Republic of Rwanda
Ministry of Health

Rwanda Biomedical Centre
Healthy People, Wealthy Nation

National HIV and Viral Hepatitis Annual Report

2020-2021

Foreword

The Ministry of Health annually releases a report delineating National progress towards HIV, STIs and Viral Hepatitis diseases control in Rwanda. This year's report is aligned with the implementation of activities to contain HIV, STIs and Viral Hepatitis up to June 2021.

Achievements drawn up in this report are the results of several engagements and collaboration between the Government of Rwanda, development and implementing partners, Civil Society Organisations in HIV response, UN agencies and other valuable partners that day to day provide their assistance and contribute towards alleviating the burden of HIV epidemic in Rwanda.

Furthermore, dissemination of this annual report sets an opportunity to recognize tireless work rendered by scientists and epidemiologists from different technical working groups, health care workers at different levels of health services delivery and peer groups supporters at community level.

Notwithstanding that a big step was made to control the HIV epidemic in Rwanda, this report highlights the need for future investment to eliminate new HIV infections especially among groups at risk, with application of targeted interventions aligned to the existing cooperation between the Government of Rwanda and their partners.

Dr. NGAMIJE M. Daniel
Minister of Health

Executive Summary

Every year, the Ministry of Health through the Rwanda Biomedical Centre releases the annual report for HIV, STIs and Viral Hepatitis program achievements. This report provides the updated status of National program response and progress towards targets set from July 2020 to June 2021.

Despite the disruptions caused by Covid-19 to a wide range of services delivery, routine interventions to control HIV, Viral Hepatitis and STIs continued. Notwithstanding that HIV services delivery is decentralized at health facilities and community level, there is a need to measure the long-term impact of Covid-19 on HIV program in Rwanda.

On top of sustaining and maturing the existing strategies, new approaches have been introduced to contribute to achieve the national targets. These interventional approaches are in key areas of the National HIV program, namely: (i)HIV prevention, (ii) HIV care and treatment, (iii) STIs and Viral Hepatitis, (iv), HIV epidemic surveillance and strategic information. Among the approaches that have been scaled up include, Pre-exposure prophylaxis (PrEP) among Adolescent girls and young women (AGYW), scaled up HIV self-testing, index testing and partner notification, HIV case-based surveillance and recency testing, scale up of DTG -based regimen to all eligible PLHIV, TB Preventive Therapy (TPT) to all PLHIV, multiple months drug dispensing to reduce the burden of multiple visits of PLIV at health facilities.

From July 2020-to June 2021, at least 3,348,337 HIV tests were performed countrywide, resulting 0.48% of positivity rate, with a higher of 5.3% yield from index testing. During this reporting period, 95% of all pregnant women living with HIV received ART during antenatal care, with the rate of mother to child transmission for HIV estimated at 1.5%. More than ninety-eight percent of HIV-exposed infants tested negative after 24 months of follow up. In addition, for the same period, 480,260 males were medically circumcised.

Eleven thousand five hundred thirty-five people were initiated to HIV antiretroviral therapy, totalling 207,089 people living with HIV on ART by June 2021. As Rwanda is still in the campaign of Eliminating Hepatitis C virus, at least 5,062,018 have been screened and 51,722 were initiated to treatment with a success rate of 92% on first line treatment. Alongside, 4,865,320 people screened for STIs with 4.54% screened positive and treated.

Successful implementation to contain HIV STIs and viral Hepatitis and sustain the gains during this last fiscal year, is a sign of effective collaboration between the Government of Rwanda, Development partners, UN agencies, implementing partners, Civil society organizations and beneficiaries towards achieving global targets and ending AIDS.

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Abbreviations & Acronyms

ABASIRWA	Network of Journalists in the fight against HIV/AIDS
ACBS	Active Case-Based Surveillance
ACF	Active Case Finding
AEs	Adverse Events
AGYW	Adolescent Girls and Young Women
AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Care
ART	Antiretroviral Therapy
ARV	Antiretroviral
CBS	Case-Based Surveillance
CDC	Centers for Disease Control and Prevention
COP	Country Operational Plan
CPDS	Coordinated Procurement and Distribution System
CSB+	Corn Soya Blend plus
CSOs	Civil Society Organizations
SDC	Sero-Discordant Couple
DHs	District Hospitals
DQA	Data Quality Assessment
DSDM	Differentiated Services Delivery Model
DTG	Dolutegravir
EMR	Electronic Medical Record
EMTCT	Elimination of Mother to Child Transmission
EPP	Estimated Population Projection
FSWs	Female Sex Workers
FY	Fiscal Year
GF	Global Fund
GoR	Government of Rwanda
HBV	Hepatitis B Virus
HC	Health Center
HCV	Hepatitis C Virus
HCVST	Hepatitis C Virus Self-Testing
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
HSSP4	Health Sector Strategic Plan
HTS	HIV Testing and counselling Services
IBBSS	Integrated Behavioral and Biological Surveillance Survey
IGA	Income Generating Activities
KPs	Key Populations
M&E	Monitoring and Evaluation
MoH	Ministry of Health
MSM	Men who have Sex with Men
MTCT	Mother to Child Transmission
NCDs	Non-Communicable Diseases
NGO	Non-Government Organization

NRL	National Reference Laboratory
NSP	National Strategic Plan
NST	National Strategy for Transformation
OI	Opportunistic Infection
OP	Operation Plan
PCR	Polymerase chain reaction
PEPFAR	US President's Emergency Plan For AIDS Relief
PIT	Provider Initiated Testing
PLHIV	People Living with HIV
PMTCT	Prevention of Mother to Child Transmission
PrEP	Pre-Exposure prophylaxis
PSF	Private Sector Federation
RBC	Rwanda Biomedical Centre
RDHS	Rwanda Demographic Health Survey
RICH	Rwanda Interfaith Council on Health
RITA	Recent Infection Testing Algorithm
RNGOF	Rwanda NGO Forum
RPHIA	Rwanda Population-based HIV Impact Assessment
RRP+	Rwanda network of People Living with HIV
SDGs	Sustainable Development Goals
SGBV	Sexual Gender Based Violence
SPIU	Single Project Implementation Unit
STIs	Sexual Transmitted Infections
TB	Tuberculosis
TLD	Tenofovir-Lamividune-Dolutegravir
TLE	Tenofovir-Lamividune-Effavirenz
TPT	Tuberculosis Preventive Therapy
UNAIDS	Joint United Nations Program on HIV/AIDS
UPHLS	Umbrella of Organizations of Persons with Disabilities in the fight against HIV&AIDS and for Health Promotion
USG	United States Government
VCT	Voluntary Counselling and Testing
VL	Viral Load
VLS	Viral Load Suppression
VLSMS	Viral Load Short Message Service
VMMC	Voluntary Medical Male Circumcision
WAD	World AIDS Day
WHO	World Health Organization

1. INTRODUCTION

According to UNAIDS data of 2020, globally, 37.7 million people were living with HIV in 2020 and targets were set to end the HIV epidemic. Despite the joint efforts and investments of Governments and various organisations in HIV response, HIV remains among key public health priorities. The recent data for Rwanda show that the country's progress towards 95-95-95 targets.

The present report highlights the national HIV and viral hepatitis response during July 2020 to June 2021. The purpose of the report is to inform the stakeholders in that specific area about progress made against outputs and strategies for all of us to strengthen, reset and adapt actions and interventions to maximize the results towards an AIDS-free nation.
After presenting the situation of HIV epidemic in Rwanda and response, the report provides details on progress and achievements per different HIV response main pillars, namely prevention, care and treatment, social impact mitigation, STIs and viral hepatitis prevention and treatment, strategic information and HIV response funding.

1.1. Overview of the HIV epidemic in Rwanda

As per the recent survey data, HIV prevalence among the general population in Rwanda has been stabilized and maintained at 3% and even less according to gender and age. The Rwanda Population-based HIV Impact Assessment (RPHIA), a national household-based survey conducted in 2019, showed that the overall HIV prevalence among people aged 15-64 was 3.0%; 3.7% in women and 2.0% in men. It also indicated a decreased prevalence to 2.6% among adult people aged 15-49. According to the same survey, the HIV prevalence in urban areas is estimated at 4.8% and 2.5% in rural areas; however, the HIV prevalence was higher (4.3%) in the City of Kigali and lower in the northern province (2.2%).

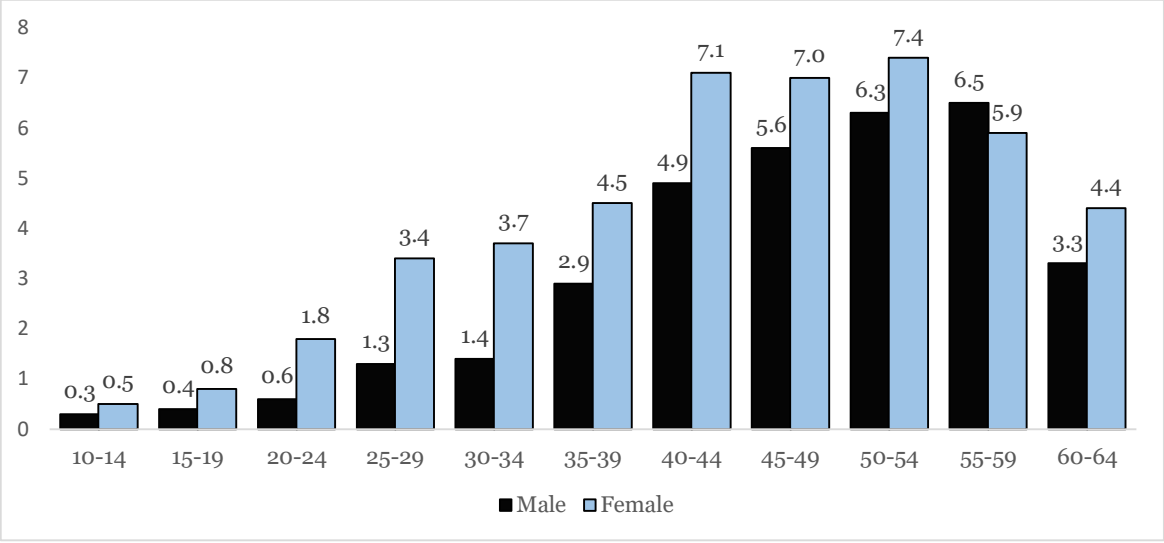


Figure 1: HIV prevalence by age group and gender, RPHIA 2019

The RPHIA revealed that the HIV prevalence was approximately two or more times greater in older adolescent girls and young women (ages 15-24 years) compared to older adolescent boys and young men (1.2% vs. 0.5%). The findings showed that the HIV epidemic in Rwanda is aging as suggested by the prevalence of 6.5% among men aged 55-59 and 7.4% among women of 50-54 years old.

Apart from the prevalence, the RPHIA estimated the overall percentage annual HIV incidence among adults at 0.08% (95% CI: 0.02% - 0.14%) which corresponds to approximately 5,400 new cases of HIV infection among adults per year. In the City of Kigali, the percentage annual HIV incidence among adults increased up to 0.11% (95% CI: 0.00% – 0.26%).[1]

The survey data from key populations show a different picture. The Integrated Biological and Behavioural Surveillance Survey (IBBSS) conducted among FSWs in 2019 showed an overall prevalence of 35.5% (CI: 31.5-39.8) among adult female sex workers. The higher prevalence was found in Western Province (44.1%, CI: 35.1, 53.4), while the lower prevalence in Southern Province (26.6%, CI: 21.8, 32.0). The 2020 IBBSS among MSM estimated an overall HIV prevalence at 4.3%, where the highest prevalence was found in Kigali City (11.3%).

1.2. Response to the HIV epidemic

Since the discovery of the very first case of HIV in Rwanda, under the coordination of the Ministry of Health, different programs, projects, interventions, innovations and services were implemented to control the HIV epidemic, and national and international partners joined the battle.

The Government of Rwanda recognises HIV-AIDS as a cross-cutting public health problem that needs to be addressed through joint efforts of all sectors, a multidisciplinary approach, from central to lower levels. For that reason, the response to HIV is highlighted through different National policy and guiding documents, namely the National Strategy for Transformation, Health Sector Strategic Plan, Rwanda Vision 2050, and Sustainable Development Goals (SDGs). Every five years, the national HIV program develops the National Strategic Plan for HIV to guide the interventions of all partners; the recent one covers was published in 2018 for the period of 2018-2024.

As a result, from HIV testing to treatment services, across the country, for both children and adults, the HIV services are free of charge and are accessible in all Hospitals and Health Centres; and various innovations are being implemented to reduce new HIV infections and ensure improved health outcomes of HIV-infected people. The details about HIV services and related outcomes are detailed in this report, under respective sub-programs. This is a fruit of joint efforts and both technical and financial support of UN Agencies, Global Funds, PEPFAR and its implementing partners, World Bank and so many others.

In order to inform the HIV program on progress, success and challenges for timely decision making and action, the monitoring system was put in place; this is mainly done through routine data recording and reporting into electronic systems like EMR/OpenMRS, Individual records into DHIS2, RHMIS and periodic surveys and surveillance activities. The most known surveys are the Rwanda Demographic and Health Surveys (RDHS), Integrated Behavioural and Biological Surveillance Surveys (IBBSS) among Key populations, mainly Female sex workers and Men who have sex with men, HIV and Syphilis Sero-surveillance surveys among pregnant women, Rwanda AIDS Indicator and HIV incidence Survey, Rwanda Population-based Impact Assessment, and others.

[1] Rwanda Biomedical Center (RBC). Rwanda Population-Based HIV Impact Assessment (RPHIA) 2018-2019: Final Report. Kigali: RBC; September 2020.

1.3. Progress towards 95-95-95 UNAIDS targets

The Fast Track 95-95-95 strategy is an ambitious target set by the UNAIDS in 2014, to end the AIDS epidemic by 2030. The aim is to achieve 95% diagnosed among all PLHIV, 95% on antiretroviral therapy among diagnosed, and 95% virally suppressed (VS) among treated. An intermediate goal of 90-90-90 was set for 2020. In Rwanda, these targets have been nearly all met as observed in the RHIA report. 86% of HIV-positive adults (15-64 years) know their HIV-positive status, of which 97% of the diagnosed are on ART and currently 90% achieved VLS.

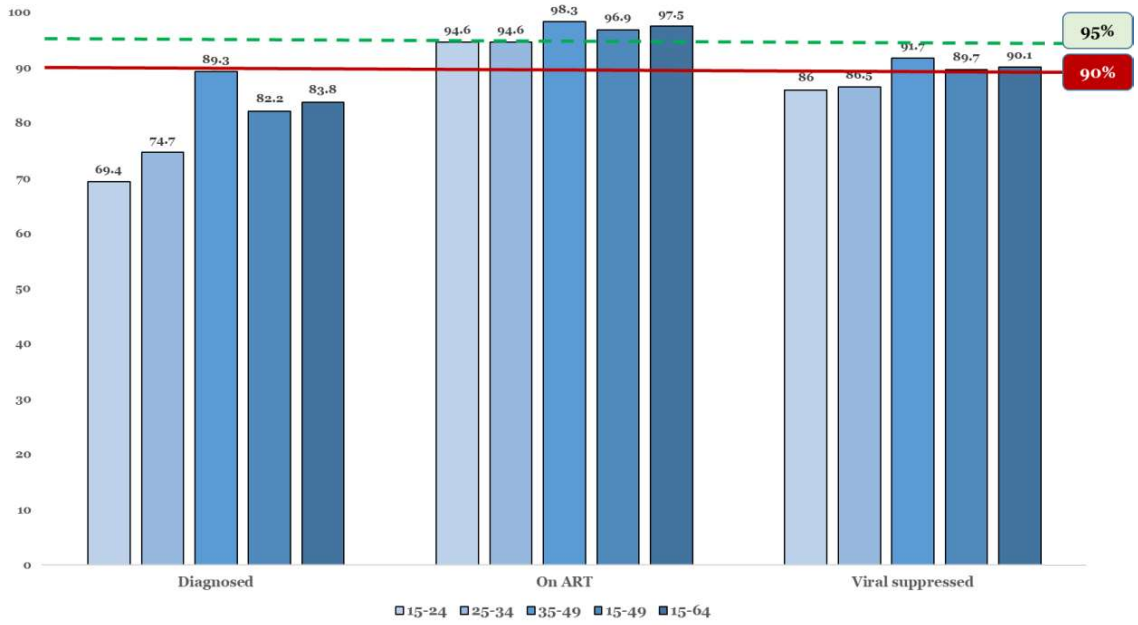


Figure 2: Progress towards 90-90-90 and 95-95-95 UNAIDS targets

2. HIV PREVENTION

2.1. Introduction

HIV Prevention program is key in HIV national response to reduce the HIV incidence and ensure that people living with HIV are early diagnosed. Innovative approaches and new strategies have been implemented by the Government and national partners toward ending the AIDS epidemic by 2030 as part of the Sustainable Development Goals. The package of interventions offered in Rwanda include optimized HIV testing Services (HTS) as well as innovative evidence-based HIV case finding strategies through index testing and partner notification for the Active HIV Case Based Surveillance (CBS), Recency testing as a powerful tool for public health programs and HIV Epidemic control, HIV self-testing, Prevention Mother to child Transmission (PMTCT), Voluntary Medical Male Circumcision (VMMC), Condom programming, Key Populations (KPs) services, Pre-Exposure Prophylaxis (PrEP) and HIV awareness across the country to reach people who are at risk of acquiring HIV infection.

The above strategies allowed the program to reach key populations living with HIV to be aware of their status and link them in appropriate services. In addition, the country made efforts to accelerate UNAIDS targets and to achieve the 90% and 95% by 2020 and 2030 respectively.

2.2. HIV testing services

HIV Testing Services (HTS) aim to identify as many people living with HIV as early as possible and link them to appropriate prevention services and Care and Treatment timely. The HTS are provided through different entry points.

From July 2020 to June 2021, a total number of 3,348,337 HIV tests across the country were conducted, with an overall positive yield of 0.48%. The higher positive yield of 5.33% was identified in sexual partner testing through the index testing services.

Entry Points	Number of tests done	Number of positive tests	HIV positive yield
VCT/PIT	2,086,457	10,674	0.51
ANC women	361,010	913	0.25
ANC partners	257,292	1511	0.59
Male circumcision	292,800	201	0.07
Maternity	301,494	263	0.09
Index testing	49,284	2,628	5.33
Overall	**3,348,337**	**16,190**	**0.48**

Table 1: HIV testing and positive yield by modality, July 2020-June 2021

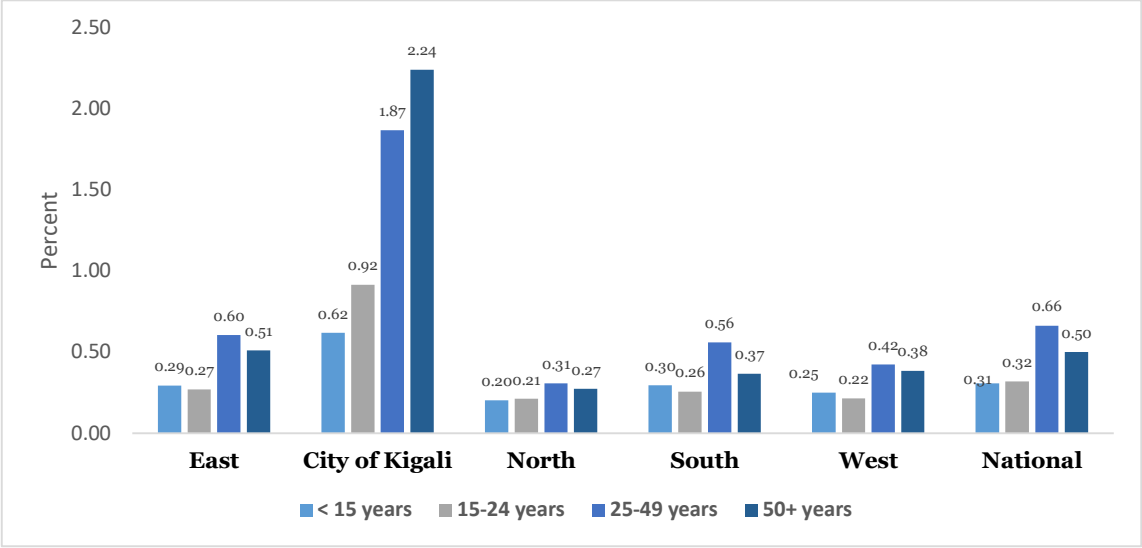


Figure 3: HIV testing yield in HTC by age category and province

Further the HIV testing yield was higher among males in all age categories except those aged 15-24, whereby the yield was 0.16% and 0.44% among male and females, respectively.

