY OF KEY TERMS

90-90-90 targets: According to the United Nations Programme on HIV and AIDS (UNAIDS), by 2020, 90% of all people living with human immunodeficiency virus (HIV) will know their HIV status; 90% of all people with diagnosed HIV will receive sustained antiretroviral therapy (ART); and 90% of all people receiving ART will have viral load suppression.

Universal Health Coverage - access to key promotive, preventive, curative and rehabilitative health interventions for all at an affordable cost, thereby achieving equity in access.

Antiretroviral therapy (ART): Treatment with ARV drugs that inhibit the ability of HIV to multiply in the body, leading to improved health and survival among people living with HIV.

HIV Prevalence - The proportion of persons in a population who are living with HIV at a specific point in time.

HIV Incidence - : A measure of the frequency with which new cases of HIV occur in a population over a time period. The denominator is the population at risk; the numerator is the number of new cases that occur during a given time period.

HIV - HIV is the virus that causes AIDS. The virus is passed from person to person through blood, semen, vaginal fluids and breast milk. HIV attacks CD4 cells in the body, leaving a person living with HIV vulnerable to illnesses that a healthy immune system would have eliminated.

AIDS - AIDS is a disease that can develop after HIV causes severe damage to the immune system, leaving the body vulnerable to life-threatening conditions, such as infections and cancers.

Bilateral & Multilateral organisations- international Public or public/private organizations, institutions or Agencies which receive contributions from donor countries and from other sources, thus multilateral funding is a mechanism whereby assistance investments are pooled by different donors and granted in not necessarily one-to-one relationships between donor and recipient countries. This usually occurs via international agencies within the UN system, development banks. The GFATM is a private/public multilateral organization

AIDS spending categories – it is the broad categories to which the assessment assigns expenditure on HIV and AIDS. Any expenditure captured has to be for a function / an ASC (used interchangeably)

Beneficiary population - The populations presented here are explicitly targeted or intended to benefit from specific activities, e.g. the intended recipients of the various services.

CSOs - The formal and informal networks and organizations that is active in the public sphere between the state and family. They include a wider range of associate forms such as trade Unions, churches, cooperatives, professional associations and informal community-based groups

Sustainability: Is the small set of organizational and contextual factors that build the capacity of maintaining a public health program over time.

Funding Stability: This is defined as making long-term plans based on a stable funding environment.

Political Support Is the internal and external political environment that influences program funding, initiatives and acceptance.

Partnership: Is defined as the connection between program and community.

Organizational Capacity: Is defined as the resources needed to manage the program and its activities effectively.

Program Adaptation: Is the ability of the program to adapt and improve to ensure effectiveness.

Program Evaluation: Is defined as the monitoring and evaluation of process and outcome data associated with the program.

Communications: The strategic dissemination of program outcomes and activities with stakeholders, decision-makers, and the public.

Public Health Impacts: Is defined as the program's effect on the health attitudes, perception, and behaviors in the area it serves.

Strategic Planning: Is defined as the process that defines program directions, goals, and strategies.

ABSTRACT

HIV/AIDS epidemic has impacted the different sectors of the society. About 38 million people live with HIV worldwide with 25.7 million of them in Africa. Nigeria HIV prevalence in adults 15-64 years dropped to 1.4% (2018) from the peak of 5.8% (2001), currently there are 1.7 million people living with HIV, 1.6 million of them know their status and 1.5 million are on antiretroviral therapy in Nigeria. Nigeria has a weak healthcare system and the HIV program in Nigeria is highly reliant on foreign aid. To be able to sustain the gains made, this paper seek to identify the factors affecting sustainability of the HIV program in Nigeria.

This study is a scoping literature review using only articles written in English. The findings are presented using the nine elements of sustainability capacity of public health programs conceptual framework of Schel et al. Rwanda and Botswana are also used as case studies to identify best practices that can be adapted to Nigeria. There are good partnerships, organizational capacity to sustain the HIV program, also program evaluation leads to appropriate adaptation. Most of these activities are funded by foreign donors who fund over 80% of the national HIV response. Major threat to sustainability of HIV program in Nigeria is domestic funding capacity.

Strengthening the Primary Health Care system is a cheaper way to ensure effective healthcare services and upon which a sustainable HIV program can be grafted. Nigeria needs to provide strong leadership for both external donors and the internal system to enable country ownership and sustainability.

Key terms : Sustainability, Political support, Funding stability, HIV, AIDS, Program evaluation, Program adaptation, Strategic planning.

- "Program Evaluation"[Mesh]
- "HIV"[Mesh]
- "Nigeria"[Mesh]
- "Capital Financing"[Mesh]
- "Politics"[Mesh]
- "Program Development"[Mesh]

Word count: 13092

CHAPTER 1 - BACKGROUND

1.1 Epidemiology of HIV

Human Immunodeficiency Virus (HIV) infection has been a significant epidemic for over 30 years and has dramatically impacted the different sectors such as the health, welfare, employment, and economic sectors. This impact is irrespective of culture or tradition, cutting across the various social strata and ethnic groups.[1]

By the end of 2019, about 38 million people live with HIV worldwide because effective treatment and care with diverse, innovative prevention strategies have made HIV infection a manageable chronic health condition.[2]

Combined international efforts in response to HIV have made services coverage steadily increase. Globally, 26 million people (68% of adults and 53% of children living with HIV) received lifelong antiretroviral therapy (ART) at the end of 2019.[2] Between 2000 – 2019, the advent of ART dropped the incidence rate of HIV by 39%, HIV-related deaths reduced by 51% and saved 15.3 million lives. All these were made possible by the various national HIV programs, supported by civil society organisations and international development partners.[2] However, this success is varied across different regions, with much yet to be achieved. In 2019, 690,000 people died from HIV-related causes, and 1.7million people became newly infected due to gaps in HIV services.[2] The key population is the driver for new incidence of HIV, accounting for over 62% of all new HIV infections globally while up to 95% in some regions, e.g., eastern, and central Europe, Asia and the Pacific, and the Middle, East and North Africa.[3]

More than two-thirds of people living with HIV are in the African region (25.7 million) and 1.1 million (310,000 in West and Central Africa) of the new infections also in Africa, 16.3 million (64%) of people living with HIV have access to ART with 52% virally suppressed. So-called key populations accounted for 64% of new HIV infections in West and Central Africa, even though HIV is prevalent among the general population.[3]

1.2 Nigeria HIV response

Since the first case of HIV in Nigeria in a 13-year-old female sex worker who was diagnosed in 1985 but reported in 1986, the HIV infection has spread through the country across the different ethnic groups and sexual networks in all social classes uncurbed and rapidly, and it has become a massive epidemic that not only burdens the healthcare system but has a vast socioeconomic impact [4–6]

Nigeria is the most populous country in Africa, accounting for about half of West Africa's population having approximately 202 million people. Her youth population is one of the largest in the world.[7] It is culturally diverse and multi-ethnic, having 36 autonomous states and the Federal Capital Territory. About 40% (83 million people) live below the poverty line, with another 25% (53 million) vulnerable to poverty. A country highly reliant on crude oil entered a recession in 2015-2016 when oil prices fell sharply. The country faces a massive developmental challenge with an unstable economy worsened by the global COVID-19 outbreak and few buffers and policy instruments to cushion the various adverse effects of the pandemic.[7]

The government of Nigeria (GoN) officially declared the first AIDS case in 1986 and then established the National Expert Advisory Committee on AIDS (NEACA), reporting to the Minister of Health. A more organised response followed in 1988 by establishing the National AIDS and STI Control Program (NASCP) within the Ministry of Health. All efforts to this stage were solely a health sector response, but the federal government declared HIV an epidemic in 1991, leading to a multisectoral response. In line with this, the government created the National Action Committee on HIV/AIDS in 1999. It later converted into a full agency - National Agency for the Control of AIDS (NACA) in 2007 by a National Assembly Act. It campaigned against the epidemic at the three levels of the government. Despite these, the estimated prevalence rapidly increased from 1.8% in 1991, peaking at 5.8% in 2001 (Figure 2), after which it started to decline; from the last Nigeria HIV/AIDS Indicator and Impact Survey (NAIIS) (2018), the study estimated prevalence is currently 1.4%.[5,8–10] As of 2020, 1.7 million people are living with HIV, 1.6 million of them know their status and 1.5 million are on antiretroviral therapy in Nigeria.[11]

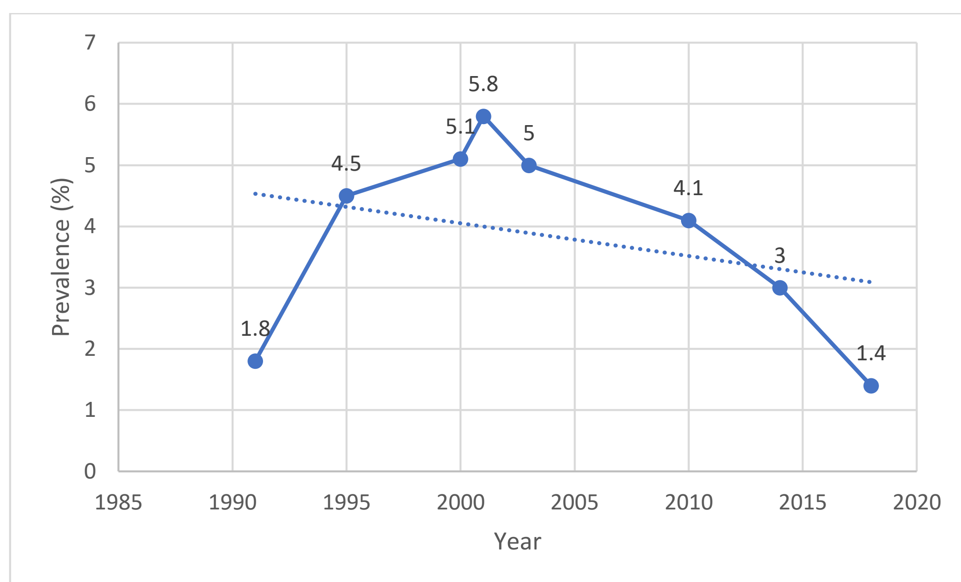

Figure 1: Trend of HIV prevalence in Nigeria 1991-2018

To ensure a solid national HIV response, NACA is leading in conjunction with the State Agency for the Control of AIDS (SACA) and the Local Government Agency for the Control on AIDS (LACA). It moved from the national policy on HIV/AIDS in 1997 to the HIV/AIDS Emergency Action Plan (HEAP) in 2001 for a multisectoral response approach. The country operates under the "Three Ones principle" framework, i.e., One coordinating agency (NACA), One strategic plan (National Strategic Framework), and One Monitoring and Evaluation framework - the Nigeria National Response Information Management System (NNRIMS). NNRIMS was an achievement for the government in coordination, which, together with institutional management, constitutes essential components of an effective national response to the HIV/AIDS epidemic. NACA coordinates the national response across the three-tier system based on the country's federal system.[5,6] The impact of the Nigeria HIV response is seen in the decline in the rate of new HIV infections and AIDS-related deaths (Figure 2).[12]

