

Republic of Rwanda



Ministry of Health

Rwanda HIV and AIDS National Strategic Plan 2018-2024



A Healthy People. A Wealthy Nation

PREFACE

Rwanda has achieved tremendous progress towards universal access to HIV and AIDS care services. The 2018-2024 HIV National Strategic Plan presented here is a set of objectives and strategies inspired by national and global approaches and targets to end the AIDS epidemic by 2030.

The 2018-2024 HIV NSP is an extension of the 2018-2020 NSP, which was developed slightly before the development of HHSP 4 and NSTP 1. The development of the NSP was rooted on broad participation of all key actors involved in addressing HIV and AIDS in Rwanda, including community-based and civil society organisations, Ministries, and development partners. As a result, we are certain that the strategies identified in the plan are likely to achieve the ambitious results that we are aiming for.

The global financial constraints globally affecting HIV funding led Rwanda to prioritize cost-effective and highly impactful strategies and interventions. There is no doubt that this NSP will contribute to ending the AIDS epidemic.

Let us continue our work and make HIV and AIDS a historical reality in Rwanda.

Dr. Diane Gashumba

Minister of Health

ACKNOWLEDGEMENTS

The Rwanda Biomedical Center (RBC) is very thankful to all participants who worked hard to develop the 2018-2024 HIV NSP. The NSP development process passed through different stages that required inputs and advice from all actors.

Technical working groups met regularly in working sessions and workshops under the coordination of the HIV division. The HIV Division of RBC was the leading entity coordinating this process, but several other divisions and units within MoH were involved in all steps of the development of this NSP alongside various partners and stakeholders, including civil society organizations, private sector partners, non health EDPRS sector, local government and development partners such as UN family, USG CHAI. This participatory approach resulted in this final 2018-2024 HIV NSP, which is inclusive, complete, and comprehensive.

May all partners be congratulated here for their active participation in the elaboration of this new NSP, and more broadly for their continued contribution to stop the AIDS epidemic by 2030.

Jeanine U. Condo, MD, PhD
Director General
Rwanda Biomedical Center

EXECUTIVE SUMMARY

The 2018-2024 NSP was developed based on an extension of the 2018-2020 NSP with updated epidemiological facts on HIV, and new policies. It is also aligned with other key national priorities and strategies such as the national strategy for transformation Vision 2020(1), EDPRS 3(2), the Health Sector Strategic Plan (HSSP IV)(3), as well as international priorities like the Sustainable Development Goals (SDGs), and new guidelines for the management of HIV. Finally, the drafting of the NSP was guided by a number of core principles: national mobilization and ownership, equity and human rights, gender equity, integration of HIV services into the national health system, cost effectiveness of interventions, and national capacity building.

In the past decade, the HIV epidemic in Rwanda has stabilized at a prevalence of 3%% (4) following a strong national response to control the spread of HIV and to diagnose and treat affected individuals. However, behind this statistic hides a number of vulnerable groups carrying a disproportionately high burden of disease, and who are key to the transmission of the epidemic, including sex workers and their clients and sero-discordant couples. It has become clear that in order to consolidate the gains of the last few years, and to continue making headway in a cost-effective manner, there is a need to further focus attention on the needs of these groups.

Going forward, the NSP sets ambitious goals for its timeframe of execution, including:

- Reducing new infections.
- Reducing the number of HIV-related deaths.
- Ensuring that people living with HIV (PLHIV) have the same opportunities as all others.

To achieve these goals, three main levers of intervention are of focus: prevention of new infections, care and treatment, and impact mitigation. It is under these three levers that this NSP develops and prioritizes specific activities that will have the highest impact for a given investment in line with our goals.

For the prevention of new infections, this NSP follows a two-pronged approach:

- Interventions directed at the general population that either build further behaviour change (e.g. condom usage), or provide the lasting benefit of reduced disease transmission (e.g. male circumcision, screening in pregnancy). Key 2024 goals include increasing the use of condoms, increasing coverage of voluntary medical male circumcised, and maintaining the rate of new Mother-to-Child HIV infections %below 5%.
- Interventions directed at groups especially susceptible to high transmission such as female sex workers (FSW), men who have sex with men (MSM), and sero-discordant couples (SDC), in particular adding pre-exposure prophylaxis as a new preventive approach along with behavioural and other supportive interventions.

For care and treatment, this NSP incorporates recent evidence-based changes in international guidelines, notably the “Treat All” policy recommending ARV initiation to all identified PLHIV regardless of their immunity or clinical status; “All In” to address gaps in HIV and sexual reproductive health among adolescents; and a simplified model of care to accommodate the burden of services at health facilities and reduce the number of visits for patients with good adherence and viral suppression at 6 and 3 months interval for clinical and drugs pick up respectively. This approach requires more focused testing strategies to bring hard to reach populations to treatment, as well as community support to avoid loss to follow up due to visit intervals.

Interventions in this area fall under two broad categories:

- Extension of ART coverage for PLHIV from an estimated 82.7% %to 85%% by 2020, and an increase in the rate of viral load suppression for those on treatment.
- Improved quality of care with strong adherence to standards of care, nutritional support whenever needed, and psychosocial support, including mental health integration, palliative care and community support to PLHIV.

For impact mitigation, this NSP has three overarching goals:

- Ensuring economic opportunity and security of PLHIV through support and development of cooperatives and promotion of self-reliance toward food security.

- Protecting most vulnerable children (MVC) with a key target to maintain a high level of school attendance (>85 %) in the 10–14 age group.
- Reducing stigma and discrimination as well as SGBV.

Overall national coordination of the NSP is led by the HIV Division within the Institute for HIV and Other Disease Prevention and Control of RBC, but it is an effort to which the broadest array of stakeholders participates, including other divisions of RBC (e.g. National Reference Laboratory, Health Communication Center, Medical Procurement, etc.), the social cluster of ministries in the Government of Rwanda, civil society organizations, and many international and local partners. At the population level, the national health system is the main focus of implementation, and many of the interventions included in this NSP either leverage Rwanda's health system or further strengthen it to make an adequate volume and quality of services available to the population.

Supporting the NSP is a robust and detailed monitoring and evaluation (M&E) plan, tied to a complete set of key performance indicators ensuring that progress is well understood, winning approaches are exploited to the fullest, and challenges are diagnosed and corrected early.

Ultimately, a strategy is about choosing what to do and not to do with the resources at hand to achieve the desired result. In creating this NSP, there has been a significant effort to quantify the relative impact and costs of various interventions to guide the selection of approaches that would be the most cost effective. But these analyses often rely on best estimates and triangulations between a heterogeneous set of available data points. At the same time, the science and knowledge on HIV continues to progress and expand. Therefore, while this NSP is meant to provide guidance, clarity of purpose, and national alignment as we tackle the scourge of HIV, it does not imply that the strategy is frozen for the next six years. As a result, we expect that this NSP will evolve during its six years lifespan as new facts and evidence come to light and new contexts emerge.

TABLE OF CONTENTS

PREFACE	i
ACKNOWLEDGEMENTS	i
EXECUTIVE SUMMARY	i
TABLE OF CONTENTS	i
LIST OF FIGURES	iii
LIST OF TABLES	iii
ABBREVIATIONS AND ACRONYMS.....	iv
1. INTRODUCTION.....	1
2. WHERE WE ARE: SITUATIONAL ANALYSIS	Error! Bookmark not defined.
2.1 Know your epidemic	Error! Bookmark not defined.
2.2 Know your response.....	8
2.2.1 Main stakeholders.....	8
2.2.2 Main achievements in HIV response.....	8
3. WHERE WE WANT TO GO.....	4
3.1 Policy environment.....	10
3.1.1 National policies.....	10
3.1.2 International policies	11
3.2 Overarching principles	12
3.2.1 National mobilization and ownership.....	12
3.2.2 Equity and human rights.....	12
3.2.3 Gender equity	13
3.2.4 HIV integration.....	13
3.2.5 Cost-effective and evidence-based planning and response	14
3.2.6 Capacity building.....	15
3.3 Overarching result framework.....	15
4. HOW WE WANT TO DO IT	16
4.1 Prevention result framework	17
4.2 Care and treatment result framework	34

4.3	Impact mitigation result framework	10
4.4	HIV management and health support systems	10
5.	TOOLS WE HAVE: GOVERNANCE MECHANISMS.....	17
5.1	National level coordination	17
5.2	Decentralized/district level leadership and coordination.....	18
5.3	EDPRS sectors	18
5.4	Civil society organizations	19
5.5	Private sector	20
5.6	Public sector	20
5.7	Operationalizing the NSP at implementation level	20
5.8	Partnership for greater harmonization and alignment of donors with NSP priorities ...	21
5.9	Financial management mechanisms	21
6.	ASSESSMENT OF WHAT WE ARE DOING: M&E PLAN ON HIV AND AIDS	22
6.1	Development of the M&E plan	23
6.2	National and program-level indicators	23
6.3	M&E systems in Rwanda	24
7.	FINANCIAL RESOURCES: COSTING AND PRIORITIZATION OF THE NSP.....	32
7.1	Objective and process.....	Error! Bookmark not defined.
7.2	Costing Methodology	Error! Bookmark not defined.
7.2.1	Funding estimation methodology	Error! Bookmark not defined.
7.2.2	Impact methodology and cost effectiveness	32
7.3	Costing and financial gap results.....	46
7.3.1	Funding estimates and gap analysis.....	48
7.4	Impact estimation	49
7.5	Challenges and limitations	50
7.5.1	Role of government and sustainable HIV financing.....	51
8.	CONCLUSION	54
	REFERENCES.....	xvi
	ANNEXES	xx
	Annex 1: NSP PERFORMANCE FRAMEWORK.....	xx
	Annex 2: Costing tables – Outcome-Output- Strategies	xxiii

LIST OF FIGURES

Figure 1: HIV Prevalence by Sex (DHS 2005, 2010 and 2015).....	4
Figure 2: HIV Prevalence by Age for Men and Women (DHS 2010- 2015).....	5
Figure 3: Distribution of new infections by mode of transmission (MOT 2012).....	6
Figure 4: Overarching result framework	15
Figure 5: Prevention result framework.....	19
Figure 6: Care and treatment result framework.....	1
Figure 7: Impact Mitigation result framework	12
Figure 8: Summary of costing and funding projections	47
Figure 9: Comparison NSP 2013-2017 with NSP Extension breakdown by program.....	48
Figure 10: HIV Domestic and External funding	49
Figure 11: Epidemiological projections – AIM and GOAL.....	50
Figure 12: %age of Government of Rwanda budget allocated to health.....	53

LIST OF TABLES

Table 1: HIV incidence, prevalence and behavioral data for main risk groups in Rwanda.	7
---	---

ABBREVIATIONS AND ACRONYMS

ABASIRWA: Abanyamakuru Barwanya Sida mu Rwanda baharanira n’ubuzima (Rwanda Media network against HIV and AIDS and for health promotion)

AIDS: Acquired Immune Deficiency Syndrome

AIM: AIDS Impact Module

ANC: Antenatal Services

ART: Anti-Retroviral Treatment

ARV: Anti-Retroviral (drugs)

BCC: Behavior Change Communication

BSS: Behavioral Surveillance Survey

CBS: Case-Based Surveillance

CD4: Cluster Differentiation 4

CDC: Centers for Disease Control and Prevention

CHW: Community Health Worker

CNLS: Commission Nationale de Lutte Contre le SIDA (National AIDS Control Commission)

DALYs: Disability Adjusted Life Years

DDP: District Development Plan

DHS: Demographic and Health Survey

DSDM: Differentiated Service Delivery Model

EAC: East African Community

EDPRS 2: Economic Development and Poverty Reduction Strategy 2

EMR: Electronic Medical Recording System

EMTCT: Elimination Mother-to-child Transmission of HIV

FOSA: Formation Sanitaire (Health Facility)

FSW: Female Sex Workers

GBV: Gender-Based Violence

GF: Global Fund

HBV: Hepatitis B Virus

HCC: Health Communication Center

HCT: HIV Counseling and Testing

HCV: Hepatitis C Virus
HF: Health Facility
HIV: Human Immunodeficiency Virus
HMIS: Health Management Information System
HSSP III: Health Sector Strategic Plan III
HTS: HIV Testing Services
ICT: Information Communication Technology
IEC: Information, Education, Communication
IHDPC: Institute of HIV Disease Prevention and Control
IV: Intravenous
IYCF: Infant and Young Children Feeding
MESST: Monitoring and Evaluation Systems Strengthening Tool
MC: Male Circumcision
MDGs: Millennium Development Goals
M&E: Monitoring and Evaluation
MIFOTRA: Ministère de la Fonction Publique et du Travail (Ministry of Public Service and Labor)
MINECOFIN: Ministry of Economy and Finances
MERG: UNAIDS Monitoring and Evaluation Reference Group
MPPD: Medical Procurement and Production Division
MoH: Ministry of Health
MOT: Mode of Transmission
MSM: Men who have Sex with Men
MSW: Male Sex Workers
MTR: Mid Term Review
MVC: Most Vulnerable Children
NACS: Nutritional Assessment Counseling & Support
NCBT: National Center for Blood Transfusion
NCC: National Commission for Children
NGO: Non-Government Organization
NRL: National Reference Laboratory
NSP: National Strategic Plan

OAG: Office of Auditor General

OBBI: Other Blood Borne Infections

OI: Opportunistic Infection

OVC: Orphans and Vulnerable Children

PEP: Post-Exposure Prophylaxis

PEPFAR: President’s Emergency Plan For AIDS Relief

PICT: Provider-initiated Counseling and Testing

PIT: Provider-initiated Testing

PLHIV: People Living with HIV

PME: Planning, Monitoring and Evaluation

PMTCT: Prevention of Mother-to-Child Transmission of HIV

PSF: Private Sector Federation

PWD: People With Disability

QMS: Quality Management System

RBC: Rwanda Biomedical Center

RCA: Rwanda Cooperative Agency

RCLS: Confessions Religieuses pour La Lutte Contre Les SIDA (Rwanda Interfaith Network against HIV and AIDS)

RRP+: Réseau Rwandais des Personnes Vivant avec le VIH (Rwanda Network of PLHIV)

RPPA: Rwanda Public Procurement Authority

RTQII: Rapid Testing Quality Improvement Initiative

SDC: Sero-Discordant Couples

SGBV: Sexual and Gender Based Violence

SRH: Sexual and Reproductive Health

STI: Sexual Transmitted Infection

TWG: Technical Working Group

TB: Tuberculosis

UNAIDS: Joint United Nations Program on AIDS

UN: United Nations

UPHLS: Umbrella des Personnes Handicapées dans la Lutte contre le SIDA (Umbrella of People with Disabilities in the Fight against HIV and AIDS)

USG: United States Government

USPLS: Umbrella of Public Sector against HIV and AIDS

VCT: Voluntary Counseling and Testing

VL: Viral Load

VMMC: Voluntary Medical Male Circumcision

WHO: World Health Organization

YFC: Youth Friendly Cent

1. INTRODUCTION

In line with the processes set out in national development policy documents guiding Rwanda's ambitious and positive overall development trajectory in recent years, the HIV response is seen as a long-term development objective in Rwanda, intrinsically linked to development goals around poverty reduction and economic growth. In 2007, as the Government of Rwanda began preparations for the development of its third HIV and AIDS NSP, it took the opportunity to redouble its efforts to understand the Rwandan epidemic and sharpen its national response. Working with national agencies and various development partners, it aimed to better define the problem and understand the dynamics of the changing HIV epidemic in the country. From 2007 to 2009, several empirical and analytic reviews were conducted to inform the development of an evidence-based and data-driven HIV response. This involved synthesizing and triangulating HIV information from multiple sources, conducting modelling to understand modes of transmission, and studying HIV risk among vulnerable groups such as female sex workers (FSW) and men who have sex with men (MSM).

By late 2008, through research and data analysis, the government and its partners had identified and generated new information on the important drivers of the epidemic. Combined with other emerging data, key decision makers in government translated this knowledge into a comprehensive strategy in the 2009-2012 NSP(7). The plan included a detailed situational analysis of both the HIV epidemic and response, based on the 'know your epidemic / know your response' strategic planning approach.

The 2013-2018 NSP was the result of more than a year of preparatory work, starting with the development of Rwanda's second Economic Development and Poverty Reduction Strategy 2013–2018 (EDPRS2), and the 2012-2018 Health Sector Strategic Plan(HSSP3) that confirmed the response to HIV and AIDS as a cross-cutting national development priority.

As the 2013-2018 NSP is coming to an end, it has been extended for 3 more years through December 2020. The extension of the HIV Rwandan **National Strategic and Operational Plan from January 2018 to December 2020** ultimately led to the approval

in December 2017 of the Global Fund grant. The extended NSP was developed slightly before the **Health Sector Strategic Plan 4 (HSSP4)** and the National Strategy for Transformation (NSTP), which are leading strategic documents driving the Rwandan health agenda until 2024. In order to guarantee alignment in the planning cycle, the leadership of the Ministry of Health and RBC set the objective to **extend the timeframe of the HIV NSP up to June 2024**. Ultimately the HIV program is expected to have one comprehensive NSP document covering the timeframe from July 2018 to June 2024.

This document is comprehensively overviewing Rwanda's progress in reversing the impact of HIV and AIDS, where the nation wants to arrive by the end of the year 2020, and how we plan to get there. The situational analysis on HIV and AIDS included in this document provides an overview of the main elements of the current epidemic and response, the policy environment, and the overarching principles guiding the implementation of the HIV response in Rwanda. The results framework indicates where we want to go, while the remainder of the document describes how we plan to get there (detailed intervention framework, governance, M&E plan, and costing and prioritization). The 2018-2024 NSP has been developed with the active participation, support, and input of all the main HIV stakeholders through a series of workshops which took place between April to June 2018. These stakeholders include GoR (MoH, RBC, and other ministries and agencies), development partners, implementing partners, civil society organizations, private sector organizations, and academia. These stakeholders agreed on the strategic framework (impact, outcomes, and outputs) to guide the NSP development, aligned on activities and costing of activities, reviewed M&E indicators and targets for the time period, and then wrote the finalized report. The content of the new NSP is the result of these meetings, and it was presented, validated, and approved by HIV stakeholders and decision maker in August 2018.

Recent epidemiological data about the HIV response coupled with global evidence on best practices in HIV prevention and treatment delivery have been used to update specific aspects of the plan based on the most rigorous and up-to-date information available. The main strategic changes and innovations included in this new NSP include a stronger focus on HIV testing services (including self-testing), point of care for early infant diagnosis, pre-exposure prophylaxis, and treat all HIV+ persons regardless of CD4 count leveraging a Differentiated Service Delivery Model (DSDM) aiming to simplify the delivery of care.

In addition to these new strategies, adjustments to costing estimates based on the projected decrease in external funding, including prioritization of the most cost-effective interventions, was considered.

This 2018-2024 NSP document is designed to present only the main strategic orientations of the national HIV response for the period 2018-2024. More details on operationalization and costing of activities are available in the NSP operational plan.

The progressive decrease of external funding for HIV, TB, and malaria has recently taken a more drastic turn, and in spite of continued efforts by GOR to increase its contribution, this sharp decline in available resources will undoubtedly have a negative impact on the implementation of the prioritized strategies presented in this 2018-2024 NSP document.

1.1 What is this numbering for?

2. WHERE WE ARE: SITUATIONAL ANALYSIS

2.1 Know your epidemic

Rwanda continues to experience a mixed HIV epidemic, generalized in the adult population, with an adult HIV prevalence rate stabilized around 3% (4), and particularly concentrated in the Female Sex Worker (FSW) population (45.8%). The HIV prevalence in the population aged 15–49, as estimated through the Rwanda Demographic and Health Survey (DHS), remained the same in 2005, 2010 and 2014/15 at approximately 3% (confidence intervals [2.6–3.5 %] in 2005 (8); [2.78–3.36 %] in 2010 (4) and [2.8–3.4 %] in 2014/15). HIV prevalence in 2014/15 remained higher among women (3.6 %) than among men (2.2 %) (Figure 1). According to RDHS 2014/15, HIV prevalence increases with age. For example, among women, HIV prevalence increases from 0.8 % in the population aged 15-19 to a peak of 7.9 % in the population aged 35-39 in 2014/15. Similarly, among men, the prevalence increases from 0.3 % at age 15-19 and reaches a peak of 9.3 % at the age of 45-49. RDHS 2014/15 showed that about 3 % of couples in unions are sero-discordant (i.e., one partner is infected and the other is not).

Figure 1: HIV Prevalence by Sex (DHS 2005, 2010 and 2015)

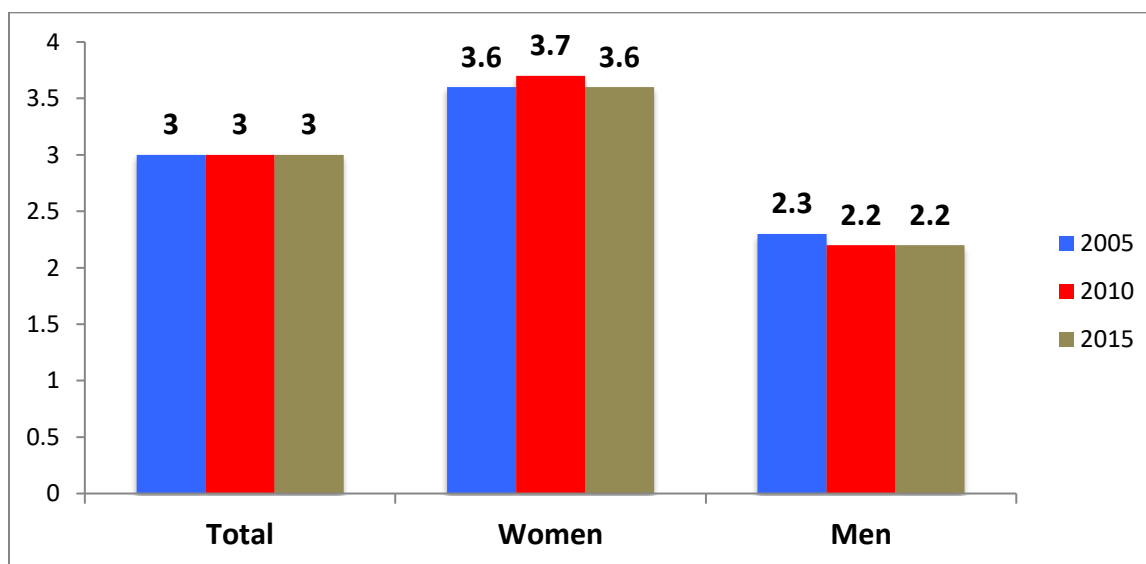
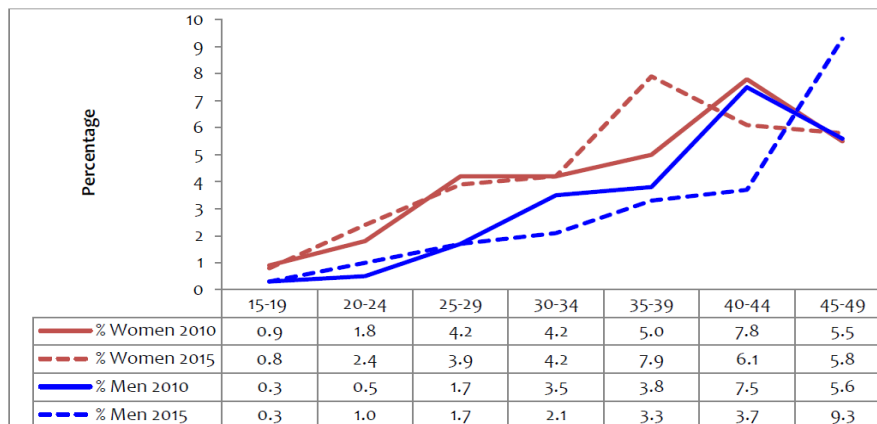


Figure 2: HIV Prevalence by Age for Men and Women (DHS 2010- 2015)



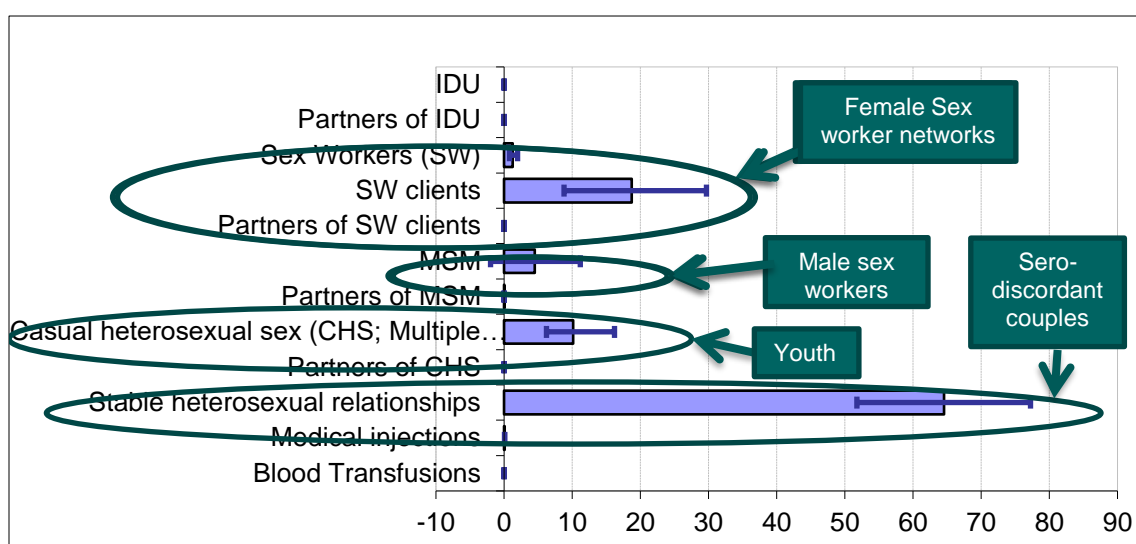
The 2015 Behaviour and Biological Surveillance Survey (BSS) has shown that HIV prevalence is higher among FSW (45.8 %) with a high prevalence among FSW operating in Kigali (55.5 %) The first BSS conducted across the MSM population in 2015 showed that the HIV prevalence among MSM was 4 %.