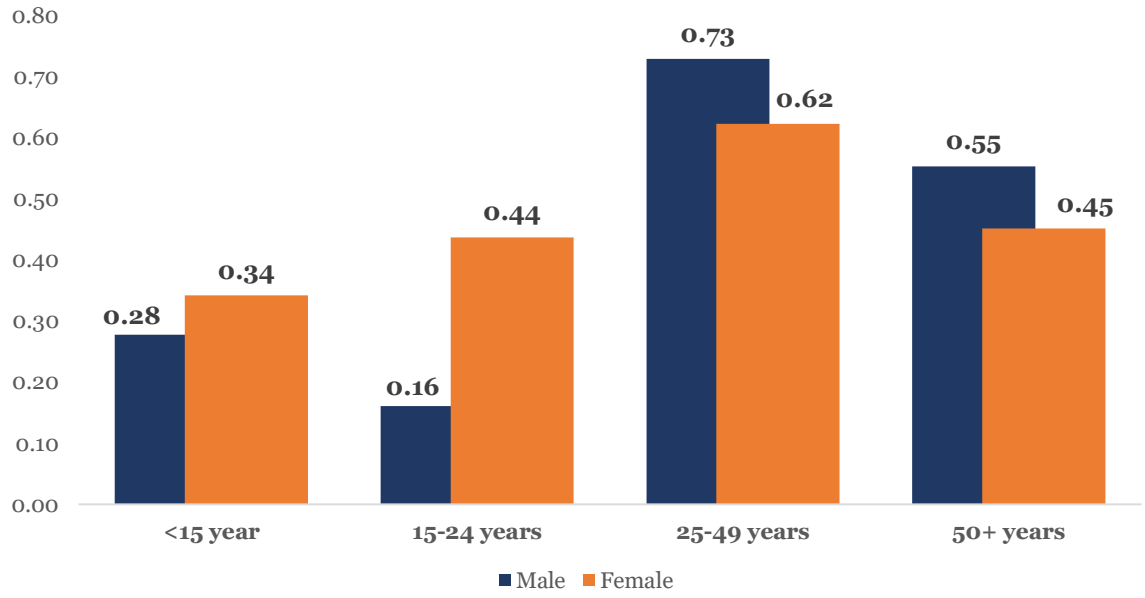


Figure 4: HIV testing yield in the HTS by gender and age category

The national HIV program has scaled up strategies to reach hard populations and unknown HIV positive cases through the HIV self-testing, index testing and partner notification for the Active HIV Case Based Surveillance (CBS) as well as Recency testing as a powerful tool for public health programs and HIV Epidemic control in Country.

2.2.1. *HIV self-testing*

HIV Self-Testing (HST) is an innovative strategy for HIV testing whereby an individual collects his or her specimen, performs a test and interprets the results, often in a private setting either alone or with someone he or she trusts. Reactive results are confirmed by a trained provider at a health facility, non-reactive results are linked to HIV prevention services, and confirmed positive clients are linked to HIV care and treatment services.

The two main distribution channels for HIV self-test kits distribution include health facility through the index testing and partner notification for sexual partners who wish to get tested but refuse the health facility invitation, private pharmacies and community distribution through the KP platforms. During the last fiscal year, a total number of 80,991 and 262,150 self-tests kits were distributed at the health facility and private pharmacies, respectively. During the reporting period, the total number of private pharmacies distributing HIV self-test kits have increased from 59 to 70 across the country.

2.2.2. *Index testing and partner notification*

Index testing is a new approach focusing on identifying and tracing sexual partners and biological children of the index client for HIV testing services.
Partner notification is a voluntary process whereby a trained counsellor and/or health care worker asks people who are diagnosed HIV-positive ("*index clients*") about their sexual partners and family members. If the HIV-positive client agrees, the provider in collaboration with the index client, offers his or her partners HIV testing services after obtaining consent from the index client.

By the end of June 2021, the index testing and partner notification services were scaled up in all health facilities. The results of this countrywide scale up are seen in the increase of newly diagnosed clients raised from 6,514 to 9,558 between July 2020 and June 2021. Among the partners elicited who were reached and tested, the yield of HIV is estimated at 5.9%.

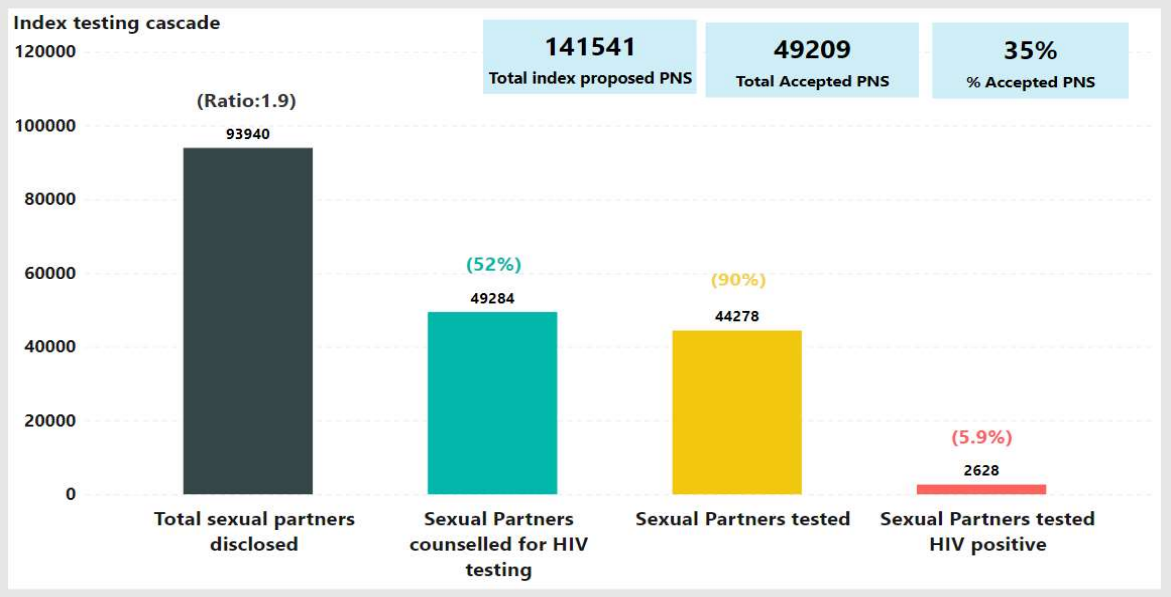


Figure 5: Cascade of Index Testing and Partner Notification

2.2.3. Recency testing

HIV recency test is a laboratory-based test that detects whether an HIV infection is recent (less than twelve months) or not. Information received from the HIV recency testing helps assess how HIV is being transmitted, clusters of new HIV infections, to describe the behaviours that are facilitating HIV transmission and optimize HIV-related data collection and information on risk factors. HIV recency testing was only performed at the National Reference Laboratory (NRL) and the Viral load hubs located in all provinces of the country, nevertheless it was scaled up to all countrywide district hospitals. In addition to that, twenty-three health facilities in the City of Kigali perform the HIV recency testing as point of care testing.

As per the figure below, of all people who initiated ART (11,350), the recency testing was done for 8,856 clients. The results showed that 315 of them had a recent HIV infection.

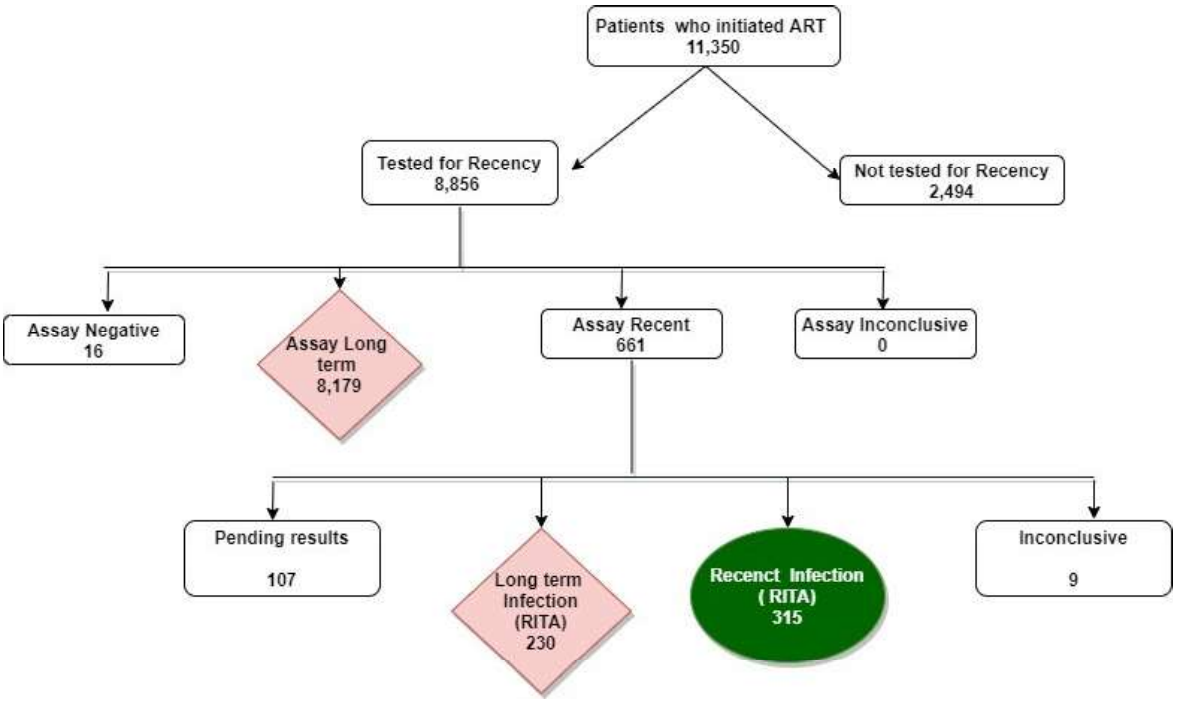


Figure 6: Cascade of HIV Recency testing, July 2020-June 2021

The figure below describes the HIV recency testing by age category and gender. The highest dissimilarity in HIV recency rate among male and females was observed among adolescents aged 15-19 years, (9% males vs 4% females) and older population (5% females Vs 2% males).

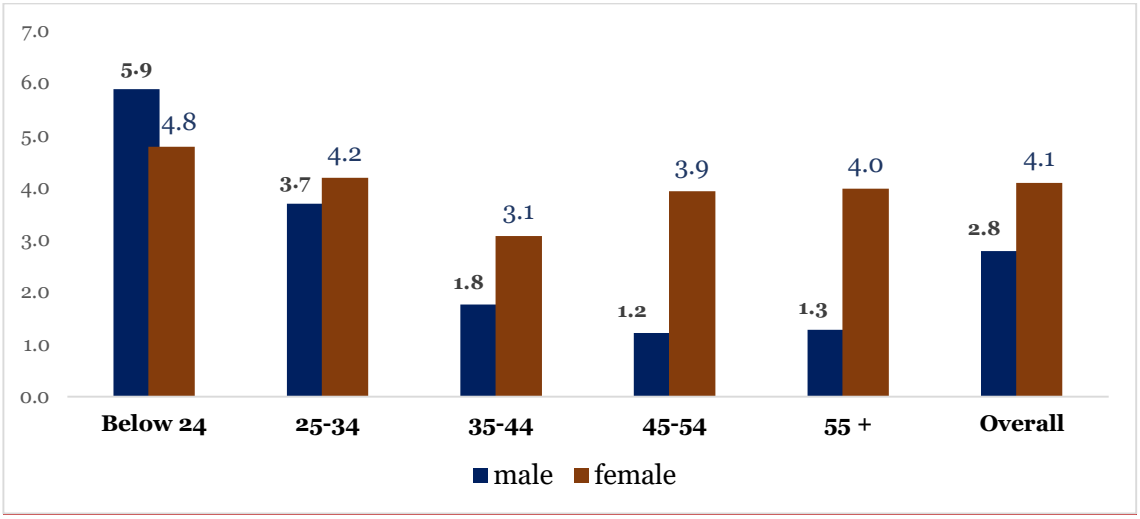
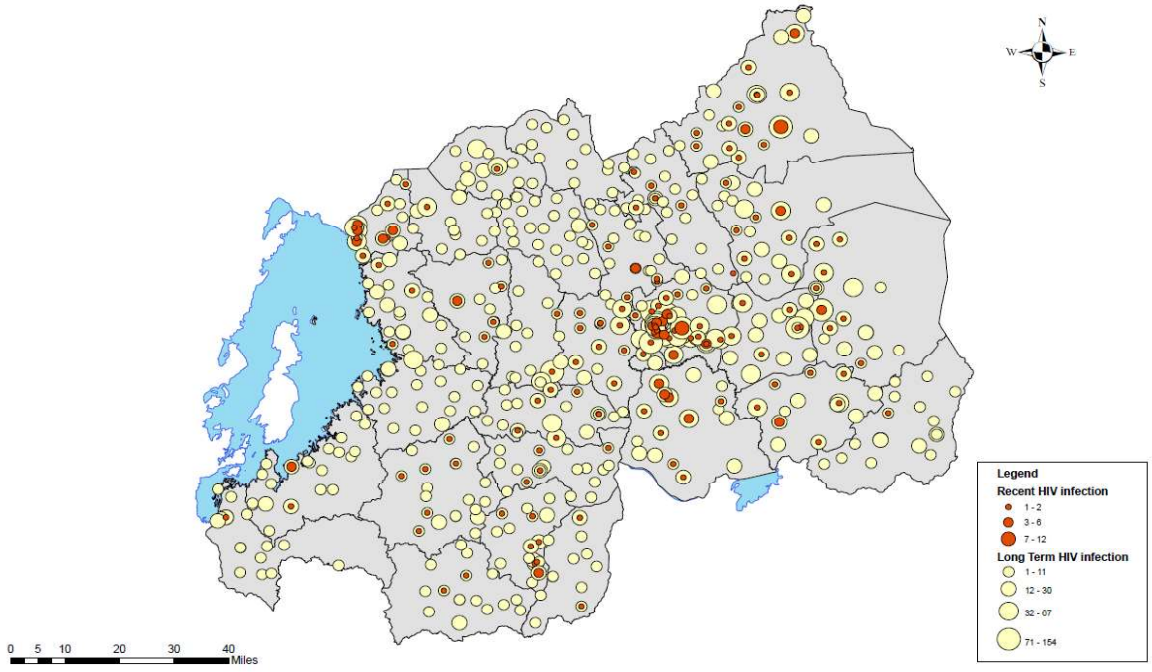


Figure 7: HIV recent infections by age group and gender, July 2020- June 2021

The map below shows that the bigger clusters of HIV Recency were identified in the City of Kigali, Nyagatare, Rubavu, Bugesera and Kayonza districts.



Map 1: Distribution of Recent and Long-Term Infections across Rwanda, June 2021

2.3. Prevention of Mother-To-Child HIV Transmission

2.3.1. Care for HIV positive mothers

Since 2004, Rwanda has implemented the PMTCT program which includes the complete package of primary prevention (education on HIV prevention, HIV testing for pregnant women in ANC, at labour and postnatal), prevention of unintended pregnancies among HIV-infected mothers,

provision of ART to HIV infected mothers and ART prophylaxis for HIV-exposed infants, and post-natal follow-up of mother-infant pairs until 24 months after delivery.
During this fiscal year, 372,189 pregnant women consulted for ANC services. Of them, 1.7% knew their HIV status while 97.9% (6,194) were on ART; and of those who reported they were HIV negative or unknown HIV status, 1,430 tested HIV positive, translating into a positivity rate of 0.39%.

The overall prevalence among pregnant women presenting at health facilities for antenatal care services has decreased from 2.78% in 2016 to 2.08% in 2021. The data also showed an increase of known HIV positive mothers, from 70.3% to 81.6%, in the same period as above. Between July 2020 and June 2021, 7,826 (95%) infected mothers have received ART to prevent the vertical HIV transmission.

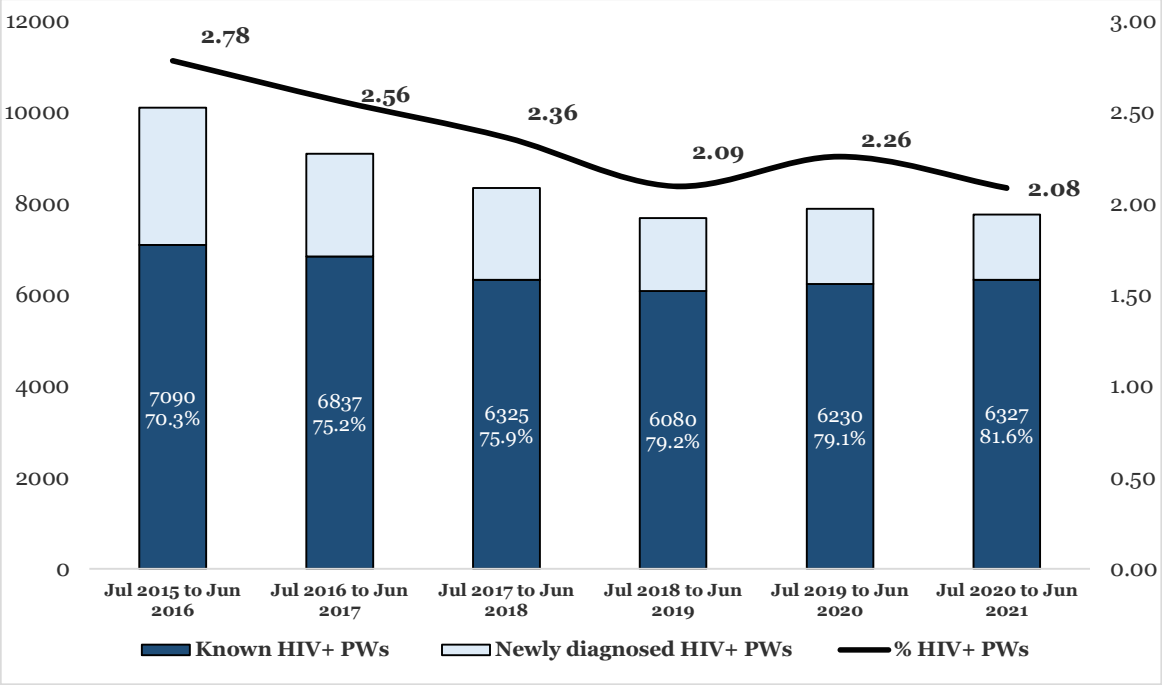


Figure 8: HIV prevalence among pregnant women attending ANC services, June 2021

2.3.2. Follow up of HIV exposed infants

The uptake of follow up of HIV exposed infants born to HIV-infected mothers in the PMTCT program is up to 24 months' postpartum to closely monitor their HIV status. To enable timely early infant diagnosis and rapid ARV initiation for those tested HIV during follow up, HIV-exposed infants are tested at different points in time (6 weeks, 9 months, 18 months and 24 months) as a standard of care and children are tested using PCR at six weeks of age.

Following the national HIV guidelines in use, HIV exposed infants are followed up in PMTCT program up to 24 months' postpartum with close monitoring of their HIV status, HIV testing and appropriate management.
The figure below shows the number of children who were tested at different times of the cascade as well as the positivity rate at each testing point respectively.