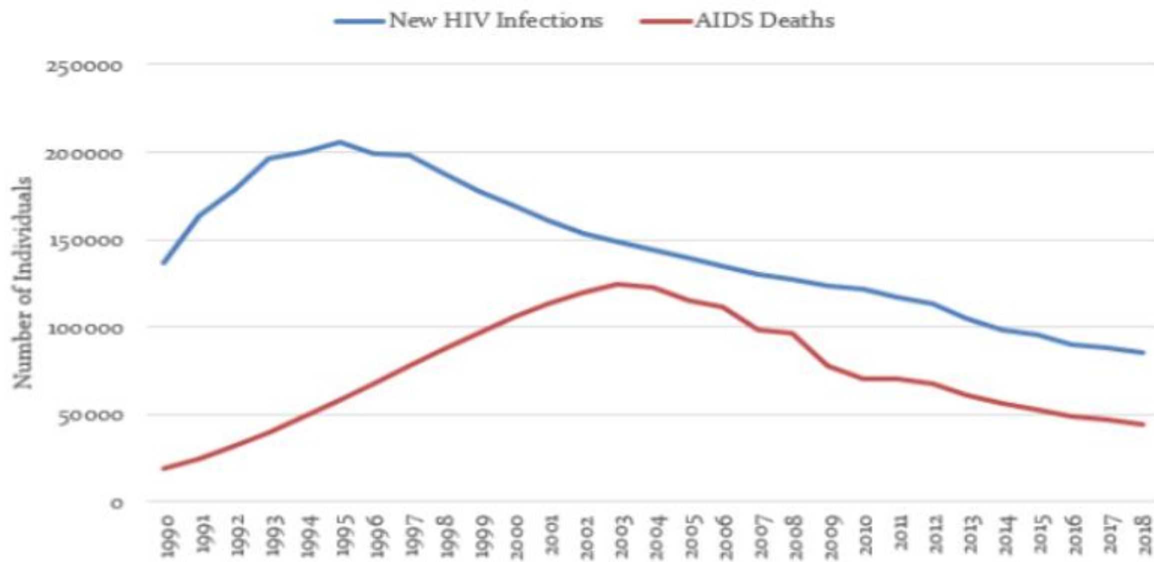

Figure 2: New HIV infections and AIDS deaths in Nigeria 1990 – 2018

Source: PEPFAR 2019

Nigeria employs a mixed health economy of private and public healthcare delivery funded by the government, households, corporations and donors. Nigeria's health financing indicators are way below the global standard. The minimum Government-funded health expenditure per capita recommended to ensure universal health coverage for essential services is $86, but in 2017 GoN only spent N3,786.00 ($12).[13]

HIV program in Nigeria has three primary sources of funds: public, i.e. the Government, private sector and external (international) sources (Figure 3). In addition, the international donors have been the leading funder of Nigeria's HIV/AIDS program through international, bilateral and multilateral organisations, foundations, and NGOs. How beneficial has this support been, to what extent have they achieved their set aim, and the non-intended adverse consequent effects?

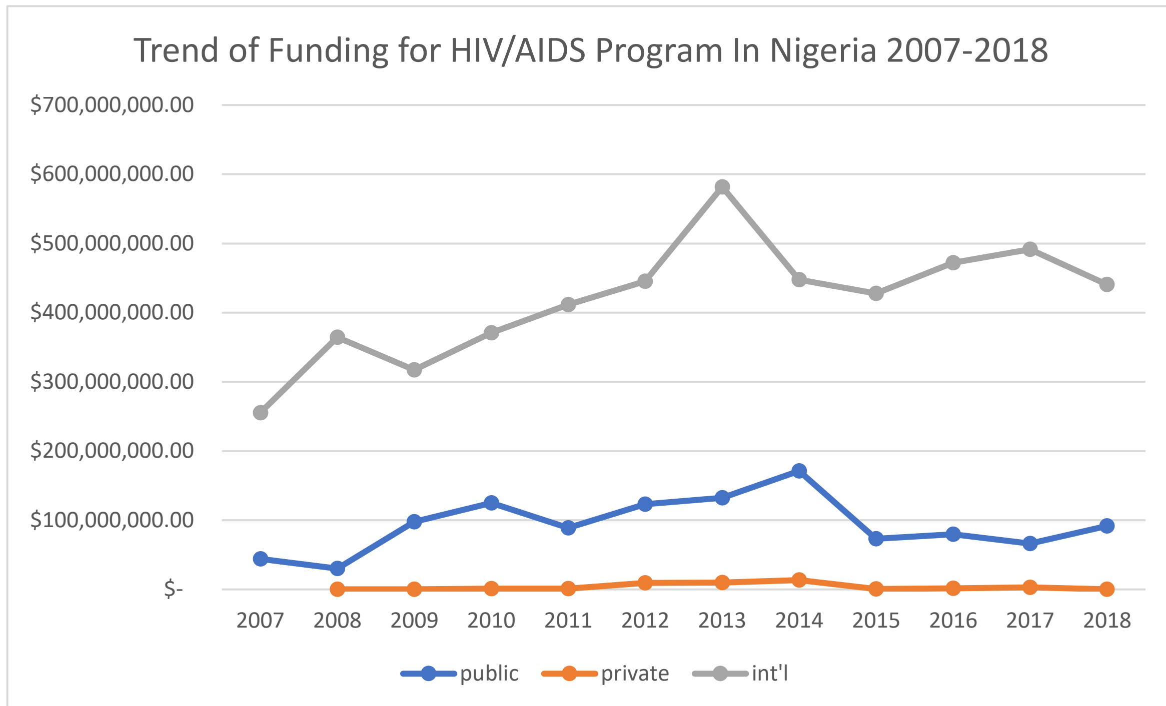

Figure 3: Trend of Funding for HIV/AIDS Program In Nigeria 2007-2018

HIV program in Nigeria has cost US$6.2 billion between 2005 – 2018, with more than 81% of the funds coming from international donors, the government was responsible for 18% and the organised private sector 1%. [12,14] The three major Global Health Initiatives (GHI) funding most of the national HIV response are the United States President Emergency Plan for AIDS Relief (PEPFAR), Global Fund to fight AIDS, TB and Malaria (GFATM) and the World Bank Multi-country HIV/AIDS Program [15].

CHAPTER 2 – PROBLEM STATEMENT, JUSTIFICATION, GENERAL AND SPECIFIC OBJECTIVES

2.1 Problem statement

Sustainability is a concept that has widely varied definitions and dimensions with no single accepted generalised concept analysis yet. Still, there are broad concerns to funders, implementers, researchers, and community partners, including:

1. Are healthcare innovations and disease prevention activities truly beneficial and cost-effective?
2. Can it continue after the initial funding?
3. Are the communities empowered to continue the said interventions?
4. What is the ethical basis for funders to develop innovative programs for others to sustain in light of the public health impact, considering that public health programs are important ways of improving the health and well-being of the population?
5. The effect on subsequent innovative healthcare programs.[16–19]

The military neglected the healthcare system in Nigeria for over a decade, from which it is finding it challenging to recover. The neglect led to consequent poor linkages between reproductive health, maternal and child health, HIV/AIDS and TB programs giving little opportunity to integrate governance and economic growth components into care and support and prevention messages into other sector programs. [21]

The healthcare system in Nigeria is deficient in facilities and human resources, with gross inequity in the distribution of existing infrastructures. A 2017 national health account review reveals that the country spent over 84% of Primary Health Care (PHC) expenditures in non-PHC facilities. PHC spending only accounted for less than 10% of current health spending. The Federal Government prioritised preserving the little gains made in healthcare delivery and has planned to put a robust national health policy on the framework of Primary Health Care (PHC). This move will enable both public and private health care facilities to thrive and provide affordable care.[13,22]

With the resumption of democracy in 1999, the government displayed a positive attitude and organised a truly multisectoral response controlled at the federal level. [10] In 2001, the Government of Nigeria convened an African Summit on HIV/AIDS, Sexually Transmitted Diseases, Tuberculosis, Malaria, and other related diseases. The summit, which attracted Heads of State in Africa and beyond, world leaders and the Secretary-General of United Nations, birthed the Abuja 2001 declaration. They pledged to allocate at least 15% of their annual budget to health.[23] Nigeria is yet to fulfil the pledge (Figure 4). The summit also attracted bilateral and multilateral donors to the Nigerian HIV epidemic response,[10] thus became the beginning of significant funding for the national HIV response. Nigeria's HIV/AIDS program is highly reliant on international donors, mainly the United States Government President's Emergency Plan for AIDS Relief (PEPFAR) program and other donors such as Global Fund and World Bank. A total of US$6.2 billion was spent on HIV response in Nigeria between 2005 and 2018, with the PEPFAR and GFATM being the major contributors.[12]

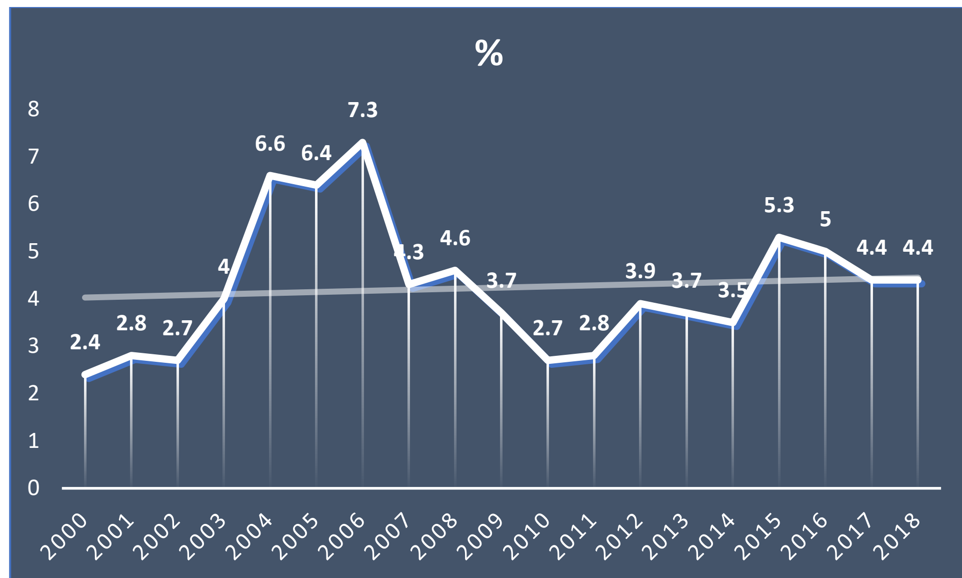

Figure 4: Chart showing Nigeria general government expenditure on health as a share of general government expenditure 2000 - 2018

Funding from external donors has been waning in the past decade. In 2014, PEPFAR funded the Sustainable Financing Initiative (SFI) to promote shared financial responsibility with the Government of Nigeria (GoN) towards a more sustainable HIV response.[24] Two states (Abia and Taraba) were selected as models to study the scalability of transferring nationwide ownership of the HIV response to the GoN. While the states demonstrated administrative and managerial capacities, there was still a deficit in technical expertise, especially in policy, commodities procurement and management, and monitoring and evaluation. Transitioning is not a one-size-fits-all approach across the states. The greatest threat to successful Nigerian ownership of the HIV epidemic response is a lack of stable, adequate funding.[25]

NACA did not succeed with the pilot program and has not scaled up because of the scarcity of funds and a lack of strong political commitment, especially at the subnational level.

This study aims to identify salient factors affecting the sustainability capacity of the HIV program in Nigeria.

2.2 Justification

Studies have observed that terminating a program for a disease that remains or recurs is non-productive. That new programs might not enjoy acceptability if previous ones were not sustained.[17] Investing in sustainability allows the maximal impact of public health intervention. Sustainability research helps in understanding factors influencing the sustainability of evidence-based interventions, enabling proactive planning for the continuation of such interventions.[26]

Do we desire the program's sustainability or the investments in the people in the form of capacity building? Improved capacity usually translates to the institutionalisation of the interventions that are part of the programme. A study argues that rather than institutionalising programs that later become sterile bureaucracies, grants should develop the capacity, problem-solving skills, and confidence of the community and leadership. There could also be the organisation's sustainability, which has been identified as an essential factor that may affect the sustainability of programs within those

organisations. [27]. But whether the program or the capacity is sustained, this leads to the continued provision of the intervention. The question is, which solution gives better and more responsive care and is cheaper and less resource-demanding?