Just as HIV prevalence has remained relatively stable in the general adult population, the Mother-to-Child HIV transmission rate has also been stabilised below 2 % since 2014.

Rwanda conducted its first population based HIV incidence survey in 2013/14. The results suggest an overall HIV incidence of 0.27 per 100 person-years.

In an effort to understand the dynamics of the HIV epidemic across risk groups, RBC commissioned an application of the UNAIDS Modes of Transmission (MOT) model to estimate the expected distribution of new HIV infections by exposure group (10). **The model uses existing** demographic, epidemiological, and behavioural data for each risk group **from national, regional, and international sources. This exercise was led by the HIV and PME Divisions within RBC in close collaboration with partners including UNAIDS, Centers for Disease Control and Prevention (CDC), and MEASURE Evaluation. The modelling exercise is limited to sexual transmission and is applied to the adult population aged 15–49. These data was then used to model the expected distribution of new HIV infections across risk groups (Figure 3).**

Figure 3: Distribution of new infections by mode of transmission (MOT 2012)



The modelling results were presented and analysed in participatory workshops, first with RBC, and then with key stakeholders, in order to draw key conclusions and implications for the design of this new plan. Key findings and conclusions are presented below.

- 1) Stable heterosexual relationships constitute the risk group where the majority of new infections are projected (65 %). In the Rwandan context, this risk group includes a large number of new infections among sero-discordant couples.
- 2) The second group where a substantial proportion of new infections (20 %) is projected is among FSW networks, composed of FSW, their clients, and their non-paying partners.

- 3) The third group where a substantial proportion of new HIV infections (10 %) is projected is among those participating in casual heterosexual sex. For the purposes of this model and in the Rwandan context, these results were interpreted as youth aged 15–24, as they compose the majority of sexually active individuals out of union according to existing data.
- 4) The last group where a substantial proportion of new infections (5 %) is projected is among the MSM population. Based on the available data, however, this finding is representative of a specific subset within this population: male sex workers. The qualitative data shows that this specific subgroup is the easiest to target for both research and interventions, as MSM remain a hidden population in Rwandan society due to social stigma associated with sexual orientation.

Table 1 below summarizes the results of the MOT (5) modelling exercise and the best available data for the different risk groups identified that were used to generate the modelling results. This data was validated as the ‘best estimates’ of current data by risk group for Rwanda by the national technical working group (TWG) on HIV prevention in February 2013 and they are still valid today.

Table 1: HIV incidence, prevalence and behavioural data for main risk groups in Rwanda.

Risk group*	Contributions to HIV incidence (MOT)	HIV prevalence	Key behaviours		Comprehensive knowledge
			Condom use at last sex	HIV test in last 12 months	
SDC	65%	3.43% ¹	10.71% ¹	45% ¹	57% ¹
FSW	20%	51% ²	83% ²	89% ²	22% ²
Youth	10%	1% ¹	54% ¹	57% ¹	50% ¹
MSM/MSW	5%	13.7% ³	50% ⁴	51% ⁴	20% ⁴

* Ordered in terms of magnitude as identified by MOT 2012(5)

¹: Rwanda DHS 2010(4)

²: BSS FSW, Rwanda 2010(11)

³: BSS MSM, Kampala, Uganda (12)

⁴: *MSM Study, Rwanda, 2011.*(13)

On the basis of these results, and in addition to existing interventions targeting key populations (FSW, MSM, SDC, adolescents, and young adults), interventions are planned through the global “All In” initiative targeting in and out-of-school groups.

2.2 Know your response

2.2.1 Main stakeholders

During the course of the last NSP, RBC oversaw not only the HIV, AIDS, STIs, and Hepatitis program but also TB, malaria, and other diseases, including non-communicable diseases, mental disorders, and maternity and child health. This oversight has contributed to a better integration of the HIV and AIDS program to the health sector. Several MoH units are also closely involved in HIV interventions (Health Financing Unit, Human Resources, Clinical Services, Planning and M&E). Apart from health sector institutions, other sectors, coordinated by lead ministries, also contribute to the multi-sectorial response. The role of civil society, coordinated by umbrella organizations, has been significantly strengthened, as has the private sector.

2.2.2 Main achievements in the HIV response

During the last five years, the coverage of HIV services has continued to increase to reach levels associated with the global target. According to programmatic data reported through HMIS, as of June 2018 (9), the percentage of health facilities offering a full package of HIV services rose from 93 % in 2013 to 96 % in 2018, with 97.8 % offering ART, 97.4 % offering VCT, and 97.7 % offering PMTCT. This significant increase in geographic coverage was coupled with improvements in the quality of services being delivered. For example, high enrolment and retention rates allowed Rwanda to reach universal access for ART with coverage of 83 % of all HIV infected patients receiving treatment. From 2013 to 2017, retention on treatment after twelve months was continually kept above 90 % annually and AIDS-related deaths decreased by 10.6 %.

HIV testing strategies were revised to increase HIV Testing and Counseling (HTC) services, to increase HIV-positive case finding, and to improve outreach of HTC services to key populations. In order to improve and integrate HTC services at as many entry

points as possible, HIV testing using the self-testing and finger prick method was adopted. Resulting from these strategies, 10.5 million HIV tests were performed and sero-positivity rate has remained below 1 % over the last three years.

Regarding the prevention of HIV transmission from mother to child (MTCT), 99 % of HIV infected pregnant women received antiretroviral therapy to reduce the risk of mother to child transmission, and only 1.5 % of all exposed children were infected by 18 months. According to the 2014/15 DHS, 30 % of Rwandan males aged 15-49 years were circumcised. The VMMC prevalence was almost doubled as compared to 13 % in DHS 2010.

These successes in the national HIV response are to a large extent due to the strengthening of the national health system. The network of health facilities is well decentralized, with almost all administrative sectors equipped with a health center. Further, health posts are now being developed or upgraded to bring primary healthcare closer to isolated areas. Mobile services and outreach activities have been implemented to reach isolated and marginalized populations, particularly hard-to-reach key populations such as FSW and MSM. Health care providers in health facilities are trained to provide adapted and respectful services to these key populations as well as to other vulnerable groups with specific needs (e.g., youth, people with disabilities). In Rwanda, 78.7 % of households have at least one member covered by health insurance, and of these individuals, 97.1 % are covered by community-based health insurance scheme (RDHS 2014-2015). HIV services are partly supported by external funding and partly included in the insurance package.

3. WHERE WE WANT TO GO

After reviewing the current state of the HIV epidemic and response, the next step is to define the main orientations of the NSP. This involves identifying the main national and international policies and strategic frameworks guiding the development of this NSP, describing the main principles that are followed in the proposed strategies, and introducing the interventions and overarching result framework of the 2018-2024 NSP.

3.1 Policy environment

3.1.1 National policies

The strategies presented in this NSP are aligned with Rwanda's development strategic documents, including Vision 2050, NST (2018–2024) (1), and HSSP4 (2018–2024) (3).

The key indicator targets of global target 2030 and vision 2050, which gives long-term objectives for the country's development progress, were recently revised as those initially set had already been achieved. Over the last decade, national HIV prevalence has been stable at 3%¹. Though Rwanda joined the rest of world in working toward the UNAIDS 90-90-90 targets for this NSP refer to ambitious 95-95-95 targets to help end the AIDS epidemic. According to this target, by 2024, 95 % of all PLHIV will know their HIV status, 95 % of all people with diagnosed HIV infection will receive sustained antiretroviral therapy, and 95 % of all people receiving antiretroviral therapy will have viral suppression.

The current NST (2018–2024) considers HIV as one of its cross-cutting issues and acknowledges the extensive gains made in preventing HIV using five integrated components: VCT, prevention of mother-to-child transmission (PMTCT), male circumcision, behaviour change communication (BCC), and HIV treatment. HIV is also identified as an important program within the health sector strategy of EDPRS2 (2), as one of the foundational issues on which emerging economic priorities can be developed. Within the EDPRS framework, the goal of the health sector in Rwanda is to improve the quality, demand, and accessibility of primary healthcare, of which HIV is an important component.

The third HSSP 2012–2018 (3) also gives a general orientation on health sector priorities in the HIV response for the coming five years, identifying key challenges the health sector must focus on in order to achieve universal access to HIV prevention and treatment services.

3.1.2 International policies

Apart from these guiding national documents, the NSP is also aligned with international strategic documents, including the Sustainable Development Goals (SDGs) and the UNAIDS Strategy 2016–2021 and 2030. Rwanda has successfully achieved its 2015 MDG targets due to impressive progress across the health, social, and economic development sectors. Declining rates of HIV-related mortality, and stabilizing prevalence suggest that the spread of the infection is halting. Although the lack of consistent and comparable measurements of HIV incidence for risk groups in Rwanda does not allow the analysis of temporal trends, projections of new infections obtained by statistical models (EPP/Spectrum) suggest that HIV incidence is on a downward trend. In terms of access to ART for eligible HIV patients, the current coverage is estimated at 82.7 % of patients, well within the definition of universal access. In 2016, Rwanda fully adopted the 'test-and-treat' strategy to be implemented in all health facilities providing HIV services. All eight key interventions identified by the UNAIDS Strategy 2016–2021 (see the box below) (17) are programmatic priorities within the NSP logical framework. The critical enablers and synergies with development sectors identified in this framework are also taken into account in our NSP (described in the next chapter on overarching principles).

1. Children, adolescents, and adults living with HIV access testing, know their status, and are immediately offered and sustained on affordable quality treatment.
2. Young people, especially young women and adolescent girls, access combination prevention services and are empowered to protect themselves from HIV.
3. New HIV infections among children are eliminated and their mother's health and well-being is sustained.
4. Tailored HIV combination prevention services are accessible to key populations, including sex workers, men who have sex with men, people who inject drugs, transgender people and prisoners, as well as migrants.
5. Women and men practice and promote healthy gender norms and work together to end gender-based, sexual and intimate partner violence to mitigate risk and impact of HIV.
6. AIDS response is fully funded and efficiently implemented based on reliable strategic information.

7. Punitive laws, policies, practices, stigma, and discrimination that block effective responses to HIV are removed.
8. People-centered HIV and health services are integrated in the context of stronger systems for health.

Eight key interventions identified by UNAIDS Strategy 2016-2021

3.2 Overarching principles

3.2.1 National mobilization and ownership

The strong commitment of national decision makers and opinion leaders to collaborate towards ambitious targets, as well as holding donors and development partners accountable, explain most of Rwanda's success in addressing HIV and AIDS in the health, economic, and social sectors of the country.

HIV is a cross-cutting issue for NST, meaning that all sectors of Rwandan society are aware of their responsibility in addressing the epidemic, including the economic and development sectors. Of course, external support has been, and continues to be, a major contributor to the national HIV response. However, the strategies adopted seek to align national and international stakeholders along national priorities and sustainability. This communal alignment continues to be a strong principle that will guide the implementation of this NSP.

3.2.2 Equity and human rights

Despite the strong results achieved by Rwanda over the past decades in addressing the HIV epidemic, issues of stigma and discrimination relating to the HIV epidemic are still persistent. Great strides have been taken to ensure geographic and financial accessibility to health and HIV services to all citizens, yet a small number of people in community still experience stigma within their communities, limiting access to appropriate and adapted services.

The Rwandan network of PLHIV (RRP+) has played an important role in advocacy and representation in all the planning and management of the HIV response.

RRP+ is also involved in interventions for economic empowerment of PLHIV (through cooperative formation and strengthening), and in addressing stigma and discrimination

related to HIV. The RRP+ will continue to play a prominent and active role at the national and decentralized levels in the implementation of this plan.

3.2.3 Gender equity

Following the findings of the 2013 gender assessment of Rwanda's national HIV response (18), the promotion of gender equity has remained a priority orientation of the HIV programme. The principles outlined in the gender and HIV strategy adopted in 2010 and operationalized in the National Accelerated Plan for Women, Girls, Gender Equality and HIV 2010–2014 (19) are integrated in this NSP.

3.2.4 HIV integration

The integration of HIV services is achieved at various levels:

- Complementarity of HIV services. The HIV response employs combinations of, and achieves synergies between, different HIV strategies and services in order to offer a comprehensive package of services adapted to different target groups. This includes linkages between preventive and curative services, and between community-based and facility-based interventions.
- Integration of HIV services within broader health programs. As HIV progressively becomes a chronic disease, it needs to be better integrated into the general system of healthcare provision; particularly health programs with strong linkages to HIV interventions, including sexual and reproductive health, nutrition, and mental healthcare. Integration of HIV services into the health system has always been a strong characteristic of the Rwandan HIV response, and this has benefited both the HIV program and the health system in general. In this NSP, a large component of the overall planning of resources is linked to health infrastructure and equipment and human resources for health. Infrastructure and equipment and human resources for health cannot be managed separately for the HIV program, but must be analysed through a systemic approach, where HIV programming is contributing to, and benefiting from, the general health system's resources.

- HIV mainstreaming. The multi-sector integration of HIV in the wider national development agenda is ensured by the identification of HIV as a cross-cutting issue within NST.
- Regional integration of the HIV response. As collaboration between member countries of the East African Community (EAC) has continued to be strengthened, an EAC unit of HIV & AIDS collaborating with the National AIDS Control programmes and the Ministries of Health of member countries has been established. This regionally integrated response enables citizens of each EAC member country to access more socio-economic opportunities across countries, leading to higher regional mobility. As such, it is becoming increasingly relevant and important to establish harmonized protocols and guidelines for HIV prevention and care interventions in all countries of the region. Regular regional coordination meetings take place between the health sector and HIV decision makers to develop regional reference documents that will be uniformly applied.

3.2.5 Cost-effective and evidence-based planning and response

The planning process of this NSP has been based on existing evidence, both at national and international levels, to assess progress made to date in the national HIV response, and to select the best strategies for achieving national and global targets.

The national M&E system has been central to obtaining up-to-date data through routine monitoring, surveillance and surveys, and research and evaluation. One area of improvement in our M&E system during the coming period will be to strengthen the evaluation component of the system, in order to gather data that will allow us to better assess the impact of measures seeking to reduce HIV infections and mortality.

Special emphasis will be placed on improving the quality of services. This will be achieved through strengthening the integrated supervision system that will identify areas of weakness within our interventions, and the associated mentoring designed to address and correct these weaknesses.

Finally, one of the most important trends that is taken into account in the strategic planning process is the declining trend of external funding for the HIV response. This new NSP maintains ambitious national targets for the reduction of new HIV infections

and of HIV-related deaths, while taking into account prioritization of the most cost-effective interventions.

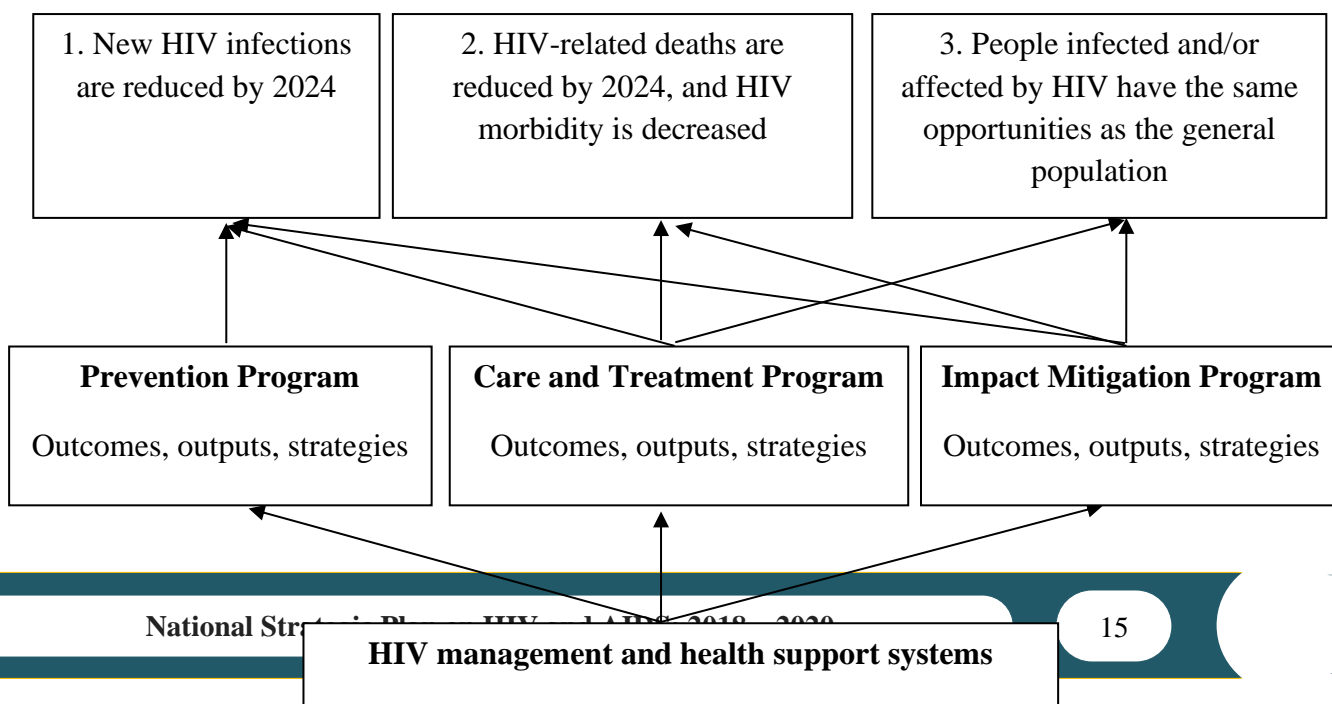
Another strategy adopted to maximize cost efficiency of HIV interventions is to increasingly call upon civil society and private actors for activities where they have expertise and an advantage for efficient implementation.

3.2.6 Capacity building

Strengthening healthcare providers' capacities is a priority to improve quality of services and ensure optimal efficiency of interventions. Increased resources are being allocated for short and long term trainings, in addition to the recruitment of specialized medical doctors to meet increasing demand for high quality care. Appropriate training of nurses to fulfil responsibilities previously reserved to physicians – task shifting -- allows for better coverage of services to the increasing number of patients receiving ART, thus freeing physicians for management of more complex medical problems. Apart from improving knowledge and skills of healthcare providers and other health workforce members, capacity building activities also target organizational and institutional strengthening to ensure continuous quality service provision, despite human resource instability and rapid turnover being frequent.

3.3 Overarching result framework

Figure 4: Overarching result framework



All interventions of the NSP are oriented toward three impact levels for results. When possible, quantitative targets were set to indicate the magnitude of the changes expected during the period as part of the response to the HIV epidemic. These targets are based on estimates generated by EPP/Spectrum for HIV new infection and related deaths because of the difficulty to measure observed trends of national HIV incidence and mortality. Although each of the three main programs (Prevention, Care and Treatment, and Impact Mitigation) can be more closely associated with one of these three overarching results, the diagram above illustrates the fact that each individual program contributes to more than one impact result. For example, it is now well documented that ART and associated care and treatment interventions not only reduce HIV-related mortality and morbidity, but also contribute also to preventing new HIV infections.

Similarly, although quantification of impact is not possible, different components of the Impact Mitigation program contribute not only to the improvement of livelihoods of people infected and affected by HIV, but also to preventing new infections and supporting adherence to treatment, thereby reducing deaths and morbidity. The detailed result framework for each of the three programs is presented in the following sections.

Two other components are supporting the three programs in a transversal manner: (1) HIV management, including coordination and monitoring and evaluation of HIV interventions (mostly the role of RBC); and (2) health support systems, where resources supporting the general health system but not specifically identified as HIV services are captured (health infrastructures and equipment, human resources for health, integrated supervision program).

4. HOW WE WANT TO DO IT

In order to achieve the overall results presented above, a detailed logical framework has been developed for each of the three main programmatic areas of the HIV response. These logical frameworks are structured according to the different levels of results

targeted by each program (impacts, outcomes and outputs) and identify the main strategies and the detailed interventions to be implemented to achieve these results.

4.1 Prevention result framework

Best practices and lesson learned in the last decade

- Importance of political engagement in the HIV response.
- Availability of financial support from both the Government of Rwanda as well as different partners.
- Regular revision of guidelines regarding integration of HIV testing services, key populations, elimination of EMTCT, male circumcision using the medical device, sero-discordant couple follow-up program, etc.
- Elaboration of EMTCT strategic and implementation plans.
- Improved quality of services through clinical mentorship in HIV prevention.
- Consideration of HIV prevention activities completed in the community.

Challenges in HIV prevention program

- New HIV infections despite availability of prevention interventions.
- Decreased funding for HIV response.
- Limited financial accessibility of VMMC services.
- Emergence of tetanus cases in VMMC beneficiaries.
- Limited accessibility of condoms at community level.
- Repeat testers in HCT settings.
- Loss to follow-up of people in HIV prevention services.
- Low national rate of male circumcision.
- Late consultation of pregnant women.
- Low coverage of PMTCT services in private clinics.
- High prevalence of pregnancies in known HIV-positive women.
- High HIV prevalence among FSW.
- High staff turnover.
- Low coverage of adolescents and youth-friendly prevention services.
- Challenging monitoring and evaluation of HIV prevention activities within

communities.

- High prevalence of viral Hepatitis among pregnant women.

Innovations to address challenges and sustain best practices

- Strengthen counselling and emphasize risk assessment and reduction to contribute to the reduction of HIV re-testers.
- Scale-up of fingerpick method for HIV testing.
- Initiate HIV self-testing strategy to reach those not currently reached.
- Initiate case based surveillance and partner notification.
- Implement and monitor the referral system to improve linkage between HIV testing and treatment services.
- Integrate trainings by increasing onsite training.
- Initiate e-based training.
- Reinforce monitoring and evaluation of HIV services in communities by leveraging specific tools.
- Revise and update the distribution plan of condom and set M&E strategies.
- Initiate free condom kiosks distribution points in selected hot spots.
- Revise and update HIV guidelines.
- Elaborate tools for specific groups (IEC tools adapted to all types of disability, M&E tools for FSW, tools for sero-discordant couples).
- Initiate oral Pre-exposure prophylaxis.
- Promote weekend voluntary medical male circumcision through campaigns to meet demand.
- Introduction of Tetanus vaccines in the package of VMMC services.
- Introduce large scale safe and quick adult non-surgical methods for male circumcision.
- Scale-up of voluntary medical early infant male circumcision.
- EMTCT strategies that focus on all four prongs.
- Initiate point of care Early Infant Diagnosis.
- Public-private partnership to scale PMTCT services in private and new public health

facilities.

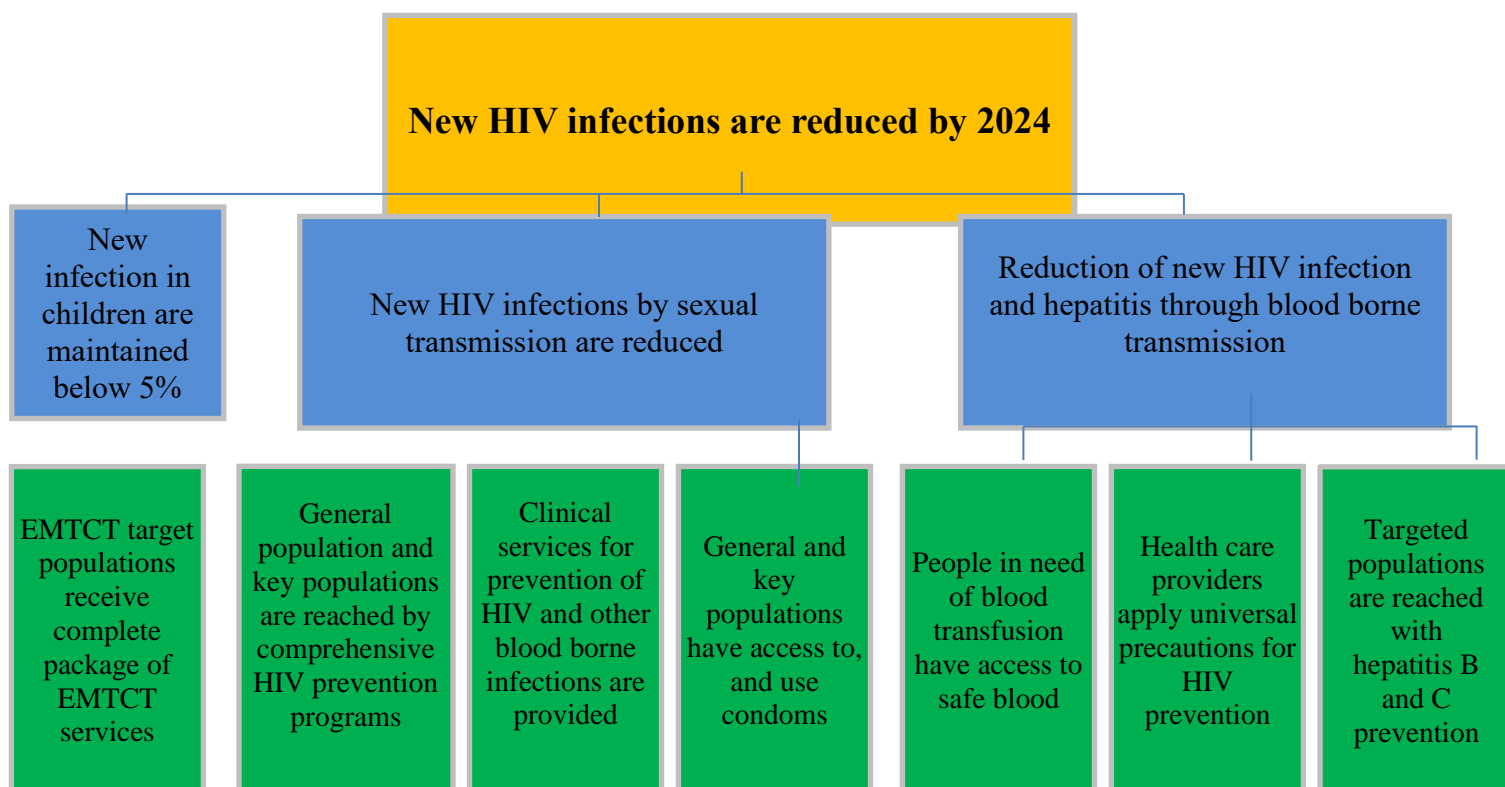
- Integrate viral Hepatitis prevention in HIV prevention programs by vaccinating and screening high risk groups.
- Integrate youth-friendly services into existing services provided at health facilities, and reinforce linkage between youth-friendly centres and health facilities.
- Implementation of “All In” national operational plan to address gaps in HIV prevention programming targeting adolescents.
- Strong involvement of CHWs in HIV prevention awareness.