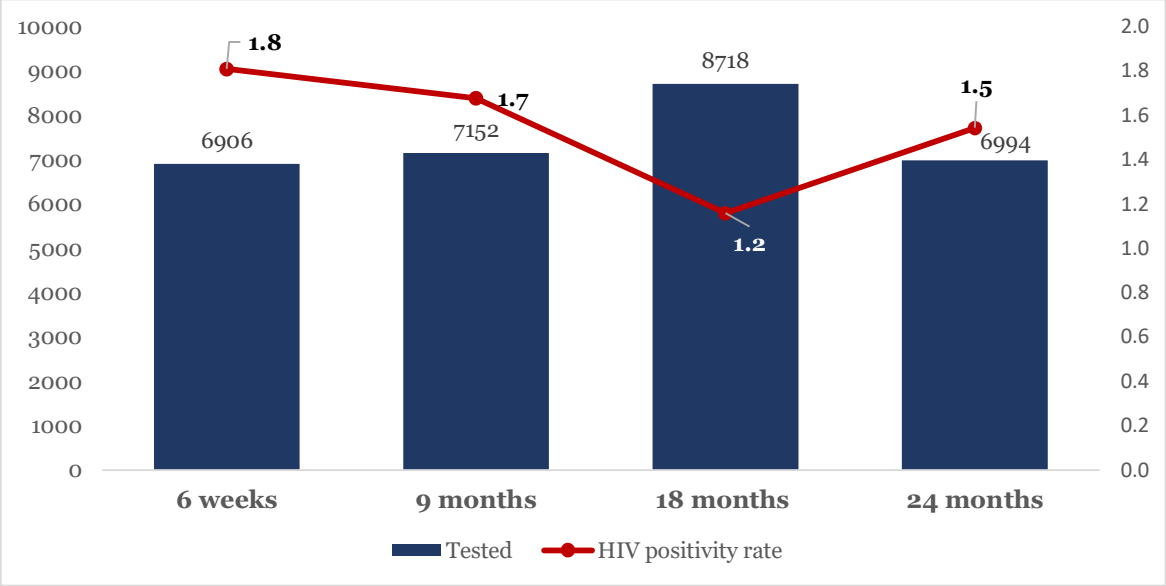


Figure 9: HIV-exposed infants testing cascade, 2021

2.4. Voluntary medical male circumcision

Since 2007, the World Health Organization has recommended voluntary medical male circumcision (VMMC) as a key component of combination of HIV prevention in countries with a high HIV prevalence and low levels of male circumcision. Male circumcision is a method found to reduce HIV transmission by 60%. It remains one-off intervention that reduces the risk of HIV infection and is highly cost-effective.

Rwanda has adopted this strategy in 2008 as an additional measure for HIV prevention intervention. VMMC service is offered at health facility level and this program is gradually expanded to meet the increased demand. According to recent findings from RPHIA conducted in 2019, male circumcision prevalence is estimated at 39.9%.

During this reporting period, surgical male circumcision procedure is the main method used for service delivery, non-surgical method using Prepex was replaced by Shangring and this is under pilot phase through Adverse Events (AEs) Surveillance, following WHO requirement to assess the new adverse event which may occur in country prior to the scale up. Further, Rwanda Biomedical Centre in collaboration with VMMC implementing partners aimed to increase the number of the clients in VMMC service that are sexually active and at greater risk of HIV acquisition. To increase the accessibility and uptake of male circumcision, both routine service delivery and special campaigns, the combination strategies were used for VMMC service delivery.
In order to optimize VMMC services delivery and aligning with WHO recommendations, the following amendment was made in the national HIV guidelines of 2020:

All clients aged 15 years and above with high risk of HIV transmission, offered HIV test before undergoing MC procedure
Clinical evaluation of client before procedure
For children under 18years, parents or guardians must sign a consent form before the procedure
Administration of 1 dose of tetanus vaccine for both methods non-surgical (Shangring device) and surgical method

In line with the HIV national strategic plan to increase the sustainability of the VMMC program and increase the MC prevalence, notable efforts have been deployed at various levels countrywide. During this reporting period, the main activities have been undertaken, particularly capacity building targeting health providers on non-surgical and surgical male circumcision. Consequently, a total number of 480,260 male have been circumcised; with a high proportion of 462,479 (96.3%) who used the surgical method. Further the eastern province, followed by the western and southern provinces have a higher number of males circumcised during this fiscal year.

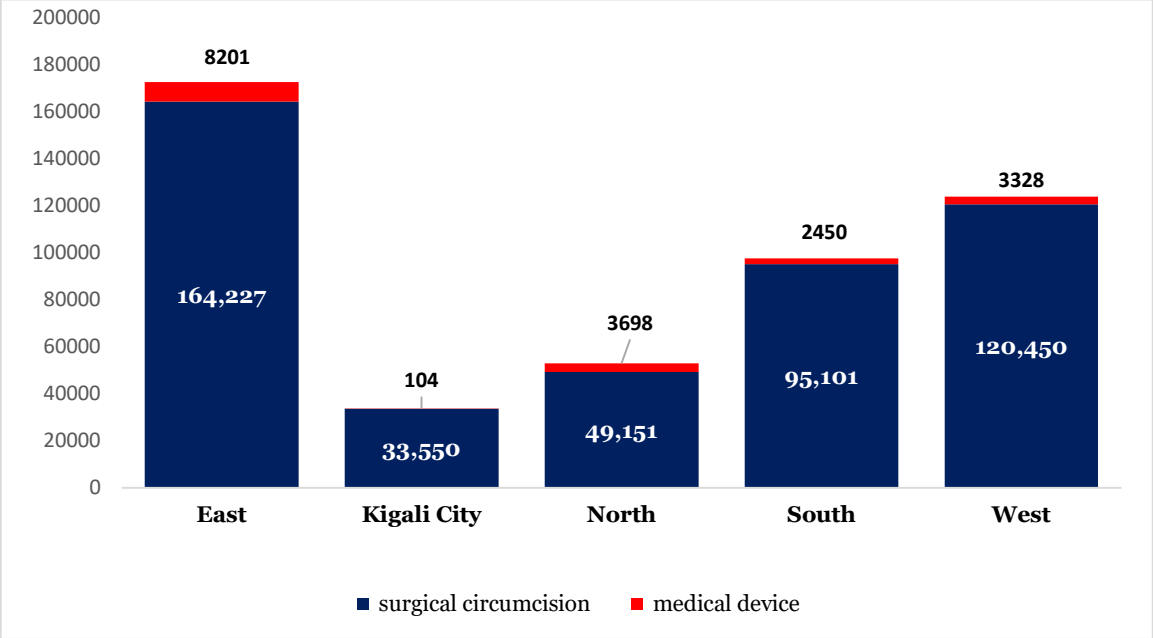


Figure 10: Number of VMMC performed by province and method, July 20-June 21

Comparing the male circumcised by age category, the younger men aged 15-19 years were the majority to be circumcised across all the provinces.

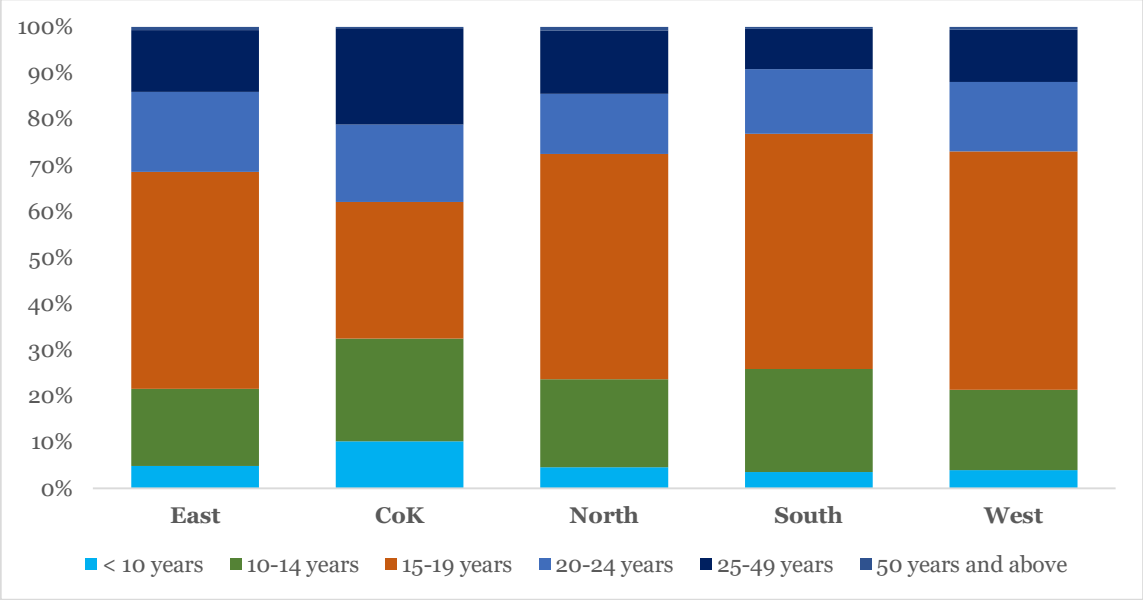


Figure 11: Number of VMMC performed by age group and province, July 20-June 21

The figure below highlights the trend of VMMC by methods, for the last five years. The proportion of surgical male circumcision method has increased over the time compared to the male circumcision using medical device.

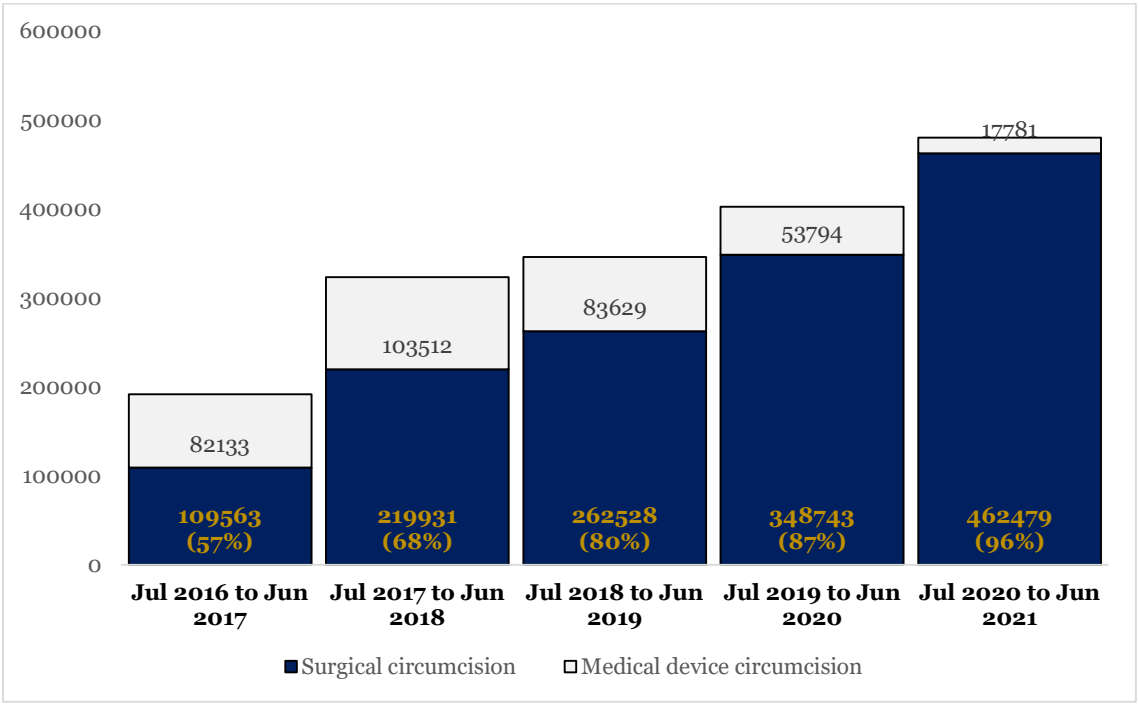


Figure 12: Trend of VMMC, July 2016-June 2021

2.5. HIV Prevention Services for Key Populations

2.5.1. Pre-Exposure Prophylaxis service delivery

The HIV prevention, care and treatment guidelines 2018 incorporated Key Populations interventions directed to KPs as identified in the new NSP 2018-2024.
In that framework, there is a need to train the healthcare providers for the scale up of KPs interventions including Pre-Exposure prophylaxis as an additional HIV Prevention intervention. Thus, a total number of health facilities trained increased from 31 up to 113 health facilities with 182 Healthcare providers trained on Pre-Exposure Prophylaxis (PrEP). Moreover, the HIV Prevention technical working group revised the PrEP training modules, adopted and developed PrEP tools for quality of service and data quality of Key Populations

Nevertheless, the development of monitoring and evaluation (M&E) tools is key component to ensure that KPs are reached with HIV prevention programs as well as improving KPs services and data quality. The PrEP initiative has been implemented in phases targeting the most population at high risk of HIV acquisition as well as Female Sex Workers (FSWs), Male who have sex with male (MSM), HIV sero-discordant couples (SDCs) and Adolescent Girls and young Women (AGYW). Additionally, Outreach activities targeting adolescent women were conducted to strengthen the knowledge on HIV prevention, SRHR services and linkage to HIV services as well as PrEP services for those aged at 18years and above.
Consequently, the capacity building on Health care providers was a focus with the aim of PrEP implementation.

Between July 2020 and June 2021, 29,643 FSWs were enrolled in HIV prevention programming and among them 4,177 FSWs (14.1%) were tested HIV Positive and 3,917 or 93.8% are on ART. Therefore, 5,966 HIV negative are initiated on Pre-Exposure prophylaxis (PrEP) as an additional HIV Prevention intervention. However, MSM as an additional KPs at high risk, this targeted population is hard to reach aligned with a self-stigma were enrolled only 759 in HIV interventions.

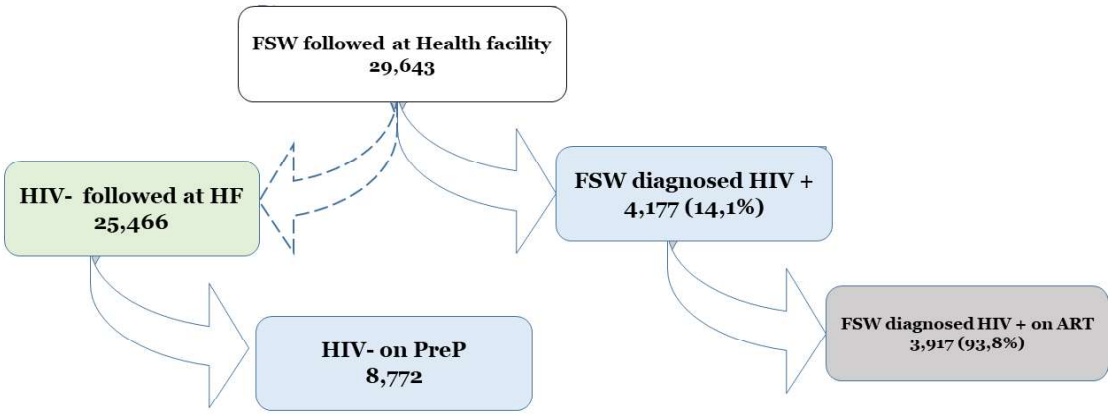


Figure 13: Cascade data on Female sex workers in HIV Program

2.6. HIV Prevention services among Adolescent Girls and Young Women

The component of Adolescent Girls and Young Women (AGYW) was recently introduced in the HIV Prevention program in March 2021. It is a program being implemented by RBC/HIV Division in collaboration with partners in HIV response, especially those working with adolescents and young girls. The partners work at community level and link them with health facilities for further follow up. This new program aims at identifying AGYW who are at high risk of HIV infection for them to initiate PrEP, and those who can be empowered to improve their lives. Since its implementation, a total of 727 AGYW were referred to health facilities for HIV Prevention services, among them 360 AGYW are on PrEP services.

2.7. Condom programming

The condom programming is one the of HIV Prevention approaches provided at both health facility and community levels. In this reporting period, 33,461,867 condoms were distributed, including social marketing (15,928,194 condoms) and approximately 1,446,240 condoms distributed through 8 condoms kiosks selected in different hotspots in City of Kigali, Rubavu, Rusizi and Huye Districts. In addition, 3,663,680 condoms were distributed in the community to the high-risk populations for acquiring HIV infection through peer educators during outreach sessions.

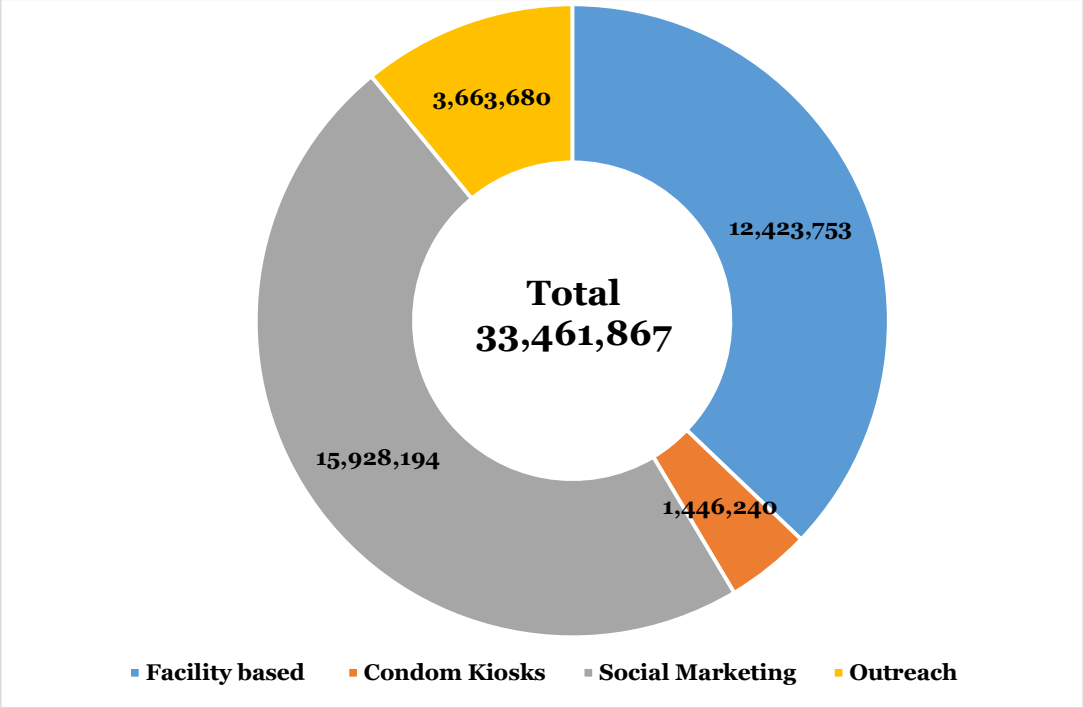


Figure 14: Condom distribution through different channels

2.8. HIV Awareness

The knowledge about availability and accessibility of HIV prevention, Care and treatment services is crucial. Different interventions to increase awareness of population on HIV, STIs and viral Hepatitis were conducted though media (radio & TV spot production and airing, newsletter) and social media and mass campaign.

2.8.1. Radio and TV shows

Both public and private media houses were used to provide information and education on available HIV and Viral Hepatitis services. The messages and shows mainly focussed on new strategies and service delivery. During this reporting period, 948 DJ mentions, 720 Jingle shows, 4471 shows of radio spots, 17 TV talk shows, 22 radio live talk shows were conducted and 14 radio and 12 TV programs were produced.

2.8.2. Development of data collection tools and educational materials

Data recording is crucial in the delivery of HIV, STIs and Viral hepatitis services. The data are collected through various tools as primary source of data. This goes with healthcare providers guides and educational materials to ensure clients and patients education.