There is a downward trend in the prevalence of HIV infection over the years and presently at 1.4% (Figure 1). However, because of Nigeria's large population, it is still very significant regarding the actual HIV burden, which will translate into a high cost of care and a large pool of potential sources of new HIV infection.[6]

With technical assistance and funding from PEPFAR and Global Fund, the Nigerian government undertook the largest HIV population-based survey globally – the Nigeria HIV/AIDS and Impact Survey (NAIIS) in 2018. The study aimed to determine the incidence, prevalence of HIV, viral load suppression, and risk behaviours; this was to help ascertain the benefits and effects of the HIV program interventions implemented in the country.[28]

The survey showed significant improvement in stemming the tide of the HIV epidemic, and the country is moving closer to the UNAIDS 95-95-95 targets.[9,28,29] According to the UNAIDS 2019 country scorecard, 71% of the population now know their HIV status, 89% of PLHIVs are on treatment, and overall, HIV viral load suppression was 43.1%. UNAIDS also reported that the percentage of pregnant women living with HIV accessing ART increased to 43% from 27% in 2010, vertical transmission rate reduced to 22% from 31%, with early infant diagnosis improving to 26.6%from 9.6%.[3]

NAIIS also reported the differing HIV prevalence among adults aged 15 - 64 for each state, with some having a high prevalence than the national average (Figure 5) and thus needing adapted responses like the Antiretroviral therapy (ART) Surge intervention. ART Surge is a rapid scale-up of an antiretroviral therapy program for nine selected states with an estimated prevalence above 2% and a massive gap of unmet needs.[28] The mode of implementation is based on the incident command structure of the US Army and uses comprehensive, data-driven, locally adapted strategies.[30] The ART Surge program in the Rivers State of Nigeria recorded massive success, with the number of PLHIV on ART increasing from 26,041 to 99,733 within 18 months.[31] Also, across the nine states, there was an eight-fold increase in the number of newly identified HIV infections, and 208,202 persons, in addition, were receiving ART.[30] People Living With HIV/AIDS (PLWHA), who know their status in Nigeria, is about 73% compared with the global achievement of 84%. Also, PLWHA on antiretroviral therapy achievement is about 89% in Nigeria against the average global coverage of 73%.[3,32]

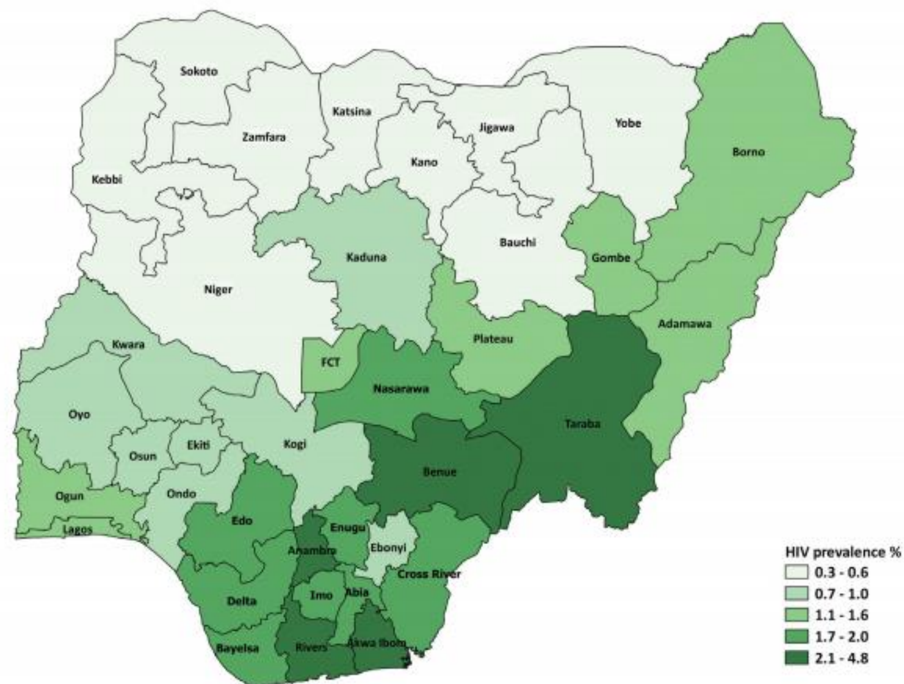

Figure 5: HIV prevalence among adults aged 15–64 years by state

Source: NAIIS Technical Report 2018

Nigeria needs to sustain these gains in the face of dwindling donor funds and support or a resurgence of the HIV pandemic. It, therefore, calls for the need to understand the conditions that affect sustainability so that Nigeria can actively plan long-term sustainability that is locally driven.[17]

PEPFAR transitioned Abia and Taraba states to the GoN to test run country ownership of the HIV program in April 2015. Evaluation report after two years showed that staff were committed, and both states demonstrated administrative, managerial, and programmatic capacity but were lacking funds. As a result, the HIV program failed due to a lack of funding and strong political will.[25] External funders are taking over the two states come FY22.

Analysing the sustainability capacity of the Nigeria HIV program in this study will point to factors necessary to achieve nationwide country ownership.

2.3 Objectives

2.3.1 General Objective

The study aims to critically analyse and identify the various determinants of the sustainability of HIV program in Nigeria

2.3.2 Specific Objectives (SO)

SO1 – Analyse factors affecting the sustainability of the HIV program in Nigeria

SO2 – Identify and describe international best practices and lessons learnt from other countries that have potential effects on the sustainability of the HIV program in Nigeria

SO3 - Make recommendations on how to improve the sustainability of the HIV program in Nigeria.

CHAPTER 3 - METHODOLOGY

3.1 Research Design and Search strategy

The author achieved the above objectives by conducting a scoping review of available literature. I developed a concept builder of keywords and MeSH terms (Table 1) that I combined to perform a literature search on Pubmed, VU library, Google Scholar and Google website was also checked for grey literature and web pages relevant to this study. In addition, I searched the reference lists of articles found for relevant studies. Only articles written in English language and not later than ten years ago were used mainly except some articles that stressed important elements. Not much peer reviewed articles on sustainability of the Nigeria HIV program is available except program implementation and evaluation reports.

Table 1: List of keywords and MeSH terms used

Keywords	MeSH Terms
• Elements • Components • Determinants • Circumstances • Influences • Characteristics • Considerations • Sustainability • Stable • Tenable • “Long-lasting” • Viable • Consistent • Enduring • Lasting • AIDS • Retrovirus • Program • Nigeria • Funding Stability • Political Support • Partnerships • Organizational Capacity • Program Adaptation • Program Evaluation • Communications • Public Health Impacts • Strategic Planning • Institutionalization	• "Program Evaluation"[Mesh] • "HIV"[Mesh] • "Nigeria"[Mesh] • "Capital Financing"[Mesh] • "Politics"[Mesh] • "Program Development"[Mesh]

I contacted an Assistant Director who is the Special Assistant to the Director-General on Nigeria Comprehensive AIDS program at the Federal Ministry of Health, who oversees the sustainability

agenda of the Nigeria HIV program. She gave me access to documents from the government on the strategic frameworks and spending analysis.

I picked Botswana and Rwanda to describe their best practices and see the likely lessons that can be learnt in administering the Nigeria HIV response. Both are high burden countries in sub-Sahara Africa, just like Nigeria, but they have achieved the UNAIDS 90-90-90 targets. Rwanda went through a war crisis with a complete breakdown of its healthcare system but has risen above it.

3.1.1 Conceptual Framework

Researchers initially viewed Sustainability within the overlapping program life cycle of initiation, development, adoption, implementation, sustainability, and dissemination. [27] but a study later argued that the concept of stages was not viable, but implementation and sustainability run simultaneously as parallel processes.[19] Also, most program staff erroneously think funding alone can sustain a program, thereby identifying alternative funding sources when the current funding cycle ends. Still, examined literature proves sustainability is a multifactorial process beyond identifying new funds sources alone.[16,17,27]

Shediac-Rizkalah et al. were the first to have an all-inclusive framework summarizing the available empirical studies to that date. Their study observed that criteria for sustainability are highly variable as the project type, setting, or resources determines what needs to be sustained, thus making the concept of Sustainability more of a degree and not an all-or-none phenomenon.[17] Also, sustainability is an entity to be attained and that the concept of program sustainability will remain highly varied with specific programs. The context within which they are operating is the major determinants of the outcomes. Early researchers identified sustainability measures as ongoing program activities, continued measured benefits or outcomes for new clients, and maintained community capacity[27].

Another study improved on this, identified the importance of the factors and context that led to program outcomes as valid sustainability measures, and critically assessing them can determine the prospects of sustainability of a public health program.[16] Limitation of the conceptual framework in the study includes: overlapping constructs with no clear delineation; it is more applicable to researching a program beyond the initial funding cycle. At which point do we say a program is sustained? The likely ambiguity and difficulty of tracking sustained elements, i.e. sustainability outcomes, and general applicability across the various stakeholders.[33] All these make the framework not applicable to the HIV program in Nigeria because the program is quite large and operates on varying levels.

While agreeing that sustainability can be measured as outcome variables, some researchers also believe that in addition to the characteristics of the program determining its sustainability, the organizational and system characteristics already existing do play a vital role as sustainability measures of the public health program. They referred to that as the capacity of the public health program for sustainability. Their study argues the criticalness of the contextual and organizational characteristics are prerequisites for sustaining a program over time. They define sustainability capacity as “The existence of structures and processes that allow a program to leverage resources to implement and maintain evidence-based policies and activities”.[33]

There are various definitions and understanding of the concept of sustainability, as shown in table 2. There are some distinct differences among them, but common to all and underlying the various concepts is the fact that there exists the extended deployment of program components and activities well after the termination of the initial funding period.[16,34,35]

For this study, I would be using the definition of Schel et al. (2013), which defines sustainability as "The existence of structures and processes that allow a program to leverage resources to implement and maintain evidence-based policies and activities".[33]

Table 2: Different definitions of sustainability

Source	Definition
Oxford English Dictionary	"The ability to be maintained at a certain rate or level."
Rogers (2003)	"the degree to which an innovation continues to be used after initial efforts to secure adoption is completed."
Bowman et al. (2008)	"the continued use of core elements of intervention and persistent gains in performance as a result of those interventions"
Scheirer (2005)	"the program components developed and implemented in earlier stages are (or are not) maintained after the initial funding, or another impetus is removed."
Stetler et al. (2009)	"changes (practice and outcomes) that continue over time as related to specific projects"
Scheirer and Dearing (2011)	"The continued use of program components and activities (beyond their initial funding period) for the continued achievement of desirable program and population outcomes"
Davies and Edwards (2013)	"the continued implementation of innovations over time and depends on the ability of workers, organizations, and healthcare delivery systems to adapt to change."
Schel et al. (2013)	"sustainability capacity is the existence of structures and processes that allow a program to leverage resources to effectively implement and maintain evidence-based policies and activities."

Factors affecting program sustainability do not work in isolation but interplay throughout implementation and assessment,[27] i.e., sustainability is both a process and an outcome.

The analytical tool to understand the interplay of these factors regarding HIV programming in Nigeria is the conceptual framework for the sustainability capacity of public health programs by Schel et al. (2013) (Figure 6). It aids the understanding of how available infrastructure and processes, together with the program's characteristics, transform resources into positive health outcomes.[33,36] The findings will be documented and presented according to the constructs of this framework.

The chosen framework was developed through a combination of literature review and conceptual mapping and happened to be widely applicable to:

- The various stakeholders of public health programs (funders, researchers, implementers, evaluators, and decision-makers).
- Different program implementation levels (community, state or national).

- It can also be used to assess the sustainability capacity of public health programs in real-life settings.