Strategies for reaching out and providing HIV services to key populations

A combination of strategies will be used to ensure that key populations have access to a comprehensive package of services as defined by the national program.

- Provision of a facility-based package of services, including regular screening and testing for STI and HIV, systematic initiation of ARV treatment for those who tested HIV-positive, condom and lubricants provision, and family planning services provision.
- Provision of community-based services such as HTS, STI screening, and condom distribution through outreach strategies.
- Linkage of community and health facility level interventions to ensure continuum of care.
- Establish support group of different categories of key populations through peer education approach.
- Establish enhanced follow-up (HIV testing and linkage to care and treatment) of children born to FSWs.
- Organize mass campaigns targeting key population groups to increase their awareness and service utilization.

Figure 5: Prevention result framework



IMPACT 1: New HIV infections are reduced by 2020

The goal of the HIV prevention program is to reduce new HIV infections by 2024. To achieve this target, prevention interventions will focus on key drivers of new infections in Rwanda, contributing to the three outcomes below:

1. New infections in children are maintained below 5 %.
2. New HIV infections by sexual transmission are reduced.
3. Reduction of new HIV viral hepatitis infections through blood borne transmission.

Outcome 1.1: New infections in children are maintained below 5%

The country is aiming to continue the downtrend line of Mother-to-Child HIV transmission rate below 5 %. This rate is in line with the global EMTCT goal to eliminate new paediatric HIV infections, and improve maternal, newborn, and child health and survival in the context of HIV.

The PMTCT program was initiated in the country and then was progressively scaled up to achieve 97.7 % geographic coverage. As the PMTCT program achieved positive and significant outcomes related to service availability, the EMTCT strategy emphasizes re-orientation and re-organization of existing program activities. This strategy aims to continue the scale-up of PMTCT services, upgrade quality, and improve access to, and utilization of maternal, newborn and child health services at both the national and district levels. The scale-up will mainly focus on integrating PMTCT services in new public and private health facilities.

Output 1.1.1: EMTCT target populations receive complete package of EMTCT services

The EMTCT program has been running through health facility-based interventions. More emphasis will be put on community engagement, ranging from the increased use of services, to improved adherence of those enrolled in the program for follow-up visits. A sustainable linkage between facilities and the community will be established and correctly monitored. The following strategies will be used:

Sensitization of young girls and boys on the importance of PMTCT services

In order to enhance primary prevention, youth sensitization will be reinforced and provided through peers. Anti-AIDS clubs, peer educator systems, youth corners, and youth friendly centres (YFCs) will be working through a more effective and monitorable system. This system will target adolescents and young adults both in and out of schools. Pre-nuptial testing and counselling will be reinforced and will cover all components of primary prevention beyond its current limitation to HTS in several facilities. Vulnerable young girls and young FSW will be specifically targeted. Furthermore, emphasis will be put on young boys who represent around 36 % of female sex workers' clients as per the 2015 Behaviour and Biological Surveillance survey of FSW (11).

HIV testing services for pregnant women and couple testing

HIV testing services are provided to all pregnant women at the time of their first visit, with antenatal services (ANC) as a key component of the package of care. In addition, all pregnant women who test negative during ANC will be retested during labour to identify potential cases of HIV sero-conversion and newly infected pregnant women.

In addition to HIV testing, pregnant women and their partners are systematically screened for syphilis to reduce to the risk of mother to child transmission of syphilis.

Couple testing will continue to be prioritized as a part of HIV testing services for pregnant women and the population in general, as a good strategy for mutual support in service utilization. To encourage couples to use services, EMTCT implementation relies on strategies reinforcing male partner involvement. Local authorities, community health workers, mass media, and community sensitization campaigns will sensitize male partners on the benefits of their involvement in antenatal care.

ARV treatment for HIV-positive pregnant and breastfeeding women

ARV treatment for HIV-positive pregnant and breastfeeding women will continue to be available to all women in need, aiming to maintain good health status and prevent HIV transmission to their children. The quality of services will be improved to increase the retention of pregnant women receiving ART.

Family planning

The prevention of unintended pregnancies among women living with HIV and AIDS will continuously be supported to reduce unmet need for family planning. The availability of condoms for dual protection will be ensured and will always be coupled with counselling for consistent and correct utilization.

Mother - infant pair follow up

HIV-positive pregnant women and breastfeeding follow-up

Comprehensive medical care and supportive services will continue to be emphasized for identified HIV-infected mothers. Components of comprehensive care include regular clinical follow-up, and continuous adherence support to ensure women are kept in the continuum of care up to the end of PMTCT follow-up period as per national guidelines.

Exposed infant follow-up

Services meant for exposed infant follow-up include birth ARV prophylaxis, early HIV testing, treatment, and nutritional support for those in need. These services will be

enhanced and will be available in public and private health facilities through systematic follow-up and care to the mother-infant pair. This will be achieved by optimizing the number of health facilities offering PMTCT services and the quality of services offered as well.

Beside PMTCT entry point, an active identification strategy for HIV-positive children will be leveraged in other service delivery areas, including in vaccination programs and paediatric wards. This identification strategy will be facilitated in high volume PMTCT health facilities through the introduction of Point of Care Early Infant Diagnosis. The goal of this program is to ensure that at-risk infants have timely access to an early diagnosis, and facilitate early ART initiation for those who are HIV-positive.

All identified HIV-positive children will be closely monitored to document causes and risk factors associated to HIV transmission in order to guide program interventions. Furthermore, this monitoring will help to ensure that all identified HIV-positive cases are linked to HIV care and treatment.

Outcome 1.2: New HIV infections by sexual transmission are reduced

To reduce new HIV infections by sexual transmission, combined prevention interventions will target the main groups associated with new infections, including FSW networks, MSM, youth, and SDC.

The outcome result will be achieved through the following outputs:

Output 1.2.1: General population and key populations are reached by comprehensive HIV prevention services

Key prevention interventions targeting the general population

To ensure that all Rwandans are informed about the major modes of HIV and STI transmission, methods for HIV and STI prevention, and the existence of key services existing to help them remain HIV-negative, a combination of HIV prevention interventions will be provided. These interventions include community events and

national sensitization campaigns using different communication channels such as mass media campaigns, and sensitization campaigns on the workplace. The following activities will be conducted:

- Community sensitization involving local authorities and community health workers to promote safe sexual behaviour, including HIV, STI and viral hepatitis prevention, education, communication and counselling against gender-based violence (GBV), family planning, HIV testing, and promotion of condom use.
- Small and large scale HIV prevention campaigns to reduce discrimination against key populations.

Key interventions implemented by mass media

Media networks will play a big role in information dissemination and community education through the implementation of integrated BCC broadcast programs on HIV, STI, and viral hepatitis. This will be carried out through the following proposed key priorities:

- Creation of new, and strengthening of existing, coalitions of media organizations on specific themes of HIV, STI, and viral hepatitis prevention.
- Development and initiation of broadcast programs on HIV and AIDS through radio and TV.
- Promotion of health service utilization including comprehensive HIV services.
- Strengthening the provision of specific support to media umbrella against HIV.
- Gender mainstreaming into HIV, STI, and viral hepatitis prevention through media partnership broadcasting program.

Key interventions in the workplace program

The workplace program is implemented by the private and public sectors in Rwanda. The private sector intervenes in private company workplaces, including agriculture, commerce, financial institutions, liberal professions, tourism, arts and crafts, women

entrepreneurs, young entrepreneurs, and ICT private institutions. Meanwhile, the public sector/MIFOTRA intervenes in ministries, districts offices, and other public institutions. The main interventions in this NSP that will be coordinated by the Private Sector Federation (PSF) and the Umbrella of Public Sector against HIV and AIDS (USPLS) are the promotion and social marketing of condoms in hotspots (hotels, lodges and bars) and workplaces, and the implementation of a minimum package of HIV services in the workplace (sensitization, initiation of HIV self-testing and HTS in general, referral to clinical services, reduction of stigma and discrimination).

Key interventions for adolescent and young adults

Adolescents and young adults will be reached in school through school-based sexual health and HIV, STI, and viral hepatitis education, and out of school through anti-AIDS clubs for out-of-school youth. Although sensitization activities will be addressed to the general youth population, most HIV prevention interventions will target the most vulnerable youth, including out-of-school youth. Key activities include:

- Support of sexual and reproductive health and HIV prevention in schools through small scale campaigns.
- Provision of a complete package of prevention education with out-of-school youth through peer education, including information on sexual and reproductive health (SRH), HIV and STI, GBV, life skills, and referral for HIV, STI and hepatitis testing.
- Improve services for GBV survivors and PMTCT for women aged 15–24 years.
- Target young boys through HIV comprehensive package, especially VMMC services

Key interventions for people with disabilities

There is no data showing that HIV prevalence in people with disabilities is higher than in the general population in Rwanda. Instead, the main challenge for this group is to ensure access to services.

Interventions for people with disabilities will focus on:

- Development of appropriate IEC materials customized for each specific category.

- Sensitization intended to reduce stigma and discrimination in the community through peer education.
- Organization of trainings to ensure disability friendly services.

Key interventions targeting key populations

The main focus of prevention interventions is on priority groups identified by the MOT exercise: SDC, FSW and their clients, vulnerable youth (particularly young women aged 15–24) and MSM. Each of these groups has been attributed a minimum package of services addressing their particular needs. Some interventions are common to all, while others are specific to certain groups.

Common interventions:

- Development and distribution of guidelines for prevention and clinical follow-up.
- Development of IEC materials specific to each key population.
- Outreach programs through peer education programs: provision of information on HIV and STI, referral for HIV testing, promotion of condom use and STI diagnosis.

Specific interventions:

Provision of intensive package of services at facility level for SDC, FSW and MSM

- Peer education for FSW and MSM also addressing the problem of gender-based violence to which they are particularly vulnerable.
- Targeted STI screening and HTS of FSW and their clients in hotspots.
- Targeted SRH and PMTCT services for pregnant FSW and their children.
- Advocacy with law enforcement and local authorities to improve protection of FSW and MSM.
- Strengthen FSW and MSM participation in policy development and program implementation.

- Reduction of socio-economic vulnerability of sex workers by encouraging FSW to create associations and cooperatives.

Other groups are targeted because of their specific working or living environment, including: mobile populations (long distance truck drivers and their assistants, and fishermen), people in uniform, prisoners, refugees, and internally displaced persons.

Output 1.2.2: General and key populations have access to and use condoms

Consistent and correct use of condoms dramatically reduces the risk of acquiring STIs, including HIV. To ensure that condoms are available, accessible, and used by general and key populations, the following strategies will be leveraged.

Condom availability and accessibility to general and key populations

This strategy will seek to strengthen commodity management approaches to ensure the availability of condoms in all service points within a health facility, at all times. Working with the social marketing and private sectors, partnerships with the central and decentralized health sectors will be strengthened to ensure availability of condoms at the community level, particularly focusing on hot spots and high-risk zones. The national program plans to scale-up and strengthen the newly introduced free condom distribution kiosks located in selected hotspots around Kigali City. This strategy is meant to ensure both free access to condoms at all times, and the provision of educational material on HIV and safer sex practices. Furthermore, various HIV prevention outreach activities that are already planned (HTS, VMMC, PMTCT, etc.) will provide opportunities for community-wide distribution of condoms.

Implementation of these combined strategies will be coupled with regular review of the current supply chain system, and specific measures to strengthen quantification, procurement, inventory management, and distribution of condoms targeting all potential user groups, and, in particular, key populations.

Output 1.2.3: Clinical services for prevention of HIV and other blood borne infections are provided

The objective of this output is to ensure that clinical services are available, accessible and affordable. These services have to be provided at the highest quality possible without discrimination, especially to key populations. During the next three years, we will ensure that the following services reach general and key populations:

HIV counselling and testing services

The objective of this strategy is to ensure that the general population, with specific focus on key populations, has access to affordable HTS to identify HIV infected people and link them to ART, as well as to identify those who are negative and advise them on risk reduction.

For the general population, the strategy will aim to avoid repeat testing of people at low risk and instead reach those who have not yet been tested and do not know their status. For key populations, outreach interventions will be implemented to reach them beyond health facilities, and to ensure regular HCT and medical follow-up. In this respect, innovative technologies and approaches, including the finger prick method, have been introduced to increase access to services. In addition, HIV self-testing will be introduced to reach people who have not been reached with existing strategies. Strong linkages will be built to ensure provision of prevention and care and treatment services after testing. A quality assurance system will be strengthened to ensure correct test results and to periodically review the testing algorithm.

HTS guidelines and IEC materials will be updated and disseminated. Training of service providers on specific services including HIV self-testing, testing using finger prick method, and couple counselling and testing will be scaled-up with special emphasis on trainings in private health facilities. Provider-initiated counselling and testing (PICT) services within all delivery units in health facilities will also continue to be strengthened.

As the country has begun its implementation of option B+ in PMTCT program and its “Treat All” strategy, it is essential to ensure that beneficiaries of HIV testing receive accurate tests results before initiation of lifelong treatment. Therefore, the national program will put more emphasis on Rapid Testing Quality Improvement Initiative

(RTQII) to ensure long-term sustainability of quality HIV testing, while keeping error rates as low as possible.

To ensure continuous quality improvement of HIV testing services, a number of interventions are planned, including development of guidelines for implementation of RTQII, provision of HIV confirmatory test kits, human resource development through trainings, continuous supervision, and mentorship.

HIV Self-Testing

In Rwanda, the geographic coverage of HIV testing services is around 97 % of all public health facilities. The strategies currently used for providing HIV testing services include facility-based and outreach HIV testing services.

Despite this high coverage, the 2014/2015 DHS has shown gaps in HIV testing in some specific segments of the population, including adolescents. This health survey showed that 86 % of women and 81 % of men have ever been tested for HIV and almost all (97 %) received their results. However, a low coverage of HIV testing among adolescents and youth was found, with 52.5 % of adolescent women (aged 15 to 19), and 41.5 % of adolescent men (aged 15 to 19) reported having ever been tested.

Introduction of HIV self-testing is expected to increase coverage of HIV testing services to people who are not currently reached through existing HIV testing approaches. Implementation of HIV self-testing will be done in a phased approach to gain enough experience to inform a national roll-out.

Under overall coordination of the national program by RBC, the first phase will be a joint effort between RBC and its partners in HIV response. Key interventions include procurement of HIV test kits, capacity building of stakeholders who will be involved in implementation, linking people with health facilities for cases who will need HIV confirmatory testing, and elaborating communication materials around the strategy for both HIV self-testing beneficiaries and health care providers.

Male Circumcision

Currently, two main methods are used in VMMC service delivery, traditional surgical and medical devices. These methods will continue to be the focus for the next three years to ensure that both adults and children are covered. The use of innovative technologies, such as VMMC devices, increased the number of voluntary medical male circumcisions,

including male circumcisions in non-clinical settings. Different approaches will continue to be used to reach the male population in need of VMMC services including mobilizing the general population through organized male circumcision campaigns in health facilities targeting schools, youth friendly services, and focusing on reaching key populations.

As male circumcision alone cannot provide complete protection against HIV, other prevention methods still need to be leveraged such as condoms, delaying sexual debut, and reducing the number of sexual partners. In addition to existing VMMC comprehensive services, systematic tetanus immunization was introduced in 2016 in the national guidelines as a mitigating strategy for tetanus risk. The feasibility of including male circumcision in the package provided by medical insurance schemes will continue to be studied to ensure universal access to this service.

Prevention of STI in general and key populations

This strategy aims to increase STI systematic screening from 40 % to 75 % of all HIV-positive clients, improve treatment of positive cases, and improve STI indicators that are reported in HMIS. Additional strategies including the introduction of rapid testing for herpes simplex type 2, gonorrhoea, and chlamydia in all district hospitals will be implemented.

Key interventions will focus on (1) provision of drugs and consumables for STI screening and treatment, (2) development/updating of communication tools for healthcare providers on STI screening, counseling, and referral for key populations, (3) training of healthcare providers on particular STI management for key populations, and (4) development/updating and production of an STI diagnosis algorithm for all health facilities.

A strong integrated clinical mentorship will be needed to support clinicians in appropriate STI systematic screening and management of PLHIV.

Pre-exposure prophylaxis

Pre-exposure prophylaxis is considered an additional prevention strategy in a comprehensive package of services. However, implementation of PrEP will not replace existing effective HIV prevention interventions such as condoms for key population and other interventions. Beneficiaries of PrEP will include key populations who have

substantial risk of HIV acquisition, including sero-discordant couples and female sex workers.

As PrEP is a new initiative, the plan is to complete a progressive scale-up starting from a small scale phase. The package of services includes HIV testing to ensure that those started on PrEP are truly HIV-negative to avoid any potential drug resistance after initiation, provision of PrEP drugs, and capacity building of health care providers who will be involved in program implementation.

Post-Exposure Prophylaxis

Access to post-exposure prophylaxis (PEP) and addressing the barriers to accessing these services is important to prevent new HIV infections from GBV and accidental exposure. Key interventions will focus on (1) elaboration and multiplication of PEP policy/tools for healthcare workers, and (2) provision of drugs for PEP.

Prevention with Positives

Primarily HIV prevention efforts in Rwanda have been focused on changing risk behaviours of HIV-negative individuals. However, greater attention is now being paid to prevention among HIV-positive individuals. Changes in the risk behaviours of HIV-infected individuals are likely to have larger effects on the spread of HIV than comparable changes in the risk behaviours of HIV-negative individuals. Helping PLHIV adopt safer behaviours is an important part of a comprehensive prevention approach. Broadly, positives prevention goals have been defined as reducing sexual transmission of HIV to partners, identifying HIV-positive partners/family members for care and treatment, reducing the risk of patient acquiring new STI and new strains of HIV, reducing unintended pregnancy and mother-to-child HIV transmission, reducing alcohol use that contributes to high risk transmission behaviours and poor adherence, and reducing viral load through increasing adherence to care and treatment. Key interventions will include capacity building of health care providers on prevention with package of services targeting HIV-positive persons, through integrated training, and involvement of index partner to ensure that they are tested for HIV and have access to family planning services.

Clinical prevention services to key populations

Some members of key populations may have limited access to health services in general and HIV programs in particular. Beyond limited access to services, they also face discrimination and stigma from both healthcare providers and their communities.

Specific attention will be paid to addressing barriers that key populations encounter when accessing health services. Health care providers will be trained on friendly services provision to key populations, in particular FSW and MSM. These friendly services will include HTS at health facility level and in the community through outreach, family planning and reproductive healthcare, STI screening, and treatment.

A special focus will be put on strong linkages to care and treatment for FSW and MSM tested positive for HIV so that they can start ART as per the “Treat All” strategy. This will go together with targeted adherence programs.

While elimination of new HIV infection in children through vertical transmission of HIV can now be considered a realistic public health goal in the general population, it is a more difficult goal to reach for some specific populations, such as female sex workers. The 2015 sex workers BSS survey revealed a high HIV prevalence of up to 45.8 % for children born of FSW. Thus, children born to HIV-positive FSW are among those most exposed to the risk of MTCT of HIV.

Special attention will be paid to FSW children and infants by providing them with PMTCT services and close follow-up as they are at high risk of being infected with HIV. Planned interventions include capacity building of health care providers, as well as mentorship and peer education aimed at improving utilization of HIV prevention and treatment services for children born to FSW.

Outcome 1.3: Reduction of HIV infection and hepatitis through blood borne transmission

The estimated number of new HIV infections through blood transmission in both clinical and non-clinical settings is very low. In terms of clinical settings, the blood transfusion system screens all donated blood for most common blood borne infections (HIV, HBV, HCV, syphilis), and universal precautions are generally followed in health facilities. In terms of non-clinical settings, the number of IV drug users is still believed to be very low in Rwanda, although there has not yet been any empirical research conducted to estimate

Output 1.3.1: People in need of blood transfusion have access to safe blood

the real prevalence of this problem in Rwanda. Therefore, the goal of this outcome is to reduce blood borne HIV infections, and other blood borne infections.

The National Center for Blood Transfusion (RBC/NCBT) is ensuring systematic screening for HIV and other blood borne infections in all donated blood. The improvements targeted include increasing geographic accessibility of blood transfusion services by strengthening regional blood transfusion centres and blood banks, increasing financial sustainability of the program by establishing a cost recovery system, improving the quality of services by setting up a Quality Management System (QMS), and strengthening equipment maintenance capabilities.

Output 1.3.2 Health care providers apply universal precautions for HIV

According to 2014/15 DHS (4), 99.2 % of men and 98.8 % of women aged 15-49 who had received an injection in the last 12 months declared that the syringe and needle used at last injection was taken from a new, unopened package. To maintain this high level of application of universal precautions, the main strategy is to provide sufficient equipment to health facilities and healthcare providers, including syringes and safety boxes. Medical waste management will continue to be a focus to ensure sustainable universal precautions. Further, health care providers will continue to provide and receive refresher trainings on safe injections and waste management.

Output 1.3.3 Targeted populations are reached with Hepatitis B and C

Hepatitis B and C screening and treatment of other blood borne infections

Viral Hepatitis, especially Hepatitis B Virus (HBV), can be transmitted from mother to child during pregnancy or delivery. According to National Viral Hepatitis guidelines, screening for HBV and Hepatitis C virus (HCV) by testing for HBsAg and HCVAb

should be performed at the first antenatal visit or other delivery setting for every pregnancy, regardless of previous Hepatitis B vaccination or previous negative HBsAg tests.

Vaccination against Hepatitis B virus will be recommended for pregnant women who screen negative for the virus. Additionally, those women who screen positive will be counselled and referred for care and treatment.

Other specific groups at high risk of acquiring or transmitting Viral Hepatitis (HBV and HCV) include healthcare providers (HCPs) due to their potential contact with infected bodily fluids, such as blood, incarcerated persons, FSWs, and MSM, as they are exposed to HBV and HCV via daily activities that expose them to bodily fluids, semen, and vaginal fluids. These high-risk groups will be screened for these infections to reduce transmission.

Provision of HBV Vaccine for Exposed Individuals

Vaccination against HBV has proven to be an important tool in preventing transmission of the virus. Typically given in a series of three doses, the vaccine provides protection from infection for more than 95 % of healthy infants, children, young adults, Community Health (CHWs) Workers, and HIV-positive people.

Health Providers (HCPs) and CHWs are at an increased risk of contracting HBV in the workplace due to their potential contact with infected bodily fluids, such as blood, saliva, and vaginal fluids. HIV-positive people and infants born from HBV infected mothers are also at high risk of acquiring HBV. They need routine provision of HBV vaccine to protect them from infection. It is recommended to provide 3 doses for each high-risk person, except for PLHIV, in which case 4 doses are needed to increase the efficacy of the vaccine.

4.2 Care and treatment result framework

Best practices and lesson learned in the last decade

- Political commitment to HIV response.
- Financial support from both the Government of Rwanda and partners.
- Revision and updated treatment guidelines based on global evidences.
- Decentralization and scale-up of ART services at the primary health facilities.
- Universal ART coverage among PLHIV.
- Task shifting from medical doctors to nurses for ART prescription and patient follow-up (nurses now prescribe ART to adult and children patients).
- Improved quality of services through clinical mentorship in HIV care and treatment.
- Strengthening health system (human resources capacity building, laboratory capacity at all levels).
- Availability of medicines (first, second, and third line ART, including paediatric formulation).
- Initiation of a Differentiated Service Delivery Model (DSDM) to support “Treat All” strategy.
- “All In” initiative operational plan to guide interventions addressing gaps in HIV services to adolescents.
- Implementation of peer-education program as a community based approach to support patients’ adherence to treatment.