Following changes made in the HIV, STIs and viral hepatitis guidelines which may affect the data collection tools and educational materials, different tools and materials were developed, reviewed, produced and distributed, namely registers, patients' files, SOPs and brochures, job aids, referral forms, appointment cards… The educational materials produced are being distributed into schools and communities to raise awareness of young girls and boys on HIV, STIs and gender-based violence.

2.8.3. Celebration of the World AIDS Day

On the December 1st 2020, the Government of Rwanda joined other countries to celebrate the World AIDS Day. The purpose of that celebration is to increase HIV awareness, show support for PLHIV, and commemorate those who have died of its related illnesses. The 2020 WAD was celebrated around the national theme: "**Defeating HIV/AIDS is our joint responsibility**".

In the presence of Minister of Health, Ambassador of USA in Rwanda, Director General of RBC, Representatives of UN Family and Partners in HIV response, key achievements of the national HIV program were presented and gaps were raised and discussed for improvement. The date marked the launch of national campaign aiming at raising HIV awareness to all citizens through comprehensive actions towards HIV testing, reduction of new HIV infections and HIV related deaths. While physical meetings were limited due to COVID-19 pandemic, the use of technologies was promoted including mass media, social media and other communication technologies to reach put to audiences with HIV related information.

It was also an opportunity to officially publish the findings from the Rwanda Population-based HIV Impact Assessment (RPHIA), conducted between 2018 and 2019. Key findings were presented and final report handed to the Ministry of Health.

3. HIV CARE AND TREATMENT

3.1. Introduction

As the HIV epidemic continues to be a major public health concern, care and treatment remains as a key priority in the fight of the HIV epidemic towards ending AIDS by 2030. The care and treatment modalities available restore the quality of life of People living with HIV and significantly prevents HIV transmission. This last year, the HIV Care and Treatment program focused on the following main activities:

(i) Updating the Differentiated Service Delivery Model (DSDM) to include 6 Multi Month Pick up (6MMP);
(ii) Scale up of Dolutegravir-based regimens;
(iii) Introduction of TPT for all PLHIV and scale up of TPT to other health facilities and
(iv) Provision of care for people infected and affected by HIV.

3.2. Innovative approaches in care and treatment for PLHIV

3.2.1. Updating Differentiated Service Delivery Model (DSDM)

Differentiated service delivery (DSD) is a person-centred approach to HIV service delivery that simplifies and adapts HIV services to reflect client's preferences and expectations while reducing unnecessary burden on the health system. DSD tailors HIV services to diverse groups of people living with HIV while maintaining the principles of the public health approach.
The national HIV program introduced DSD Model in 2016 and Health providers classify patients in two categories: stable and unstable, based on predefined criteria. In 2020, the DSDM was updated to include 6 Multi Month Pick up (6MMP).

In efforts to strengthen DSD program, Rwanda joined the HIV Coverage, Quality, and Impact Network (CQUIN) in August 2020 to improve differentiated service delivery (DSD) for people living with HIV. From November 2020, the HIV Care & Treatment program implemented a national scale-up of 6MMP to be able to improve on client-centred approaches and further ease the burden on health facilities.

During the CQUIN annual meeting, we set goals to improve coverage of DSDM with targets of increasing clients in less-intensive DSD from 67% to 80%, secondly to shift 50% of clients currently on 3MMP to 6MMP and lastly to decrease number of clients in the more-intensive DSD model from 32 to 20%. The graph below shows trends in the scale up of DSD model categories from July 2020 to June 2021.

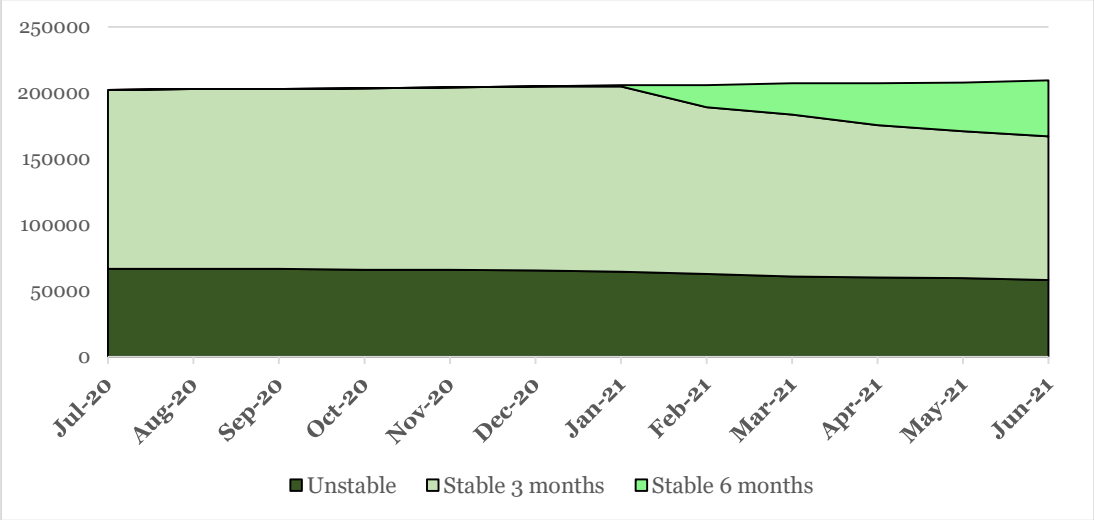


Figure 15: Trend of PLHIV by DSDM Categorization, July 2020-June 2021

As of June 2021, the total number of patients in the less intensive model (Stable) are 110,613 which accounts for 72% of all patients on ART. The distribution of patients in the stable group are 42,447 on 6MMP representing 20% of all patients on ART and those on 3MMP being 108, 804 (52%). The total number of patients in the unstable category are 58,166 (28%).

3.2.2. Scale up of Dolutegravir-based regimens

Based on the expanded studies that assessed the benefits and risks of using Dolutegravir, it was recommended by WHO to use Dolutegravir (DTG), as the preferred treatment option for all PLHIV including pregnant women and those in child bearing age. DTG is also the preferred option in second- and third-lines ART for clients failing non-DTG based regimens. The implementation of this recommendation commenced in January 2020 and the scaling up continued during the year 2020-2021. The progressive increase of clients on DTG-based regimens until June 2021 is illustrated in the chart below:

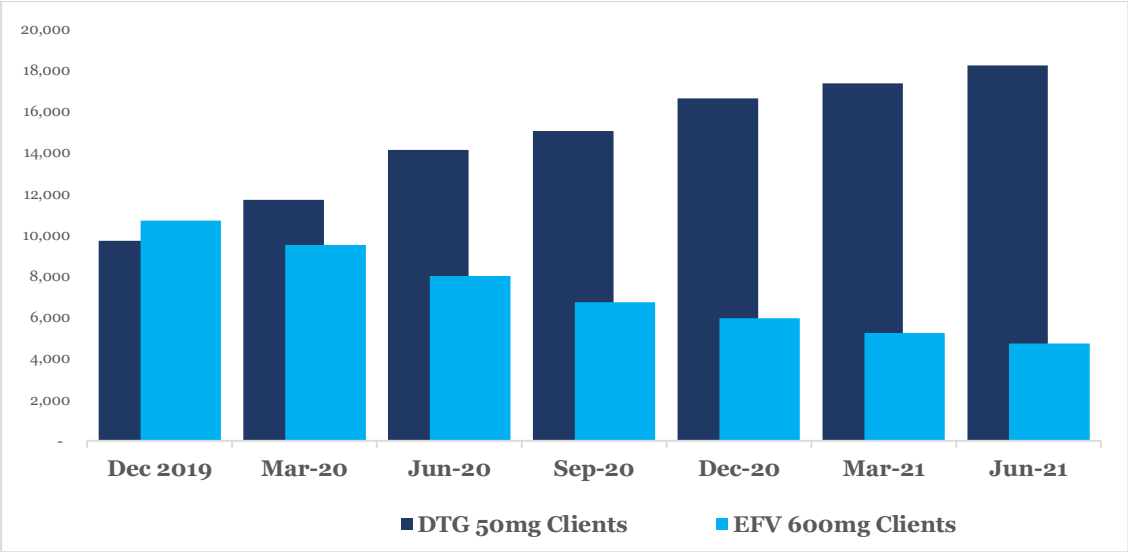


Figure 16: Number of patients initiated on DTG-based regimens, Jan 2020-June 2021

3.2.3. *Management of NCDs and Opportunistic Infections*

As of June 2021, at least one third of people on ART are aged 50 years and above. There is a possible increase of Non-Communicable Diseases (NCDs) occurrence among this particular population. Age above 50 years, long stay and potential side effects of ARVs are the most documented factors of emerging NCDs among PLHIV. NCDs screening is therefore being integrated within ART services at health facilities in order to optimise the management of both HIV and NCDs by aligning appointments. Common NCDs like hypertension, diabetes and cervical cancer are screened at each clinical visit.

HIV associated opportunistic infections (OIs) encompass life-threatening infections seen in patients with advanced human immunodeficiency virus who are generally not on ART. These infections typically affect patients with low CD4+ counts. For the last 5 years, with efforts of "Treat All", there has been a reduction of advanced AIDS-related diseases among PLHIV. CD4 count test is preferably done before initiation to ART to evaluate the immunological status and risk of developing OIs among newly diagnosed PLHIV. Some cases of tuberculosis (TB) and cryptococcal meningitis are still reported among PLHIV with poor adherence and unsuppressed Viral load.

TB preventive therapy (TPT) is one of the strategies to reduce the TB morbidity and mortality among PLHIV. From November 2019, TPT was introduced in newly enrolled HIV infected patients on a small scale, starting from high volume sites. Since July 2020, the progressive scale-up among all PLHIV is ongoing. By June 2021, TPT is being provided in 7 Hospitals (Ruhengeri, Rwamagana, Gisenyi, Kigeme, Kibagabaga, Muhima and Masaka) and health centers in their respective catchment areas and 53,078 PLHIV initiated TPT.

3.2.4. *Additional care for people infected and affected by HIV*

Rwanda has done remarkable success to contain HIV/AIDS and reduce new infections among general population, however, HIV is still negatively affecting PLHIV, their families and community. Overall, 207,089 people are on ART, including 5,965 children aged below 15 years. In order to reduce that burden, a number of interventions were implemented to mitigate the impact. Along this year, the MoH/RBC and partners in HIV response jointly worked to eliminate stigma and discrimination for PLHIV, provide psychosocial and nutrition support, support to OVC and other vulnerable groups, implementation of income generating activities among HIV-infected and affected people.

3.2.4.1. *Adherence and psychological support*

Adherence to ART and retention in care are critical to achieve viral suppression. This is possible when PLHIV receive patient-centred care and psycho-social support. During the reporting period, the emphasis was put on enhancing community peer education, psychosocial support for PLHIV, mental health screening to strengthen adherence and retention to care. Training for 357 HCPs was conducted on Community peer education model and how to engage and retain adolescents in care so they can improve their adherence to antiretroviral treatment.

3.2.4.2. *Nutritional support*

Nutrition is an important factor at all stages of HIV. There is a continuous need for PLHIV to consume a nutritious diet to maintain weight and prevent micronutrient deficiencies. Therefore, nutrition interventions are part of a package of care, treatment, and support services for PLHIV.

Nutritional assessment, counselling and support (NACS) is an approach to providing the nutrition standard of care for all individuals. Nutritional assessment is conducted for every client on every clinical visit. Malnourished clients are followed up on a monthly basis with a clear recording of their nutrition status. Nutritional support for PLHIV is provided to eligible clients as stated in new guidance of utilization.
Nutritional support (supplementary and therapeutic feeding) is provided to PLHIV; CSB+ as supplementary feeding is provided to the moderate acute malnutrition (MAM) and other groups of people who are HIV positive with high risk of getting malnourished, And RUTF is provided to the clients with severe acute malnutrition (SAM).
In this fiscal year, nutritional support (CSB+ & RUTF) was provided to PLHIV who met eligibility criteria as stated in guidelines in 46 hospitals and their health centres. In collaboration with WFP and RRP+, food support was provided for 30,450 PLHIV in need among 273 HCs of 30 districts, every beneficiary received as a matter of mitigating COVID-19 impact among vulnerable PLHIV.

3.2.4.3. Support to HIV-related OVC and vulnerable groups

Children and adolescents face significant risks and vulnerabilities as a result of HIV/AIDS and its socio-economic effects. The national HIV program provides special support to children, adolescents and young mothers, in a range of adverse situations, including children who are living with HIV, living with caregivers who are living with HIV, orphaned, at risk of becoming infected, or a combination of these factors.

In collaboration with RRP+ and the PACT ACHIEVE, health promotion interventions were implemented, including:

1) Providing technical support related to community and facility-level case findings
2) Facilitating enrolment of beneficiaries
3) HIV and STI prevention messaging
4) Community-based psychosocial support for beneficiaries
5) Providing technical support related to community and facility-level case findings.

With the support of Global Fund project, through the National child development agency (NCD Agency) Most Vulnerable Children (MVC) were supported. The support includes provision of scholastic materials and school feeding in 12 Year Basic Education (YBE), payment of school fees and renovate Early Childhood Development settings and provide their materials as well as providing IGA to parents/caregivers of Most Vulnerable Children in 12 YBE for their empowerment and resilience.

3.2.4.4. Addressing stigma and discrimination

The devastating impact of HIV-related stigma and discrimination spans social and clinical contexts and affects the entire HIV continuum of care, from prevention to care and treatment. Though sometimes seen as complex, the fundamental issue of stigma and discrimination must be addressed for sustainable progress.
During this year, Ministry of health through RBC in collaboration with Rwanda Network of People living with HIV have conducted several activities aimed to mitigate and eliminate HIV related Stigma and Discrimination, some od activities conducted are Community support structures like the family support groups, community peer support by peer educators, women 's savings groups, and other forms of CBOs share information on HIV and provide peer counselling for stigma reduction, Radio and TV talk on sensitization on stigma reduction and discrimination, dissemination of The Stigma Index survey (2020) which was conducted countrywide revealed

that some PLHIV were still experiencing both the internal and external stigma to 13%. In collaboration with the University of Rwanda, there has been initiated…on the implementation of the project of Internalized Stigma Reduction Intervention which is the research project of University Rwanda and Duke University established to assess the acceptability, and areas of necessary adaptation, of the internalized stigma reduction intervention.

3.2.4.5. Income generating activities among PLHIV and vulnerable groups

Many commonly cited reasons for non-adherence are related to economics, such as a lack of resources for medication, transportation to attend follow-up clinic appointments, food and nutritional supplements. Income Generation Activities (IGA) attempt to address poverty, unemployment, and lack of economic opportunities to increase HIV positive adolescents' and Orphan and Vulnerable Children (OVC)'s ability to generate income and secure livelihoods.
During this year, 102 OVC & PLHIV participated in the whole process and started their income generating activities. They received grants of activities according to their project without exceeding the ceiling of 2 million per project.
Social integration of PLWHIV has been done: 10 youths were able to continue their studies with the financial support from IGA, 9 youths got a job, 36 youths have their IGA as the main source of Income, 54 youths opened their bank account, 3 youths have been married, 3 children were born during the project duration.

3.2.4.6. Economic empowerment and Promotion of WLHIV rights

In October 2020, The UNWOMEN in partnership with RRP+ initiated a project that aims at Promotion of Gender equality and Empowerment of HIV+ women and girls affected by HIV in the context of COVID-19. The project raised awareness on the right of girls and women affected including providing financial support to 8 cooperatives worth 2.5 million each for improving their livelihoods and wellbeing.

3.3. ART coverage and HIV Continuum of Care

Since the adoption of "Treat all approach" in June 2016, all clients who test HIV-positive are linked to care, enrolled and initiated on ART on the same day, regardless of their CD4 count. This strategy has led to an increase in the number of patients on ART in Rwanda. The figures below show the trend of ART coverage from 2004. As of June 2021, 207,089 patients were on ART, representing 92.5% of all people living with HIV.

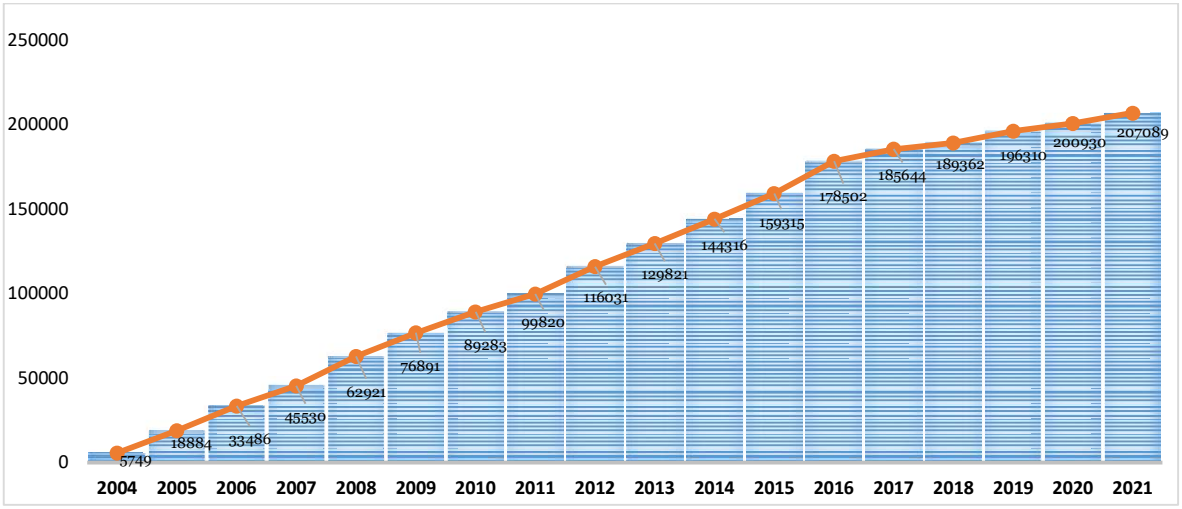


Figure 17: Trend of ART Coverage, 2004-June 2021

According to the UNAIDS estimates of 2021, the overall coverage is estimated at 92.5%. However, there is a remarkable dissimilarity between ages. For example, the ART coverage is estimated at 61.3% among patients aged below 15, 75% among 15-24 and 95.9% among those aged 25 years and above.

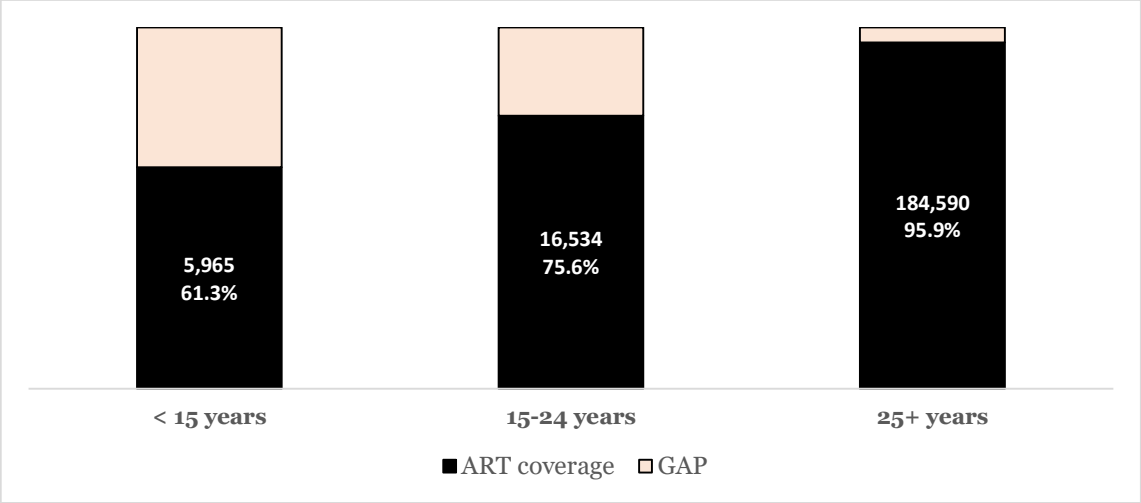


Figure 18: ART Coverage by Age groups

The figure below shows the ART distribution by age category and gender as of June 2021. Young people and adolescents aged 10-19 represent 4.3% (9,108) of all patients on ART, while adults in the 25-49 age group account for most clients of ART accounting for 60% (124,067) of all patients on ART. This age group is particularly at risk, due to early sexual activity and marriage.