No previous studies had captured this common set of factors that significantly affect sustainability within different contexts. Most of the earlier studies were mainly based on informants' perceptions of what influenced sustainability or narrow in their conceptualisation of sustainability, and not a systematic assessment of so-called predictive factors.[37,38] It also aims to show the relationship between the various sustainability concepts available within the organisational and community context.[16]

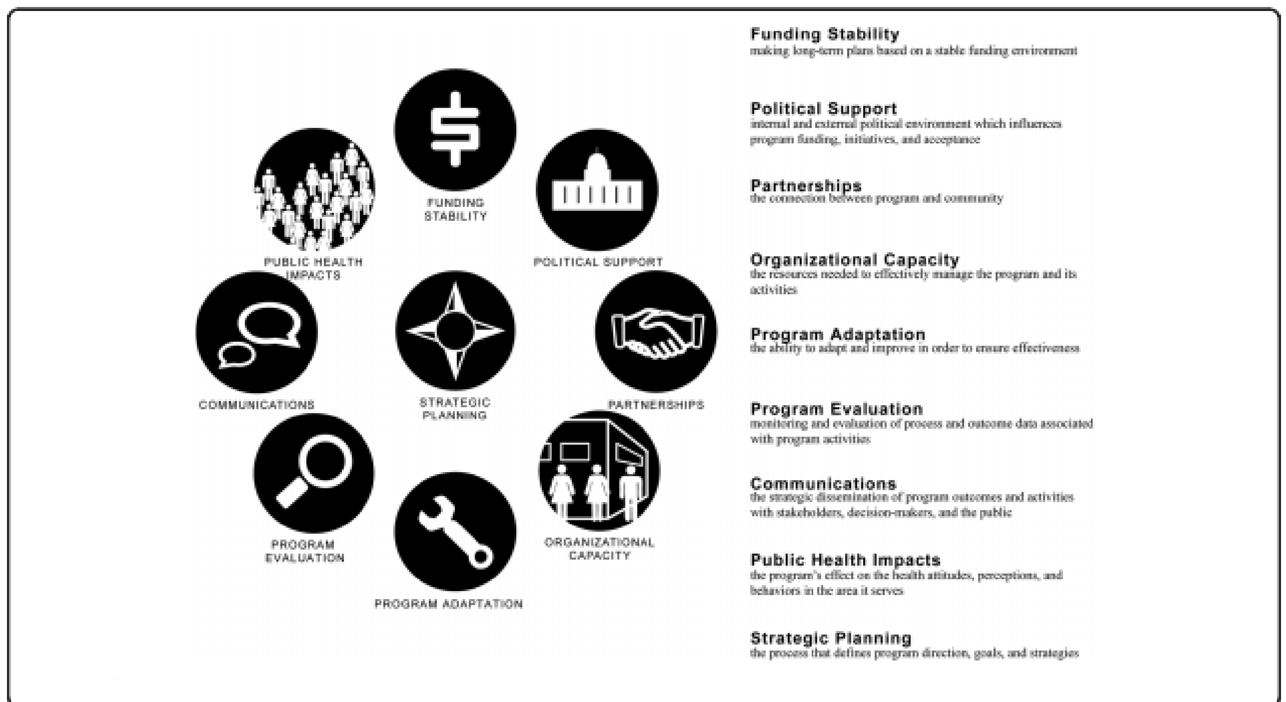

Figure 6: Conceptual Framework of Capacity for Sustainability

Source: **Public health program capacity for sustainability: A new framework**
Schell S, Luke D, Schooley M, Elliott M, Herbers S, Mueller N, Bunger A
Implementation Science (2013) 8(1)

3.1.2 Presentation of findings

The framework consists of 9 elements, each with various elements to define the factors affecting the sustainability of the HIV program. In one way or the other, all these elements impact the effectiveness and continuity of the various components of a public health program intervention.

I will be using this framework by going through each of the factors for specific objective 1. I will also use it for specific objective 2 to analyse best practices from other countries.

CHAPTER 4 – STUDY FINDINGS

4.1 Specific Objective 1- Analyse factors affecting the Sustainability of the HIV program in Nigeria

4.1.1 Funding Stability:

Introduction to the HIV programme funding of Nigeria

The Global Health Initiatives (GHIs) have provided funding stability for the national HIV response. Still, with it dwindling, it brings in the question of a sustainable alternative source of funding – probably more of country ownership?

While these GHIs have provided funding stability and increased access to quality HIV services and commodities, and helped build the health information system in Nigeria, it has increased dependency on foreign aid and not done much to address the sustainability of the services. The general health services also suffer neglect due to the non-alignment of the country's health system to the HIV program.[15]

Funding has a reciprocal relationship with political support and partnerships; I discuss this further in later sections. The GHIs have not addressed salient factors that help the domestic sustainability of services, developed a parallel supply management system. The HIV program has continued to be implemented as a vertical program, leading to over-reliance on foreign aid.[15,39,40]

Major funders:

In the following paragraphs, I will discuss the major funders one after the other. The analysis includes the size of their contributions over time. Moreover, I discuss how their long-term plans evolved and how this affected the funding stability for the HIV program in Nigeria.

The first to partner with Nigeria in her fight against the HIV epidemic was the World Bank, whose first grant was in 2001 with approval of $90 million credit to the Nigerian government. The bank has helped in financing the national response. It does economic and policy analysis so that the GoN can be aware of the epidemic's impact on development and choose the best options talking about return on investments in the HIV program interventions. The main objective of the World Bank project was the reduction of HIV infection risks through behavioural change, scaling up prevention interventions and improve access to and uptake of HIV counselling and testing services. All these efforts are geared towards enhancing the capacity and efficacy of the Nigerian government for a more sustainable national HIV response.[6,41,42]

Globally the World bank was a significant contributor in financing the global HIV/AIDS response but later evolved her approach because of the changing trend in the HIV epidemic. World bank participated in pooling funds as a member of the Joint United Nations Program on HIV/AIDS (UNAIDS). These international partnerships were to foster more effective and efficient responses in the regions and countries, in line with the vision of UNAIDS of zero new infections, zero AIDS-related death and zero discrimination.

The bank also acknowledges country requirements on the background of Country Partnership/Assistance strategies. HIV/AIDS program interventions that the world bank finances are

specifically designed to help countries achieve Millennium Development Goal Six. World Bank's International Development Association (IDA) began meaningful funding for HIV/AIDS in Sub-Saharan Africa, the Caribbean, and India. This funding to date remains the most foreseeable, flexible, and stable source for HIV program interventions. In addition, t bank is a highly influential global leader in HIV response; was a co-founding sponsor of UNAIDS, Global Fund (also serving on its board and as a trustee); and is very active in enhancing donor harmonisation alignment and coordination.[42,43]Thus, it portends a likely stable funding future for the HIV program.

GFATM is a novel approach to international health financing. It is a unique global partnership between the public and private sector whose primary duty is to source and disburse resources to prevent and treat HIV/AIDS, Tuberculosis and Malaria. This partnership is between governments, the private sector, civil society organisations, and affected communities. They work in close alliance with bilateral and multilateral organisations to boost the existing program intervention activities in the fight against these three diseases. GFATM is a significant source of funding to support the prevention and treatment of HIV/AIDS in Nigeria since 2003. As of 2019, the total disbursement to the national response was US$1,022,293,961; this has allowed planning that currently placed 1.15million people on ART, 7.25 million HIV tests taken, 27% reduction in AIDS-related mortality and a 20% reduction in new HIV infections.[6,44–46] Currently, Global Fund has approved a US$329 million grant for HIV for 2021 – 2023 for Nigeria.[12]

The United States Government President's Emergency Plan for AIDS Relief (PEPFAR) is one of the GHIs and commenced support for Nigeria in 2004 and has been the highest funder so far, investing over $6 billion in the national HIV response. This has resulted in 1,415,440 People Living With HIV/AIDS (PLWHA) currently receiving ART, with 980,498 (69%) virally suppressed.[47] In 2020 alone, HIV counselling and testing services were offered to more than 8.2 million individuals and more than 1.2 million pregnant women. PEPFAR also supports the nation in strengthening Health Systems, such as the provision of standard laboratories and pharmaceutical warehouses, policy development, and human capacity development.[6,48] PEPFAR funding peaked in 2014 when it budgeted $575,729,738 for Nigeria national HIV response. However, it has observed a downward trend, and the current budget for 2021 is $373,101,707.[47]

The United Nations Joint Team on AIDS (UNAIDS) has coordinated the United Nations system response to HIV/AIDS in Nigeria through the Joint Programme Support based on United Nations Assistance Framework. The UN Joint Programme of Support addresses six thematic areas: advocacy, intensified prevention interventions; planning and coordination; universal access to care and support; scaling up universal access to treatment services; the UN learning strategy and UN learning team; and Program monitoring and evaluation. The UN Joint Program of support had persistently been able to help strengthen the policy, system, planning and budgeting, frameworks and strengthen the competencies of both federal and state institutions, improving the social structures and motivating them for active support of the national and state responses [6]

Department for International Development (DFID) of the UK Government also was involved in the Nigeria national response and initially provided £62 million to help provide prevention and stigma reduction of HIV/AIDS in Nigeria between 2002 - 2007.[6]

Government funding

The Nigerian government started adopting major macroeconomic and sector reforms in 2003, achieving the most significant impact in financial planning, budgeting, and fiscal management. The budget system then was based on conservative reference prices for crude oil; this reduced the economic instability and provided funds to cushion the shocks [21]. On this basis, the Presidency in 2013 moved for a more domestically funded national response. It instituted the Presidents Comprehensive Response Plan (PCRP), through which increased domestic funding will be channelled towards crucial interventions that will show immediate results [49]. The macroeconomic situation became more challenging when the oil prices drastically fell in 2015, putting the country in recession again after 25 years with very few buffers available to cushion the adverse effect. The economic growth rate was 2.2% just before COVID-19 struck; in 2019, the inflation rate was 12%, and the general government fiscal deficit put at 4.4% of GDP.[7]

As seen from Fig 1, the government funding to the HIV program increased through the years and peaked in 2014. Domestic (public) funding increased from 14.6% in 2007 to peak at 27% in 2014, but gradually declined to 17.18% in 2018.[6,50] In 2018, Domestic General Government Health Expenditure (GGHE-D) as a percentage of General Government Expenditure (GGE) - (GGHE-D/GGE) was just 4%.[13]

The Government of Nigeria (GoN) acknowledged the danger of over-reliance on foreign aid, and through NACA, developed a National Domestic Resource Mobilization and Sustainability Strategy (NDRMSS) for HIV 2021-2025. Key strategies and innovative approaches such as improving public financing at both national and sub-national levels have been articulated in the document (e.g., states are recommended to cater to 20% of treatment for PLWHAs in their states and provide test kits). In addition, the private sector has also initiated a N50bn trust fund for HIV, and the President approved the annual financing to place additional 50,000 people on treatment.[12] This demonstrates the importance of political support in assuring funding stability.

External donors provide funding stability for the HIV program, but can domestic funding be adequate and sustainable?

4.1.2 Political support:

The importance of politics in global health cannot be overemphasised. Much progress has been made in public health due to close collaboration between political leadership and science, especially in the 19th and 20th centuries. HIV/AIDS happens to be a classic example of the close relationship between politics, policy, and public health. [51,52]

The political influence could either be positive or negative. In the earlier years, many governments from developing countries, Nigeria inclusive, were in denial, not willing to acknowledge that HIV was a real threat to public health until it became an epidemic. Political leaders understood very little about the disease except that the transmission route was a controversial topic full of hypocrisy and that there was no cure for it, thus becoming an embarrassment for them to accept responsibility for what their governments could not proffer solutions to.[20]

There were 5 phases of the AIDS epidemic in Africa between 1985 – 2001. The phases are Ignorance, fear, denial; Blame; Medical, social response; Domestic and International institutional reactions; and the Acceptance-response phase.[20] The lack of political goodwill to confront the problem early enough was the reason for the unchecked spread and rise in the prevalence of HIV disease. However, at the Acceptance-response phase, most government leaders were galvanised into action and jointly declared the disease an epidemic, leading to various effective policies. As a result, HIV/AIDS has enjoyed immense political support globally, mainly based on the human rights approach.[20,51] This

translates to improved funding stability, formation of effective partnerships with significant public health impacts.