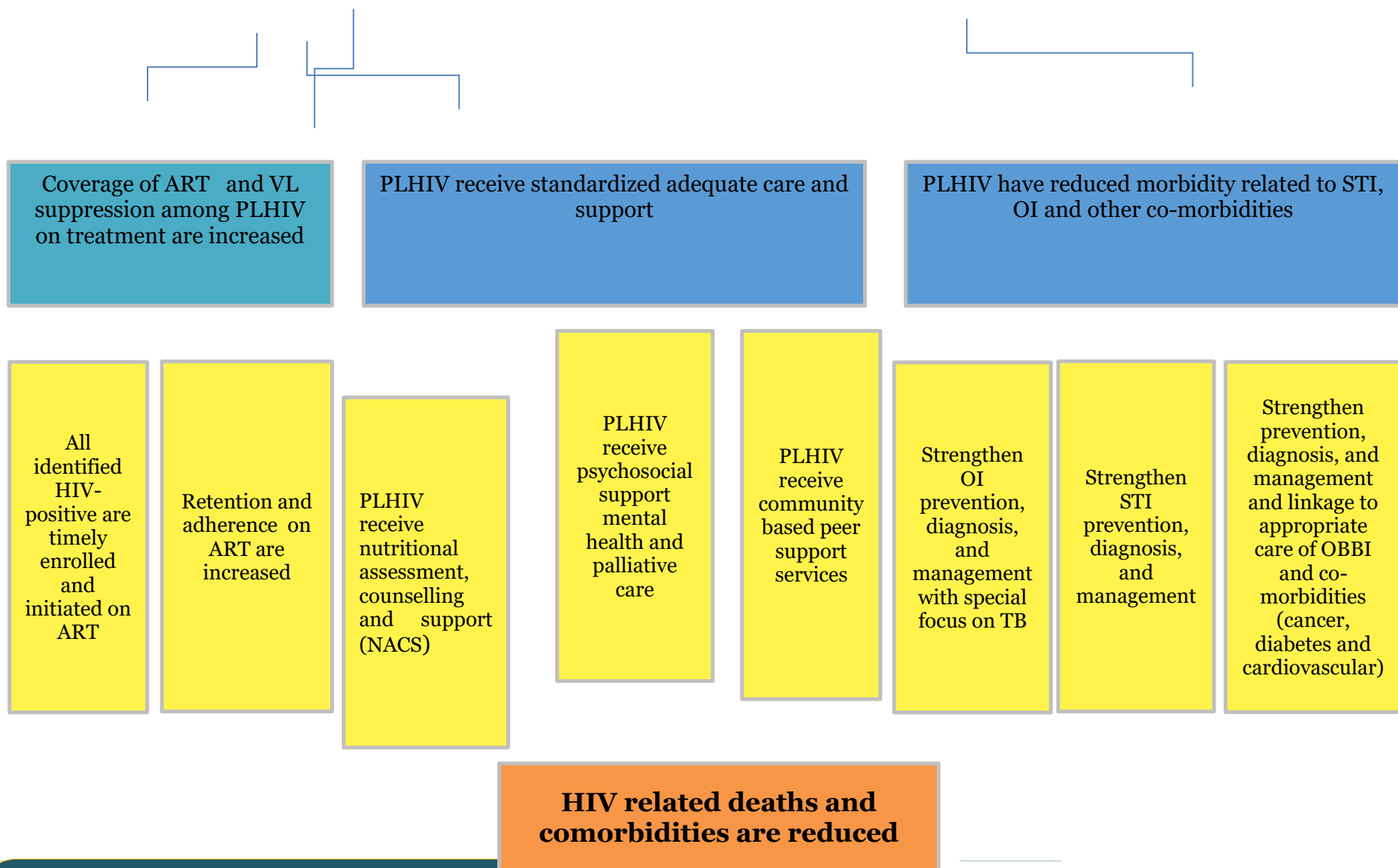
Challenges in HIV care and treatment

- Decreased funding for HIV response affecting treatment coverage.
- Low coverage of ART and low VL suppression among children and adolescents compared to the global target.
- Low decentralization of viral load tests at the point of care.
- Limited laboratory capacity to screen/diagnose all STIs, OIs, and other co-morbidities.
- Gap in terms of linkage between HIV testing and HIV care and treatment services.
- Sub optimal adherence to ART among children and adolescents.
- High staff turnover.
- Insufficient adolescent and youth friendly services.


Innovations to address challenges and sustain best practices

- Integrate services and trainings (reduce routine training and increase onsite trainings and e-learning).
- Tools to educate patients on the importance of ART adherence to increase their HIV care knowledge (leaflets, visual audio etc.).
- Reinforce psychosocial support at health facility, and community involvement through a peer-education model to support adherence and retention.
- Update treatment protocol to facilitate adherence and retention (pill burden, frequency, side effects).
- Implement and monitor the referral system to improve linkage between HIV testing and treatment services.
- Implement same day enrolment to all patients tested positive.
- Implement same day ART initiation according to patient's readiness.
- Special monitoring of key groups: children, adolescents, key populations, pregnant and breastfeeding women (viral load monitoring, support groups, friendly services).
- Continue and monitor "Treat All" strategy and Differentiated Service Delivery Model (DSDM)
- Improve active screening of nutritional status, OIs (TB, Crypto) and other co-morbidities (viral hepatitis B and C, diabetes, cardiovascular diseases, cancers,...), and increase early diagnosis capacity (molecular diagnosis, LAM,...) to reduce mortality and morbidity,
- Increase number of nurses trained on task shifting for ART for adult, paediatric and second line prescriptions to address high staff turnover.
- Improve sample testing and result availability by implementing point of care and Laboratory System Information (LIS) and upgrade existing gene expert machine.
- Reinforce quality of care through clinical mentorship, tools and SOPs availability and uses.

Figure: Care and treatment result framework







The impact result targets the physical and mental wellbeing of PLHIV . It therefore encompasses not only access to treatment and care, but also adherence to treatment, viral load suppression, and early diagnosis and management of HIV related morbidities. Indicators chosen for this result take into account the UNAIDS global targets (90,90,90) mainly the second and third 90.:

- Percentage of PLHIV (adults and children) on ART compared to all infected PLHIV (baseline: 84 %, target: 86 %).
- Percentage of VL suppression among PLHIV (Baseline: 92%, target: over 90%)
- Percentage of people still alive (adults and children) and on treatment 12 months after initiation of ART (baseline: 92.7 %, target: over 90 % in 2014).
- Percentage of

This result will be achieved through the following three outcomes, which are related to specific types of services required to reduce morbidity and mortality within the framework of comprehensive care and treatment for PLHIV:

Outcome 1: The coverage of ART and the VL suppression among PLHIV on treatment are increased

Outcome 2: People living with HIV receive standardized adequate care and support

Outcome 1: PLHIV have reduced morbidity related to STI, OI, and other co-morbidities

Outcome 3: PLHIV have reduced morbidity related to STI, OI and other co-morbidities

This outcome is subdivided into three outputs, designed to ensure that specific important co-infections and morbidities are adequately addressed within the framework of a comprehensive care and treatment package.

Output 1.1: Strengthen OI prevention, diagnosis, and management with special focus on TB

Prevention, diagnosis and management of opportunistic infections (OIs) still remain an important strategy for the wellbeing of PLHIV. Early diagnosis to recommend appropriate treatment of OIs is key to reduce mortality and morbidity related to OIs. Particular attention will be paid to cryptococcus and tuberculosis infections as mortality and morbidity of these OIs are high.

In an effort to reduce the burden of TB in PLHIV, TB case finding will be intensified through systematic screening of TB symptoms for all HIV patients at enrolment and follow-up in HIV clinics, as well as at every follow-up visit with a care provider. Screening tools will be strengthened by introducing chest x-rays for new PLHIV enrolled in care and treatment. Capacity of health facilities will be strengthened regarding para clinical examinations for those suspected of having TB, using gene expert and Lateral Flow Lipoarabinomannan (LF-LAM) for specific groups. Patients with HIV/TB co-infections will be put on ART based on their CD4 count. To achieve these targets, the collaboration of TB and HIV programs at all levels will be strengthened, and will be supported through a well-functioning M&E system.

All PLHIV with low immunity (CD4 less than 200 cells) at enrolment will be systematically screened for Cryptococcus and managed according to national protocol. Screening for cervical cancer will become part of the systematic OI screening for PLHIV. This screening practice will be included in the regular training and refresher courses for healthcare providers.

People with disabilities due to OIs will be facilitated in rehabilitation for appropriate management.

Output 1.2: Strengthen Sexual Transmission Infections (STIs) prevention, diagnosis, and management

This strategy aims to increase systematic STI screening for treatment of positive cases, and reinforce prevention of STI infection. Currently, 60 % of clients visiting a health facility are screened, and this strategy should be strengthened in order to screen more people and provide drugs for positives cases. Additional strategies, such as introduction of new STI tests approved by national guidelines for all district hospitals, will be implemented. To achieve this goal, emphasis will be put on updating STI national guidelines, training healthcare providers, and ensuring availability of STI drugs at all health facilities. Further, strong integrated clinical mentorship will be needed to support clinicians in appropriate STI management to prevent HIV infection.

Output 1.3: Strengthen prevention, diagnosis, and management and linkage to appropriate care of OBBI and co-morbidities (cancer, diabetes and cardiovascular)

Hepatitis B and C

Evidence shows that HIV, hepatitis B Virus (HBV) and hepatitis C Virus (HCV) are transmitted in similar ways, and it is common for an individual to be co-infected. In fact, HIV and HBV and/or HCV co-infected individuals are more likely to become chronically infected with hepatitis compared to individuals who do not have HIV, leading to severe complications such as liver cancer and cirrhosis. Furthermore, certain specific groups are at higher risk of acquiring or transmitting certain types of viral hepatitis (HBV and HCV). These groups include healthcare providers, pregnant women, FSW, and MSM. These groups should be screened for both HBV and HCV infections for specific management.

Among these groups, serologic markers (liver tests) will be conducted to screen for HBV and HCV. Further, viral load and genotyping tests will be performed for treatment initiation and monitoring. Capacity building for monitoring hepatitis co-infections through training and mentorship is critical and will be conducted for health care providers at all health facilities.

Other co-morbidities (cancer, diabetes and cardiovascular diseases)

The expanded delivery of antiretroviral therapy has increased life expectancy for PLHIV. Consequently, there has been a shifting burden of morbidity and mortality from AIDS-related opportunistic infections to chronic conditions associated with aging, including non-communicable diseases (NCDs) such as cancers, cardiovascular diseases, and diabetes. Therefore, addressing these non communicable chronic conditions has become an important public health priority.

Addressing NCDs among PLHIV by ensuring access to screening in HIV services and linkage to NCD services for diagnosis and treatment, in order to decrease morbidity and mortality.

Outcome 2.: ART coverage and VL suppression among PLHIV on treatment are increased

Initiating PLHIV on treatment is one of the main strategies to keep them alive. ART improves the quality of life of PLHIV by maintaining their immunity. The main objective of ART is to suppress the VL.

Output 2.1: All HIV-positive identified are timely enrolled and initiated on ART

The 95-95-95 HIV global target identifies the following goals be met by 2030: 95 % of all HIV infected people are diagnosed, 95 % of all diagnosed people are initiated on ARVs, and 95 % of those on ARVs have a suppressed viral load.

The Rwandan Ministry of Health (MoH) is implementing the ‘Treat All’ strategy since 2016 with the main objectives being early ART initiation. The 2018 HIV guidelines recommend same day enrolment, and same day ART initiation to decrease loss to follow up and thus increase the number of PLHIV on ART.

The actual coverage of ART among PLHIV is 84 % and is used as the baseline value to measure progress during the period of this 2018-2024 NSP.

Key strategies for this output include:

- Increase communication campaigns to encourage HIV testing, especially among groups with high risk behaviours
- Strengthen the linkage between HIV testing entry points and care and treatment, leveraging home visits and monitoring meetings within health facilities and districts, and ensuring same day enrolment
- Provide short but comprehensive counselling sessions for early initiation (same day initiation when possible considering patient readiness)
- Initiate pre-ARV laboratory tests

Output 2.2: Retention and adherence on ART are increased

As geographic access to HIV services is high, the main challenge of the program is to maintain and improve the quality of services, with an overall aim at improving the quality of life for PLHIV. This goal will be achieved through integrated training of providers shifting from face to face method towards e-learning system, integrated clinical mentorship, and early detection of ARV treatment failure (viral load as per national recommendation), as well as use of differentiated service delivery model. As viral load is the back bone of monitoring patients on ARVs, its availability at point of care is a priority to decrease turnaround time, as well as the use of LIS for quality control. To ensure the availability of HIV and AIDS medications and commodities, the supply chain

will be strengthened for timely and reliable procurement, distribution and monitoring. Furthermore, clinical mentorship and formative supervision will be strengthened to support the successful implementation of all above strategies. In estimating the human resources needed to provide quality services to an increasing number of patients, new strategies for existing staff to absorb the additional workload will be initiated, including the HIV Differentiated Service Delivery Model (DSDM) for patient follow-up to improve the quality of care.

The Differentiated Service Delivery Model (DSDM), also referred to as differentiated care model, simplifies the delivery of ARV treatment, care, and support by taking into consideration various patient needs and priorities based on clinical and virological status. It aims to decrease patient clinical visits and pharmacy pick-up for medications (ARVs and OIs prophylaxis) depending on a patient's outcome and adherence to services and ARVs. Patients with good adherence and VL suppression (stable patients) will have longer time between both their clinic visits and pharmacy pick-up (6 months and 3 months), and unstable patients (less adherence and not suppressing) will continue with usual clinic visit and pharmacy pick-up times (3 months and monthly).

In addition a home-based services delivery will be initiated for people with disability and any other person in need.

Specific groups with historical issues related to adherence and retention will be focused on, including children, adolescents, key populations, and pregnant and breastfeeding women, among others.

Global initiatives such as “All In” focusing on adolescent and young adult interventions for HIV prevention, care and treatment, and sexual reproductive health are being initiated in Rwanda. “All In” is a platform aiming to drive better results for adolescents (aged 10-19 years) through critical changes in programs and policy. It seeks to engage adolescents and unite actors across sectors to accelerate reductions in AIDS-related deaths and new HIV infections, as well as improve the sexual and reproductive health of adolescents. The platform was created in reaction to alarming evidence showing that AIDS is the leading cause of death among adolescents in Africa and the second most common cause of death globally.

Recent evidence revealed that 68 % of health facilities in Rwanda providing ART do not have a healthcare provider appropriately trained in adolescent-friendly services. In

addition, the proportion of adolescents and young adults who are biologically suppressed (viral load below 1000 copies) at 6 months after treatment initiation remains low: 74.1 % of adolescents aged 10-14, 79.5 % of adolescents aged 15-19, and 78.8 % of young adults aged 20-24 are biologically suppressed. Therefore, steps need to be taken to improve retention and adherence for these age groups.

One strategy to address gaps in adolescent HIV services and outcomes is to gain a better understanding of factors associated with low linkage, treatment, and VL suppression among adolescents. Further, trainings and mentorship on adolescent friendly services are planned for HCPs to enhance retention and adherence among this specific population.

Provision of care and support services to patients on ART is essential to ensure adherence to treatment and VL suppression to reduce HIV-related mortality and morbidity. The outputs contributing to this outcome are nutritional and psychosocial support through HCPs and community support.

Outcome 3: People living with HIV receive standardized and adequate care and support

Output 3.1: People living with HIV receive Nutritional Assessment, Counselling and Support (NACS)

Nutrition and HIV outcomes are strongly related. Malnutrition is a common complication of HIV infection, and it is likely to play a significant and independent role in its progression, morbidity, and mortality. In order to reduce malnutrition among PLHIV, we will integrate and reinforce Nutritional Assessment, Counselling and Support (NACS) within HIV and AIDS services, particularly in care and treatment and in PMTCT services in all health facilities:

- Nutritional assessment and counselling for all PLHIV to identify their nutritional status and act accordingly: at each health facility visit, patients will be screened for nutrition status according to the national guideline and counselling will be given accordingly.

- A family screening, index identified at HF with malnutrition, will be conducted by health care providers for case identification.
- Nutritional rehabilitation for eligible PLHIV and family members with malnutrition: the criteria for enrolment in nutritional support for PLHIV and family members are defined in the National Guidelines of Care and Nutritional Support, and all identified PLHIV eligible for support receive a defined package as per national recommendations.
- This NSP will put emphasis on training and mentorship for health care providers, community health workers, and peers educators, as well as ensuring availability of nutrition support as recommended.
- Capacity building on good nutritional practices: evidence shows that poor feeding practices are linked to malnutrition among PLHIV and affected by HIV. Efforts will focus on enhancing knowledge and skills on good nutritional practices through education and sensitization.

Output 3.2 PLHIV receive psychosocial support, mental health support, and palliative care

Psychosocial counselling

The HIV care and treatment program will enhance psychosocial care and support for different categories of PLHIV such as children, adolescents, youth, and adults. Psychosocial care and support will be provided through individual psychosocial consultations, as well as reinforcement of HIV disclosure and support groups especially for children and adolescents. To achieve this level of care and support, capacity building of healthcare providers through training and mentorship will be an important element for managing complicated cases and ensuring improvement of quality of life for PLHIV. Psychosocial counselling before ART initiation will strengthen same day ART initiation considering readiness.

Mental health-HIV integration services

Integration of mental health and HIV services is an identified strategy to improve quality of care of patients with HIV and mental health problems. Through mental health

screening for PLHIV, all patients identified with mental health problems will be referred to mental health services. Furthermore, HIV prevention measures for people with mental disorders will be established. Provider-initiated testing (PIT) and HIV adapted prevention education will be provided to clients with mental health problems.

Palliative care services

As HIV is a chronic disease with related chronic coinfections and comorbidities, a palliative care program is required for patient support through end of life when needed. Palliative care will be provided to patients at either a health facility or within the community depending on patient status and national recommendations.

Output 3.2. PLHIV receive community-based peer support services

The spacing of patient visits to health facilities through DSDM allows a large number of HIV-positive patients to spend more time in their communities,. However, for DSDM to be successful, it must be supported by a community-based approach, namely peer education.

Peer education will be established to provide moral and psychological support to patients, promote adherence to treatment, and refer patients to a health facility when needed. Peer education will contribute to reducing time spent at clinical visits. From a health system perspective, reducing clinic contact for clinically stable ART patients to focus resources towards managing patients with complex clinical problems is a key objective. This shift has the potential to reduce staff workload and improve quality of care. From an HIV social impact mitigation perspective, the peer education approach will play a key role in improving referrals and linkages between the community and health facilities.

Community support through peer education will be the focus of this NSP, and will contribute to strengthening the Rwandan healthcare system by improving efficiency and quality of services. This strategy is a priority to deliver quality care in the context of high treatment coverage and DSDM.

4.3 Impact mitigation result framework

Best practices and lesson learned in the last five years

- Transitioning support from OVC to MVC to ensure most effective coverage and sustainability.
- Significant progress achieved in providing socio-economic support services to PLHIV and HIV-affected people.
- Continuous progress during the implementation of the previous NSP in providing legal support services to infected and affected populations; local authorities are more involved in community-led activities to reduce stigma and discrimination and promote the human rights of PLHIV.
- Significant progress in increasing the availability of services for all victims of SGBV at the community level, functional referral systems with the police and community-based organizations for SGBV survivors. One of the biggest successes was the creation of one-stop centers across the country that provide comprehensive services to survivors.

Challenges in HIV impact mitigation

Challenges associated with the existing impact mitigation programme include:

- Cooperatives of PLHIV lack competitiveness and innovations to continuously increase income

- Some PLHIV are still food insecure.
- The number of partners and subsequent funding to support MVC is far lower than needed.
- MVC have difficulties to access some services, particularly financial support services. For instance, some child-headed households cannot access credit without start-up capital.
- Stigma and discrimination remain a reality and continue to act as barriers to health service access for PLHIV and other vulnerable groups. This, in combination with perceived stigma, may prevent PLHIV from accessing these services.
- Despite the existence of a conducive legal environment for the HIV response, gaps still exist, most notably in terms of ensuring access to services and social protection for vulnerable groups.
- There are gaps in updated data on stigma and discrimination. Due to limited evidence on HIV related stigma and discrimination, programs lack measurable indicators and targets to monitor progress towards the Zero stigma and discrimination global target.

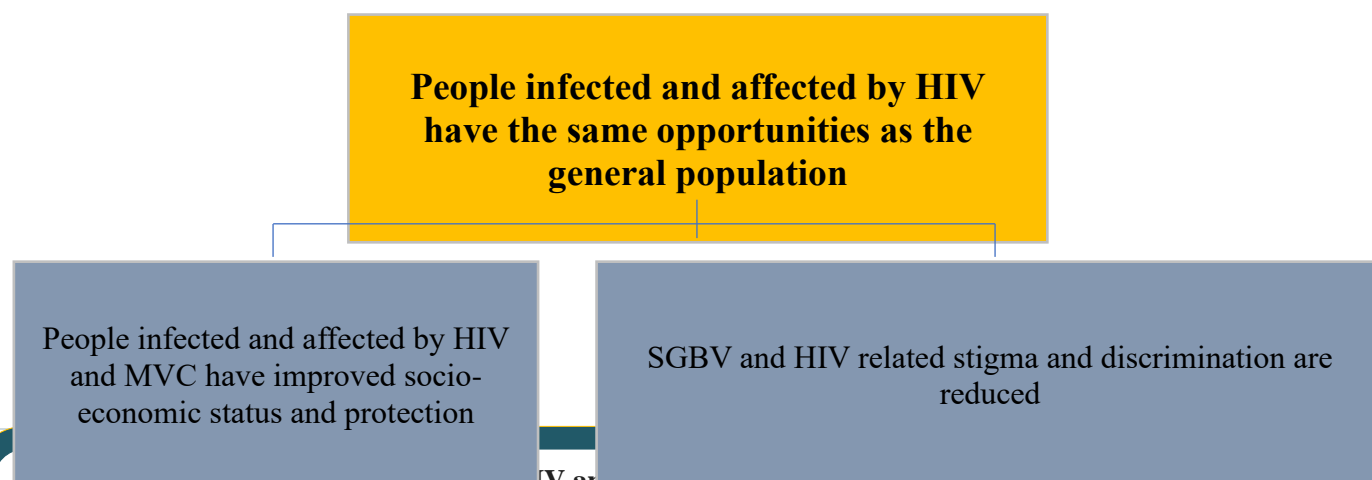
Innovations to address challenges and sustain best practices

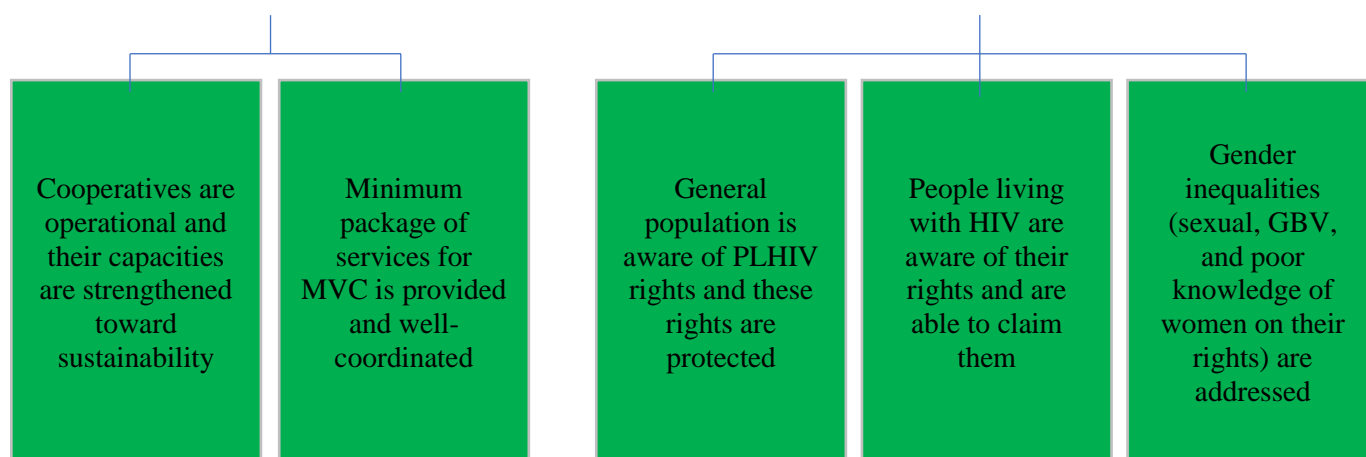
- The National Commission for Children (NCC) will play a major coordination role by bringing together partners to ensure implementation of the national minimum package of MVC services at all levels, a standard identification mechanism for MVC support that all partners and all levels can easily follow, and updated MVC database in the country to provide stakeholders with the appropriate information.
- Develop mechanisms and strategies to improve access to credit for people infected/affected by HIV by encouraging them to be in cooperatives.
- Continuous sensitization against stigma and discrimination and auto-stigmatization of people affected and infected by HIV.
- Strengthen the protection of rights of people infected and affected by HIV especially

at the workplace and in schools.

- Provide gender-specific services targeted towards young women and their specific vulnerabilities. Coordination and collaboration between the national and decentralized levels will also be strengthened.

Figure 6: Impact Mitigation result framework





IMPACT 3: People infected and affected by HIV have the same opportunities as the general population

Outcome 3.1: People infected and affected by HIV and MVC have improved socio-economic status and protection

The combination of existing and new strategies and interventions will contribute to improving the life of people infected and/or affected by HIV. This impact result will be measured through various studies mainly the Cooperative Impact assessment among PLHIV and the HIV Stigma Index. The following two outcome results "people infected and affected by HIV and MVC have improved socio-economic status and protection", and "SGBV and HIV related stigma and discrimination are reduced" will contribute to the attainment of the expected impact

Strategic and result oriented interventions to improve the socio economic status and protect people infected and affected by HIV include: (1) Strengthening the capacity of

cooperatives to create and innovate more towards sustainability. This intervention will contribute to decreasing dependency of PLHIV on external support, and lead to self-reliance. (2) Providing a minimum package of services to MVC and ensuring effective coordination. Mitigating the impact of HIV among children will contribute to reducing their vulnerability to HIV, and therefore provide a backup to national efforts towards decreasing new HIV infections.

Output 3.1.1: Cooperatives are operational and their capacities are strengthened toward sustainability

Cooperatives are coordinated by the Rwanda Network of People Living with HIV (RRP+), and have been accredited by the Rwanda Cooperative Agency (RCA). These cooperatives have been promoted and supported in the last five years to improve socio economic outcomes of their members. Strategic support for cooperatives will focus on capacity building of existing cooperatives to improve their competitiveness by improving the quality of their products, and stimulate market related innovations.

The National Children Commission (NCC) is the institution in charge of coordinating Most Vulnerable Children Interventions (MVC). The Commission defines a minimum package of services for MVC including the following: health, nutrition, education, shelter, social protection, as well as psychosocial and socio-economic support.

These services are provided to MVC by different stakeholders in accordance with the Integrated Child Rights Policy (ICRP). In addition to provided services, efforts will also focus on enhancing coordination and expanding access to Early Childhood Education for MVC.