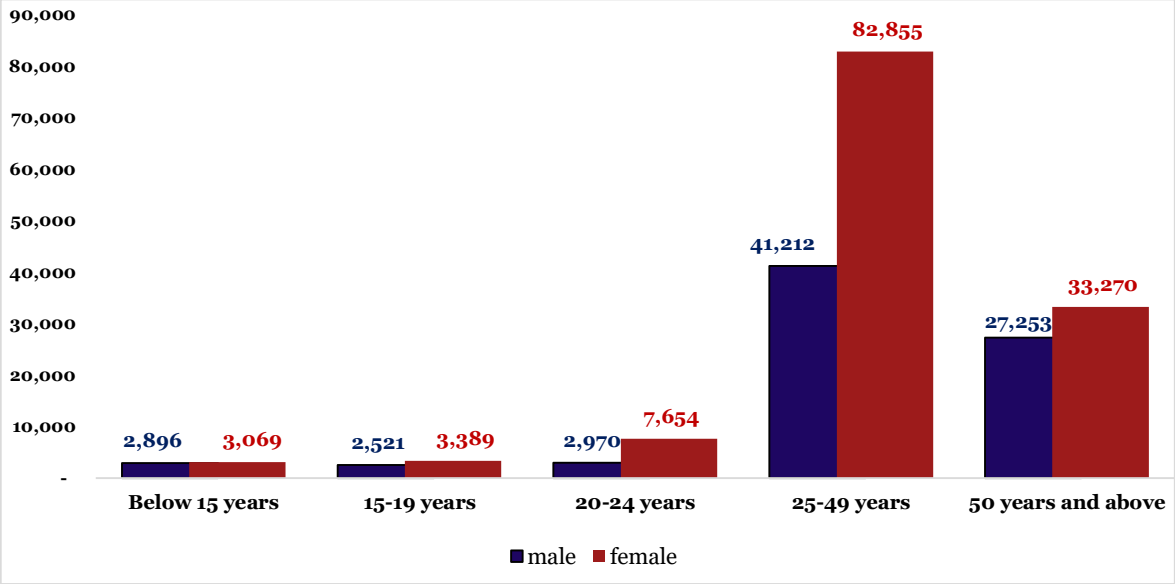


Figure 19: Total number of PLHIV on ART by Age and Sex, by June 2021

3.3.1. Linkage and enrolment

Early linkage to care and treatment reduces HIV/AIDS related morbidity and mortality which is effective at preventing further HIV transmission. It optimizes health benefits of treatment and prevent secondary transmission. The HIV Care and Treatment program in Rwanda has strengthened strategies to improve linkage and initiation on ART for all patients who have been newly diagnosed HIV positive, communication between testing entry points and ART services, Same-day enrolment, enhanced counselling at enrolment, and same-day initiation on ART where feasible. From July 2020 to June 2021, HIV care and treatment initiated 11,535 patients on ART.

3.3.2. Retention on Treatment

Retention in care is a spectrum of continuum of care packages starting from diagnosis of HIV infection till lifelong services. Nearly all health facilities at the level of the community known as health centers provide comprehensive antiretroviral treatment allowing maximum retention to care given that the distance to the health facility is within reach. During the reporting period, as observed on the graph below, the level of retention to care was 92.3%.

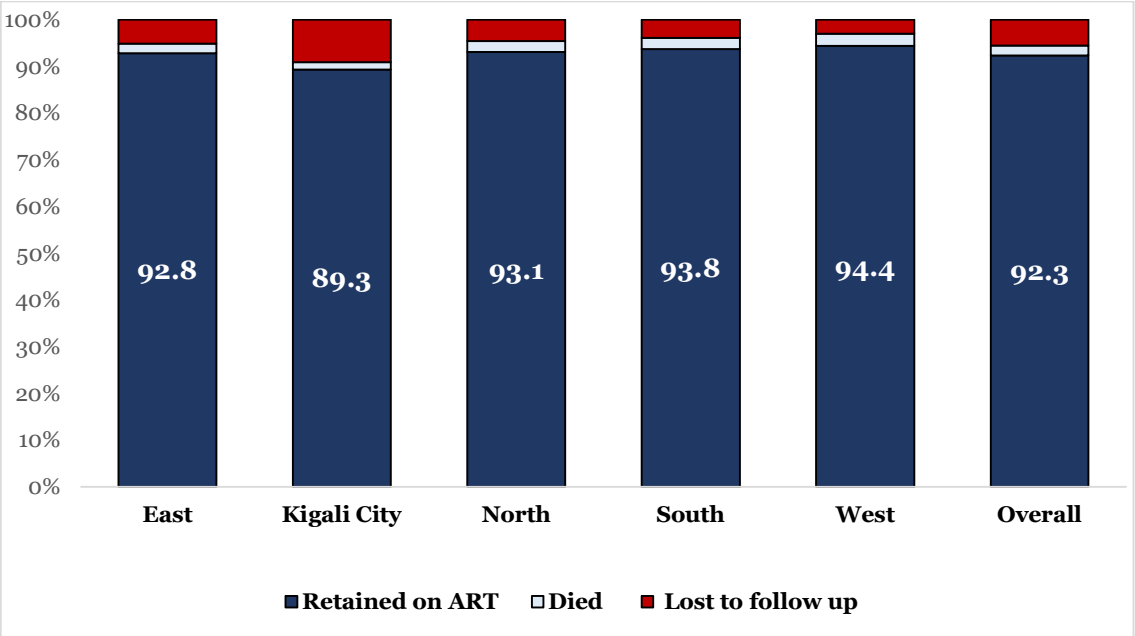
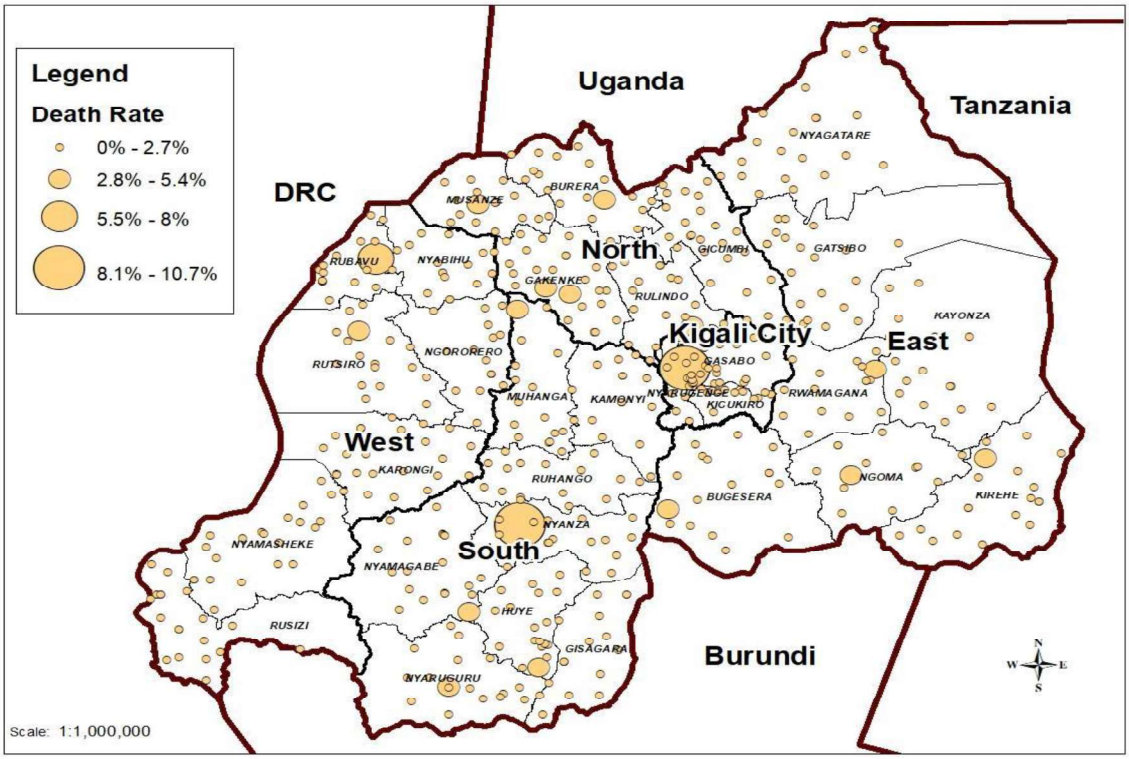


Figure 20: Movements of patients on ART, July 2020-June 2021

As of June 2021, the overall number of patients on ART were 207,089 representing coverage of 87%. The total number of new clients during the reporting period were 11468. Those lost to follow-up were 4018, with 2305 retraced back to care whereas, a total of 1548 patients died. The map below shows the distribution of deaths occurring between July 2020 and June 2021 among PLHIV on ART.



Map 2: Deaths among PLHIV on ART, July 2020- June 2021

3.3.3. *Viral load monitoring*

Viral load testing is the gold standard for HIV treatment monitoring. The routine viral load monitoring helps health care workers identify adherence challenges early, permitting timely adherence support intervention and guide other actions like switching the patients to other regimens. In the Rwandan context, patients on ART are considered to have suppressed the viral load when their VL is under 200 HIV RNA copies/ml.

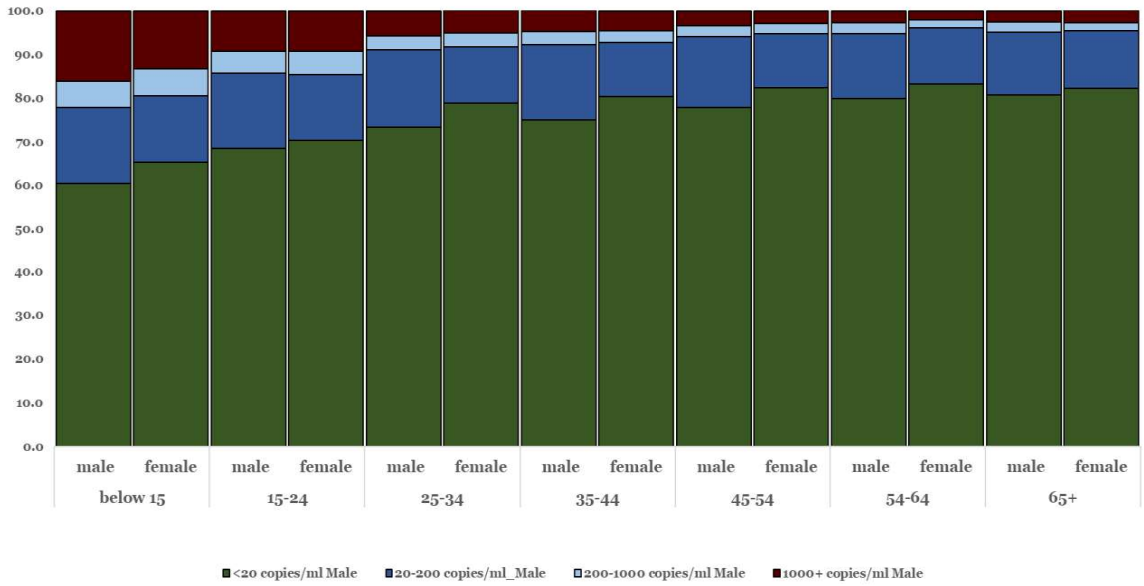


Figure 21: Status of viral load suppression among patients on ART, by sex and age

The above figure describes the status of viral load suppression among patients on ART during the reporting period. Though, the general curve shows a good progress, there is a lot of work to do especially among young people (aged below 25 years) and male patients on ART in general.

3.4. ART and Lab Commodities Supply Chain Management

Strong and effective supply chains are key for any health system or program to deliver the intended services at the expected levels of performance. Supply chain management of antiretroviral medicines and other HIV related commodities involves a series of activities to ensure products are continuously available for clients in need. Below are some of the activities accomplished during the fiscal year 2020-2021:

- **The annual quantification of HIV program related commodities and other essential needs** were estimated during the integrated quantification exercise conducted in December 2020. The main outputs of this exercise are the forecasted needs for 2021-2024 and the procurement requirements for 2021-2022. A comprehensive report has been produced and approved by the Resource Management Committee as the supreme organ of the integrated Coordinated Procurement and Distribution System (iCPDS).
- **Health commodity stock status review**: Stock status analysis and pipeline monitoring is a routine exercise conducted on a monthly basis and whenever required. Stock levels at central, District and Health Facilities levels are analysed for two main indicators which are "Stocking according to plan" and ''Remaining product shelf-life

analysis". Appropriate measures are put in place to prevent both shortages and overstocking that respectively result in poor service delivery and expiries.

- **Continuous monitoring of the implementation of changes in guidelines** where new molecules are introduced while others are phased out. In collaboration with Rwanda Medical Supply and through routine stock status analysis, commodity ordering and validation, required decisions are undertaken regarding the amendment of the basis for validation, commodities to be returned from lower to upper levels or redistributed as appropriate.

4. VIRAL HEPATITIS AND SEXUALLY TRANSMITTED INFECTIONS

4.1. Introduction

The World Health Organization (WHO) estimates that viral hepatitis B and C are causing 1,100,000 deaths every year which means that 1 person dies every 30 seconds. In 2019, 296 million persons, or 3.8% of the population, were living with chronic hepatitis B virus (HBV) infection in the world and the African and Western Pacific regions accounted for 67% of those living with HBV. In 2015, the estimated global prevalence of HBV infection in HIV-infected persons was 7.6%, and 2.7 million persons were coinfected with HBV and HIV. Most of the people currently living with HBV infection were born before the hepatitis B vaccine was widely available and used in infancy

In 2019, 58 million persons were living with hepatitis C virus (HCV) infection in the world, accounting for 0.75% of the population. Of those living with HIV, 2.3 million persons also had HCV infection, of which 1.4 million were PWID. HCV infection is unevenly distributed across the world. The European and Eastern Mediterranean regions are the most affected, but there are variations in prevalence across and within countries. Unsafe health-care procedures and injection drug use were the leading causes of new HCV infections. In 2019, there were 1.5 million new infections.

Chronic infection with viral hepatitis can lead to liver inflammation and further cause chronic liver disease, cirrhosis and liver cancer, contributing to an increased burden of morbidity and mortality. With effective vaccines and treatment for Hepatitis B (HBV) and an increasingly affordable cure for Hepatitis C (HCV), combating viral hepatitis has become a focus for national strategic plans in Rwanda.

The Rwandan government, capitalizing on its success in rapid expansion of HIV services and care, has led the way in reducing its hepatitis burden, the first country in the region to launch a national viral hepatitis control program, to establish a dedicated hepatitis unit in 2011, to put in place first national guidelines in 2013, to put in place first hepatitis C treatment from 2015, vaccination and screening campaigns from 2016 and finally to launch hepatitis C elimination plan in 2018. Different activities have been conducted to support the prevention, care and treatment of viral hepatitis B and C as well as STIs. The following key achievements were noted:

- Prevention means were used through awareness, sensitization, mass screening and vaccination as the most effective ways to reduce the burden of HBV and HCV. Radio talks and TV shows have played a big role in raising the population's awareness.
- From 2002 till now, HBV vaccination has been done to over 7,000,000 people including adults and children, meaning that all people aged 0 to 18 years old are vaccinated. From July 2020 till June 2021 only, over 98,342 adult people were vaccinated against HBV and included PLHIV, Survivors of the 1994 genocide against Tutsi, MSM, FSW and refugees residing in Rwanda. If we consider adults and children, we count over 400,000 people who were vaccinated against HBV during this fiscal year.
- As a move to task-shifting and decentralization of hepatitis management services respectively to nurses and health centers, trainings were conducted for healthcare workers including doctors, nurses and data managers. Thus, 44 hospital data managers and 530 nurses working in hospitals and health centers were trained in 2020-2021. Among them 340 were trained in practical sessions during the fiscal year and were approved as prescribers of viral hepatitis drugs.

- HCV elimination joint Umuhigo which aimed at testing the population aged 15 years and above, was implemented in all Districts of Rwanda. Based on that umuhigo, a total of

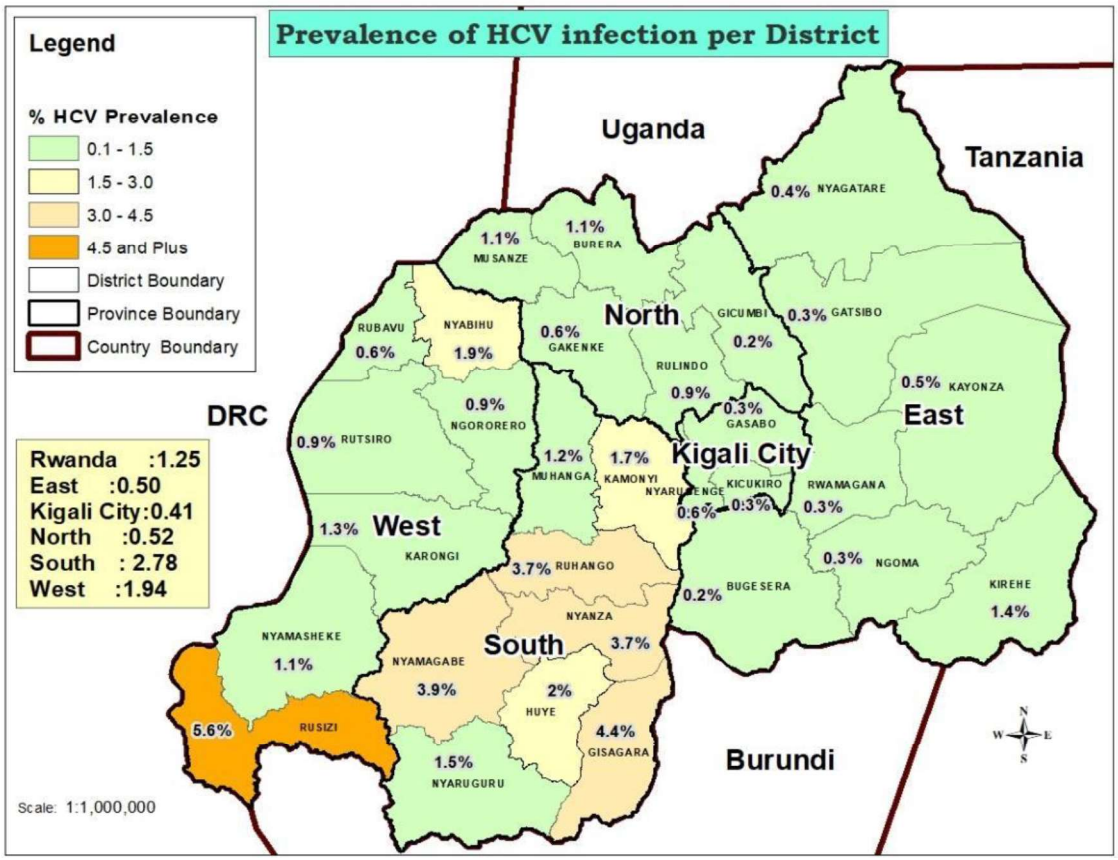
1,074,016 and 680,433 people were respectively screened for HCV and HBV from July 2020 to June 2021. For the services continuum, people screened positive were linked to confirmatory testing and treatment. A total of 23,374 people and 12,657 people were respectively screened positive for HCV and HBV on rapid test. Among them, 18,423 and 5,554 were confirmed viral load positive for HCV and HBV. The prevalence of HCV and HBV infection was respectively 1.25% and 0.82%. Up to 17,429 patients and 1,864 patients have been respectively initiated on HCV and HBV treatment.