Globally, political support for HIV became significant with the creation of the program on AIDS at the World Health Organization (WHO) by Jonathan Mann, a fierce HIV advocate. He saw it as a social disease and a lack of political support, a form of injustice. He conceptualised the association between human rights and AIDS, which evolved to be the solid basis for mobilising global political support for the disease. Thus, many countries agree to put their money into WHO's multilateral strategy,[53] forming partnerships that positively influence the HIV epidemic response.

In Africa, the epidemic affected all the different sectors of society, thus bringing to light the necessity to engage policy and decision-makers and develop a multisectoral approach to the epidemic response. As a result, the Organization of African Unity (OAU), now African Union, made a 'Declaration on AIDS Epidemic in Africa' in 1992, which all the Heads of State adopted at the meeting in Dakar.[20] In the late 90s, the advent of highly active antiretroviral therapy (HAART) and the creation of the Joint United Nations Program on HIV/AIDS (UNAIDS) in 1996 made it possible for effective political action on AIDS.[51]

The UN General Assembly special session (UNGASS) in 2001 agreed that HIV/AIDS is a political matter that needs urgent attention, and that health belongs on the foreign policy. The creation of the Global Fund to fight AIDS, Tuberculosis and Malaria followed in 2002. In 2003, President George W. Bush Launched the United States President's Emergency Plan for AIDS Relief (PEPFAR); all these led to very generous and regular funding for the HIV program, like earlier explained under funding stability.[51] The UN Secretary-General Koffi Annan further set financial targets for African political leaders at the Abuja summit of OAU. Thus, leading to improved international political will and official development assistance, the establishment of new institutions and political processes, culminating in higher financial and political commitments to HIV/AIDS in Africa [51].

As earlier mentioned, the Nigerian government's initial response was relatively slow and not coordinated at the national level. As a result, there was an unstable political environment with a lack of political will before the advent of democracy in 1999.[54] The country has since demonstrated a high level of political goodwill in ensuring an effective and efficient national response.

At the commencement of democratic rule in 1999, the Nigerian government acknowledged that the impact of the HIV epidemic is a significant threat to attaining equitable and sustainable economic growth. If the government did not quickly control the outbreak, it would further entrench poverty by continuously destroying the economic gains already achieved; the achievement of the agreed Millennium/Sustainable Development Goals becomes more difficult.[6] Accordingly, the government established the Presidential Council on AIDS (PCA), chaired by the President and Commander-in-Chief of the Armed Forces of Nigeria. The council secretary is the Secretary to the Federal Government, while other council members include: Honorable ministers of relevant ministries, heads of parastatals and special agencies. The council's primary duties include providing leadership and policy direction for the National response, making available adequate funding to execute the response activities, and providing access to international collaboration on the HIV/AIDS pandemic.

The Abuja declaration is also a form of political support, so is the waiver of user fees for PLHIV and pregnant women to aid PMTCT. The recent bill in the NDRMSS by the presidency to take 80% of the treatment of PLHIV with the states taking 20% is a solid political move that will enhance sustainability. The worry is whether this will be adequate to provide equitable access to ART.

Political support influenced the provision of resources and the strategic planning for the HIV epidemic response both at the global and national levels, which has enhanced its sustainability capacity.

4.1.3 Partnerships

The acceptability and involvement of the community is another critical factor for program sustainability. Jonathan Mann identified AIDS as a social disease. He was the first to conceptualise the relationship between human rights and AIDS, a cornerstone for building a successful all-inclusive HIV/AIDS program. He opined that the "social, cultural, and economic reaction to AIDS is as central to the global AIDS challenge as the disease itself",[53] recognising quite early the importance of community partnerships in response to the HIV epidemic. HIV/AIDS is a threat to socio-economic development, and treating it must be combined with social support to ensure a complete physical, social and mental well-being.[55]

In their 2008 annual report, UNAIDS identified purposeful engagement with civil society as an unconditional prerequisite for a successful HIV program and continuously built partnerships with them, which helped civil society sectors surmount the barriers to be involved in governance and financing effectively, and the universal access movement.[56]

A community can either be defined as individuals sharing a geographical location, e.g., individuals and household units joined together by common interests or as individuals sharing a cultural or demographic identity, e.g., Sex workers, MSM, PLHIV [57]

Communities affected by HIV/AIDS have formed networks and associations operating locally, nationally, and globally. Their advocacy has had positive impacts such as increased funding for HIV programs, reduction in HIV-related stigma, and human rights violation. In addition, including PLHIVs in research development and program implementation led to more accurate results and improved program participation [58]. These partnerships thus enhance funding stability, allow political support, and provide feedback to influence effective program adaptation.

The World Bank and DFID funded a multi-study evaluation across ten countries classified as high burden countries, including Nigeria. The study found robust evidence that investing in community responses improved HIV/AIDS service uptake across multiple countries, helping to lessen the spread of the epidemic [57]. This was one of the solid bases for the National HIV Strategic Plan 2005-2009 discussed below. In addition, funding Community-Based Organisations (CBOs) activities led to increased awareness of the disease, positive social transformation, and consequently reduced HIV incidence. [57,59] These are part of the public health impacts that I enumerated in a later section.

A critical partnership in the Nigerian national response to the HIV epidemic is the Civil Society for HIV/AIDS in Nigeria (CiSHAN) which is a coalition of the different Civil Society Organisations involved in the prevention and mitigation of the HIV/AIDS impact in Nigeria currently with about 3000 member organisations.[60] Nigeria Business Coalition Against AIDS (NiBUCAA) is the largest coalition of businesses in Nigeria and is the private sector's response to the HIV epidemic.[61] The private sector, through the National Domestic Resource Mobilization and Sustainability Strategy, has initiated the N50bn HIV Trust Fund target.[62] This is assuring future funding stability that is domestically sourced and so likely to be sustainable.

A "scientifically rigorous evaluation of community response in Nigeria" funded by World Bank, DFID, and NACA, found that the strength of engagement of CBOs at the community level was a valid predictor of the service availability and utilisation of HIV/AIDS-related services [59]

4.1.4 Organisational Capacity

This section refers to the availability of resources to adequately manage the program and the needed activities.

The funding stability section has talked about the availability and stability of funds at both the international and national levels.

The GoN formed NACA, which has been technically and administratively empowered to manage the national HIV response according to its mandate (Table 3). NACA is to address the high HIV burden in a sustained and effective multisectoral approach. Optimal technical capacity and proper coordination enhance provision and effective management of resources, and this boosts the sustainability capacity of the HIV programme.

Nigeria national response is anchored on the 'three ones' principle – one coordinating body, one agreed framework, and one monitoring and evaluation system.

NACA is empowered to coordinate the national multisectoral response to the HIV/AIDS epidemic. Through its enabling Act, it has been mandated to act in the following broad areas:

Table 3: Mandate of NACA

Area	Mandate
Coordination	• Plan and coordinate activities of the various sectors in the national response strategic framework
	• Facilitate the engagement of all tiers of government and all sectors on issues of HIV/AIDS prevention, care and support.
	• Provide and coordinate linkages with the global community on HIV/AIDS
Policy and Advocacy	• Advocate for mainstreaming of HIV/AIDS interventions into all sectors of the society
	• Formulate policies and guidelines on HIV/AIDS
Resource mobilization	• Mobilise resources (local and foreign) and coordinate equitable applications for HIV/AIDS activities.
Monitoring, Evaluation & Research	• Monitor and evaluate all HIV/AIDS activities in the country
	• Support HIV/AIDS research in the country

NACA provides the backbone upon which the multisectoral approach can be enacted efficiently in Action Plans and National Strategic Frameworks (NSF).

NACA also ensures that the much needed organisational, financial, and human resource support to carry out and complete assigned tasks in a multisectoral arrangement is given to all establishments

and groups that are responsible for the implementation of the NSF aims and activities and that the NSF is the central framework used by all partners involved in the national HIV response to achieve national coordination of one response.[14,63]

NACA has a Director-General who is also the substantive head of the NACA secretariat and reports to the President and PCA, NACA comprises members from both the private and public sectors, with 132 staff within seven departments across three units, and this structure is replicated at the State (SACA) and Local Government Area (LACA) levels, each domiciled in the office of the State Governor and LGA Chairman respectively

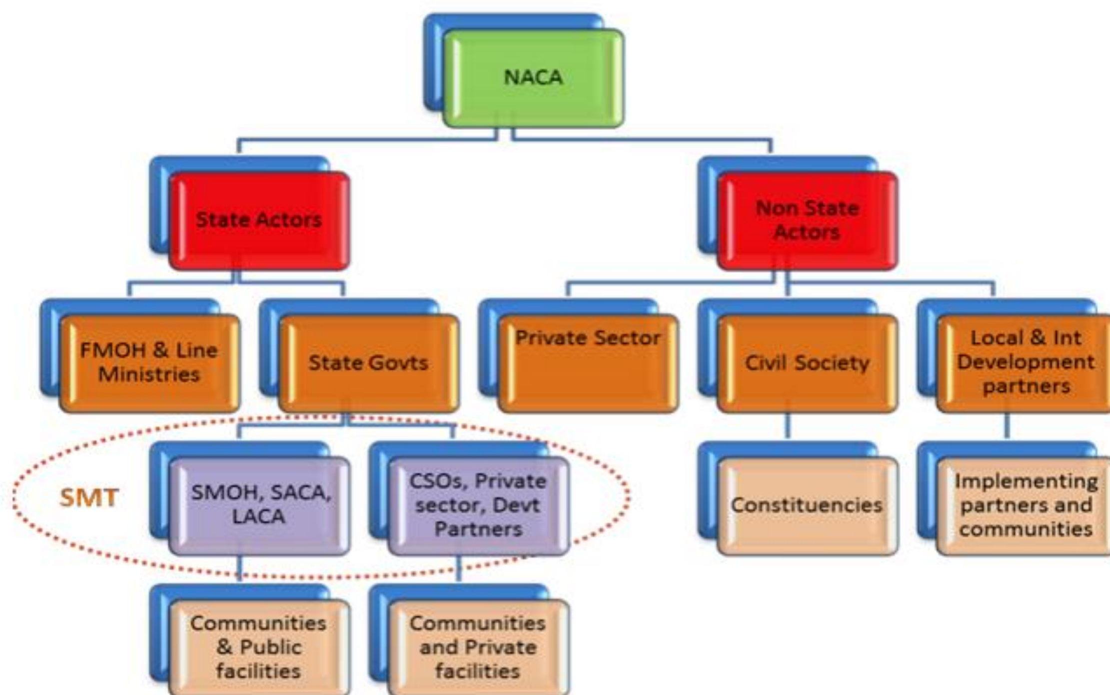

Figure 7: National HIV/AIDS Response Coordination Structure

Source: President's Comprehensive Response Plan (PCRP) 2013

NACA demonstrates its functional capacity in formulating strategic frameworks and plans; I discuss these in detail in the next section.

However, the international donors determine most programmatic decisions and how funds are used. In addition, their country offices are responsible for determining the AIDS spending categories, beneficiary populations and service providers. The bilateral and multilateral organisations also partner directly with private NGOs to implement their HIV program.[50,64,65] This brings to question the coordinating capacity of NACA, which is a vital element in the sustainability of the HIV response.

4.1.5 Program Adaptation

The National HIV program has gone through various adaptations to improve the effectiveness of the national response, from the only health sector response to the multisectoral approach and the establishment of NACA; the re-strategizing to the three ones approach [54]. Under the NSF 2005-2009,

policies were made to enable linkage of specialist care to the community such that ART services were no more facility-based [10,66].