Outcome 3.2: SGBV and HIV related stigma and discrimination are reduced

Sexual Gender Based Violence (SGBV) and HIV related stigma and discrimination remain the drivers of new HIV infections. During the course of the NSP the environment to prevent SGBV will be strengthened, and survivors will be provided with appropriate services at a decentralized level as strategized into the Health Sector Strategic Plan IV (HSSP IV).

Despite the progress made for universal access to treatment for PLHIV, stigma associated with HIV infection is still prominent, as documented by the last Stigma Index Survey.

Output 3.2.2: People living with HIV are aware of their rights and able to claim them

Output 3.2.1: General population is aware of PLHIV rights and these rights are protected

This stigmatization of PLHIV is the result of persistent prejudice among the general population, and of self-stigma among people infected and affected by HIV. Thus, stigma represents an important barrier to accessing services for many PLHIV and must be adequately addressed to successfully achieve universal access.

The promotion and protection of the rights of PLHIV is essential to the success of HIV response. Strategic interventions including awareness campaigns for the general population on the rights of PLHIV will be conducted. The legal framework protecting the rights of PLHIV will also be strengthened, and legal support will be provided for the beneficiaries. This output result will also be achieved by reinforcing the knowledge of local authorities and peer educators of laws protecting PLHIV.

Knowledge of their rights is key for PLHIV to be able to claim them and use appropriate mechanisms and channels as per national policy and law provisions to address rights abused. Raising awareness among PLHIV on their rights is an important strategy to address HIV related stigma and discrimination. To increase awareness requires a synergy of various stakeholders.

Output 3.2.3 Gender inequalities (sexual, GBV, and poor knowledge of women on their rights) are addressed

Levels of SGBV and violence in general remain high, including among sero-discordant couples. Therefore, providing access to legal services to SGBV victims, and integrating SGBV related messages into existing communication channels are important. Efforts will be put into reinforcing linkages and referral systems between the community, police authorities, and health services for comprehensive care of survivors. SGBV services will be integrated into existing health services at each health facility. Special legal, psychological, and care packages will be provided to the most vulnerable groups, such as children, young girls, and others facing SGBV at community levels. Furthermore, the discrimination faced by women and youth living with HIV will be given special attention in sensitization campaigns

4.4 HIV management and health support systems

Apart from the three main programs leading the national HIV response as described above, there are also cross-cutting components providing support systems, and resources, needed for the implementation of interventions. These systems are categorized into two types of involvement.

First, HIV-specific management mechanisms are supervised by central institutions (RBC and MoH for health sector institutions), government ministries leading the economic development sectors, and civil society umbrellas for the coordination, monitoring, and evaluation of the national HIV response. HIV-specific training is also included in this component.

Second, many resources that are essential for the successful functioning of the HIV program are coming from the health sector, but not as HIV-specific resources. As has been the case in the past, the HIV program is contributing to the strengthening of the health sector as a whole, and at the same time, general health resources are mobilized to implement HIV interventions.

- For example, most human resources providing HIV services to the population, as well as management staff, are not HIV specific and devote only part of their time to the management of the HIV epidemic. The training of nurses to provide HIV services that were previously reserved only for medical doctors (task shifting) is contributing to the capacity building of the health workforce. Integrated

supervision and mentoring are also important activities to increase the competency of health staff. Performance-based financing mechanisms support the provision of quality services for healthcare in general, and also more specifically for HIV services.

- Similarly, health infrastructure (health centres and hospitals, maternities, laboratory, and pharmacies at central and decentralized levels) is crucial for the provision of HIV services, but also plays a larger role for health services in general.
- Community-based health insurance (Mutuelles de santé) is a major health system program ensuring accessibility to healthcare for a large segment of the Rwandan population (91 %), and thus also benefits PLHIV.
- Cooperatives of community health workers are being rewarded for the services they give to their communities through community performance-based financing (covering HIV and many other types of services).
- Setting up an Electronic Medical Record (EMR) system whereby each patient will have an electronic record of all personal health related data will be critical to monitor certain HIV indicators for which data could previously only be collected through specific (and costly) population surveys.

All of these support systems belong to the health sector as a whole, but contribute in a very significant manner to the success of the HIV program. Due to this interrelationship, this NSP is allocating an important part of its budget to strengthening these different aspects of the health system.

5. TOOLS WE HAVE: GOVERNANCE MECHANISMS

5.1 National level coordination

The RBC-Institute of HIV Disease Prevention and Control (IHDPC) is the national coordinating agency responsible for ensuring that all HIV interventions in Rwanda are harmonized and aligned with national priorities and strategies, and that the Three Ones principle (one national coordinating body, one national strategy, one national M&E framework) is followed. To achieve this, a standard format has been designed for both

annual plans, and for quarterly and annual reporting that is used by all partners involved in the national response to HIV and AIDS. Annual plans and annual reports are developed by all districts, economic sectors, and umbrella organizations, and are consolidated into a national HIV annual plan and report.

RBC/IHDPC coordinates clinical and non-clinical aspects of the national response to HIV and other disease prevention and control. Within IHDPC, the HIV Division coordinates HIV, AIDS and STI and other blood borne infection activities. It is responsible for national planning, formulation of policies, training of trainers, and curriculum development of clinical programs. It provides technical assistance and gives guidelines pertaining to the organization and effective management of HIV and AIDS, STI, and other blood borne infection control programs. It is also responsible for monitoring, evaluating, and coordinating health sector activities as a whole in response to HIV. It ensures the coordination of research on STI, OI, VCT/PMTCT, TB and ART, as well as socio-behavioural research.

Apart from the HIV Division, a number of other divisions within RBC are also playing important roles in contributing to the HIV response, including: National Reference Laboratory (NRL) Division, National Center for Blood Transfusion (NCBT), Health Communication Center (HCC), Medical Procurement and Production Division (MPPD), Tuberculosis and Other Respiratory Diseases Division (TB), and Vaccine-Preventable Diseases Division (VPD).

5.2 Decentralized/district level leadership and coordination

Following the decentralization process, local governments at district level are responsible for the management of all public services. The District Health Unit plans and coordinates all health interventions in the district, including HIV-related activities.

5.3 EDPRS sectors

Implementation: In EDPRS 2 covering the 2013–2018 period, HIV is addressed as a crosscutting issue, and priority activities have been identified in all twelve economic sectors. They include not only ministries and public institutions, but also all private and community organizations involved in the same field of activities. HIV and AIDS activities implemented by each sector at the district level are integrated into the five-year

District Development Plans (DDP) and district annual work plans.

Coordination: Under the coordination of a lead ministry, each of the twelve EDPRS sectors has a strategic plan, as well as an annual work plan, within which HIV activities are integrated. Each sector has put in place an HIV focal point that has the responsibility to coordinate the implementation of its HIV priority activities at central and decentralized levels. RBC/IHDPC/HIV Division will support each lead ministry to coordinate HIV activities undertaken by the sector at the district level, and will ensure that HIV interventions of different sectors are delivered in a coordinated way at the district level.

5.4 Civil society organizations

Implementation: Civil society organizations will contribute to the implementation of the NSP. In the field of prevention, many outreach activities for the general population will be implemented by community health workers and civil society organizations. Civil society organizations will be important actors for the implementation of new strategies developed in this NSP, including the delivery of a comprehensive package of preventive interventions for identified key populations and most vulnerable groups (FSW and their clients, MSM, mobile workers, sero-discordant couples, PLHIV for positive prevention, people with disabilities, etc.).

There will be a concerted effort to improve collaboration and coordination mechanisms between civil society organizations and health services to ensure complementarity and synergy between their interventions.

In the field of care and treatment, 40 % of healthcare facilities are managed by faith-based organizations, and are fully integrated into the healthcare system. Furthermore, there is strong collaboration with the MoH and public coordinating bodies to ensure quality of care and respect of national guidelines and standards.

Associations and cooperatives of PLHIV and affected people have been key players in the implementation of activities aimed at mitigating the impact of HIV and AIDS, including income-generating activities. Faith-based organizations are also strongly involved in the provision of psychosocial support to PLHIV and OVC. In all these areas of activities, civil society's role as a major implementer will be enhanced through improved mechanisms of collaboration with public services, and through the established national framework for comprehensive packages of services.

Coordination: The different sectors of civil society are coordinated by five umbrella organizations: Rwanda NGO Forum on HIV and AIDS, Faith-Based Organizations Network against AIDS (RCLS), Rwanda network of PLHIV (RRP+), Umbrella of People with Disabilities in the Fight against HIV and AIDS (UPHLS), and ABASIRWA network of journalists (newspapers, radio and TV stations).

Civil society umbrella organizations have various roles in relation to coordination: planning, monitoring, documentation and sharing of best practices, capacity-building of their members, participation in national decision-making bodies and technical working groups, and advocacy for a better recognition of the role of civil society in the response to HIV.

5.5 Private sector

To coordinate the HIV response in private and para-public enterprises, the Rwandan Private Sector Federation has set up an HIV unit. This unit has the mandate to support and oversee HIV committees established in private enterprises and business development committees at the district level.

5.6 Public sector

Similarly, to coordinate workplace programs in public sector institutions, MIFOTRA has established the Public Sector Umbrella in the Fight against AIDS (USPLS). USPLS mobilizes the public sector to provide a coordinated and effective response to the epidemic. One hundred and thirty public institutions are registered in its database.

5.7 Operationalizing the NSP at implementation level

This NSP document includes a general operational plan that identifies the actors involved, the general timeframe, and a budget estimate for each activity. Based on this general plan, each actor will develop its own work plan taking into account NSP guidelines, both at central and decentralized levels. Interventions will be categorized according to the setting through which they will be implemented, either at the community or facility/institutional level.

At the national level, each EDPRS sector will develop its annual operational plan, drawing on the NSP to guide the implementation of its HIV priority activities. At the

district level, all actors involved in the local HIV response will come together to determine the district annual work plan.

5.8 Partnership for greater harmonization and alignment of donors with NSP priorities

Despite a continual decrease in external funding for HIV, the successful implementation of the NSP continues to depend to a large extent on the support of Rwanda's development partners. These development partners include official donors, local and international NGOs, civil society, and the private sector.

In line with the Paris Declaration on Aid Effectiveness, the Government of Rwanda recognizes the importance of mutual accountability in its relationships with donors, and will take steps to strengthen these reciprocal obligations through the use of new and existing systems. During the implementation period of the last NSP (2009–2013) (7), the main external donors contributing to the national HIV response (GF, PEPFAR, and the One UN program) have all aligned their programs to the strategies and priorities set by the NSP. This accomplishment should be continued and strengthened during this new NSP.

5.9 Financial management mechanisms

Rwanda's financial management mechanisms are structured as follows:

- The national procurement system is supervised by Rwanda Public Procurement Authority (RPPA), which is an agency affiliated with the Ministry of Economy and Finances (MINECOFIN). It oversees the implementation of the existing public procurement laws and public procurement policies issued by the Cabinet. The different procuring entities (ministries, public institutions, and decentralized administrative entities) submit their annual procurement plan and monthly procurement reports to RPPA, which provides them with supervision and technical assistance for capacity building and conducts audits regularly.
- The national financial and audit systems are under the authority of MINECOFIN, which supervises and provides technical assistance to the budget entities. Each entity submits its annual budget to MINECOFIN on the basis of its negotiations with donors, and requests funds from MINECOFIN after submission of monthly

and quarterly financial reports.

- The Office of Auditor General (OAG) reports to the Parliament and conducts audits of all budget agencies and government projects. It verifies if the Government of Rwanda's accounting and financial data are accurate and if the government collects or spends the authorized amounts for purposes envisaged by the Parliament and donors. It also verifies if budget entities have internal control systems to safeguard the reception, custody and adequate use of public goods, and if programs were implemented economically and efficiently. Its functions are guided by laws and cabinet decisions establishing the regulations of public financial management.

Other important assurance frameworks are also in place, including the Office of the Ombudsman to ensure transparency and to deal with corruption and fraud, the Office of the General Prosecutor to monitor implementation of audit findings (OAG reports to the Parliament) and to follow-up on reports of mismanaged funds, and the Parliamentary Public Fund Committee to oversee the implementation of audit recommendations on reported mismanagement.

MoH and public institutions under its authority (including RBC) follow the general financial management mechanisms described above.

6. ASSESSMENT OF WHAT WE ARE DOING: M&E PLAN ON HIV AND AIDS

The national M&E plan and strong evidence for planning and programming remain crucial as the Government of Rwanda continues to implement and scale-up comprehensive HIV prevention, care, and support interventions for its population. Based on the work of the previous plan, this M&E plan outlines the strategies that will be implemented from 2018 to 2024 in order to further strengthen a fully functional HIV M&E system that meets the data and information needs of all stakeholders at all levels, while also focusing on key populations.

6.1 Development of the M&E plan

This M&E Plan was developed according to the guiding principles of functional M&E systems generally accepted by the international community, and followed a participatory process engaging all HIV M&E stakeholders at both national and district levels. RBC, in collaboration with partners, organized a workshop in June 2013 to assess the functioning of the national M&E system by using the M&E Systems Strengthening Tool (MESST) and the UNAIDS Monitoring and Evaluation Reference Group's (MERG) approved assessment tool for the twelve components of a functional national HIV M&E system.

The M&E plan was developed to strengthen an overall system which is able to measure to what extent all HIV services are delivered in a high-quality manner, target the appropriate population, and ultimately contribute to the achievement of NSP output-level results in accordance with the NSP results framework. The system prioritises strategies to promote the use of data for decision-making at all levels of the HIV sectors, as is the overall objective of any well-functioning M&E system.

Based on the NSP result framework for each overarching result, indicators were assigned for each result level in the NSP, with the most recent baselines available and target results provided for each indicator. These indicators constitute the list of common national indicators (See matrix of indicators in Annex 1). The matrix of national indicators was developed with the contribution of all main stakeholders, and is coherent with key national indicators, namely EDPRS 2 and the Health Sector Strategic Plan (HSSPIII). Additionally, the list refers to the most recent international guidelines (MERG Indicator Registry) and includes a key subset of indicators from SDG, GAM, PEPFAR, and Global Fund, as well as indicators for universal targets.

6.2 National and program-level indicators

National and program-level indicators (community-based and health facility-based) will be monitored regularly (depending on the indicator type) and made operational at the district level (service delivery level) to ensure adequate data collection at all levels. For each national and program-level indicator, an indicator reference sheet describes the definition, the frequency and level of measurement, the entity responsible for data collection, the source of data, and where to find additional pertinent information about

the limitations and interpretation of each indicator. Indicator Protocol Reference Sheets for national and program-level indicators for both community-based and facility-based M&E system are attached in Annex 1. Activities described in the twelve components included in this chapter will ensure that high quality data reporting on these national and program-level indicators are collected, managed, quality-assured, analysed, and used, both for reporting purposes and for program improvement and strategic decision-making.

6.3 M&E systems in Rwanda

The HIV M&E system is primarily divided between health facility-based and non-facility-based (or community-based) components of monitoring and evaluation, and is decentralized from national to district levels. Community-based activities are defined as all non-facility-based activities. The health facility-based components of the M&E framework are led by MoH and RBC at the national level, and District Health Officers at the district level. Better M&E planning and coordination have contributed to improving overall system performance at central and decentralized levels.

However, high turnover is causing instability of M&E staff, and for community-based M&E systems, support is needed in the dissemination of finalized M&E tools and the continued training of local partners. The frequency and quality of supervisory visits from central to decentralized levels have to improve, as well as follow-up after supervision visits. Research capacity and data use in the health sector are still insufficient, and the current systems for the dissemination of program data and results from studies and evaluations need strengthening.

In order to make sure that all essential components were included in the final M&E plan, it was decided to organize the M&E system around the twelve essential components of a functional M&E system, outlining a comprehensive framework incorporating all M&E-related tasks.

Component 1: Organizational structures with HIV M&E functions

All organizational structures of the HIV M&E system (health facility and community-based components, at central and decentralized levels) need to be further strengthened, with more emphasis on the community-based components of the system at the decentralized level. In general, HIV M&E is integrated and mainstreamed within the existing M&E structures of RBC.

RBC coordinates M&E for health facility and for community-based interventions across EDPRS sectors, including public and private sector institutions and civil society through umbrella organizations. RBC also coordinates M&E at central level through research, studies, annual reporting, and other activities.

RBC is also responsible for providing guidance and capacity building at national and subnational levels. Districts are responsible for coordinating all M&E interventions at the district level. RBC and the districts work in close collaboration with governmental and non-governmental partners to coordinate and implement M&E activities. For example, district health system infrastructure is responsible for the collection and management of facility-level HIV data. Civil society organizations and decentralized umbrella organizations are responsible for data collection and management of community-level HIV data. Central systems at MoH, RBC, and all central-level development partner organizations are responsible for managing decentralized data that is fed up to the central level and sharing this data with RBC and other key stakeholders.

Component 2: Human capacity for HIV M&E

In addition to ensuring that M&E staff are put in place at all levels, the staff needs training to have the minimum job requirements and satisfactory skill sets to properly perform their required M&E tasks. Capacities of M&E staff will be built for facility-based and community-based HIV M&E staff, including RBC, MoH staff, and EDPRS focal persons, at both central and decentralized levels. This capacity-building support will be delivered through public institutions such as the School of Public Health where M&E modules were developed specifically for this purpose in the last M&E plan.

Component 3: Partnerships to plan, coordinate, and manage the HIV M&E system

Activities under this component will include activities to strengthen technical working groups involved in the implementation and management of the HIV M&E system by improving linkages between the national and decentralized levels for M&E. The Planning, Monitoring, and Evaluation (PME) Technical Working Group will continue to provide overall guidance and technical assistance to the implementation of the national M&E system.

The working group is primarily responsible for developing and implementing the integrated HIV M&E annual work plan each year (see Component 5). It meets quarterly to review progress on implementation of the annual work plan, and to perform additional ad-hoc tasks as required.

Component 4: National multi sectorial HIV M&E plan

In line with the results-based planning and management approach adopted for the NSP, planning and M&E activities are interlinked. Current M&E tools will be revised to align with the new NSP strategies and expected results. The NSP and the M&E plan will be jointly reviewed by all stakeholders at midterm to ensure that adequate progress is being made towards the achievements of targets for 2024. At the end of the implementation period, a similar joint commission will evaluate the overall success of the NSP.

Component 5: Annual costed national HIV M&E work plan

In order to ensure timely implementation of all HIV M&E-related activities necessary for a fully functional M&E system, it is critical to have a national integrated HIV M&E annual work plan describing all annual activities. For each year of implementation of the 2018-2024 M&E Plan, a national integrated HIV M&E annual work plan will be jointly developed by all HIV M&E stakeholders, including activities, implementers, timelines, and activity costs for the successful implementation of all M&E activities in the country.

Component 6: Advocacy, communications and culture for HIV M&E

The HIV sector in Rwanda already has a strong positive culture for M&E, and most stakeholders across the system recognise the importance of data and evidence-based decision-making. To maintain and build on this existing culture, efforts will be made to incorporate sessions and presentations on the importance of M&E into other meetings, workshops, and conferences to further increase awareness.

Component 7: Routine HIV program monitoring

The routine monitoring of facility-based HIV services is already well established through a series of published standard operating procedures guiding the collection and management of HIV data. However, routine monitoring can be improved to document the quality of service delivery at health facilities. The community-based monitoring system needs to be strengthened, specifically to monitor interventions targeting key populations and vulnerable groups. Health facility information is collected through various registers on a daily basis at the time of service delivery. Each facility reports on monthly aggregate

data to be entered into HMIS, which uses the DHIS 2 platform. Furthermore, Electronic Medical Records (EMR) need to be scaled to cover all health facilities across the country and linked together to improve data accuracy.

Component 8: Surveys and surveillance

Several biological and behavioural surveys (DHS, BSS for key populations, Rwanda Aids Indicator, HIV Incidence Survey and Drug Resistance Monitoring) will be conducted during the implementation of the NSP. Sero-surveillance in a national representative sample of sites will continue for pregnant women to assess HIV trends among this group. RBC will ensure that data collection on benchmarks and indicators that are to be reported as part of national indicators are incorporated into all surveys and surveillance activities. RBC will also ensure that key indicators used to facilitate program evaluation (e.g. questions about program exposure) are included.

Component 9: National and sub-HIV databases

In order to monitor and evaluate HIV interventions, a number of health information systems were established. These systems routinely collect data on different interventions and quality of services to support decision-making. The table below describes the routine HIV data systems currently in place and related details on data area and coverage.

System Name	Area	Geographic Coverage	Donors /Partner(s)	Brief Description
Electronic Medical Record /OpenMRS	Patient monitoring systems	322 health facilities. Expansion underway to all health facilities	GoR-PEPFAR-Global Fund-MSH-PIH	Standalone system capturing individual patient data for clinical monitoring. Plans are on the way to implement additional primary health care modules in addition to the deployed HIV/AIDS module.
Rwanda Health Management Information System	Aggregate M&E Indicator Reporting	Nationwide	GoR-PEPFAR-Global Fund	Web-based reporting system of health-related aggregated data using DHIS-2 platform with geospatial information capacity. It is used by all health facilities

System Name	Area	Geographic Coverage	Donors /Partner(s)	Brief Description
(RH MIS)				(private and public).
Performance-based financing (PBF)	Aggregate M&E Indicator Reporting	Nationwide	GoR-PEPFAR-Global Fund-MSH	Web-based database collecting a selected number of output indicators used to track progress and calculate performance based payments for community health worker cooperatives, health centres, and district hospital. The system also uses data from quarterly quality evaluations to ensure that data and service quality are maintained and to reduce the performance payment accordingly.
TRACnet		Nationwide	GoR-PEPFAR-Voxiva Inc.	Phone and web-based reporting system that collects HIV/AIDS, TB, OI aggregated data. The system was migrated on the RH MIS in October 2014.
Electronic Logistical Management Information Systems (e-LMIS)	Supply Chain Management Information System	District pharmacists, MPPD	GoR-PEPFAR	An automated pharmaceutical management system (e-LMIS) was rolled out in March 2014 to improve quality and timely access of data. Captures basic data on ARV and TB commodities consumption, stock status, and information on stock-outs at health facilities.
LIS	Laboratory Information	National Reference	GoR-PEPFAR	Stores laboratory data and supports laboratory management. The

System Name	Area	Geographic Coverage	Donors /Partner(s)	Brief Description
	System	Laboratory		system will be expanded to all district level laboratories to develop a national electronic network of laboratories
BBIS	Blood Bank Information System	5 regional centres	GoR-PEPFAR	Provides blood bank commodities and testing data.
e-IDSR	E-Integrated Disease Surveillance System	Nationwide: All health facilities	GoR-PEPFAR	Collects aggregate data of diseases under surveillance outbreak response data.
Integrated Human Resource Information Systems (iHRIS)	Human Resources, Training Information Systems	Central database	GoR-PEPFAR	HRIS collects and aggregates data on health workforce and links to MOH principal personnel office.
Rwanda HIE	Health Information Exchange Project	Operational in One (1) District (Rwamagana)	GoR-PEPFAR-Jembi Health system	Ensures exchange of patient health records across health facilities.

Key planned innovations to the National HIV Database include:

- Interoperability of systems and implementation of Unique Patient Identifiers (UPID) to promote shared medical records.
- Building of case-based surveillance (CBS) system for: (1) active case findings, (2) monitoring status of individual patients ,and population level HIV treatment, and (3) adverse events within their treatment regimens.

- Continued implementation of laboratory information system and linkage to EMR and implementation of linkage to routine data reporting systems.
- Adaption of EMR to support the “Treat All” strategy.

Component 10: Supportive supervision and data auditing

In the newly established integrated supervision system, all health services are assessed in a common supervision visit. The weaknesses identified during these visits are then addressed through targeted mentoring conducted by specialized mentors for capacity building. There are two principal levels of supervision in the facility-based system: (1) RBC conducts integrated supervision visits, employing both qualitative and quantitative data collection activities at the district level and (2) DHs conducts supervision visits to district-level HIV implementers. Other supervisory visits include visits to community-based activities. These supervisory visits are jointly conducted on a quarterly basis by RBC central level staff and district level staff in charge of health monitoring. Subsequently, the findings are shared to further improve the quality of HIV reported at the community level. Thus, the district is responsible for assuring data quality of district-level HIV implementers who directly report to them. Equally, the EDPRS sector district representatives and civil society umbrella organizations district representatives are responsible for assuring the quality of data reported to them by their respective constituencies, which they subsequently report to the district.

At the national level, a bi-annual data audit is conducted by RBC to assess the completeness and accuracy of district-level reporting and the degree to which national-level tools and formats are being respected both by district-level HIV implementers and by districts.

Bi-annual data quality audits ensure the soundness of data that is being reported from the service delivery level to the district level, and from the district level to the national level via HMIS. Improving the quality of collected data is essential to ensure that evidence-based decision-making is informed by the most accurate information.

Component 11: HIV evaluation and research

The Research Committee on HIV and AIDS will develop a better coordination mechanism of HIV clinical research in the country to ensure that one national research agenda is adopted by all partners conducting research in the country, and that it is linked

to an overall evaluation agenda. A formal mechanism will be developed to collect and disseminate the results of research projects that have been approved by the committee.

The research agenda, defining key priority areas for research and evaluation in the country, will be based on information gaps identified in the new NSP, and additional identified country information needs, including HIV risk among key populations and other vulnerable populations and information on the effectiveness of different HIV interventions, including ART adherence and resistance studies and evaluations of the effectiveness of EMTCT services. The program impact evaluations will be an important component of this research agenda.

Component 12: Data dissemination and use

The M&E system needs to develop data dissemination mechanisms at all levels to ensure that all relevant stakeholders have access to the most up-to-date information available to inform their program decisions. Information products include the following: HIV and AIDS Annual Report, HIV at a glance, dashboards, and a NSP indicator snapshot.