- From the beginning of the program till June 2021, a number of 5,062,018 people have been screened for HCV; 109,624 have been HCV antibody positive; 52,142 have been HCV RNA positive and 51,722 have been initiated on treatment and 92% were cured. Regarding the HBV, 3,246,600 people have been screened; 117,218 have been HBsAg positive; 12,513 have been confirmed HBV DNA positive and 5,548 are on a life-long treatment.

4.2. Viral Hepatitis Management

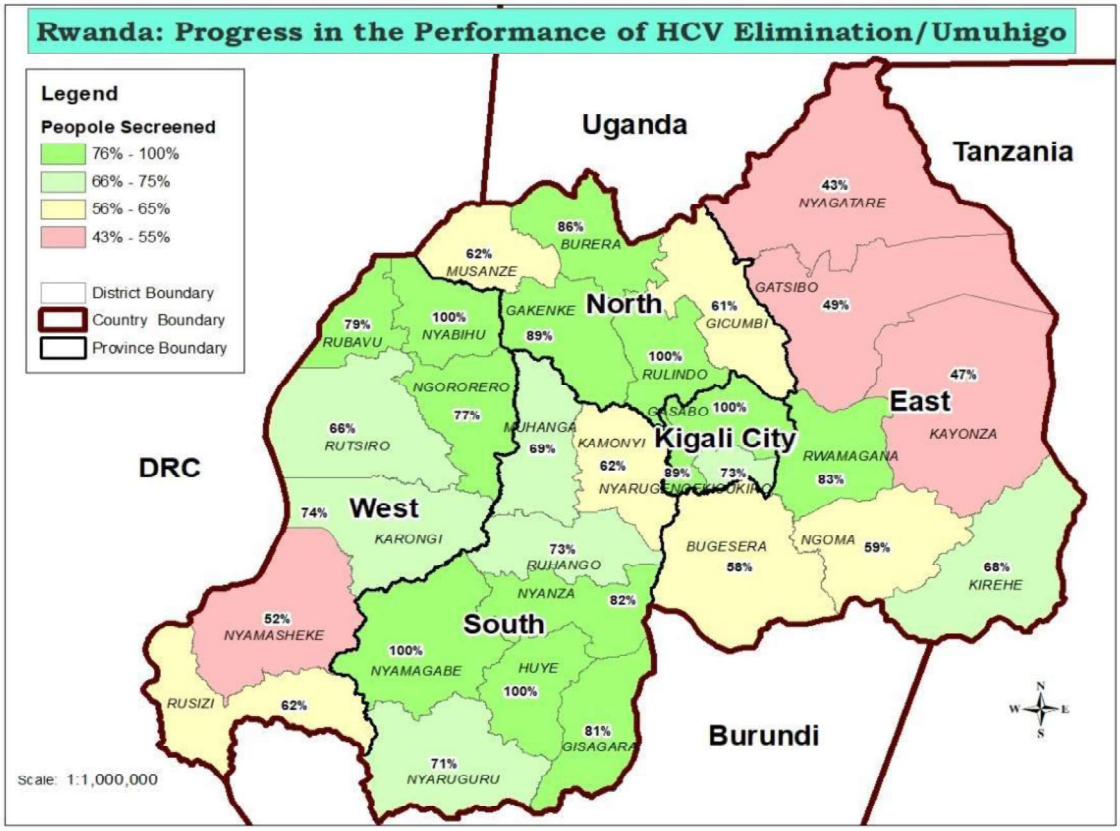
4.2.1. Management of Hepatitis C

From July 2020, in line with Viral hepatitis elimination in Rwanda, RBC prepared and conducted awareness campaigns on viral hepatitis and different categories of the population were educated and screened. HCV elimination joint Umuhigo was implemented in all Districts of Rwanda. Based on this Umuhigo, a total of 1,074,016 people were screened for HCV from July 2020 to June 2021. For service continuation, people screened positive were linked to confirmatory testing and treatment. A total of 23,374 people screened positive for HCV first test and among them, 18,423 were confirmed viral load positive for HCV and 17,429 people have been initiated on treatment. The prevalence of confirmed HCV infection after viral load test has been 1.25%.



Map 3: Prevalence of HCV Infection by District, June 2021

From the launch of HCV elimination plan in December 2018, Districts have been assigned to screen all their population aged 15 years and above in the framework of HCV elimination. The exercise was called "Umuhigo" and started by the procurement and distribution of required commodities to respective Districts to help them perform the HCV screening. From the beginning of the program till June 2021, a total of 5,062,018 people aged 15 years and above have been screened out of the 7 million expected to be screened in total. Among them 52,142 people have been HCV RNA positive and 51,722 have been initiated on treatment with a cure rate of 92%. Districts performed differently the HCV screening as per the map below showing the progress per District in percentages.



Map 4: Progress in the performance of HCV Elimination

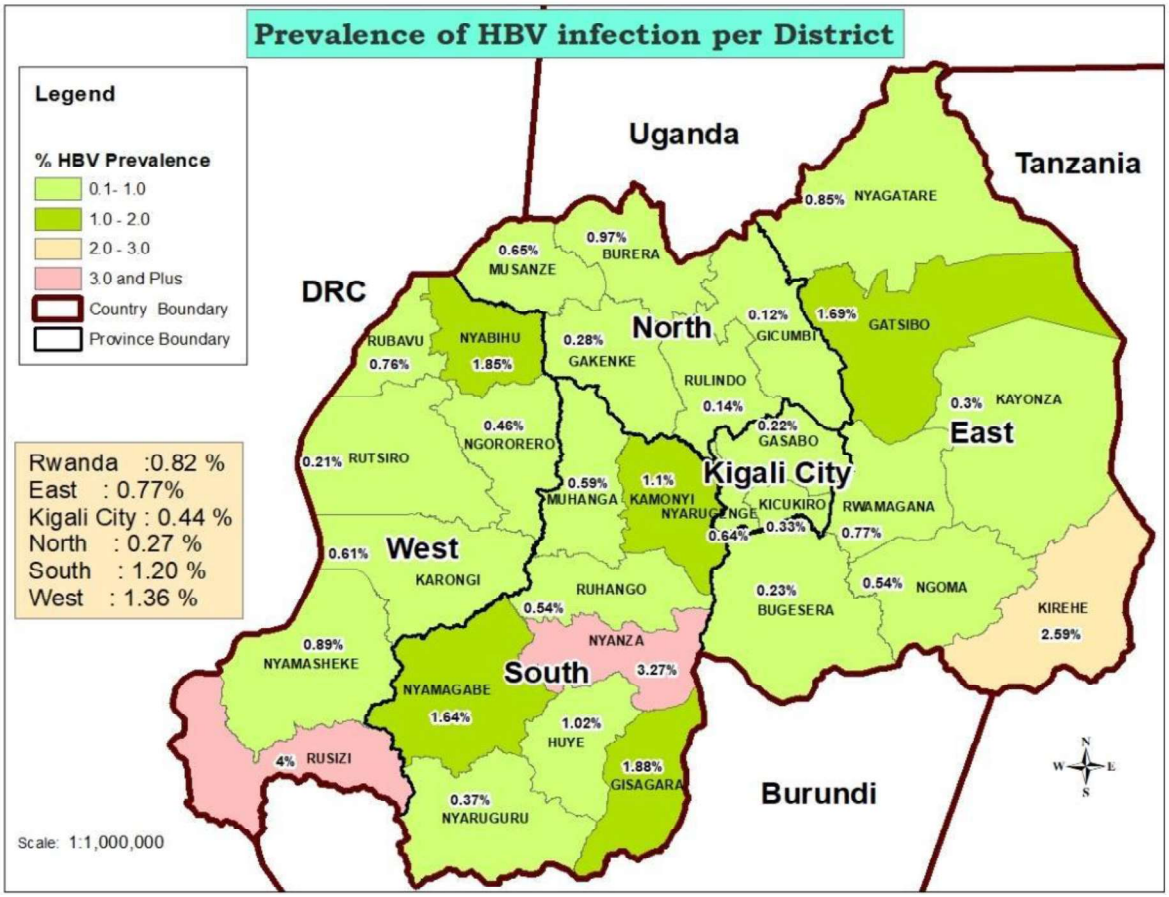
4.2.2. Vaccination of HBV

Prevention of HBV infection was done through awareness messages, radio talks, screening and vaccination. Vaccination is a significant contributor to HBV infection control. Routine administration of the HBV vaccination schedule for infants has already been in place since 2002, and nationally almost all one-year-olds have received three doses of the HBV vaccine (~97% within a given year) (WHO, 2013).

From 2002 till now, HBV vaccination has been done to over 7,000,000 people including adults and children, meaning that all people aged 0 to 18 years old are vaccinated. From July 2020 till June 2021, over 98,342 adult people were vaccinated against HBV and included PLHIV, survivors of the 1994 genocide against Tutsi, MSM, FSW, prisoners and refugees residing in Rwanda. If we consider adults and children, we count over 400,000 people who were vaccinated against HBV during this fiscal year.

4.2.3. HBV testing and treatment

From July 2020, RBC prepared and conducted awareness campaigns on viral hepatitis and different categories of the population were educated and screened. HBV screening was conducted in all Districts of Rwanda. A total of 680,433 people were screened for HBV from July 2020 to June 2021. For service continuation, people screened positive were linked to confirmatory testing and treatment. A total of 12,657 people screened positive for HBV first test, 5,554 were confirmed viral load positive for HBVand 1,864 people have been eligible and were initiated on HBV lifelong treatment. The prevalence of confirmed HBV infection based on viral load results has been 0.82%. Cumulatively from the beginning of the program, 3,246,600 people have been screened; 117,218 have been HBsAg positive; 12,513 have been confirmed HBV DNA positive and 5,548 have been eligible and initiated on a life-long treatment.



Map 5: Prevalence of HBV Infection per District, June 2021

4.3. STIs Management

By 2030, World Health Organization (WHO) has a vision of zero new infections, zero sexually transmitted infection-related complications and deaths, and zero discrimination in a world where everybody has free and easy access to sexually transmitted infection prevention and treatment services, resulting in people able to live long and healthy lives. This is aiming to end STI as a major public health concern using strategies like universal health coverage, the continuum of services and a public health approach.

In the same line with WHO vision, from 2011, the Ministry of Health (MOH) through Rwanda Biomedical Centre (RBC) urged for STI systematic screening especially in pregnant women to

reduce unmet need in STI prevention and treatment services. This strategy helped to recognize clients with symptomatic STI who do not seek health care and thus increased the number of treated cases. However, although we are aware that a significant number of people remain asymptomatic while they continue to spread the disease, socio-economic means that should help to use advanced method to recognize them, still represent a challenge to remarkably reduce the burden of STI in Rwanda. So far, in Rwanda, patients aged 15 years and above visiting different health facilities for several health issues are actively checked for STI signs and symptoms and all pregnant women and their partners are systematically screened for STI especially for syphilis.

4.3.1. STIs prevention, care and treatment

In Rwanda, apart from syphilis, which is etiologically diagnosed in Antenatal care (ANC), other STI are diagnosed and treated using a syndromic approach. Although the syndromic approach has advantages like high sensitivity among symptomatic patients, taking account of multiple infections and client satisfaction, its success requires regular monitoring, evaluation as well as supervision and trainings. Furthermore, the approach has some limitations including; over-diagnosis, over-treatment, and unnecessary side-effects. However, it has been shown as a best strategy for STI control in resource limited settings if compared with laboratory approach, which requires a big investment in STI response by equipping laboratories and hiring highly trained personnel.

So far, significant efforts have gone into strengthening the national health system in Rwanda. These advances have facilitated improved access to medicines and have contributed to the success of different national programs including Human papilloma virus control and syphilis in pregnant women. However, other STI have been lagging behind for many years, despite their impact on public health.

Neisseria gonorrhea is currently a growing threat worldwide due to antimicrobial resistance. Unfortunately, for a long decade, Rwanda has adopted the WHO recommendation for the treatment of gonorrhea and other STI, with no particular regard for the country context.

STI partner notification, care of asymptomatic cases as well as knowing the real course of the syndrome have to be continuously improved. From July 2020 to June 2021, 4,865,320 clients have received the screening and counselling on STIs. Of them 221,251 (4.54%) were confirmed positive for at least one STI, among which 7228 (3.27%) self-reported being HIV positive.

Compared with previous years, data show a progressive decrease in the number of people screened for STI and an increase of the positivity rate which started to slightly decline during this fiscal year, from July 2020-June 2021. This highlights the implementation of the targeted testing for efficiency.

A higher percent of clients who confirmed with STIs was seen in the city of Kigali (10%) and the eastern province (8%).

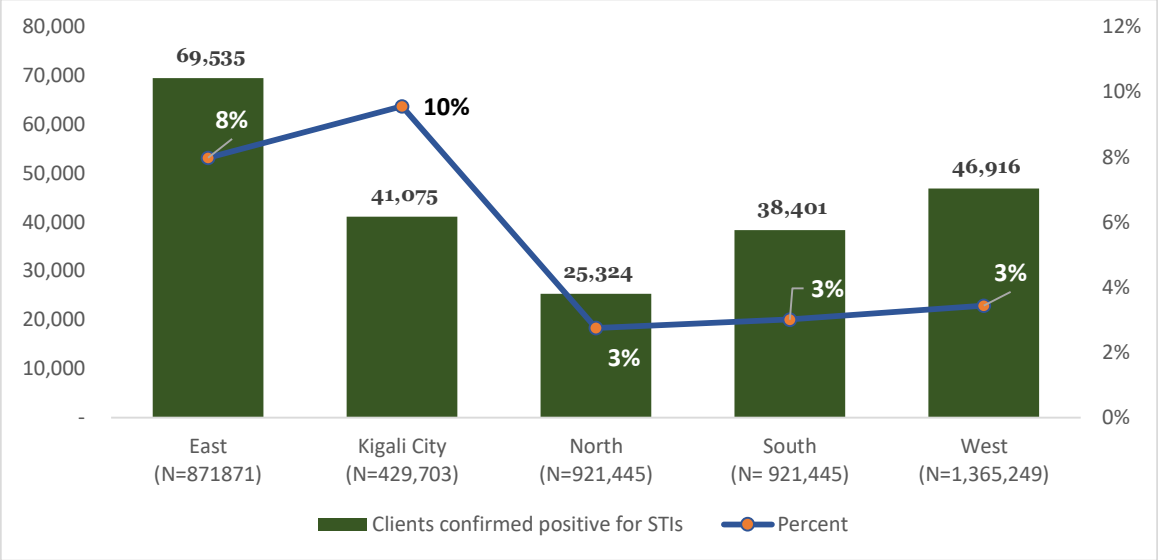


Figure 22: STIs Prevalence by Province

The figure below shows the distribution of the STIs cases by syndrome from July 2020 to June 2021. Cases of vaginal discharge represent the majority of cases (122,453, 43.0%) followed by cases of urethral discharge in men (59,771, 21.0%) and cases of pelvic pain in women (27,946, 11.9%).

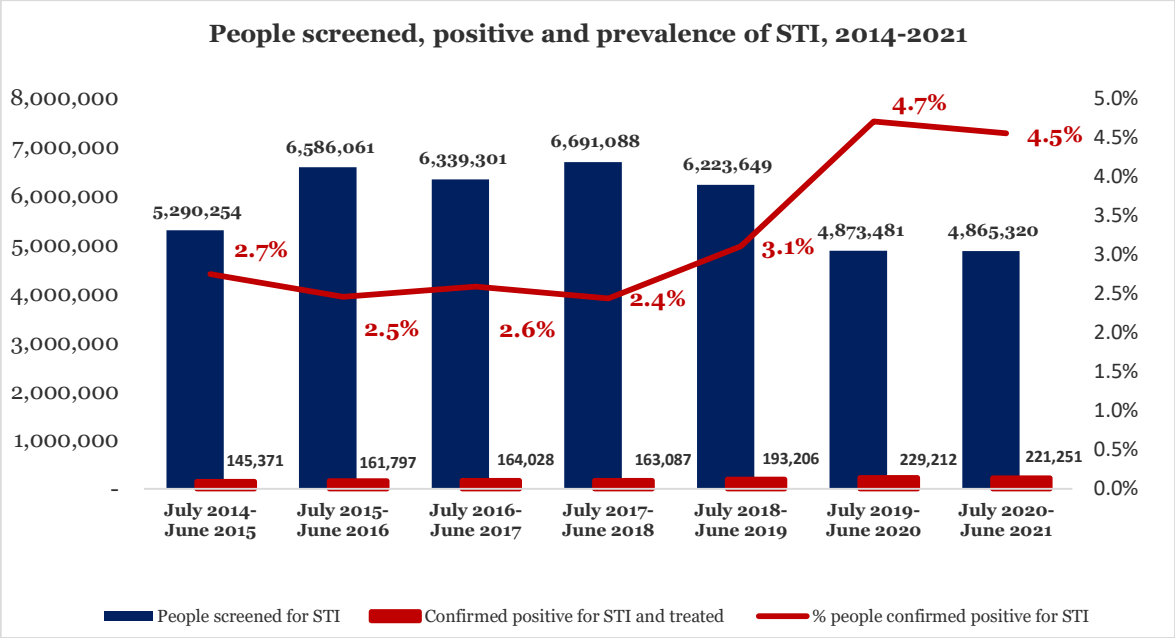


Figure 23: Trend of STI screening and positivity rate, July 2014 to June2021

5. STRATEGIC INFORMATION FOR HIV

5.1. Introduction

The HIV strategic information aims at generating reliable and timely health information on which to base decision making. During the reporting period, the National HIV program implemented various interventions and activities to improve HIV strategic information. The interventions inform and guide health policy, planning, resources allocation, program management, service delivery, monitoring and evaluation, and survey and surveillance. During July 2020-June 2021, new activities were initiated, implemented and scaled up while the existing ones improved.

5.2. Health information systems

To strengthen electronic information system, the Rwanda Health Management Information system has been upgraded to reflect new HIV guidelines as well as refreshing end users on changes On Electronic Medical Records, ARV nurses and data managers were trained on the upgraded OpenMRS version which included new HIV guidelines and new reporting framework.

In order to move towards an AIDS-free generation, data is needed to identify new HIV patients, patients linked to care and treatment, patients who initiated ART, those who were referred to other health facilities, those who were lost to follow up, those who suppressed viral load and those who died. This can be achieved through HIV Case Based Surveillance system (CBS) that includes two main components: Active case finding (ACF) to detect new HIV patients and routine case-based surveillance (RCBS) to track HIV patient care journey.
This initiative was operationalized through the initiation of an integrated health information system that synchronizes data entry and reporting across various health databases to reduce transcription errors, eliminates data capture errors, and reduce the time spent in reporting. By June 2021, the first phase of the project has been successfully tested and piloted in 6 sites.

5.3. HIV Data Reporting and Monitoring

Accurate, timely and accessible health care data play a vital role in the planning, development and maintenance of health services. Following the revision and changes made in the National HIV guidelines, version 2020, some HIV, STIs and Viral Hepatitis indicators were also revised and/or incorporated into HMIS to align with the national HIV guidelines. The indicators related to DSDM, DTG, CBS, TPT, PrEP and Viral load monitoring were revised and incorporated accordingly. Apart from the training of Data managers on changes to ensure data quality, during the reporting period, reporting forms were revised, related mentorship was conducted and HIV Indicators user Manual was developed. In total, by June 2021, 582 health facilities submit their monthly reports on 13 core national indicators that provide minimum necessary information for national-level monitoring and response of the HIV epidemic, are STIs and Viral Hepatitis. Data quality assurance is conducted by the national level team by looking at timeliness, completeness and data accuracy. This allows the National HIV program to monitor the progress and timely implement various recommendations and evidence-based actions.
For the hepatitis program, a DHIS2 system has been set up to collect existing hepatitis data and assemble them in a single database. Nurses and data managers have been trained on the use of DHIS2. Tablets, modems and internet connection have been provided to public health facilities to support a continuous data collection and entry in the DHIS2 system.