HIV/AIDS Emergency Action Plan (HEAP) shifted the focus to prevention programmes which was also a priority in the NSF 2005-2009. The primary aim was to increase awareness. Most resources were used for Behaviour change programmes centred around abstinence, be faithful and proper condom use (ABC), and HCT services, but program evaluation still observed a high prevalence.[10,66] The advent of the GHIs with substantial funding changed the narrative. In addition, cost-effective antiretroviral drugs were available, which influenced policy change to run prevention and treatment programmes simultaneously.

UNAIDS identified the importance of partnerships with the community, and studies confirmed the positive impact on the program. [56,57,59] This brought a paradigm shift in implementing the HIV program, which had majorly been facility-based. A community-oriented approach led to policy changes and informed new strategic plans, which led to various innovative program adaptations.

Retention and adherence were critical factors to viral suppression and are part of the measures of a successful ART program. In 2014 World Health Organization introduced the Differentiated Model of Care (DMoC) and defined it as a client-centred approach to service provision across the different thematic areas that serves the patients better while reducing the burden on the healthcare system at the same time.[67,68] It has led to so many variations of service delivery, all aimed at overall retention and viral suppression of PLHIV.[67] Community pharmacy model of delivering ART to PLHIV outside of the hospitals in Nigeria found that the prescription refill rate was 95% (95% CI 94.2-95.3); there was a 98% retention rate and 99.12% viral suppression. [69]

Adaptation of the Medical Records System of the ART clinics to an Integrated electronic medical records system helped scale up networked HIV treatment in Nigeria. It also enhanced the one medical records principle of the national response. The adaptation improved patient care and prompt and quality data, allowing program managers to make quality-controlled audits and data-driven decisions. [70]

NAIIS reported a national prevalence of 1.4%, which led to the Revised National HIV/AIDS Strategic Framework 2019-2021 to re-align strategies based on recent findings. Effective program adaptation was the foundation for the success recorded in the Surge program in the nine states with prevalence above 2%; community intelligence, best practices based on reliable data drove the implementation model of ART Surge.[30,31]

These show adaptabilities of the HIV program, which has been enhanced by adequate funding, partnerships and organizational capacity that is donor-driven.

4.1.6 Program Evaluation

In this section, I will be discussing how monitoring and evaluation of processes and outcome data of program activities have affected the sustainability of the HIV program in Nigeria.

World Health Organization (WHO) defines a functional health information system as one that makes possible the production, analysis, dissemination and use of quality and prompt data for evidence-based decisions at the various health system levels. It must also involve the three domains of health information: health determinants, health performance, and health status.[71] An effective program evaluation system will provide accurate, periodic, and timely information to develop program policy and avail program managers and influential decision-makers of reliable and timely data. NACA had identified the importance of an efficient monitoring and evaluation system in the national response

and launched a single coordinated Monitoring and Evaluation system – NNRIMS.[54] NSF (2005-2009) led to the development of a national M&E Operational plan (2007-2010), there was the harmonisation of tools and indicators. NACA also conducted a sustainability analysis of the national HIV/AIDS services.[66]

All major stakeholders in the national response agreed to use the NNRIMS as the single central monitoring and evaluation system for the country (the one information management system), periodically updating HIV program data through the HIV/AIDS and syphilis seroprevalence. This enhanced coordination, partnership and availed timely evidence-based data for program adaptation as may be needed. This evaluation system led to many HIV/AIDS policies. There were still gaps in the protection of human rights in HIV, and most of the policies did not address gender dimensions of the HIV/AIDS epidemic. [10]

However, a review of the first National Health strategic Development Plan (2010-2015) revealed that the Nigeria Health Management Information System (NHMIS) is weak and fragmented because of multiple vertical programs. These programs are primarily donor-funded and run their own parallel HIS.[72]

The reliance of the government on funds existing within donor-funded vertical programs to improve the nation's HIS shows overreliance on foreign aid.[72]

As mentioned earlier, NAIIS was a major evaluation done on the HIV program in Nigeria, and there was adequate dissemination of the findings. It led to significant strategic changes in program implementation and was used for advocacy.

In 2019, the Federal Ministry of Health, in conjunction with PEPFAR, launched the Nigerian Data Repository (NDR) for HIV program. NDR collects de-identified patient-level data from across the facilities offering HIV services nationwide.[73] This provides reliable and prompt data for informed decision making an essential component for sustainability capacity. The evaluation system put in place for SURGE activities informed evidence-based adaptations, which resulted in an approximately eight-fold increase in the number of positives identified weekly and a 65% total increase in the number of PLHIVs on treatment.[30]

While there is a significant improvement in program evaluation activities for HIV programmes, the system is highly reliant on external donor funding.

4.1.7 Communication

This section is about the strategic dissemination of program outcomes and activities with stakeholders and the public. Communication is vital for strategic planning and public acceptance of the program. If done effectively, it will boost the sustainability capacity of the program

NACA has always taken responsibility for information dissemination of program outcomes and activities to stakeholders and the public in general. NACA has an updated website where all relevant publications such as yearly program reports, national validated data, factsheets, national guidelines and global reports are available and updated regularly.[74]

It was the NSF 2005-2009 that prioritised communication intervention for the public. Even though awareness of HIV/AIDS was high (87.7% in 2003 and 93.8% in 2007), extensive knowledge on its transmission was still abysmally low (24% in 2007). Therefore, information, Education and Communication (IEC) and Behaviour Change Communication (BCC) became vital in the Prevention interventions, leading to the National Behaviour Change Communication Strategy 2009-2014 [66].

An excellent demonstration of strategic dissemination of program outcomes was with the NAIIS study in 2018. NACA widely disseminated the report among all key stakeholders, and there were media releases on it. The report informed the review of NSF 2017-2021 and led to the formulation of Revised NSF 2019-2021 in 2019.[75] It further strengthened the basis for initiating the ART Surge program by PEPFAR and GFATM.[30]

Looking through the ACT used to establish NACA, there is no specific mention of the information dissemination and communication duties; neither is there a dedicated department for communications.[76] This might affect the promptness and effectiveness of information dissemination planning and activities.

Evidence-based program adaptations approved by key stakeholders due to effective communication are vital to the program's sustainability and for maximal public health impacts.

4.1.8 Public Health Impacts

As discussed under organisational capacity and strategic planning, the effects of the various strategies implemented in the national HIV response is seen in the people's health attitudes, perceptions, and behaviour. When positive or negative, these public health impacts serve as an indicator of the success or otherwise of the program intervention. It could also be a basis for its continuity.

- Health attitudes – the awareness of the HIV/AIDS epidemic was significantly raised with HEAP, thus increasing the demand for ART services.[10] Uptake of PMTCT services increased to 11% in 2009 from 2% in 2004, there was increased uptake of HCT services at the end of 2009, though service delivery points were still grossly inadequate.[66] As of 2018, the level of awareness was still not optimal; only 46.9% of PLHIVs knew their HIV status; although the health-seeking attitude had improved with 96.4% of PLHIVs aware of their status receiving antiretroviral therapy and consequent 80.9% viral load suppression.[9,28]

- Perception and behaviour – people started having positive perspectives on HIV/AIDS with a consequent reduction in stigma and discrimination due to the high level of awareness with HEAP.[54] Stakeholders identified Behaviour change and positive perception as essential factors in curbing the spread of HIV infection and allowing PLHIV quality life devoid of stigma and discrimination. Thus the primary focus of the NSF 2005-2009, which prioritised preventive activities. Condom distribution increased with the awareness that it serves dual protection of preventing HIV and other STI transmission; program evaluation found awareness of male condoms to be 71%.[66] The use of condoms is still deplorable. Only 35% of adults reported having sexual intercourse within 12 months before the study, with a non-marital, non-cohabiting partner reported using a condom.[9,28] Traditional Birth Attendants (TBAs) helped eliminate mother-to-child transmission of HIV/AIDS; TBAs had knowledge and awareness of HIV/AIDS, with about 91% of them being aware of Mother-To-Child-Transmission (MTCT) of HIV/AIDS. 89% of the TBAs offer HCT services to pregnant women and 86% of them refer positive women to treatment centres; 81% of the study participants support HIV positive women on ART to breastfeed their babies. 76% of the TBAs support a strict adherence to ARVs in HIV positive women, mothers, and infants. 93% of them use sterile equipment for their delivery process, 91% cut the umbilical cords with new razor blades, and 97.2% wear new pair of sterile gloves for different procedures. All these made them conclude the vital role of the TBAs in the e-MTCT of HIV in NIgeria[77]

4.1.9 Strategic Planning

Strategic planning has a significant impact on the other eight elements and their interplay to ensure the program's sustainability. It is the process of defining program direction, goals and strategizing the most efficient and effective ways of achieving them, considering the availability of resources and capacity as mentioned in previous sections. As discussed under organisational capacity, NACA coordinates National Strategic plans and Frameworks and provides direction for the national response. It is a dynamic process with a bidirectional influence with all other eight elements surrounding it.

HIV/AIDS Emergency Action Plan (HEAP):

The first significant step in coordination was developing the HIV/AIDS Emergency Action Plan (HEAP) in 2001, a multisectoral plan to address three main areas viz removal of informational, socio-cultural, and systemic barriers to prevention and care and support. HEAP was more of a medium-term strategic plan to curb the rising prevalence of HIV/AIDS in Nigeria by actively addressing three key determinants – Social, Behavioral, and Biological determinants believed to be responsible for the rising tide of the prevalence[54].

HEAP attracted resources both internally and externally, providing funding stability for the program. The HEAP led to the formation of vital partnerships. Several actors at all levels of government, private sector, civil society organisations, faith-based organisations, non-governmental organisations and development partners all came together under one coordination of NACA, raising over $US300 million to aid the national response.[10,54] The funds assisted the commencement of a comprehensive antiretroviral (ART) programme in 25 centres (private and missionary hospitals inclusive) targeting 5000 children and 10000 adults. The impact of this was a reduction in seroprevalence from 5.8% in 2001 to 5% in 2003,[10]

HIV National Strategic Plan (NSP) 2005-2009:

NACA identified some strategies for the prevention of new HIV infections, which are HIV Counselling and Testing Services (HCT); Prevention of Mother to Child Transmission (PMTCT) of HIV; Early detection and treatment of Sexually Transmitted Infections (STIs); Condom promotion and Communication interventions towards the general population and the Most at-risk population (MARP); and consolidation of Sexual and Reproductive Health (SRH) and HIV services. As a result, the prevalence rate dropped to 4.6% in 2008 from 5% in 2003.

Support and Care of People living with HIV/AIDS –NSF 2005-2009 coincided with the call for partnership with the community and the time during which cost-effective antiretroviral drugs (ARVs) became more available. With substantial support in funding and technical assistance mobilized from the US PEPFAR program and the GFATM. The framework was used to develop policies and guidelines which promoted a minimum package and standards of care and support services and also came up with a common policy framework with which all key stakeholders at federal, state and local government levels could operate. These policies and directions enabled equitable access to comprehensive ART services and the linking of specialist and professional care to the community level and home-based care to encourage the continuum of care strategy for PLHIV and their families. Non-governmental Organizations (NGOs), Civil Society Organizations (CSOs), Faith-based Organizations (FBOs), Community-based Organizations, and the various PLHIV support groups welcomed the idea.

With technical assistance and governmental support, these organizations became the main driver and provider of care and support services to about 3 million PLHIVs, several millions of People Affected by AIDS (PABA), and about 17.5 million orphans and vulnerable children (OVC). Registered PLHIV support groups grew from 35 in 2005 to over 500 in 2009. In 2009, fifteen states, including FCT, had a functional State Agency for the Control of AIDS (SACA), giving them access to the government budget to implement needed activities.[66] This level of community acceptance and engagement demonstrates the high sustainability capacity of the HIV program.