Focus will be put on district-level data dissemination to ensure that district-specific data is not only reported to the national level, but that it is disseminated locally to HIV stakeholders and used in decision-making.

In addition, the international HIV research conference is organized every two years to foster the exchange of information and experiences between all HIV stakeholders.

The three main strategies that will be implemented to strengthen data use are described below:

- 1) Review of national and program-level indicators, and standardization of data collection tools so that data collected will be useful in informing the decision-making process.
- 2) Institutionalization of feedback mechanisms at all levels of reporting to address data quality issues and to improve quality of care.
- 3) Building the capacity of decentralized entities in analysing and using data.

7. FINANCIAL RESOURCES: COSTING AND PRIORITIZATION OF THE NSP

7.1 Background and Objectives

During the first semester of 2017 the Rwanda Biomedical Center (RBC) initiated the process of developing an extension of the HIV Rwandan National Strategic and Operational Plan (from now on collectively named “NSP”) from January 2018 to December 2020 ultimately leading to the approval in December 2017 of the Global Fund grant. The extended NSP was developed slightly before the Health Sector Strategic Plan 4 (HSSP4) and the National strategy for transformation (NSTP), which are leading strategic documents driving the Rwandan health agenda until 2024. In order to guarantee alignment in the planning cycle, the leadership of the Ministry of Health (MoH) and RBC set the objective to extend the timeframe of the HIV NSP up to June 2024. Ultimately the HIV program is expected to have one comprehensive NSP document covering the timeframe from July 2018 to June 2024 (from now on ‘2018-2024 NSP ’)

The first objective of this document is to define the process and the technical methodology behind the development of this NSP, and provide key technical guidelines for developing funding projections, costing and impact estimations of the 2018-2024 NSP2018-2024. The second and final objective is to report and analyse the results of the costing and impact estimations.

2 7.2 Methodology

1.1 Process of development of the NSP

In line with the previous NSP, the overarching principle has been to deliver an “ambitious yet realistic” plan by prioritizing the most impactful and cost effective interventions. The key objective behind the entire NSP development process has been to find a way to achieve the best outcomes given available resources following the principle of “doing more with less”.

The objective of the process has been to approve an integrated document named “HIV NSP 2018-2024” by July 2018 with the validation of the leadership of RBC and the Ministry of Health. In order to reach these objectives, RBC planned a set of three workshops which provided the platform for a participative process of a broad range of HIV stakeholders in Rwanda. The process is described below:

1. **Forecast of the funding envelope** from a comprehensive range of developing partners (GF, USG, UN, other sources) and domestic resources from July 2018 to June 2024. The task was conducted before and during the first workshop by a core team including the RBC/MoH staff in charge of Planning/M&E and Health Financing.
2. **Identification of potential new trends, innovations challenges and strategies**, leading the development of the NSP 2018 - 2024. A first workshop was carried out in Musanze from May 8th to May 11th, 2018 with the participation of the full range of HIV stakeholders comprising RBC, the Ministry of Health, developing partners, civil society organizations, NGOs, and the private sector. The workshop combined both plenary reflections and detailed work carried out in 6 subgroups. The subgroups were identified in line with critical NSP areas (Care and Treatment including Impact Mitigation, Hepatitis and STIs, HIV Prevention, Strategic Information, Costing, Impact estimation and HIV commodities). During the five days workshop, the TWG members not only conducted an assessment of the existing operational strategies but also identified new innovations and strategies to be implemented.
3. **Definition of a coherent and comprehensive HIV logframe from strategies to activities and cost estimates.** A second workshop was held in Kigali from May 21st to May 26th 2018 with a core team representing all HIV stakeholders. The objectives of the workshop were to link strategies identified during the first workshop with a specific set of activities, and to cost them out with the support of a technical advisor. The work followed the same structure of TWGs identified in the first workshop and, at the end of the five days workshop all the TWGs produced a comprehensive logframe clearly identifying all the inputs needed for the costing.
4. **The prioritization and validation process** was conducted before and during the third and final workshop held in Kigali on June 25th – 29th, 2018. While the final validation with high level authorities was granted during the meeting, the prioritization was carried out on a continuous basis right after the second workshop. The prioritization took place both at the strategic level with the leadership of the HIV program defining macro priorities, and at the operational level where the technical working groups worked analytically to make sure every activity was costed efficiently and revised every detail of implementation.

1.2 Funding estimation methodology

As mentioned above the funding projections were estimated both before and during the first workshop in Musanze by a multidisciplinary team including experts in health financing, planning, and financial management. Given the high uncertainty in the future level of funding from various donors, the team agreed to proceed to define three scenarios connected with a low, medium and high volume of funding. The process to develop the projections was the following:

- 1) **Understanding the global historical trends of HIV financing and global resource needs.** The team first aimed to build a common understanding of the global historical trend in HIV financing. For this purpose the team used the data published on the most recent report published on July 2017 “Donor Government funding for HIV in low-and middle income countries in 2016” developed by a joint team of UNAIDS and the Kalser Family foundation. The analysis on historical data was then complemented by a review of global resource needs to fast track the HIV/AIDS response included in the UNAIDS strategic plan 2016-2024.
- 2) **Identify historical trends of HIV funding for Rwanda for the last three fiscal years.** The process to identify the historical funding trends for Rwanda presented different challenges according to the funding sources. While historical funding from the Global Fund grants was easily identified according to the approved grant envelopes managed with national systems, the funding estimation for the United States Government (USG) was challenging to estimate as the values of the approved Cooperative agreements had to be aligned to the Rwandan fiscal year and discounted by a % indicating the overheads of implementers outside the Ministry of Health. Regarding historical estimates of the funding for HIV from the Government of Rwanda, the team relied on the analysis conducted for the Global Fund application grant.
- 3) **Estimating three possible sets of assumptions for funding projections of each sources.** As a key starting point the team used the approved Global fund grant that secured funding up to December 2020 and the approved COP 18 grant from the USG. For the remaining years the team defined a set of three assumptions connected with three alternative scenarios defined as:
 - a. Low scenario: The scenario assumes a continued decrease of external funding compared to actual levels, partially offset by the increased investments of the Government of Rwanda in the national HIV response.

- b. Middle scenario: The scenario assumes that external funding is stable in absolute terms, along with an increased funding commitment of the GoR.
- c. High scenario: The scenario assumes that external funding will match half the efforts of the Government of Rwanda to increase financing for HIV.

1.3 Costing methodology

The objective of the costing was widely discussed during the first workshop in Musanze, and the team agreed that the key goal is to identify the amount of financing required in the period 2018-2024 to perform the actions defined in the National Strategic Plan. Moreover a secondary objective was to estimate how much the HIV program could contribute to the costing of the Health Systems Strengthening plan reported in the HSSP4 document for the period 2018-2024². A set of relevant information were identified leading to the decision to link the HIV NSP with the Health Sector Strategic Plan 4:

1. The HSSP4 2018-2024 has been approved and, on top of the cost estimates of the various Health Systems Strengthening (HSS) components, it also estimates the HIV programmatic costing. It should be noted that the HIV costing included in the HSSP4 was developed before the HIV NSP 2018-2024 object of this report.
2. While the HIV costing included in the HSSP 4 was carried out using a top-down approach, the costing team agreed that:
 - a) Regarding the HIV core programmatic areas (Care and Treatment, Prevention, Impact Mitigation, Strategic information), the costing process should follow a bottom-up approach with a detailed identification from programmatic areas of activities to be implemented for up to June 2024. This costing should be the reference point for the HIV NSP 2018-2024.
 - b) Regarding the Health Systems strengthening component, the costing should rely on the HSS costing included in HSSP4 and the only objective is to define which % of the HSS plan might be contributed by HIV financing according to the 3 different level of funding identified in the scenarios.

It should be stressed that the connection between the 3 scenarios of funding and the costing is only on the contribution of HIV to the overall HSS plan included in HSSP4. The key assumption is that programmatic costs will be prioritized and the different level of funding will first affect the contribution of HIV on HSS.

² For the costing of the HSS it was used the HSSP4 report signed by the Hon Minister of Health with file name “HSSP4_-Rwanda-22-03-2018-1.pdf” with reference to the tables chapter 11 from pag 53 to pag 60

The following table summarized the key methodological choices of the costing process.

Methodological element	Choice
Objective	<p>The costing of the HIV NSP 2018-2024 had two key objectives:</p> <ol style="list-style-type: none"> 1) Understanding the amount of financing required in the period 2018-2024 to perform the actions defined in the National Strategic Plan 2) Identify how much the HIV program could contribute to the costing of the Health Systems Strengthening plan reported in the HSSP4 document for the period 2018-2024
Perspective of costing	<p>A provider perspective was applied to Rwanda to understand the funding required to accomplish the strategies of NSP in the period 2018-2024. Through a provider perspective it was possible to isolate the cost of fighting HIV from the amount covered by patients, their caregivers or the overall society that was not expected to be included in the analysis.</p>
Perimeter of costing	<p>The costing perimeter was then defined according to three levels of health care represented by the National, District and Sector level. At each level both supporting facilities and direct providers were included. The direct cost included in the analysis refers to the following categories:</p> <ul style="list-style-type: none"> • National level of care <ul style="list-style-type: none"> ○ Support service: Centre for Blood transfusion, RBC management and coordination, HIV coordination at other ministry, RBC planning, National Reference Laboratory, Medical Procurement and Distribution Division (MPDD), Civil Society Organizations; ○ Direct service: National referral hospitals; • District level service: <ul style="list-style-type: none"> ○ Support service: District HIV coordination; ○ Direct service: District Hospitals. • Sector level: <ul style="list-style-type: none"> ○ Direct service: Health Centres, Health posts, Community Health Workers.
Accounting vs Economic	<p>In the Rwandan experience, given the perspective utilized it was applied an accounting costing that allows an analytical costing of the inputs required to</p>

costing	accomplish the strategies of the NSP.
Full costing vs Marginal costing	Given the definition of the NSP timeframe (2018-2024) and the goal of understanding the total financial requirement of the NSP, it was applied a full costing method.
Cash vs Accrual method	According to the goal of providing a financial understanding of financial resource required and the data available, it was applied a cash accounting method.
Top down vs bottom up approach	The costing used a bottom up approach for costing the HIV core programmatic components with adjustment to inflation and/or unit cost trends. Regarding Health system costing the costing was performed using the costing projections included in HSSP 4 related to Health System Strengthening with the objective to estimate how much the HIV programs could contribute to Health system strengthening included in HSSP4.

1.4 Impact estimation methodology

The key strategic interventions were defined by their contributions to reducing of HIV and co-infection epidemics. Thus, we estimated the epidemiological impact basing on both programmatic and survey data. The impact computations have been developed using the most up-to-date epidemiological statistical software package, EPP/Spectrum 2017, leveraging both the AIDS impact module (AIM) (22) and the combined GOAL prevention module.

The Goals model is intended to support strategic planning at the national level by providing a tool to link program goals and funding. The model can help answer several key questions such as impact estimation and required resources to achieve the program goal.

In this NSP, we focused on infections averted and deaths averted.

The methodology used to estimate the epidemiological impact of the NSP was based on a mathematical model using several sources of data, including demographic data, program statistics, epidemic patterns, surveillance, and survey data. The calculation took into consideration different possible type of sexual transmission by population groups, determinants of risk of infection, interventions affecting the impact of HIV transmission, new infections, and treatment. The major metricss estimated were infections averted, deaths averted, and life years gained due to ARV and PMTCT.

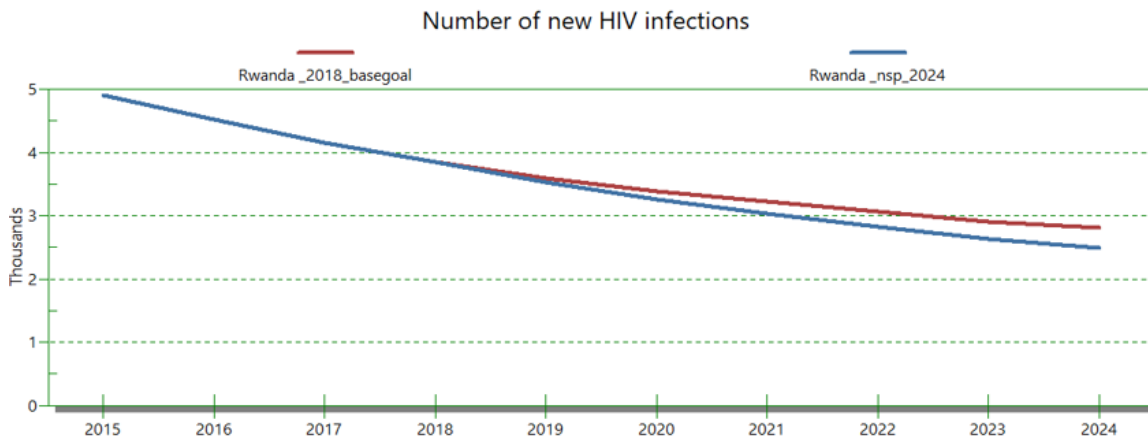
Infections averted were estimated using the reduced HIV risk attributable to consistent and correct condom use and to adherence to ARV treatment as prevention strategies. For deaths averted, the impact was estimated based on reduction of deaths attributable to ARVs.

The epidemiological impact was then adjusted to consider the impact of different size estimates of the health systems (human resources, infrastructure and integrated and supportive supervision).

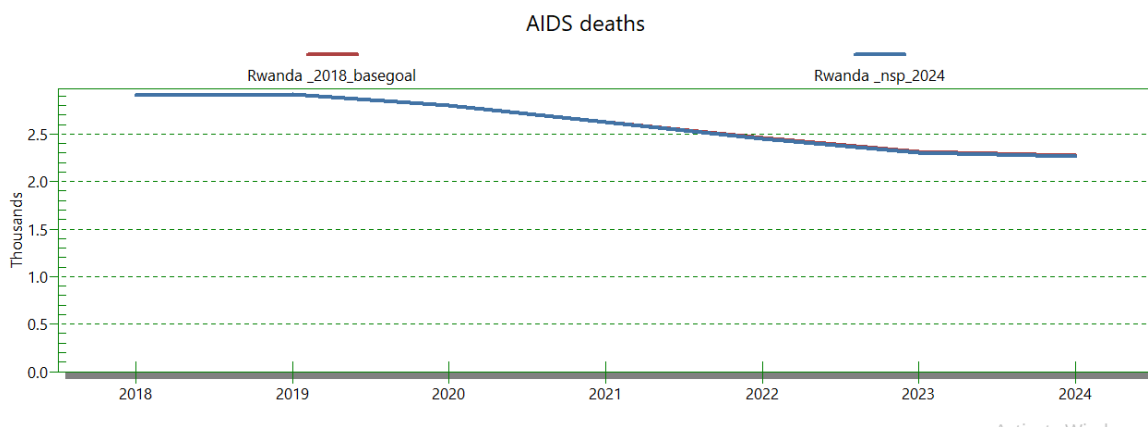
It has been assumed the following coverage inputs might lead to a decrease in the epidemiological impact.

	RNM - Coverage - Rwanda _2018_basegoal	RNM - Coverage - Rwanda _nsp_2024
Community mobilization		
Reached by intervention per year	40%	50%
Mass media		
Reached by campaigns per year	57%	80%
Voluntary counselling and testing		
Adult population receiving VCT each year	32%	50%
Condom provision		
Condom coverage	60%	80%
Youth		
Primary students with teachers trained in AIDS	44%	60%
Secondary students with teachers trained in AIDS	58.8%	80%
Out-of-school youth reached	60%	80%
Cash transfers		
Young women and girls (15-24) receiving cash transfers	10%	30%

This new NSP will contribute to an overall reduction of about 5% of new infection as compared to the current one. The below figure shows the slight changes on new HIV infection.



The number of deaths due to HIV will be reduced by about 1% as compared to the current NSP.



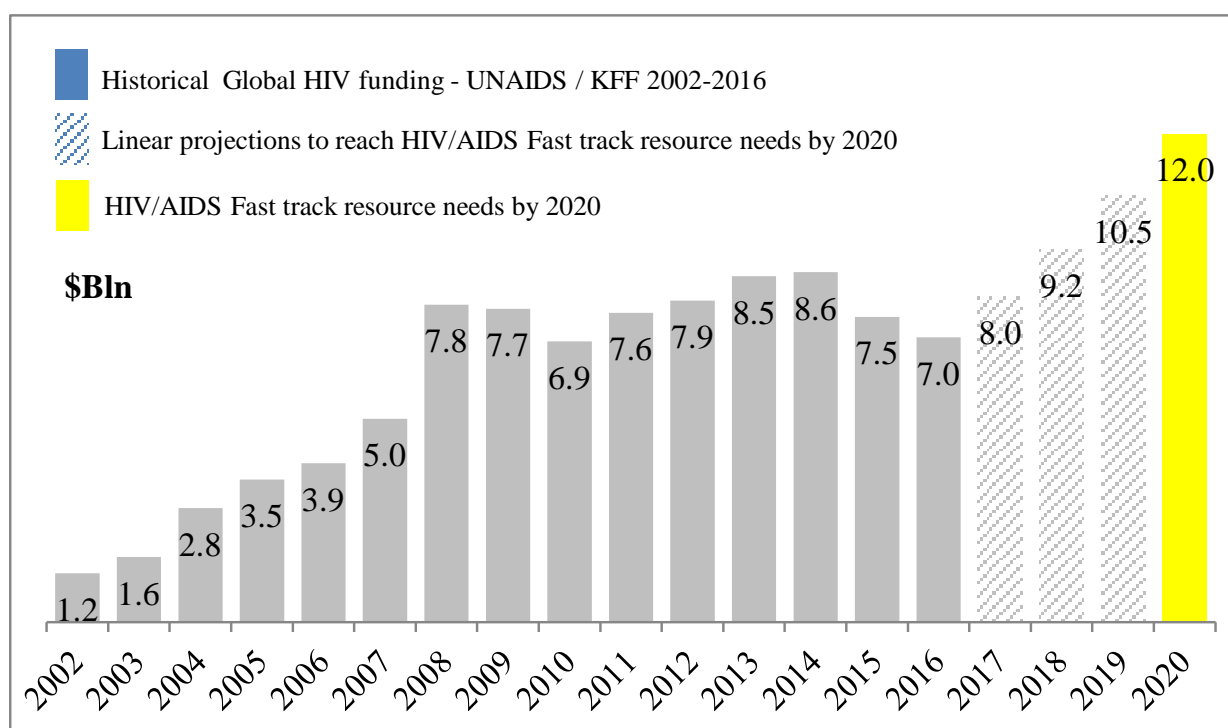
2 Results

2.1 Funding estimation

As reported in the methodological notes, the starting point to estimate the extent of HIV funding resources in Rwanda was to build a solid understanding of current global trends of HIV Financing. As reported by the figure below, after a sharp increase from 2002 to 2008 reaching up to USD 7.8 billion, global HIV funding has essentially remained stagnant with minor cyclical fluctuations.

As reported in the UNAIDS Strategic plan 2016-2021 fast-tracking the AIDS response will require an annual investment by 2020 for low and middle income countries of 12.0 billion USD, requiring a sharp increase from 2016 levels of \$7.0 billion³. Keeping current levels of funding without filling the missing \$5 billion gap will not allow countries to fast track the AIDS response and reach the global 90-90-90 targets by 2020.

Figure 7: Global Donor Government disbursement for HIV 2002-2016 in low and middle income countries



Source: Donor Government funding for HIV in Low and Middle income Countries in 2016, July 2017 UNAIDS/Kaiser family Foundation, UNAIDS strategic plan 2016-2021 and author linear projections.

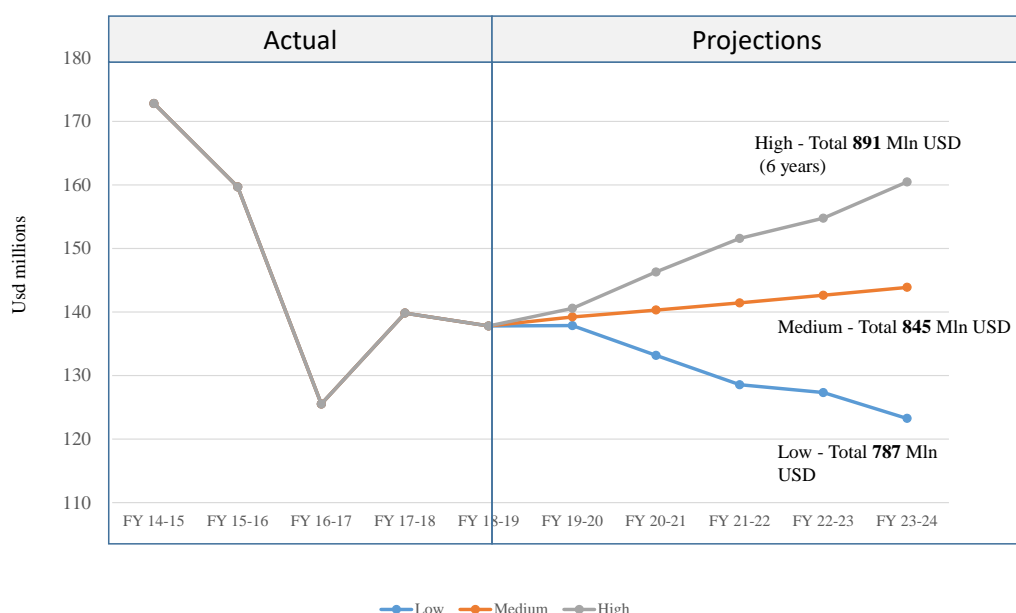
³ Report “On the Fast-Track to end AIDS” – UNAIDS strategic plan 2016-2021 – pag 67

Given the current global landscape, historical trends, and resources needed to fast track the global AIDS response, the funding projections for Rwanda were built around three different scenarios considering as starting point a progressive investment of the Government of Rwanda in HIV programming, in order to increase financial sustainability and reduce donor dependency. The three scenarios have been envisioned as follows:

- 1) **Low Scenario:** Despite global HIV funding advocacy efforts, the global external funding for HIV will keep on decreasing and Rwanda will also be affected. The Government of Rwanda will progressively increase its efforts on HIV financing at a rate of 2% per year but will not be able to offset the decrease of external funding in absolute terms. In this scenario the total annual funding is expected to decrease by 2024 at around \$125 mln.
- 2) **Middle scenario:** External funding will remain stable in absolute terms coupled with an increased funding commitment of the GoR at a rate of 5% per year. The net effect will be a slight absolute increase in total funding with total annual funding in 2024 around \$145 million.
- 3) **High Scenario:** External funding will match around half the efforts of the Government of Rwanda to increase financing for HIV at rates in line with the expected annual GDP growth of 7.26%. In this scenario the total funding will increase to reach in 2024 the same level of funding experienced in 2015 of around \$160 million per year.

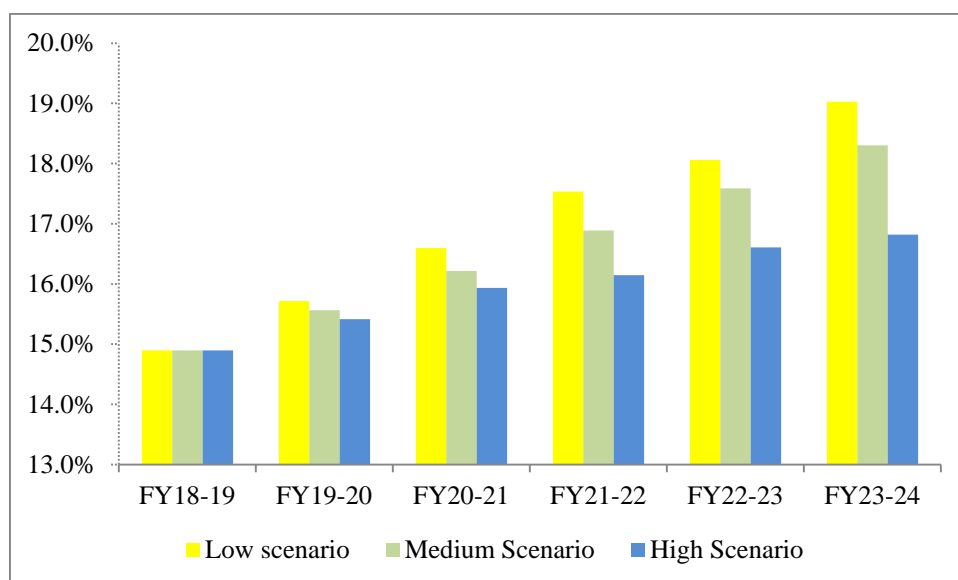
As reported by the figure below, the last four fiscal years for Rwanda have been characterized by a rapid decline in HIV funding from more than \$170 million per year in 2015 to around \$140 million per year in 2018. In term of projections the absolute variance for a six years plan between the high and low scenarios is \$104 million, with an expected total funding for the high scenario by 2024 of \$891 million and of \$787 million of the low scenario.

Figure 8: Historical trend and scenarios of HIV funding in Rwanda (all sources)



In terms of financial sustainability and external financing dependency, for all three scenarios it has been assumed that the Government of Rwanda will keep on increasing its investment in HIV, mainly driven by the expected growth of the economy and the cascading increase of government and health budgets. As shown by the figure below, in all the scenarios the proportion of the GoR spending is increasing from the current 15% up 19% in the high scenario by 2024.