5.4. Integrated Supportive Supervision and Data Quality Assessment

The 2020 Integrated supportive supervision and data quality supervision (ISS&DQA) was conducted in 35 health facilities (17 hospitals and 18 health centers). The small number of health facilities to supervise was chosen in order to comply with Covid-19 prevention measures in the country which included limited movements to and from health facilities. Health facilities were chosen based on the criteria of not performing well in data quality assessment which was defined as having greater or equal to 10% data discrepancy for any indicator which has been assessed in the previous ISS&DQA conducted in 2019.
For the HIV program, the exercise consisted of assessing the level of implementation of recommendations provided during the previous ISS & DQA conducted in 2019 at the level of hospitals and at assessing the quality of data for the indicator "Total number of patients currently on ART" in both hospitals and health centers.
Of 46 recommendations which were provided, 28 (60.8%) were fully implemented, 9 were being implemented while the other 9 were not implemented at all. The key gaps identified were the irregularity of mentorship for health care providers and untimely update of the Body Mass Index curve for patients' nutrition status follow-up.

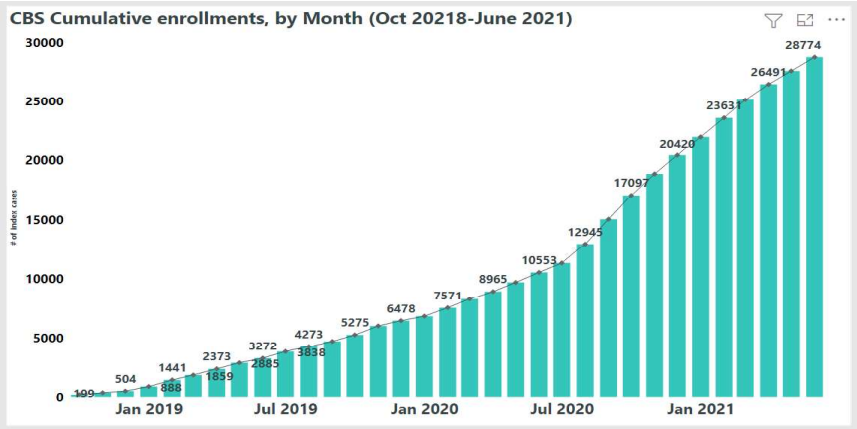
The data quality assessment found that 100% (n=35) of all health facilities (17 Hospitals and 18 health centers) had no discrepancy between R-HMIS reported data and registers for the total number of patients currently on ART. A further comparison was conducted between patients on ART recorded in registers and total patients stratified by ART regimens, a total of 20,238 patients currently on ART regimens was recounted comparatively to 20,240 patients currently on ART were recounted in ART registers without considering ART regimens. This comparison revealed a discrepancy of less than 1% which is far below the acceptable level of 5% discrepancy as per the Rwanda standard operation procedures for routine health data management.

5.5. HIV Epidemic Surveillance

During this reporting period, in order to inform and guide the national HIV program based on scientific evidence, the HIV Division implemented research activities including routine HIV surveillance and surveys.

5.5.1. Active Case-Based Surveillance for HIV

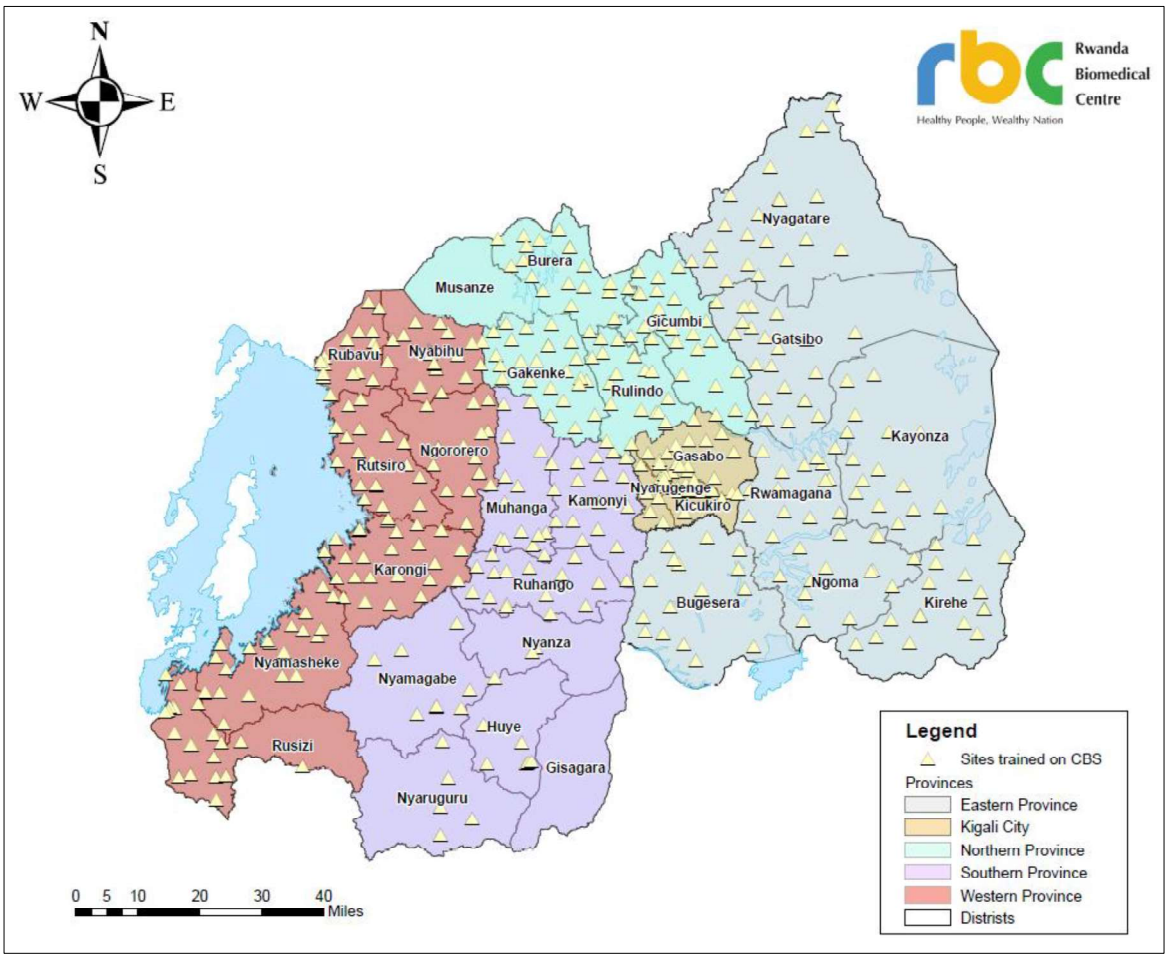
Given the current HIV prevalence of 3% over the past 15 years among the adult population, the national HIV program revised and innovated strategies to identify new HIV cases and to track the HIV continuum of care at individual level. Among others Active Case Based Surveillance (ACBS) for HIV has been implemented and being scaled up at health facilities offering HIV services across the country. This strategy helps know "who", "where" and "how" around HIV new cases, the essential information needed for the program to adjust appropriate and timely interventions. ACBS is coupled with three index testing strategies (i.e.: Partner notification, family testing and social network testing) to actively find new HIV cases. For surveillance and epidemic control purposes, newly diagnosed HIV positive cases receive a voluntary recency test to identify whether they were infected in the last 12 months.
In Rwanda, the ACBS for HIV was started in 2018 with 23 health facilities located in Kigali City; by June 2020, it was rolled out in additional 165 facilities, making 188 health facilities in total.



During the fiscal year 2020-2021, additional 284 health facilities were trained and ACBS for HIV was implemented. The related collected data are reported into DHIS2. So far, out 472 sites trained, 341 sites (72.2%) report through DHIS2.

Figure 24: Trend of CBS enrolment, October 2018-June 2021

From July 2020 to June 2021, the cumulative number of clients enrolled in CBS program increased from 10,553 to 28,774. The target is to have all patients enrolled in CBS to facilitate monitoring of patient's course of HIV disease from diagnosis to entry into care, treatment and health status over time. According to the map below, by June 2021, 472 health facilities were offering ACBS for HIV in Rwanda; 127, 138, 93, 70 and 44 health facilities in Eastern, Western, Northern, Southern Provinces and the City of Kigali, respectively.

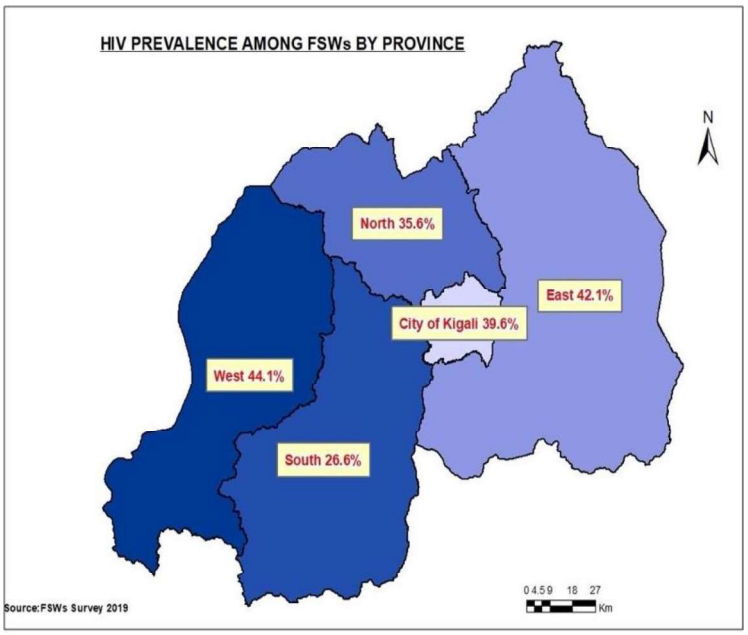


Map 6: Health Facilities trained and implementing ACBS, June 2021

5.5.2. HIV surveillance for key populations: IBBSS among FSWs, 2019

As part of its strategy to control the spread of HIV, Integrated Behavioural and Biological Surveillance Surveys (IBBSS) was conducted among Female Sex Workers (FSWs) to monitor the evolution of their sexual behaviour, estimate the HIV prevalence and assess the progress of programs targeting this key population. The survey targeted FSWs aged 15 years and above operating in Rwanda. In total, 1,741 of eligible FSWs consented to participate in the survey.
The findings showed that the median age of participants was 29 years. Most participants weren't married (61.9%), never went to school or did not complete primary school (63.7%), while 28.5% and 7.7% completed primary school, secondary school or had vocational or higher education level, respectively. 89.3% of FSWs reported venue (bar/hotel) as regular workplace and 10.7% worked in the street (street/market). Only 57.0% of respondents were using health insurance.

Overall, 35.5% of FSWs were HIV positive; showing an overall decrease in HIV prevalence of approximately 10% in 2015. The higher prevalence was found in Western Province (44.1%), while the lower prevalence in Southern Province (26.6%). Compared to the 2015 IBBSS results, the prevalence of syphilis has decreased among FSWs from 50% in 2015 to 28.7% in 2019. However, it found to be highest in the Eastern province (41.2%)
Regarding sexual behavioural, 36.2% FSWs reported their first sexual intercourse below 15 years and more than 51.7% when they were still teenagers (15-19 years), while 32.0% of them declared their first commercial sex within the same age range.



Map 7: HIV prevalence among FSWs, 2019

The consistent condom use with sexual paying and non-paying partners was reported by 55.0% and 36.0%, respectively. The level of HIV comprehensive knowledge of respondents was 47.9%. Overall, 55.3% and 21.9% of FSWs in the survey experienced any form of physical violence and/or sexual violence in their lifetime, respectively. Even though the national prevalence has declined overtime among FSWs, it is still higher, especially in the Western and Eastern Province. The prevalence should be reduced by encouraging consistent condom use, which is still poorly used with paying (55.0%) and non-paying partners (36.0%).

5.5.3. HIV surveillance for key populations: IBBSS among MSM, 2020

The HIV and AIDS Rwanda National Strategic Plan (2018 – 2024) considers men who have sex with men (MSM) a high-risk group for HIV infection and transmission. To prevent new HIV infections, the national strategic plan sets up interventions directed to this vulnerable high-risk group, in particular with treatment as prevention, as an added approach to the behavioural and other supportive interventions.

In March – July 2020, IBBSS was conducted among MSM. Any MSM who was 18 years and older, resided in Rwanda during 3 months preceding the survey and who reported having had anal or oral sex with a male in the last 12 months, was eligible to participate. A total of 1,306 eligible MSM consented to participate in the survey.
The survey results showed that most participants were adolescents and young adults aged <20 (12.8%), 20-24 (46.1%) and 25-29 (23.7%), single (94.9%), reached primary or secondary school at the highest level of education (84.5%). 22.2% of MSM reported being unemployed at the time of the survey and 2.4% reported sex work as their main occupation. Overall HIV prevalence was 4.3%, where the highest was found in Kigali City (11.3%) and the lowest in Eastern and Southern Province (1.2% and 1.4%, respectively). Compared to the IBBSS/MSM conducted in 2015, the overall HIV prevalence has increased of 0.3% in 2020 which may be a sign of a possible increase and call for the program for special attention to the MSM population. The syphilis prevalence was 3.1%, where the highest was found in the Western Province (7.3%).

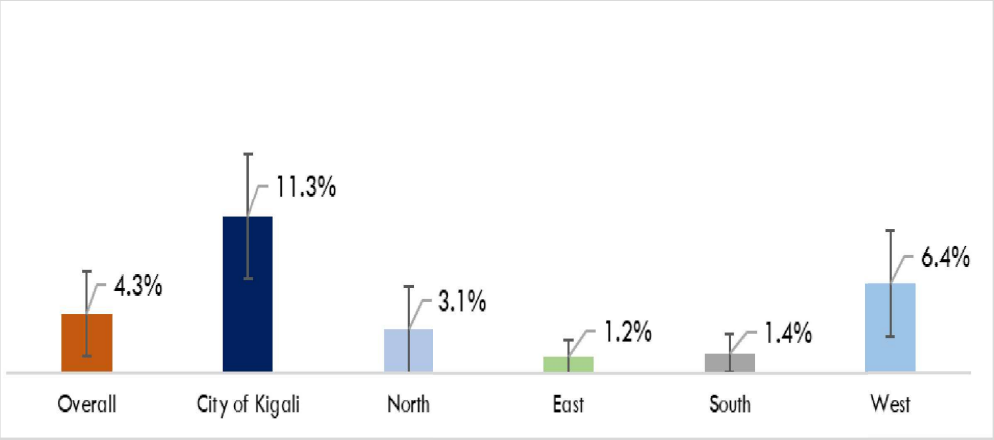


Figure 25: HIV Prevalence among MSM by Province, 2020

Most participants reported their first sex with a man below 24 years of age (45.0%). Most respondents reported having ever used a male condom during sex (70.0%), of whom 57.7% used it consistently during the 30 days prior to the survey and 52.1% used it during the last anal intercourse with a male partner. The HIV comprehensive knowledge among MSM was lower (21.9%). Most participants reported being circumcised (90.2%). The results of this study highlight the importance of improving the understanding of the risks associated to male sex, understand the networks of MSM in Rwanda and improve access to HIV services, expand access to safer sex commodities, and promote safer sex decision-making among MSM.

5.5.4. HIV surveillance for pregnant women, 2020

HIV and syphilis surveillance among pregnant women attending ANC has been found to be a better source of valuable information about the burden of HIV and syphilis among healthy and sexually active women in general population. Combined with other sources of surveillance data, HIV surveillance among pregnant women attending ANC allows surveillance programmes to address key aspects of the "know your epidemic" approach of second-generation surveillance of HIV and syphilis. These aspects include understanding changes in the direction of the epidemics, understanding subnational variations in an epidemic and identifying localized geographical areas with higher burdens of HIV and syphilis.[2]

[2] *WHO and UNAIDS (2015). Guidelines for conducting HIV surveillance among pregnant women attending antenatal clinics based on routine programme data. WHO Press, Geneva: Switzerland.*

In Rwanda, HIV and syphilis surveillance (HSS) among pregnant women began in 1988 with six sentinel sites. In 2002, the number of sites was increased to 24, in 2005, to 30 and in 2014, 35 health facilities were added to make 65 sentinel sites.
As per the figures below, the preliminary results from the 2020 HSS among pregnant women attending ANC/PMTCT services in sentinel sites in Rwanda revealed a decrease in HIV prevalence in the 30 original sites, from 3.6% in 2014 to 2.6% in 2020. By Province, the higher HIV prevalence was found in the City of Kigali (4.1%) while the overall prevalence in both original and new sites was estimated at 1.6%.

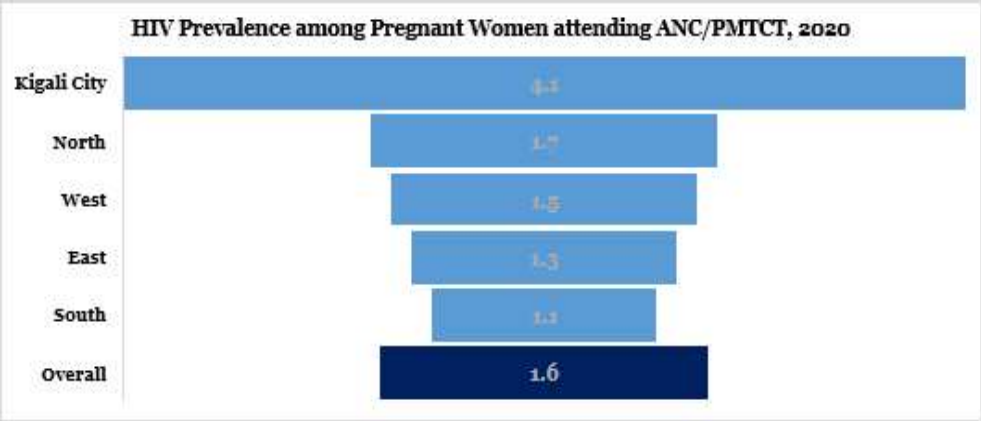


Figure 26: Overall HIV prevalence among pregnant women

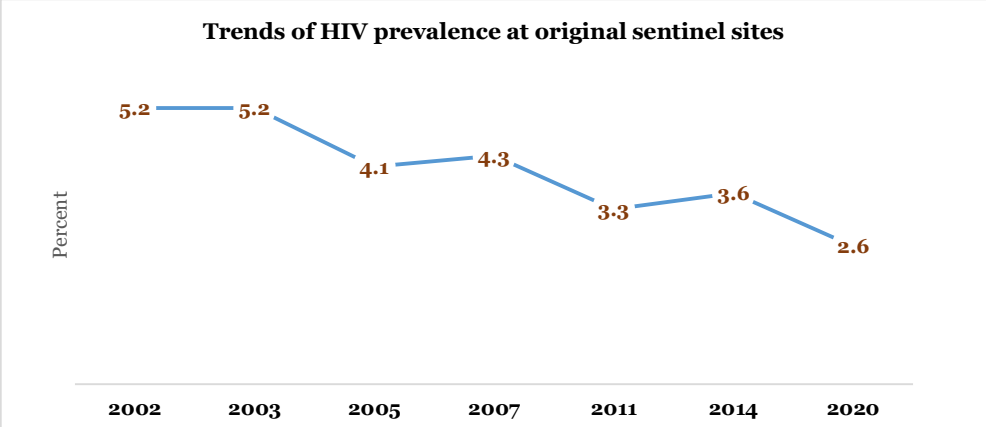


Figure 27: Trend of HIV prevalence, PW, 2002-2020

5.5.5. Pharmacovigilance for Dolutegravir

Antiretroviral medicines are associated with significant safety concerns with both short- and long-term effects. Some side effects and other reactions may affect patient adherence. Poor adherence is known to lead to failure of therapy in the patient and development of resistance by the virus leading to reduced efficacy of the medicines. In order to control the occurrence of the above stated issues, the national HIV Program established a pharmacovigilance system for antiretroviral drugs. In 2020, the program started with active surveillance of Dolutegravir (DTG) based antiretroviral regimens to determine the safety profile of DTG-based regimens including TDF/3TC/DTG and ABC/3TC+DTG among HIV patients in Rwanda. This active surveillance of DTG-based regimens will be conducted in 10 health facilities selected in all provinces and the City of Kigali.