NACA, though was able to draft a comprehensive and all-inclusive 2009 HIV policy to address legal and human rights issues encompassing HIV/AIDS, could not get political support at the national level to constitute it into law. This affected the key populations in seeking care and treatment.[66]

NACA still found it hard to mobilise funds domestically despite planning that into the framework. The state and local government tiers did not operationalise the 1% budgetary allocation to HIV/AIDS as agreed nationally. So also, the private sector had not been adequately engaged, making the national HIV response heavily reliant on donor funding.[66]

National HIV/AIDS Strategic Plan 2010-2015:

The primary goal of this strategic plan was to "reposition the prevention of new HIV infection as the centrepiece of the national HIV/AIDS response".

The HIV/AIDS anti-discrimination Act (The Act to Protect the Rights of the People Living With HIV) was passed in 2013 by the National Assembly and signed into law in June 2014. Still, adoption of the law was challenging as there was no dedicated budget for anti stigma program interventions at both national and state levels. In another light, the National Assembly also passed the same-sex marriage prohibition Act in May 2013 and signed it into law on 13th January 2014. It had severe negative consequences on the access of MSM to comprehensive ART and care services.

On the other hand, NACA used the 2013 Presidential Comprehensive Response Plan (PCRP) as an advocacy tool to enhance the mobilisation of resources domestically. Thus, there was a remarkable increase in government investments in the National HIV response at the national and state levels, including the private sector.

National HIV/AIDS Strategic Framework 2017-2021:

NACA developed the latest NSF through a highly collaborative process that involved a broad representation of relevant stakeholders like previous versions. NSF 2017-2021 vision is "An AIDS-free Nigeria, with zero new infection, zero AIDS-related discrimination and stigma". In addition, t goal is to "Fast-track the national response towards ending AIDS in Nigeria by 2030" [78].

On the clamour for harmonisation from external donors, the Nigerian government has invited them to align the national response to combat the HIV epidemic in the country; as a result of this, all resources and consumables for the HIV program will be from a single pool.

4.2 Specific Objective 2: Identify and describe international best practices and lessons learnt from other countries that have potential effects on the Sustainability of the HIV program in Nigeria

In this section, I discuss best practices from Botswana and Rwanda. For each example, I provide some background information on the status of the HIV epidemic and the sustainability factors that are reported to have played important roles in recent improvements.

4.2.1 Botswana – A case of exemplar National response.

Africa has over two-thirds of PLHIV worldwide, with Sub-Saharan Africa bearing the highest burden.[2] Republic of Botswana is landlocked in southern Africa, with a mid-sized population of about 2.3 million people. Botswana was formerly one of the poorest countries in the world in the late 1960s but has revolutionised itself into one of the world's fastest-growing economies to become an upper-middle-income country.[80]

The HIV prevalence in Botswana peaked in 2000 at 26.3% but has since been improving yearly; in 2020, prevalence is 20.3%, predominantly among young females aged 15 – 24 years, 91% of PLHIVs knew their status, with 89% of them on ART and 95% viral suppression. This shows the achievement of the 90-90-90 UNAIDS target.[81,82]

Botswana's HIV program is deemed the most progressive in Africa, with new infections drastically dropping from 18,000 in 2005 to 10,000 in 2010, and now 8,900 in 2020.[82–84]

Figure 8: Botswana – Progress towards 90-90-90 targets (all ages)

Source: UNAIDS 2020

Funding Stability

The Government of Botswana provides almost 60% of the funding for the National HIV response, while PEPFAR and Global Fund cover the remaining 30% and 10%, respectively.[85,86]

The government had also engaged the private sector much earlier with establishing the Botswana Business Coalition on AIDS based on a multisectoral approach to the national HIV/AIDS response. They are mandated to coordinate the private sector response by ensuring the development and

implementation of HIV/AIDS program interventions and supporting the multisectoral plan as directed in the National Strategic Framework.[87]

With the government of Botswana providing the bulk of the funding for the HIV response, it allows context-specific strategic planning devoid of ulterior interests of external donors.

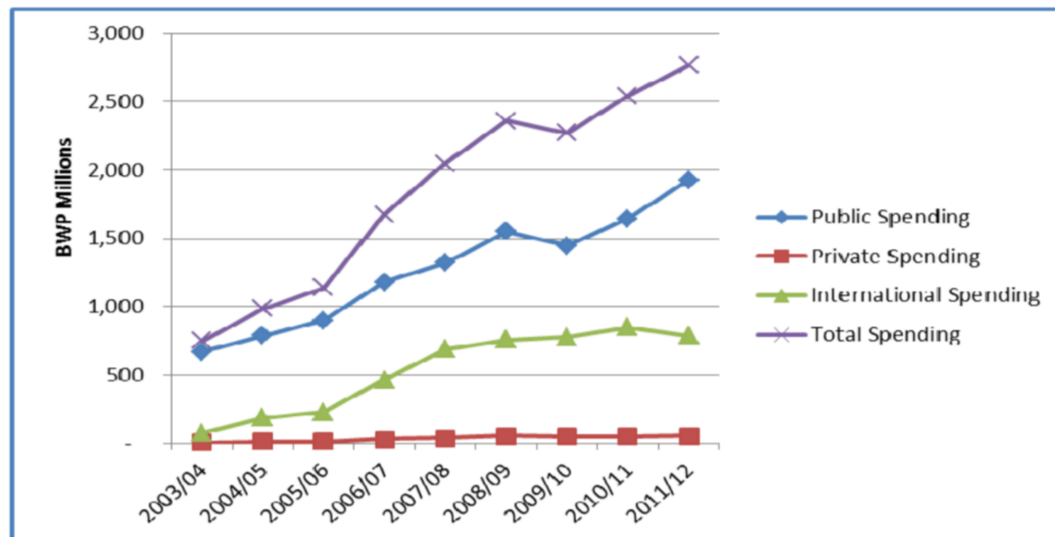

Figure 9: HIV and AIDS Spending: 2003/04 to 2011/12 HIV

Source: BOTSWANA NATIONAL AIDS SPENDING ASSESSMENT 2009/10, 2010/11, 2011/12[86]

Political leadership

UNAIDS in 2000 reported Botswana to have the highest rate of HIV infections in the world.[88] President Mogae, who took office in 1998, recognised the grave danger that the epidemic posed, and he said, "Like a war, it was taking the cream of the society in terms of youth and health". At the AIDS conference held in Durban in July 2000, President Mogae lamented that the country faced extinction.[89]

He made a solid commitment to responding to the HIV epidemic and forming a unique country-led public-private partnership called the African Comprehensive HIV/AIDS Partnerships (ACHAP). ACHAP is a collaboration between the Government of Botswana, the Bill & Melinda Gates Foundation, the pharmaceutical giant Merck & Co., Inc. and the Merck Company Foundation. As a result, in 2002, Botswana became the first country in the sub-Saharan region to provide universal free antiretroviral treatment to PLHIVs.[89,90] The success was demonstrated in the drop in the prevalence and incidence of HIV infection, as earlier mentioned.

President Mogae used a narrative of secular conversion in which he said the HIV problem is rooted in existing values and offered as an antidote, a new guiding principle. He called for change not only in medical care but also in the beliefs, attitudes, and behaviours of the citizenry with regards to HIV/AIDS.[91]

This is a practical demonstration of how political support can bring about strong partnerships that provide funding stability. Moreover, President Mogae's approach also compelled behavioural and attitudinal change towards HIV/AIDS from the citizenry.

Strategic Planning

He provided leadership, and the Nation's HIV/AIDS program drew up innovative home-grown strategies to curb the epidemic and not strategies handed down by donors. Mogae's administration invested in preventive, treatment and behavioural approaches simultaneously. In the words of Kofi Anan in 2008, while conferring on him the Mo Ibrahim Prize for Achievement in African Leadership, he said "President Mogae's outstanding leadership has ensured Botswana's continued stability in the face of an AIDS pandemic which threatened the future of his country and people".[90] In 2004, Botswana was the first country to provide routine HTC services with the 'opt-out' option. Still, in April 2013, HTC became mandatory and legally binding. As of 2013, the National Strategic Framework already included the key populations. In August 2014, the supreme court in Botswana ruled that the country's healthcare system should offer comprehensive ART services to all HIV-positive prisoners regardless of nationality.[82]

4.2.2 Rwanda

Rwanda is another sub-Saharan nation that has done exceedingly well in its response to the AIDS epidemic. Rwanda is a landlocked country bordered by Democratic Republic of Congo, Burundi, Uganda and the Democratic Republic of Congo. It has a population of over 12.6million and is the most densely populated African country. Like Nigeria, it has a predominantly youthful population although not as multi-ethnic nor multi linguistic.[92]

Rwanda's population health indicators are among the best in Africa, with over 97% of infants vaccinated and life expectancy almost tripling that of the genocidal period (26.45 in 1994 to 69.38 in 2020).[93] HIV incidence per 1000 population is 0.34 compared to 0.42 in Nigeria, 93% of PLHIV know their status with over 95% of them on treatment, viral load suppression is also high – more than 95% virally suppressed.[94]

Worthy to note that most of the innovations applied in Rwanda have also been used in Nigeria but with slight implementation differences. For example, whilst in Rwanda, Performance-Based Funding (PBF) covered the general health sector into which HIV/AIDS indicators have been embedded and were across the whole PHC system,[95] in Nigeria, only some selected states were offered PBF intervention and was only for targeted indicators with no scaling up of the program despite recorded success.[96,97]

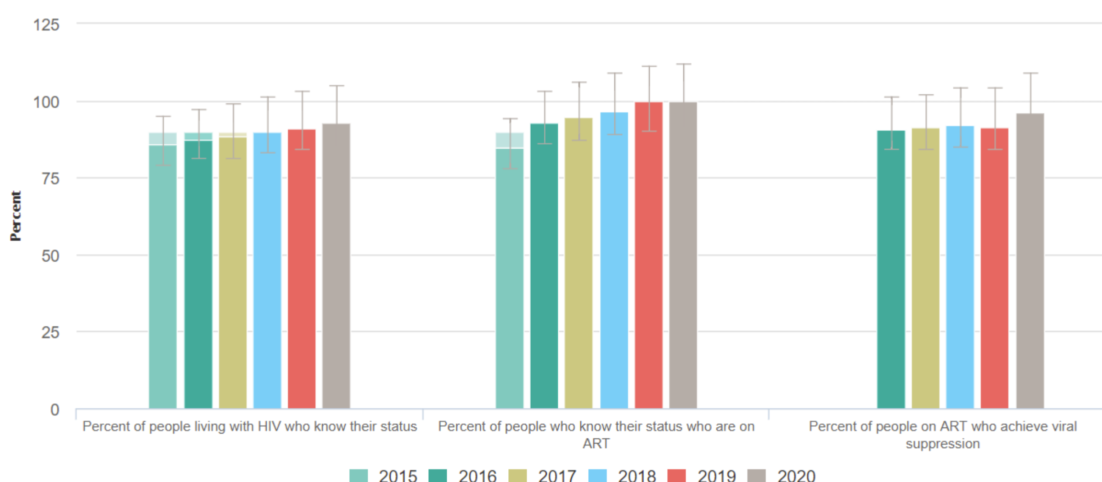

Figure 10: Rwanda – Progress towards 90-90-90 targets

Source: UNAIDS special analysis 2021

Political leadership

UNAIDS identified Rwanda as a critical ally in the global fight against AIDS. The leadership's political commitment has convinced fellow African Presidents to drive efficient and result-oriented AIDS responses. Paul Kagame was the first African President to convene a meeting at the United Nations General assembly in 2011 about the future of AIDS response and establishing a sustainable plan for health and development. This led to the re-establishment of AIDS Watch Africa, a platform for African Heads of State to meet and monitor the performance against HIV, TB, and malaria targets.[98]

Strategic planning

Production and dissemination of standardised national protocols matched with the HIV program scale-up and in time with the commencement of significant funding by international donors. An all-inclusive technical team was developed involving the government, donor partners, CSOs, and local NGOs. The team ensured integration of funds and services and improved financial accessibility and accountability.[99]

CHAPTER 5 – DISCUSSION, CONCLUSION AND RECOMMENDATION

5.1 Discussion

One can study sustainability to know how to ensure/enhance it, for ethical concerns if initial research funding ends – then what happens to the clients? Also, sustainability is essential in translational and dissemination research for the diffusion of effective programs.