Figure 9: Government of Rwanda contribution on HIV financing on 3 scenarios



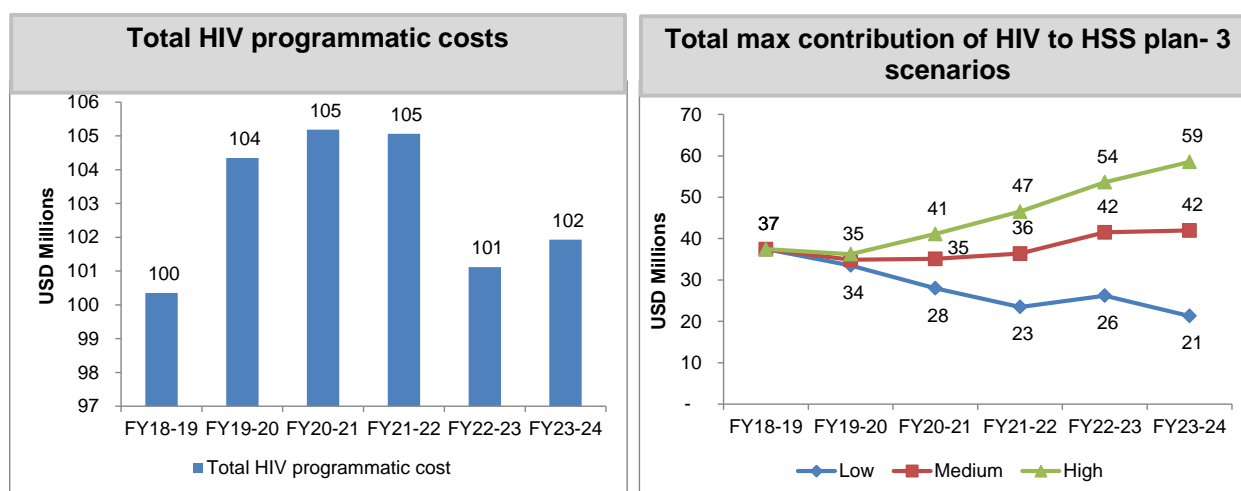
The projections reported above are aligned with the Government of Rwanda’s commitment to reduce external financing for HIV, and aim at long term financial sustainability driven by domestic resources.

2.2 Costing

The table below reports the costing results by HIV programmatic areas and the three scenarios of HIV contribution to the overall Health System Strengthening plan. The HIV programmatic costs are expected to grow to around \$105 million per year in the following four, years mainly because of investments in implementing DSDM, community peer support, and point of care viral load. In the following years the total cost will decrease and account for returns in terms of savings of frontloaded investments.

Concerning the contribution of the HIV response to the strengthening of the health system, the three scenarios range from a target annual contribution in 2023 of \$59 million in the high scenario, and \$21 million in the low scenario.

Figure 10: HIV Costing (Programmatic cost and contribution to HSS plan)

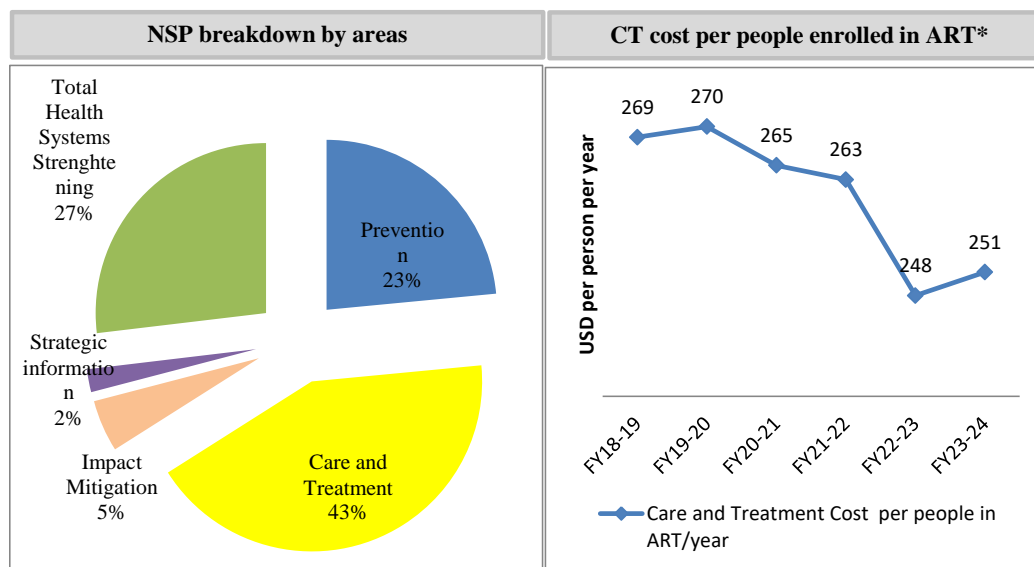


As shown by the figures below, care and treatment represent the first area in terms of cost with an average weight of 42%, followed by health system and prevention represents the 28% and 23% of the total cost, respectively. Impact mitigation and strategic information absorb only a marginal part of the costing (5% and 2% respectively).

The figure below on the right shows the trend of care and treatment cost for each person enrolled in ART. As shown by the graph after a slight increase of the cost per person in 2019, the cost will sharply decline in 2022. This is justified by the front loaded investment in HIV, mainly represented by the implementation of DSDM, peer support, and the strategy to reduce the viral

load turnaround time by investing in point of care viral load monitoring. This strategy is expected to bring substantial savings from 2022 on.

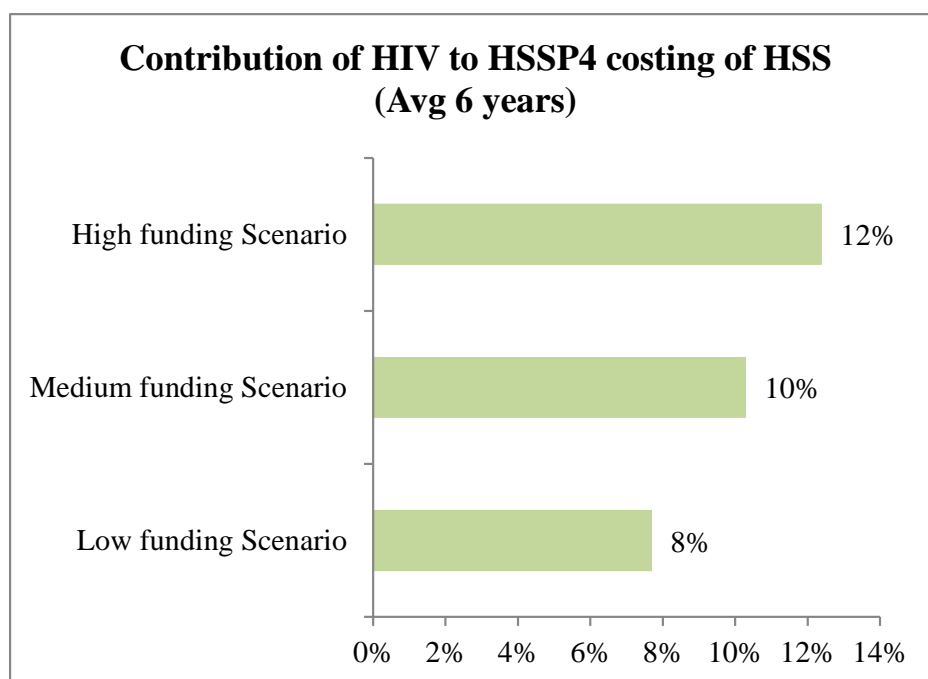
Figure 11> NSP breakdown by areas and trend of Care and treatment cost per people enrolled in ART



* Excluding HBV and HCV treatment

As reported in the methodological notes the different scenarios of funding impact the average contribution of HIV funding to the Health System Strengthening (HSS) costed plan included in HSSP 4. The figure below shows how the results of HIV contribution to HSS in the three scenarios.

Figure 12; Contribution of HIV funding to the HSS components costed in HSSP4



The range of contribution of the HIV funding to the overall HSS plan included in HSSP4 is between 8% of the low scenario, and 12% of the high scenario. This range of contributions is likely not matching the HIV current absorption of health systems resources, which has been estimated at around 28%. As a result of the misalignment between the funding contribution to HSS and the actual use of resources, it is fair to conclude that a financial gap might be considered in term of HSS, ultimately affecting the impact of HIV programmatic interventions

In conclusion the HIV response might contribute to the HSS plan included in HSSP4 but with a lower funding rate compared to the past. Therefore the costing projections do not assume an absence of financial gap that should be estimated considering the overall Health System Strengthening plan and applying an holistic view of the HSS funding, out of the scope of this exercise.

7.1.1 Impact methodology and cost effectiveness

As mentioned above, the programmatic teams defined key strategic interventions based on estimates of epidemiological impact. The impact computations were developed using the most up-to-date epidemiological statistical software package, EPP/Spectrum 2017, leveraging both the AIDS impact module (AIM) (22) and the combined GOAL prevention module.

Aligned with the NSP goals, two impact indicators were selected: infections averted and deaths averted.

The methodology used to estimate the epidemiological impact of the NSP was based on a mathematical model using several sources of data, including demographic data, program statistics, epidemic patterns, surveillance, and survey data. The calculations took into consideration different possible type of sexual transmission by population groups, determinants of risk of infection, interventions affecting the impact of HIV transmission, new infections, and treatment. The major impacts estimated were infections averted, deaths averted, and life years gained due to ARV and PMTCT.

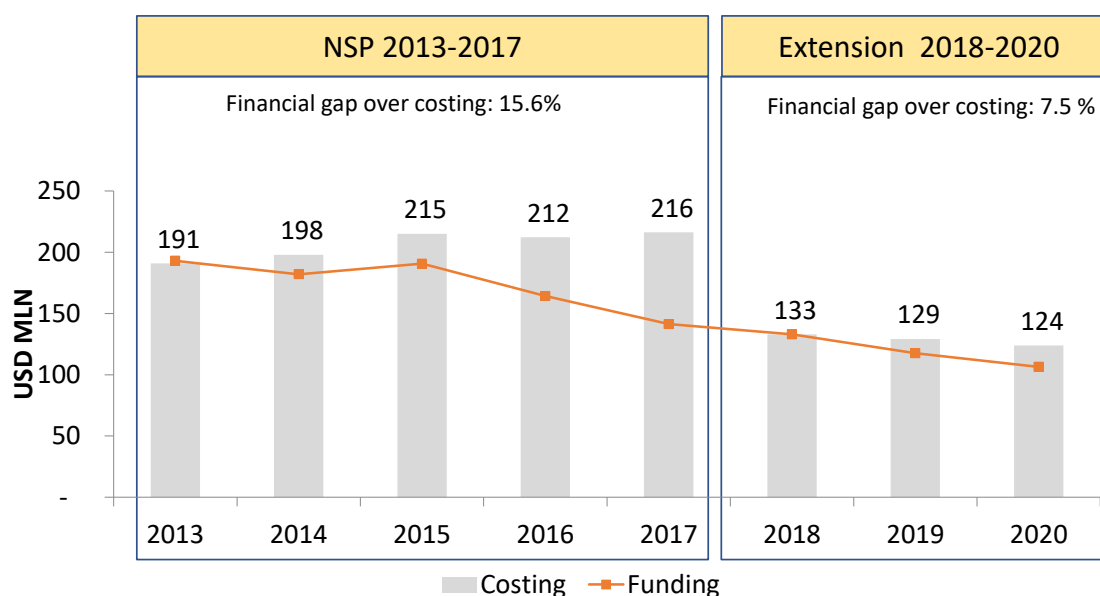
Infections averted were estimated using the reduced HIV risk attributable to consistent and correct condom use and to adherence to ARV treatment as prevention strategies. For deaths averted, the impact was estimated based on reduction of deaths attributable to ARVs.

The epidemiological impact was then adjusted to consider the impact of different size estimates of the health systems (human resources, infrastructure and integrated and supportive supervision). It has been assumed that a reduction in overall health system capacity might lead to a linear decrease in the epidemiological impact.

7.2 Costing and financial gap results

The figure below shows the trend of costing and funding of the original 2013-2018 HIV NSP and the HIV NSP Extension. The five years NSP costing 2013-2018 costed **US\$1,032 billion** with a projected financial gap of **US\$ 161.4** million (15.6 % of the total cost). For the NSP extension, the costing of the three years extension has been assessed in **US\$386.0** million with a financial gap of **US\$29.1** million (7.5 % of the total).

Figure 13: Summary of costing and funding projections

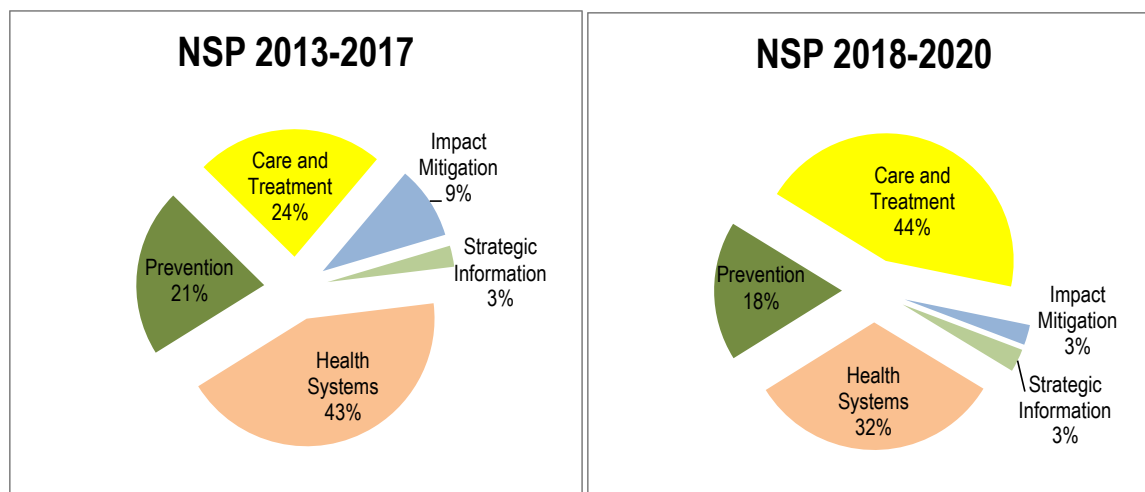


An initial level of analysis is connected with the trend of costing and the gap analysis. As outlined in the figure above, both the trends of costing and funding are expected to decrease between 2018-2020. The development of the 2018-2020 NSP extension required an intense process of prioritization that considered the available level of funding as reference point. The process resulted in very minimal a very miniman percentage of of unfunded plan out of the total costing (7.5 %). Regarding year by year analysis, the first year of the 2018-2020 NSP extension is fully prioritized, while the second and third years present an increasing gap that might require additional efficiencies.

A second level of analysis is relative to the comparison of the original NSP 2013-2018 and the 2018-2020 NSP extension. The figure below shows that Care and Treatment has increased from 24 % to 44 % of the 2018-2020 NSP extension. This increase is primarily due to the fact that the NSP extension considers a full roll-out of the “Treat All” strategy for each of the three years costed, while the 2013-2018 NSP considered the strategy only in the final years of the plan. Simultaneously, the total cost attributed to prevention activities decreased between the 2013-2018 NSP and the 2018-2020 NSP extension, with the strategies in the 2018-2020 NSP extension focused on reinforcing components of clinical prevention and blood transfusion, and on establishing a more efficient and targeted approach for reaching key populations. Furthermore, the increase in Care &

Treatment can be also explained by the sharp decline of the costing of Impact Mitigation , which shifted from 9 % to 3 % of the total costing.

Figure 14: Comparison NSP 2013-2017 with NSP Extension breakdown by program

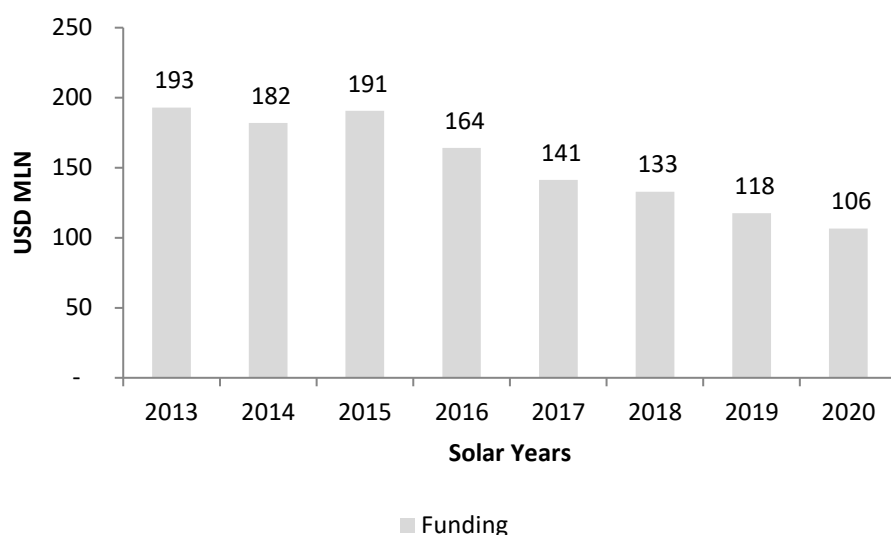


Health Systems was the predominant area of costs in the NSP 2013-2018, while the level of its costing decreased from 43 % to 32 % in the 2018-2020 NSP extension. This reduction in Health Systems costs can be attributed to the prioritization process conducted in response to the decreasing trend in external HIV funding. In line with the methodology defined in the 2013-2018 NSP , it is reasonable to state that the expected reduction of Health Systems costs that contribute to HIV may have a negative effect on the epidemiological impacts estimated through the EPP/Spectrum modelling. The quantification of this impact may be completed once the Health Sector Strategic Plan is extended beyond 2018, whereby the costing and gap analysis of the entire health sector will be completed.

7.2.1 Funding estimates and gap analysis

The figure below reports the value of domestic and external funding for the past five years and the expected value for the period 2018-2020.

Figure 15: HIV Domestic and External funding



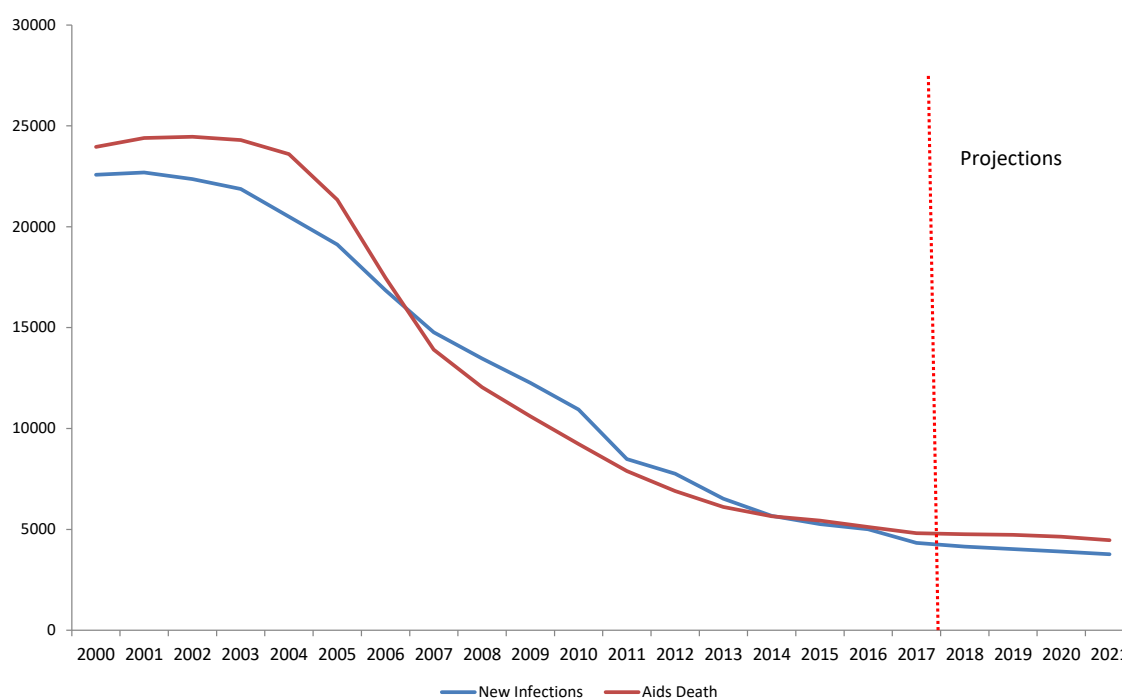
As shown, funding for HIV in Rwanda decreased sharply between 2015 and 2017, on average by approximately 13.9 % per year. For the next three years (2018-2020), the HIV program expects to receive a total of **US\$ 356.9 million**, a decrease of approximately 9.0 % per year.

For the 2018-2020 NSP extension, a resulting funding gap of **US\$29.1 million** is expected for the three-year period, based on the difference between the costing estimate of US\$386.0 million and the funding estimate of US\$356.9 million, representing 7.5 % of the total costing.

7.3 Impact estimation

The graph below reports the epidemiological results based on 2 combined modules of Spectrum (AIM and GOAL) used to estimate number of AIDS deaths and new infections.

Figure 16: Epidemiological projections – AIM and GOAL



The graph shows a similar declining trend for both AIDS deaths and new infections. Since the scale up of the HIV program in Rwanda in 2004, deaths and HIV infections have decreased sharply from more than 20,000 infections and deaths per year to approximately 7,000 infections and deaths per year in 2014. However, the progress toward zero deaths and zero new infections has slowed with a less marked decrease of both infections and AIDS deaths. The goals for 2020 estimated through the model are to continue reduce AIDS related deaths and HIV new infections.

As previously described above, the effect of the reduction in Health Systems costs on the epidemiological impact should be carefully monitored during the implementation of the 2018-2020 NSP extension. Further, this effect should be estimated once the 2018-2023 Health Sector Strategic Plan is completed, taking into account the impact, costing, and funding gap analysis.

7.4 Challenges and limitations

The estimation of the cost and the impact of the NSP was an important learning experience for all stakeholders involved in the HIV response.

First, the impact computations were based both on the final version of AIM- Spectrum 2017 and on the combined activation of a new pilot module, GOAL, which is used to estimate the impact of infections averted according to programmatic objectives. This pilot module required the review of a number of assumptions used and the definition of baseline coverage and targets that are not always in line with the existing performance framework.

Second, the Impact Mitigation program team had no quantitative data to estimate the impact of interventions on stigma, discrimination, and OVC support. The expert team based their considerations on qualitative assumptions, with input from all stakeholders. The result of this process is an Impact Mitigation strategy that fits within the overall HIV strategy.

Finally, the biggest challenge within the costing analysis was the need to determine the Health Systems contribution to HIV in absence of an updated Health Sector Strategic Plan. An intensive consultative process has been conducted across all levels, but it was not possible to compare the estimates found through this process with a holistic costing and funding gap analysis.

7.4.1 Role of government and sustainable HIV financing

The Government of Rwanda has prioritized access to health care for all to save lives. Tremendous investments have been made in strengthening the health system, including developing a health insurance scheme, investing in human resources, and investing in infrastructure as a strong foundation for all health programs.

Rwanda endorsed the resolutions of an international conference on health financing held in Rwanda in 2016 (WHO, 2016). The main strategy adopted from this conference was to mobilize domestic resources through innovative health financing strategies. Rwanda has instigated different community health interventions and prioritized an integrated health services provision as one of the strategies to ensure sustainability of health system. The Government of Rwanda has steadily increased domestic investments in the health sector to ensure accessibility of health services for all, and to remove barriers preventing people from accessing care.

Donor funding has been critical in supporting the Government of Rwanda scaling up its HIV response, and it will continue to be needed. Historically, financing for HIV from the

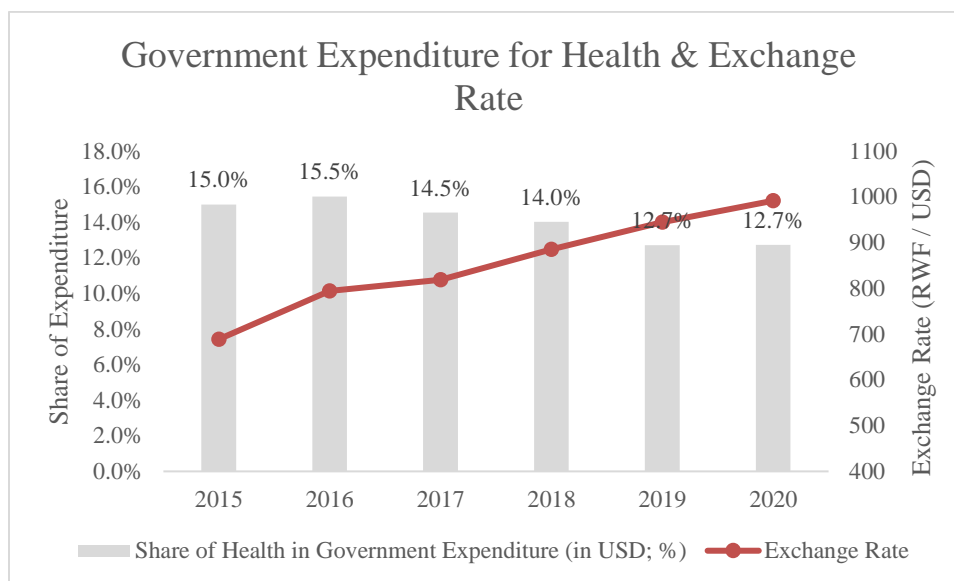
Government of Rwanda and funding from donors have been complementary – donors, in particular, have had an important role in funding Care & Treatment programs, including costs of ARVs and other medicines. In recent years, MoH has allocated domestic resources to key interventions aimed at strengthening the health system (for example, infrastructure, human resources, recurrent facility costs), and at building a strong, decentralized system, which has been critical in mobilizing communities to raise awareness of HIV.

The need to decrease the dependency on external funds is critical and extends beyond the HIV response. Innovative financing mechanisms and additional sources of domestic funding have been defined for the entire health system within a national health financing strategy, and HIV financing aligns to the national strategy and priorities. Equity and access to treatment for all play an important role in defining the allocative policy of MoH. In the short and medium term, although decreasing, external funding will continue to play a significant role in supporting the country's response to HIV and other diseases.

In order for MoH to continue becoming more financially sustainable and independent, it must work to improve alignment of national priorities of all funds, domestic and external, reduce waste and inefficiencies at both the strategic and implementation levels, and improve sector-wide and unified mechanisms to monitor and evaluate fund allocation and use.