Sustainability is a broad and complex issue but at the same time very salient and relevant at this period when there is donor fatigue, and the international political climate is unstable.

I have used all the elements of the chosen framework to discuss the sustainability capacity of the HIV program in Nigeria. The national HIV program in Nigeria has done well across most of the elements. Still, on an 80% donor funding background, one might want to ask if the country has done well or the bilateral and multilateral organisations implementing the program through foreign aids? Funding stability; Partnerships; Organizational capacity; Program Adaptation, and Program Evaluation are all elements mainly dependent on external donor funds for the various activities therein. Thus domestic funding capacity cannot sustain the HIV program in Nigeria in the current situation.

On this note, I tend to ask – do we study the sustainability capacity of the program or that of the country? Of course, it is the country responsible for the sustainability of public health programs that benefit the citizenry, which is highly unlikely on external funding. The framework tries to address the two situations. In the case of Nigeria HIV response, I found the demonstration of competencies and characteristics of the program that enhanced its sustainability but mainly on the foundation of external donor funds. The truth remains that sustainability will be out of reach except for a reliable local source of funding.

The main threat to sustainability identified is domestic funding for the program. The GoN has never fulfilled the agreement of the OAU summit, where all African Presidents pledged 15% budgetary allocation to health. The economy is in recession now and has made especially the subnational level (states and local government areas) not set aside 1% of their budget for the HIV program. The reality in Nigeria is that allocation is mostly on paper compared with actual expenditure, which usually shows lower funds disbursed.

GoN took over Abia and Taraba states in April 2015 but failed. PEPFAR has agreed to absorb both states back in their FY22.

Though NACA, with the federal government's support, has developed the National Domestic Resource Mobilisation and Sustainability Strategy (NDRMSS) 2021-2025. It articulated vital strategies to address these domestic and resource financing gaps. Beautiful proposals have been made, such as states taking care of 20% of their PLHIV and providing HIV test kits. However, the question remains – how realistic is this in a federal constituency such as Nigeria, where states have autonomy? What mechanisms will be implemented to ensure compliance, and what fallback plan for any state or local government where comprehensive ART services are deficient?

Also pleasant to note is the initiation of the N50bn trust fund for the HIV program by the private sector. It translates to about $120 million with the current exchange rate. GF approved $329 million for the next three years, while PEPFAR has budgeted $373 million for this year alone.

The trust fund is a radical change in the funding history as the private sector had always contributed very low. NiBUCAA has been formed since 2003 but is just initiating a trust fund in 2021; what is the future assurance? How reliable will this source of funding be considering the social, economic, and

political environment? What will be the modality of funds disbursement or basis for implementation and the duration for using these funds? Answering these questions will help determine how impactful it is or will be.

The organisational structure and the vision and mission aligning with that of the intervention is also an essential factor influencing the continuation of an intervention program., the subsisting capacity and organisational leadership.[16]

Another major challenge is the organizational capacity of NACA. In a situation where external funders take about 80% of programmatic decisions and implement their programmes through private NGOs in the country, there is a worry about the actual coordination and technical capacities of NACA. It is difficult for the GoN to regulate externally financed HIV programs; this tends to cause poor policy direction, strategic planning, and coordination. It is only logical for external funders to account for most of the decisions taken because they have always been the major funders of the national response, but this also tends not to allow the optimal use of these external aids. However, he who pays the piper dictates the tune they say.

Rwanda took complete control of coordination of its national HIV response, which was one of the strategies that gave them success. So also in Botswana, but unlike Rwanda and Nigeria, she contributes 60% of the funding to its national HIV program. Botswana even risked losing funding support when they rejected the ABC strategy of USAID, saying it would not work for their citizenry, an example of context-specific strategy implementation.

HIV/AIDS is no longer an emergency response, so a sustained strategic approach is the most effective way to tackle this pandemic. If external donors want to help grow sustainability truly, they should allow context-specific strategies, considering that culture and practices differ from society to society. AIDS is a social disease, and the social context is as important as the biomedical. As such, strategies to curb the HIV menace should not be a one-size-fits-all approach. Reports from the ART surge already confirmed that allowing locally adapted interventions have yielded tremendous results. Thus changing from the top-bottom approach of HIV program implementation happens to be a win-win situation for both the funder and the nation – improved efficiency of program implementation and improved sustainability capacity, respectively.

The impact of these GHIs on the Nigerian health system is also mixed. While they have enhanced availability and equitable access to HIV services and helped strengthen the health information systems, it has led to over-reliance on foreign aid, bringing in disparities in service provision and providers by forcing out other non-HIV health services. In addition, they have contributed to the maldistribution of healthcare workers because the NGOs attract health workers away from the public service with better remuneration and working conditions. The situation is such that a weakened healthcare system is not likely to sustain an effective public health program.

The framework emphasises the public health program leveraging available resources and identifying organizational and contextual characteristics to ensure successful implementation and sustainability. Thus the need for an effective healthcare system for a sustainable HIV program. Unfortunately, the healthcare system in Nigeria is abysmally flawed and trying to incorporate an effective HIV program into it is like pouring new wine into old skin. We risk losing both the wine and the skin. This should be the basis for the GHIs to help strengthen the system to protect their investments and also improve the sustainability capacity of the HIV program in Nigeria.

Botswana and Rwanda have a very functional healthcare system into which the national HIV response has fully integrated. It is the successful strategy that has made them reach the UNAIDS 90-90-90 targets. More so, it is far cheaper and effective than running a vertical HIV program.

Another reason funders might be wary of giving NACA the control of funds execution and programmatic decisions is the issue of accountability. Unfortunately, the public system is full of fraudulent practices and unnecessary bureaucracies that stand in the way of efficient program implementation. This is a great danger to the sustainability of the HIV program.

Political support is an essential component of the social, policy, and financial environment, which has become a significant factor for long-term Sustainability, especially in the light of frequent changes observed worldwide. The President is the head of the PCA, but this has not translated into pragmatic, political solid commitments of recent. Could this be due to the ongoing economic recession, but is it economic recession causing insufficient political commitment or vice-versa? It is a 2-way relationship in which the country's leadership needs to propose and enact sound economic policies to boost its macroeconomic situation. This will provide a system that gives a high sustainability capacity to the national HIV response.

Implementing a public health program without efficient communication strategies is like walking blindly. Considering how vital communication is to stakeholders and the public, creating a separate department with adequate resources is needed. This will ensure optimal, timely and effective communication and, by extension, the program's sustainability.

The factors that Botswana and Rwanda addressed better than Nigeria include solid political leadership, ensuring an effective public health system in which a likewise effective HIV program can be embedded and sustained. Both countries have fully integrated the HIV program into the healthcare system and no more vertical implementation. Although Global Health partners support both countries, Botswana contributed a higher percentage of the funding for its national response. External donors like Nigeria mainly fund Rwanda, but the government took responsibility for a functional healthcare system with over 90% insurance coverage for its citizens. The country is also in charge of the full coordination of the HIV program.

These have enabled them to formulate context-specific strategies that are home-grown and locally applicable. These can be translated to the Nigerian context. However, with the country in economic recession now, it might be challenging to have a sudden takeover of the program's funding. Still, with good economic decisions and more robust political support, these best practices can be replicated in Nigeria. Country ownership is a stepwise process, and strong political commitment helps in achieving it.

Foreign aid has made the HIV program a huge success but not sustainable. The future looks bright with the development of the NDRMSS and the successful engagement of the private sector. However, the federal government needs to do more to ensure compliance by all stakeholders, take the lead both nationally and internationally in the fight against the HIV epidemic and commit more resources.

Sustainability is both a process and an outcome – because there needs to be elements/factors in place during planning and implementation phases to ensure Sustainability, outcome indicators to evaluate if Sustainability at all, how many components of original program intervention, and to what extent. It answers our earlier question of what to desire. To sustain a program, there is a need to build the people's capacity. At the same time, competency allows people to continue the processes for sustainability which can be measured as an outcome. Though all of these on a background of adequate support in the form of the elements used in the framework for this study.

The conceptual framework used has proved valuable in evaluating the sustainability of the HIV program in Nigeria. However, some of the elements need broadening – partnerships should go beyond just the program and the community to involve intersectoral relationships. Furthermore, a multisectoral approach allows availability and efficiency of resources and improves the efficacy of implementation. In addition, organizational capacity should include the technical ability and the resources needed for managing the program. Finally, public health impacts should also consider the epidemiological data and not just behavioural changes and beliefs. Nevertheless, the definitions of the different categories were quite clear.

5.2 Conclusion and Recommendations

The HIV/AIDS epidemic has shredded the socioeconomic and developmental capacity of our human society. The disease has affected all walks of life globally, and it is evident that the only way to succeed is a joint united front in the fight against the epidemic. As such, each country needs to play its part effectively in controlling the spread of the infection and afford a normal and productive life for PLHIVs.

The Nigeria HIV program on its own has demonstrated a tendency for sustainability as there are system and organisation characteristics that it can leverage on. Still, the major challenge is external donors fund most of these. As a result, most of the activities that are being implemented successfully now are donor-driven, with the government as the face.

PEPFAR, GF, World Bank and UNAIDS are major stakeholders globally; they all played active roles in supporting the successful implementation of the HIV program in Nigeria. Still, a system highly reliant on foreign aid is not sustainable.

The GHIs have found that locally driven strategies are more effective, further confirming what accounted for the success of Botswana and Rwanda. However, this implementation approach should be extended beyond the nine states supported for ART Surge. It is high time foreign donors play an active role in fostering sustainability, not just by cutting funds but by helping to institute measures that will enhance sustainability.

Fellow Sub-saharan African countries have demonstrated success in their national response. It is fundamental to the two case scenarios in this study because of the high level of political commitment. The political commitment influenced the decisions taken even in other government sectors such that it had a positive impact on the control of the epidemic. In both countries, the government was proactive and combined prevention and treatment approaches much earlier. As a result, integration of the HIV program using the primary healthcare approach is cheaper and very effective, especially for African governments.

This paper has analysed factors for the sustainability of the HIV program in Nigeria, giving a holistic approach. This is considering that a critical step in sustainability is institutionalising the HIV program into the Nigerian healthcare system and not as a vertical program. Vertical programs are easier to implement, especially for funders, because, in the short-term, it seems efficient, and measures program outcomes quickly. Still, in the long run, not sustainable and all gains are lost or reversed. Thus, making sustainability a critical prerequisite for the long-term efficiency of public health program implementation.

From the findings of this study and after critical analysis, I would love to make the following recommendations:

The GoN can improve the sustainability capacity for its HIV response by ensuring the following:

1. Optimize treatment for PLWHAs, especially in hard-to-reach areas, while increasing the efficiency of program implementation.
2. Operationalise the Abuja Declaration and put in measures to ensure compliance at the subnational levels. This will improve the healthcare delivery in the country
3. Strengthen the PHC system while ensuring complete integration of the national HIV program. It is cheaper and more accessible; it will also provide a strong foundation for a sustainable HIV program.
4. To enhance the coordinating power of NACA and avoid duplicity of roles between NACA, NASCP and the Federal Ministry of Health (FMoH).
5. Demonstrate higher political commitment beyond public pronouncements and signing agreements. This will enable the advocacy and realization of resource mobilization and also be an avenue to enforce accountability in the public system.

External donors can also enhance country ownership which fosters sustainability by:

1. Adopt a knowledge-driven approach to HIV/AIDS epidemic and, as such, change the implementation model to locally adapted interventions across the whole nation.
2. To prioritize capacity building and reorientation of people involved in the HIV program implementation.
3. To assist in integrating the HIV program into the healthcare system by allowing external support to be used in other sectors aside the HIV division.

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