The commitment to a sustainable HIV response is a priority for Rwanda. The Government of Rwanda has committed to continually increasing the health sector budget to ensure better lives for Rwandans.

Figure 17: %age of Government of Rwanda budget allocated to health⁴



Due to the increasing exchange rate, shown in the figure above, the amount the Government is contributing appears to be decreasing over time. However, the Government has actually increased its expenditure (in RWF) within the health sector over time to ensure Rwanda continues to meet and exceed its health targets.

⁴Source of data: HSSP III 2012–2018

8. CONCLUSION

The development of the 2018-2020 NSP extension was based on the recommendations of the Medium-Term review of the existing NSP that ends in 2018. The targets set for this planning period are in continuity with progress made in recent years in addressing HIV and AIDS: continue the reduction in new HIV infections and HIV-related deaths.

While working to achieve these targets through implementation of designated HIV interventions, there will also be a reduction in the Health Systems' budget that will require an increased level of integration and efficiencies with other programs within the health sector and with other socio-economic development sectors. The successful achievement of these targets will also depend on the level of funding that will be allocated to the HIV response. Rwanda has already experienced a slowing rate in the reduction of new infections and HIV-related deaths, and progress could slow even further if funding continues to decrease at the same rate as in the past or goes below current projections.

Through the implementation of innovative strategies, the 2018-2020 NSP extension aims to expand prevention, coverage, and treatment for HIV/AIDS and mitigate the impact of HIV across the population in a sustainable manner. Through collaboration across the different stakeholders, both within the health sector and across external sectors, Rwanda has the opportunity to improve the lives of those living with and affected by HIV and reduce new infections over the next three years.

REFERENCES

1. Ministry of Finance and Economic Planning. *Rwanda Vision 2020* [Internet]. Kigali , Rwanda: Ministry of Finance and Economic Planning; 2,000. Available from: http://www.minecofin.gov.rw/fileadmin/General/Vision_2020/Vision-2020.pdf
2. Ministry of Finance and Economic Planning. *Economic Development and Poverty Reduction Strategy 2* [Internet]. Kigalii; 2013. Available from: http://www.minecofin.gov.rw/fileadmin/General/EDPRS_2/EDPRS_2_FINAL1.pdf
3. Rwanda Ministry of Health. *Third Health Sector Strategic Plan July 2012 – June 2018* [Internet]. Kigali , Rwanda; 2012. Available from: http://www.moh.gov.rw/fileadmin/templates/Docs/HSSP_III_FINAL_VERSION.pdf
4. Ministry of Finance and Economic Planning, Ministry of Health, Measure DHS. *Rwanda Demographic and Health Survey* [Internet]. 2010. Available from: <http://www.measuredhs.com/publications/publication-FR259–DHS-Final-Reports.cfm>
5. Ministry of Health,Rwanda Biomedical Center. Rwanda MOT 2012: *Changing dynamics in the HIV epidemic in Rwanda: Modeling the expected distribution of new HIV infections by exposure group*, Final Report. Kigali, Rwanda; 2013.
6. Ministry of Health, Rwanda Biomedical Center, UNAIDS. HIV and AIDS in Rwanda, 2013 *Epidemiologic Updates*. Kigali, Rwanda; 2013.
7. Ministry of Health, CNLS. *Rwanda National Strategic Plan on HIV and AIDS 2009–2012* [Internet]. Kigali, Rwanda; 2009. Available from: <http://apps.who.int/medicinedocs/documents/s18409en/s18409en.pdf>
8. Ministry of Finance and Economic Planning, Ministry of Health, Measure DHS. *Rwanda Demographic and Health Survey 2005* [Internet]. Kigali, Rwanda; 2005. Available from: <http://www.measuredhs.com/pubs/pdf/FR183/FR183.pdf>

9. Ministry of Health, Rwanda Biomedical Center, Voxiva. Rwanda Electronic Reporting System on HIV and AIDS (TRAC net) [Internet]. Available from: <http://www.tracnet.rw/tracnet/core/modules/pagelayout/web/showpage.aspx?menukey=1>
10. Joint United Nations Programme on HIV/AIDS (UNAIDS). 'Know Your HIV Epidemic , Epidemiological Review related to MOT analysis'. [Internet]. Geneva, Switzerland; 2012. Available from: <http://www.unaids.org/en/media/unaids/contentassets/documents/dataanalysis/EpiReviewToolkit2012.xls>
11. Ministry of Health, Rwanda Biomedical Center. *Behavioral and Biological Surveillance Survey Among Female Sex Workers*. Rwanda - 2010. Kigali, Rwanda; 2010.
12. Hladik W, Barker J, Ssenkusu JM, Opio A, Tappero JW, Hakim A, et al. 'HIV infection among men who have sex with men in Kampala, Uganda - A respondent driven sampling survey. PloS one [Internet]. 2012 Jan [cited 2013 Nov 19];7(5):e38143. Available from: <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=3364961&tool=pmcentrez&rendertype=abstract>
13. Chapman J, Koleros A, Delmont Y, Pegurri E, Gahire R. 'High HIV risk behavior among men who have sex with men in Kigali, Rwanda: Making the case for supportive prevention policy'. 2011;(932737254).
14. Ministry of Health,Rwanda Biomedical Center. *National Strategic Plan on HIV and AIDS Performance Evaluation*, Final Report. Kigali, Rwanda; 2012.
15. Joint United Nations Programme on HIV/AIDS (UNAIDS). *UNAIDS Country Progress Report*, Rwanda. [Internet]. 2012. Available from: [http://www.unaids.org/en/dataanalysis/knowyourresponse/countryprogressreports/2012countries/ce_RW_Narrative_Report\[1\].pdf](http://www.unaids.org/en/dataanalysis/knowyourresponse/countryprogressreports/2012countries/ce_RW_Narrative_Report[1].pdf)
16. United Nations. United Nations Millennium Declaration [Internet]. New York: UN; 2,000. Available from: http://www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/55/2
17. Joint United Nations Programme on HIV/AIDS (UNAIDS). *UNAIDS Investment framework* [Internet]. Geneva, Switzerland: UNAIDS; 2012. Available from:

http://www.unaids.org/en/media/unaids/contentassets/documents/unaidspublication/2012/JC2359_investing-for-results_en.pdf

18. Ministry of Health, Rwanda Biomedical Center. *Gender Assessment of Rwanda's National HIV Response* [Internet]. Kigali Rwanda; 2013. Available from: http://rbc.gov.rw/IMG/pdf/gender_assessment_report_b5_fin.pdf
19. Rwanda Ministry of Health, CNLS. *National Accelerated Plan for Women, Girls, Gender Equality & HIV* [Internet]. Kigali, Rwanda; 2010. Available from: <http://sgdatabse.unwomen.org/uploads/National Accerelated Plan for Women Girls Gender Equality and HIV - 2010 to 2014.pdf>
20. Ministry of Health, RBC. Stigma Index Survey in Rwanda. Kigali, Rwanda; 2013.
21. World Health Organization, FuturesInstitute. The United Nations OneHealth Costing Tool [Internet]. 2013. Available from: <http://www.futuresinstitute.org/onehealth.aspx>
22. Stover John. Spectrum System of Policy Models. USAID, Futures Institute; 2009.
23. Ministry of Health, Rwanda Biomedical Center. *Rwanda Annual Report on HIV and AIDS, 2010–2011* 1 [Internet]. Kigali Rwanda; 2011. Available from: http://rbc.gov.rw/IMG/pdf/national_annual_report_on_hiv_aids_july_2010_june_2011.pdf

ANNEXES

Annex 1: NSP PERFORMANCE FRAMEWORK

Indicator category	Indicator	Baseline Value	Baseline Year	Target (2020)
Impact	%age of men who have sex with men with active syphilis	8.1%	2015	6%
Impact	%age of sex workers with active syphilis	52.3%	2015	50%
Impact	%age of exposed infants who are HIV-free by 24 months	98.2%	2016	>95%
Impact	%age of men who have sex with men who are living with HIV	4%	2015	4%
Impact	HIV Prevalence among adult 15-49	3%	2015	3%
Impact	%age of sex workers who are living with HIV	45.8%	2015	43%
Impact	Number of AIDS-related deaths per year	3,229	2017	2,906
Impact	Under 5 mortality rate per 1000 live births	50	2015	42
Impact	Neonatal mortality rate, per 100,000 population	20	2015	10
Impact	Maternal mortality rate, per 100,000 population	210	2015	200
Impact	Number of new HIV infections per year	11,400	2017	10,000
Impact	Prevalence of Syphilis	0.9%	2013	0.7%
Outcome	%age of adults and children with HIV known to be on	92.6%	2016	94%

Indicator category	Indicator	Baseline Value	Baseline Year	Target (2020)
	treatment 12 months after initiation of antiretroviral therapy			
Outcome	%age of men reporting the use of a condom the last time they had anal sex with a male partner	71.4%	2015	75%
Outcome	%age of sex workers reporting the use of a condom with their most recent client	84.3%	2015	85%
Outcome	%age of women attending at least one antenatal care	99%	2015	99%
Outcome	%age of births attended by skilled health professional	90.7%	2015	>90%
Outcome	%age of women and men with non-regular partner in the past 12 months who report the use of a condom during their last intercourse	50.8%	2013	55%
Outcome	%age of people living with HIV and on ART who are virologically suppressed (among all those currently on treatment who received a VL measurement regardless of when they started ART)	86.4%	2014	90%
Outcome	Proportion of ever-married or partnered women aged 15-49 who experienced physical or sexual violence from a by any husband/partner in the past 12 months	20.7%	2015	18%

Indicator category	Indicator	Baseline Value	Baseline Year	Target (2020)
Outcome	%age of women and men aged 15-49 who report positive attitudes towards people living with HIV	54.1%	2015	56%
Outcome	% of eligible adults and children currently receiving antiretroviral therapy	78%	2016	85%
Outcome	% of HIV/TB coinfectd patients receiving both HIV and TB treatment	93.9%	2016	>90%

Annex 2: Costing tables – Outcome-Output- Strategies

Row Labels	2018	2019	2020	Grand Total \$
1. Prevention	23,139,185	22,657,499	22,393,699	68,190,383
1. Reduced HIV Incidence	23,139,185	22,657,499	22,393,699	68,190,383
1.1 Reduction of new HIV infections from mother to child	7,206,951	6,481,326	6,401,125	20,089,402
EMTCT target populations receive complete package of EMTCT services	7,206,951	6,481,326	6,401,125	20,089,402
ART prophylaxis for HIV-positive pregnant women	3,697,168	3,510,442	3,439,981	10,647,592
Couple testing and SDC follow-up	719,139	712,541	723,097	2,154,777
Exposed infants follow-up	1,311,055	1,029,328	1,039,884	3,380,268
Maternal and Child Health	1,086,816	839,541	825,586	2,751,943
Sensitization of young girls and boys	44,351	44,351	22,175	110,877
Family Planning	348,422	345,123	350,401	1,043,945
1.2 Reduction of new HIV infections by sexual contact	12,994,997	13,474,233	13,329,648	39,798,877
Clinical service for prevention of HIV and other blood borne infections	11,405,705	11,938,813	12,174,003	35,518,521
Counseling and Testing	6,412,754	6,829,611	6,839,841	20,082,205
Male Circumcision	4,787,541	4,792,397	4,797,675	14,377,614
Prevention for Key population	205,410	316,805	536,487	1,058,701
General and key populations have access to condoms				

	613,924	704,771	635,489	1,954,184
Condom and lubricant availability	533,414	533,414	533,414	1,600,243
Condom supply chain	47,963	138,810	89,056	275,828
Condom utilization	32,547	32,547	13,019	78,113
General population and key populations are reached by comprehensive HIV prevention programs	975,368	830,648	520,156	2,326,172
Campaign, Mass media, IEC	211,977	211,977	161,066	585,020
Out reach People with disabilities	100,370	53,576	26,788	180,734
Outreach FSW, MSM and other key populations	327,571	231,340	199,857	758,769
Outreach Media	4,723	4,723	4,723	14,170
Outreach People in Uniform	107,063	107,063	107,063	321,189
Outreach Workplace	31,566	29,872	20,658	82,095
Outreach Youth	192,097	192,097	-	384,195
1.3 Reduction of new blood borne HIV infections	2,937,238	2,701,940	2,662,926	8,302,104
People in need of blood transfusion have access to safe blood	2,937,238	2,701,940	2,662,926	8,302,104
Blood transfusion	2,937,238	2,701,940	2,662,926	8,302,104
2. Care and Treatment	56,908,304	57,276,311	57,396,475	171,581,090
HIV related deaths and comorbidities are reduced	56,908,304	57,276,311	57,396,475	171,581,090
People living with HIV receive standardized, adequate care and support	8,482,259	7,775,580	7,860,075	24,117,914

People living with HIV receive nutritional Assessment, Counselling and support (NACS)	7,109,696	6,908,554	6,868,245	20,886,495
Nutrition for eligible PLHIV	7,091,981	6,908,554	6,832,815	20,833,350
Nutritional tools	17,715	-	35,430	53,145
PLHIV receive community based peer support services	1,372,563	867,026	991,830	3,231,419
DSDM	1,372,563	867,026	991,830	3,231,419
PLHIV have reduced morbidity related to STI, OI and other co-morbidities	2,843,774	3,048,101	2,880,109	8,771,984
Strengthen OI prevention, diagnosis, and management with special focus on TB	2,843,774	3,048,101	2,880,109	8,771,984
OI prophylaxis	240,383	197,760	195,555	633,697
OI treatment	1,554,656	1,279,372	1,074,987	3,909,015
TB/HIV interventions	1,048,735	1,570,970	1,609,567	4,229,272
The coverage of ART and the VL suppression among PLHIV on treatment are increased	45,582,272	46,452,630	46,656,291	138,691,192
All identified HIV-positive are timely enrolled and initiated on ART	44,667,258	45,109,782	45,424,732	135,201,771
Biochemical follow up	10,220,470	11,131,519	11,132,342	32,484,331
Linkage between HIV testing and care and treatment	34,446,788	33,978,263	34,292,390	102,717,441
Retention and adherence on ART are increased	915,014	1,342,848	1,231,559	3,489,421
Adherence follow up	750,276	1,206,279	1,199,116	3,155,672
Adolescent ART	81,105	64,884	32,442	178,432
Pediatric ART				

	83,632	71,685	-	155,317
3. Impact Mitigation	3,290,724	3,582,215	2,985,734	9,858,674
3. People infected and affected by HIV have the same opportunities as the general population	3,290,724	3,582,215	2,985,734	9,858,674
People infected and affected by HIV have improved socio-economic status	3,248,338	3,502,619	2,976,021	9,726,979
Cooperatives are operational and their capacities are strengthened towards sustainability	141,173	618,517	39,686	799,376
Start-up capital	-	508,245	-	508,245
Supervision	58,907	58,907	29,453	147,267
Training cooperatives	61,801	30,900	-	92,701
Workshops and meetings	20,465	20,465	10,233	51,163
Minimum package of services for MVC is provided and well-coordinated.	3,107,165	2,884,102	2,936,335	8,927,602
MVC minimum package of services	3,087,467	2,864,404	2,921,504	8,873,375
Supervision	11,740	11,740	6,874	30,355
Workshops and meetings	7,957	7,957	7,957	23,872
SGBV and HIV related Stigma and discrimination is reduced	42,386	79,596	9,713	131,695
Gender inequalities (sexual, GBV and poor knowledge of women on their rights) are addressed	15,360	44,788	9,713	69,861
Awareness	-	29,427	-	29,427
Legal service	15,360	15,360	9,713	40,434
General population is aware of PLHIV rights and these rights are protected	-	21,295	-	21,295

Awareness on rights and responsibility	-	21,295	-	21,295
People living with HIV are aware of their rights and able to claim them	27,026	13,513	-	40,539
Awareness on rights and responsibility	27,026	13,513	-	40,539
4. Strategic information	3,781,389	5,193,814	2,261,947	11,237,149
Reduced HIV incidence, Reduced HIV-related mortality and morbidity and People infected and affected by HIV have the same opportunities as the general population	3,781,389	5,193,814	2,261,947	11,237,149
Monitoring & Evaluation system is well functioning	3,781,389	5,193,814	2,261,947	11,237,149
Data dissemination and use	145,652	285,012	145,652	576,316
Research	145,652	285,012	145,652	576,316
National and sub-HIV databases	778,503	372,119	216,683	1,367,305
eLMIS	167,475	69,630	69,630	306,734
EMR	323,920	224,652	80,511	629,083
LIS	287,107	77,837	66,543	431,487
National multisectorial HIV M&E plan	14,609	14,609	7,304	36,521
Supervision of youth center	14,609	14,609	7,304	36,521
Routine HIV program monitoring	1,753,121	1,673,271	1,623,538	5,049,930
Data analysis	-	11,864	-	11,864
Data management	1,661,718	1,570,005	1,532,135	4,763,858
RBF data collection				

	75,196	75,196	75,196	225,587
Training data managers	16,207	16,207	16,207	48,621
Supportive supervision and data auditing	86,710	74,810	70,622	232,143
From central level to districts	55,610	55,610	51,422	162,642
From districts to health centers / community	19,200	19,200	19,200	57,601
From health centers to community	11,900	-	-	11,900
Surveys and surveillance	1,002,794	2,773,993	198,148	3,974,935
Surveys and surveillance	1,002,794	2,773,993	198,148	3,974,935
5. Health systems	45,831,519	40,484,093	38,819,503	125,135,115
Reduced HIV incidence, Reduced HIV-related mortality and morbidity and People infected and affected by HIV have the same opportunities as the general population	45,831,519	40,484,093	38,819,503	125,135,115
Health Systems are strengthened	45,831,519	40,484,093	38,819,503	125,135,115
Health Financing	6,216,264	6,149,999	6,308,705	18,674,968
Insurance	4,693,304	4,608,895	4,725,961	14,028,161
PBF	708,308	708,308	708,308	2,124,924
Service subsidization	814,652	832,796	874,436	2,521,883
Human Resources	18,388,038	15,386,648	13,727,810	47,502,496
HRH program	6,383,887	3,242,089	2,078,200	11,704,176
Salaries CSOs	870,335	870,335	870,335	2,611,006

Salaries Health Facilities	740,978	700,082	683,195	2,124,254
Salaries MoH and RBC	9,845,668	10,057,170	9,591,578	29,494,417
Salaries Other Ministries	547,170	516,971	504,501	1,568,643
Infrastructure and Equipment	11,382,831	10,939,994	11,155,188	33,478,013
Capacity building	27,450	27,450	27,450	82,350
Equipment	-	-	-	-
Maintenance	1,738,206	1,738,206	1,704,129	5,180,542
Running costs DHs & HCs	6,510,519	6,306,368	6,725,054	19,541,941
Upgrade infrastructure	3,106,655	2,867,970	2,698,555	8,673,179
Integrated Service Delivery and Quality Improvement	1,755,674	1,254,238	857,281	3,867,193
Blood transfusion	80,860	57,967	30,383	169,210
Community Health	268,331	487	487	269,304
Epidemic Surveillance and Response	136,815	133,542	64,183	334,540
Laboratory	1,269,668	1,062,242	762,228	3,094,138
Leadership and Governance	1,406,431	1,279,481	1,224,723	3,910,635
Planning and Monitoring	492,159	377,895	334,445	1,204,498
Running costs CSOs	237,252	237,252	237,252	711,755
Running costs MoH				

	111,477	111,477	111,477	334,430
Running costs Other Ministries	103,159	103,159	103,159	309,477
Running costs RBC	428,641	415,954	404,647	1,249,242
Running costs RH	33,744	33,744	33,744	101,233
Supply Chain	6,682,281	5,473,733	5,545,797	17,701,810
Logistics	6,578,861	5,370,313	5,442,377	17,391,551
Planning and Quality control	103,420	103,420	103,420	310,260
Grand Total	132,951,121	129,193,932	123,857,357	386,002,411

Annex 3: Costing table – Impact - Outcome

Row Labels	2018	2019	2020	Grand Total \$
1. Prevention	23,139,185	22,657,499	22,393,699	68,190,383
1. Reduced HIV Incidence	23,139,185	22,657,499	22,393,699	68,190,383
1.1 Reduction of new HIV infections from mother to child	7,206,951	6,481,326	6,401,125	20,089,402
1.2 Reduction of new HIV infections by sexual contact	12,994,997	13,474,233	13,329,648	39,798,877
1.3 Reduction of new blood borne HIV infections	2,937,238	2,701,940	2,662,926	8,302,104
2. Care and Treatment	56,908,304	57,276,311	57,396,475	171,581,090
HIV related deaths and comorbidities are reduced	56,908,304	57,276,311	57,396,475	171,581,090
People living with HIV receive standardized, adequate care and support	8,482,259	7,775,580	7,860,075	24,117,914
PLHIV have reduced morbidity related to STI, OI and other co-morbidities	2,843,774	3,048,101	2,880,109	8,771,984
The coverage of ART and the VL suppression among PLHIV on treatment are increased	45,582,272	46,452,630	46,656,291	138,691,192
3. Impact Mitigation	3,290,724	3,582,215	2,985,734	9,858,674
3. People infected and affected by HIV have the same opportunities as the general popul	3,290,724	3,582,215	2,985,734	9,858,674
People infected and affected by HIV have improved socio-economic status	3,248,338	3,502,619	2,976,021	9,726,979
SGBV and HIV related Stigma and discrimination is reduced	42,386	79,596	9,713	131,695
4. Strategic information	3,781,389	5,193,814	2,261,947	11,237,149
Reduced HIV incidence, Reduced HIV-related mortality and morbidity and People infecte	3,781,389	5,193,814	2,261,947	11,237,149
Monitoring & Evaluation system is well functioning	3,781,389	5,193,814	2,261,947	11,237,149
5. Health systems	45,831,519	40,484,093	38,819,503	125,135,115
Reduced HIV incidence, Reduced HIV-related mortality and morbidity and People infecte	45,831,519	40,484,093	38,819,503	125,135,115
Health Systems are strengthened	45,831,519	40,484,093	38,819,503	125,135,115
Health Financing	6,216,264	6,149,999	6,308,705	18,674,968
Human Resources	18,388,038	15,386,648	13,727,810	47,502,496
Infrastructure and Equipment	11,382,831	10,939,994	11,155,188	33,478,013
Integrated Service Delivery and Quality Improvement	1,755,674	1,254,238	857,281	3,867,193
Leadership and Governance	1,406,431	1,279,481	1,224,723	3,910,635
Supply Chain	6,682,281	5,473,733	5,545,797	17,701,810
Grand Total	132,951,121	129,193,932	123,857,357	386,002,411

Cost element	Methodology / Assumptions	Source of information
Inflation and growth rate of unit costs	Assumed a conservative inflation rate and unit costs growth rate equal to zero	Team assessment
ARV drugs	Cost per patient per year for each ARV regimen for first, second and third line adult and pediatric. Considered an increase of the unit cost due to the shift of new patients to more expensive regimens	Quantification report – November 2012
Consumables for Biochemical follow up	Cost per patient per year comprehensive of consumables. Included the cost of CD4, Viral load, Hematology, Biochemistry, general lab consumables	Quantification report – November 2012
Drugs for opportunistic infections management	Average cost per year per case. Assumed a distribution of OI as Herpes zoster (27%), Cryptococcus meningitis prevention (27%), Diarrhea (17%), Candidiasis (Oral and Esophageal) 17%, Others 12%	Quantification report – November 2012
Prophylaxis for adults	Cost per adult patients per year. Assumed use of Co-trimoxazole in different dosages and Dapsone	Quantification report – November 2012
Prophylaxis for children and exposed infants	Cost per pediatric patients per year. Assumed use of Co-trimoxazole in different dosages	Quantification report – November 2012
Nutrition support for PLHIV	Cost per case per year broken down for severely, moderately	Nutrition sub-working group

	malnourished and household at risk	
Drugs and testing for STI management	Cost per case including testing for syphilis. Assumed distribution of STI as Chlamydia treatment (30%), Gonorrhea treatment (30%), Candidiasis (20%), Syphilis treatment (10%), Others (10%)	STI sub - working group
Drugs for mental health	Cost per case. Assumed 60% of people in ART need psychotherapy and 19% receive drugs. Assumed a distribution of case as Antidepressant (7%), Mood stabilizer (5%), Anxiotic (5%), Antipsychotics (2%).	Mental health sub-working group
Adherence follow up.	Considered transport allowance for Health care providers and community health workers to 60% of the patients receiving ARVs.	Adherence sub-working group
Blood transfusion	Cost per unit. Assumed the cost included in the strategic plan of blood transfusion.	Strategic Plan Blood transfusion
Condoms procurement	Cost per male and female condoms	UNDP database
Counseling and testing	Cost per test and control tests. Assumed 64% of the test done with HIV rapid test – Elisa and 36% with finger prick tests.	Quantification report – November 2012
Male circumcision consumables	Cost for both PrePex and surgical circumcision. Assumed a distribution of 85% PrePex and 15% surgical MC	Report “PrePex Cost analysis paper Draft _17May13” - May 2013
Family planning drugs and consumables (integrated in HIV services)	Cost per patient. Assumed a distribution of integrated cases as: injectable (61%), implant (13%),	HIV-family planning integration desk

	condoms male and female.	MoH
Outreach interventions to key population	Considered cost of peer education, IEC material, training of peer educators, Mobile VCT and STI screening, lubricants, involvement in planning and coordination, sensitization surrounding communities, supporting materials.	Prevention working group
PMTCT	Considered cost of transportation IEC material, training of peer education of mothers, cost of ARV and Exposed infants prophylaxis, training private facilities, awareness campaign, facility upgrades, community tools for infants follow up, testing of pregnant mothers, EMTCT surveillance.	Prevention working group Quantification report – November 2012
PEP	Cost per case considered treatment for 30 days	Quantification report – November 2012