5.5.6. *Active surveillance for ShangRing*

Rwanda adopted the VMMC program as a national program in 2009. At the end of 2013, non-surgical male circumcision method was introduced as an additional method using Prepex device to conventional surgical method, to deliver circumcision. In early 2020, the supplier of Prepex devices announced the unilateral end of supplying the devices. Shang ring came in as an alternative method to be used together with the conventional surgical method. The ShangRing™ is indicated for use in adolescents and adults aged 10 years and above. It has been accepted on the WHO list of prequalified male circumcision devices and was listed on 3 June May 2015.[3] The WHO outlined an evaluation framework series that each country considering device introduction should complete. The evaluation sequence is divided into three distinct phases namely, Implementation Pilot, Active Adverse Event (AE); Surveillance and Passive AE Surveillance.[4]
It is against this background that RBC/HIV Division is conducting an active surveillance of eventual adverse events (AEs), in a form of pilot survey, within the selected health facilities for a period of one year, to detect any new or rare AEs or any other problems associated with ShangRing device. The active surveillance started in August 2020 to be completed in September 2021. By June 2021, no adverse event associated to ShangRing was reported.

5.6. Hepatitis Surveillance

A study has been conducted on Hepatitis C self-testing in order to prepare the future implementation of HCV self-testing. This study informed the development of the WHO new guidelines on Hepatitis C self-testing (HCVST). The study was evaluating the acceptability, values and preferences around HCV self-test among the general population and healthcare workers. A total of 72 individuals participated. Relating to values towards HCVST, majority of informants appreciated the test as an innovative way that could allow people to test in private, know their status with no need to travel to a health facility; reduce time and cost to the health facility as well as waiting time and workload at the health facility; increase accessibility to HCV testing; allow people to keep results confidential, reduce stigma and take an autonomous decision on seeking further HCV care; and contribute to early treatment initiation and reduction of transmission. Preferences towards HCVST included the need for a full-time and easy geographical access of HCVST at the distribution point; the need to offer HCVST free of charge or at a very low price; the need for a confirmatory test following a positive HCVST; and the need to have visual, easy-to-read and understand instructions for the use of HCVST as well as the need to support illiterate people and people with visual or cognitive disabilities to prevent their exclusion from the innovation. Disadvantages identified for the use of HCVST included the possibility for errors while testing alone, lack of pre/post-counselling, as well as the potential for psychosocial harm which may follow a positive HCVST. Strategies to prevent or reduce negative consequences of HCVST included the support by a healthcare worker or via a free hotline. Overall, HCVST was perceived as a valuable tool which could increase HCV testing uptake.

[3] *WHO (2020). list of prequalified male circumcision device. Available online:* http://www.who.int/hiv/topics/malecircumcision/pqmc_list_prequalified_devices.pdf?ua=1

[4] *WHO (2012). Framework for clinical evaluation of devices for Male Circumcision. Retrieved online at:* https://apps.who.int/iris/bitstream/handle/10665/75954/9789241504355_eng.pdf?sequence=1

6. CAPACITY BUILDING AND QUALITY IMPROVEMENT

In the last 15 years, the Government of Rwanda achieved a rapid scale up of HIV services across the country. Different studies revealed the importance of enabling health care providers to provide quality services. Various interventions for HIV, STIs and viral Hepatitis management can't be successfully implemented without a well-trained and committed workforce. It is the responsibility of the National HIV program to continuously build the capacity of all staff involved from central to community levels. This is done through trainings, workshops and conferences for medical doctors, nurses, clinical mentors, lab technicians, pharmacists and store managers, data managers, social workers and administration staff.

Apart from capacity building, the central level regularly conducts quality improvement activities including mentorship, supportive and formative supervisions, audits and data collection activities.

Despite the lockdown and other COVID-19 prevention measures, the capacity building for healthcare providers and quality improvement activities didn't stop though the frequency of those activities was reduced. Trainings, supervision and mentorship activities were integrated to ensure that healthcare providers are delivering comprehensive HIV, STIs and viral hepatitis prevention, care and treatment services, as per current clinical guidelines. For some trainings and workshops, the program used virtual platforms to mitigate COVID-19 associated travel challenges.

Below are the key activities conducted between July 2020 and June 2021 to improve knowledge and skills of healthcare providers involved in the management of HIV, STIs and viral hepatitis:

Program	Activity Type	Focus	Target Population
HIV Prevention	Training	New HIV testing strategies	ART nurses, social workers, Lab tech and data managers
		PMTCT prong one and family planning	ART nurses, social workers
		Surgical and device-based Male Circumcision	Medical doctors and nurses
		PrEP provision for KPs and AGYW	ART nurses and clinical mentors
		Provision of friendly services for KPs	ART nurses and clinical mentors
	Mentorship & supervision	Implementation of new HIV testing strategies	ART nurses, social workers, Lab tech and data managers
		PMTCT prong one and family planning	ART nurses, social workers
		Provision of surgical and device-based male circumcision	Medical doctors and nurses
		Provision of PrEP for KPs and AGYW	HIV Healthcare providers and clinical mentors
		Provision of friendly services for KPs	HIV Healthcare providers

HIV Care and Treatment	Training	Main changes in HIV guidelines	Medical and nurse clinical mentors
		Psychosocial care for PLHIV	ART nurses, social workers and deans of discipline in boarding schools
		ART and supply chain management	Pharmacists and store managers
	Mentorship & supervision	Nutritional support for PLHIV	HIV Healthcare providers and nutritionists
		Psychosocial care for PLHIV	HIV Healthcare providers and peer educators
		ART and supply chain management	HIV Healthcare providers and store managers
STIs & Viral Hepatitis	Training	STIs Management	Medical doctors, nurses, laboratory technicians, Nutritionists, pharmacists
		Hepatitis B & C Management	
	Mentorship	STIs Management	Medical doctors, nurses, laboratory technicians, Nutritionists, pharmacists
		Hepatitis B & C Management	
Strategic Information	Training	HIV, STIs and Viral hepatitis indicators	HIV Data Managers
	Mentorship	Recording and reporting of HIV indicators	ART nurses and HIV data managers

Table 2: Capacity building & Quality improvement activities, July 2020-June 2021

In addition to the trainings directly related to day-to-day service delivery, training of epidemiologists through the Rwanda Field Epidemiology Training Program also continued. The cohort 5 trainees completed the two-year training and a 6th cohort was enrolled.

7. EFFECT OF COVID-19 ON SERVICE DELIVERY

Rwanda recorded the first case of COVID-19 on 14th March 2020; since then, like other countries, the Government of Rwanda adopted stringent measures that include restricting movements, national and localised lockdowns, curfew hours and quarantine of people who test COVID-19 positive. As other groups of population, PLHIV were also affected. The national HIV, STIs and viral hepatitis program closely worked with decentralised level and the community to mitigate the eventual effects of COVID-19 on service delivery.

In collaboration with RRP+, a quick assessment was conducted to have a snapshot of the situation from the community perspectives. After the assessment, among others, the following interventions were implemented:

- Provision of protective and hygienic materials to both PLHIV and peer educators in need;
- Shift from 1 month to 2 months drugs pick up, for unstable patients;
- Reinforcement of adherence to ART through peer support;
- Enhancing direct communication between healthcare providers and PLHIV through phone calls, toll-free call centre to ease sharing information about HIV services delivery;
- Facilitation of referrals and follow up of PLHIV at the nearest health facility by peer educators or healthcare providers within the catchment area;
- Provision of nutritional support to 16,250 vulnerable people living with HIV from 4,875 households across the country.

Despite these efforts to ensure continuity of services, the data showed that there has been a slight decrease in numbers of people utilising HIV, STIs and viral hepatitis services from health facilities.

The figure 19 shows the time trend of ART initiation at the health facility. On average, 960 new patients initiate ART every month. However, there was a reduction in the months of January and February 2021. The program is not able to identify the reasons, though given the reduction seen in the diagnosis during the same months, we may attribute it to the COVID-19 lock down which happened during the same months.

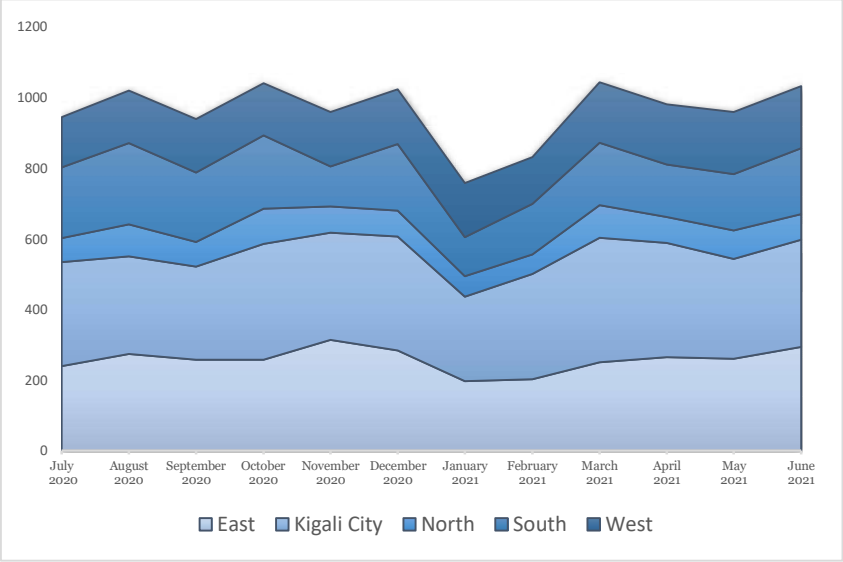


Figure 28: HIV newly initiated patients

As of June 2021, two lockdowns were encountered at national (March – May 2020) and City of Kigali level (January – February 2021), respectively. Further, in January to February, inter-districts and provinces movements were prohibited. Consequently, the program recorded a reduction of number of male circumcisions performed during that period. However, catch up plans were developed and implemented right after the lockdown period. The figure below highlights the trend of VMMC performed per month from July 2019 to June 2021.

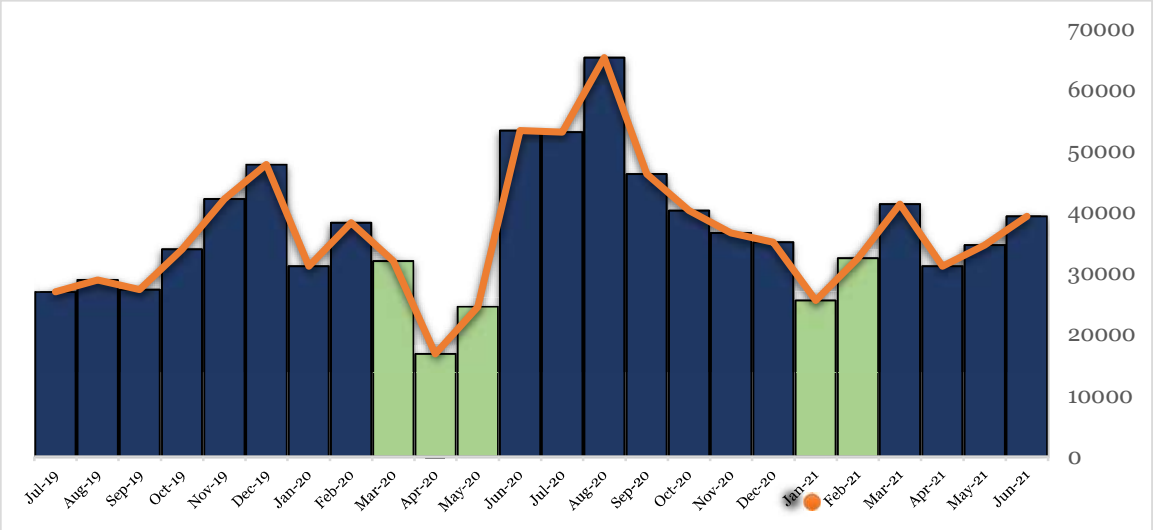


Figure 29: Trend of male circumcision performed, July 2019-June 2021

8. FINANCING OF NATIONAL HIV RESPONSE

8.1. Introduction

Financing the national HIV response is a subset of the Health Sector Financing strategy. The aim remains to improve the access of the population to health services, including HIV services. HIV programs continue to benefit funds from government and development partners and technical support. The major funding sources for the Rwanda HIV programs are:

- Government resources, which includes revenues generated from taxes and non-taxes, loans, grants, donations – reported as Government contribution/ budget allocation and part is allocated as earmarked transfers
- Development partner contributions through sector budget and project support. On the budget, the donor funds are indicated in the development budget. These include the Global Fund for HIV & AIDS, TB and Malaria, PEPFAR and contribution from One UN.
- Health insurance pooled funds (Mutuelle de Santé or Community based health insurance) from household expenditures. This is not captured in this report.
- Health related household expenditures are not yet captured in this report
- Private funds are also not captured in this report.
- Income generated from health facilities services are not captured in this report.

The data collection for the contribution of these sources is conducted on an annual basis. Therefore, the report is focused on funding sources where data were available as at the time of reporting as explained above.

8.2. Public and External Sources of funding for HIV/AIDS National Strategic Plan

The Ministry of Health and the Rwanda Biomedical Centre in collaboration with its partners worked on the financial data reported in HIV/AIDS annual report 2020-2021.

To facilitate the collection of financial information for this year's report, a separate data collection process was adopted using SMART FMIS (Integrated Financial Management Information System) for Global Fund grants and Government contribution; and directly from the in-country office for PEPFAR and UN agencies (One UN) contribution.

8.3. HIV/AIDS Expenditures in Rwanda FY 2020/2021 by Sources of Financing

The Global Fund for AIDS, TB and Malaria (GFATM) contributed the budget of $ 64,794,150for the FY 2020/2021; whereas the United States Government (USG contribution for the FY 2020/2021, is $ 77,830,212. The Government of Rwanda contributed the budget of $ 23,085,184 and lastly the UN with $ 966,998. Hence, the total contributions to the National Strategic Plan for the FY 2020/2021 was $166,676,545.

Source of funding for NSP/HIV	Revised Budget* FY 2020/2021	Expenditures FY 2020/2021	Variance	B.E rate
Global Fund for AIDS, TB and Malaria	64,794,151*	52,582,242	12,211,909	81%
PEPFAR	77,830,212	77,830,212	0	100%
One UN	966,998	966,998	0	100%
GoR	23,085,184	24,085,026	-999,841	104%
Grand Total	**166,676,545**	**155,464,477**	**11,212,068**	**93%**

**** Revised budget for GF contribution comprises of in country cash balance as of 1st July 2020 of $ 16,340,808 and approved initial budget FY 2020-2021 equivalent to $ 48,453,343.***

Table 3: Expenditures by sources of finance for NSP, FY 2020/2021

Regarding expenditures, The United States Government spent $ 77,830,212; The Global Fund for AIDS, TB and Malaria (GFATM) spent $ 52,582,242, whereas the GoR spent $ 24,085,026. Lastly, the UN spent $ 966,998. For the FY 2020/2021, the overall total expenditure for HIV NSP was $ 155,464,477 which represents 93% of the revised budget.

8.4. Government contribution to HIV/AIDS National Strategic Plan FY 2020/2021

The GoR funds are allocated to different health programs during the annual planning and budgeting process, which entails sectoral consultations to discuss prioritization and budget allocation between the Ministry/ RBC and decentralized levels basing on HSSP III implementation and different disease program strategic plans serve as guiding documents. The planning phase also uses the disease burden and services utilization data from HMIS to inform an effective resource allocation. The expenditure was then extracted and analysed based on the disease burden.

MTEF Chapter	Initial budget	Revised budget	Expenditures	Variance	B.E rate
21 Compensation of Employees	10,167,597	10,724,211	10,408,269	315,942	97%
22 Use of Goods and Services	1,893,091	1,888,558	1,792,644	95,914	95%
23 Acquisition of fixed assets	1,931,494	2,451,457	2,408,588	42,868	98%
25 Subsidies	148,079	142,562	142,562	0	100%
26 Grants	1,334,751	1,531,730	1,703,832	-172,103	111%
27 Social Benefits	2,499,473	2,687,462	2,496,649	190,814	93%
28 Other Expenditures	3,186,529	3,659,205	5,132,482	-1,473,277	140%
Grand Total	**21,161,015**	**23,085,184**	**24,085,026**	**-999,841**	**104%**

Table 4: GoR contribution to NSP per MTEF chapter, FY 2020/2021

From the above table, the initial budget for the financial year 2020/2021 was $ 21,161,015 which was revised to $ 23,085,184. Out of the revised budget of $ 23.1 Million, a total of US$ 24.1 Million had been effectively spent by different budget entities with 104% of budget execution rate.

The MTEF chapter with the highest budget execution rate was other expenditures with 140%, followed by Grants with 111%, then subsidies with 100% followed by acquisition of fixed assets with 99%. The compensation of employees was 97%, followed by use of goods and services with 95%. The last MTEF chapter with the lowest budget execution rate is social benefits with 93%.

Budget Entities	Initial budget	Revised budget	Expenditures	Variance	B.E rate
RHs	3,114,492	3,269,450	3,269,450	0	100%
Earmarked Transfers to Districts	7,408,622	7,965,154	7,714,544	250,610	97%
Other MoH Public Institutions	1,227,187	1,243,102	1,121,777	121,325	90%
MOH	4,591,710	5,493,276	5,601,983	-108,707	102%
RBC	4,819,005	5,114,202	6,377,271	-1,263,069	125%
Grand Total	**21,161,015**	**23,085,184**	**24,085,026**	**-999,841**	**104%**

Table 5: GoR contribution to NSP per budget agencies, FY 2020/2021

As reflected in the table below, the revised budget is $ 23.1 Million whereas the expenditure is $ 24.1 Million. The type of budget agencies with the highest budget execution rate is RBC with 125%, followed by MoH with 102%; then referral hospitals with 100%, followed by Earmarked transfers with 97%. The last is other MoH public institutions with 90%. The overall budget execution is 104%.

8.5. The Global Fund contribution

For the Global Fund contribution, the total approved initial budget of $ 48,453,343 was increased within the county cash balance of $ 16,340,808 to totalize the revised budget of $ 64,794,151 for the whole financial year 2019-2020. During this financial year; the expenditure was $ 52,582,242. Hence, the total budget execution rate for the FY 2020/2021 was 81%. This total variance of 19% will therefore be used to pay the related end June 2020 commitments that are highly related to nutrition support (RUTF and CSB); health commodities, health products and reagents; hepatitis drugs, non-health commodities as well as related management fees. It is important to highlight that during this financial year 2020/2021, the Global Fund invested additional amount of $ 10,026,914 in the fight against COVID-19 pandemic disease that was topped up to the normal grant to reach approved annual budget of $ 48,453,343.

Budget Entities	Revised Budget FY 2020 - 2021	Expenditures FY 2020 - 2021	Variance	B.E rate
Referral hospital	362,282	360,971	1,311	100%
Ministry of Health	4,498,420	4,362,604	135,816	97%
Other public institutions	838,528	752,203	86,325	90%
RBC	59,094,921	47,106,465	11,988,456	80%
Grand total in USD	**64,794,151**	**52,582,242**	**12,211,909**	**81%**

Table 6: GF budget execution per budget entities, FY 2020/2021

From the above table, out of the Revised budget of $ 64.8 Million, a total of US$ 52.6 has been effectively spent by different budget entities and this represents 81% of budget execution rate.

The type of budget entity with the highest budget execution rate is Referral Hospital with 100%, followed by the Ministry of Health with 97% of budget execution and then Other Public Institutions with 90%.

NSP Cost category	Revised Budget FY 2020 - 2021	Expenditures FY 2020 - 2021	Variance	B.E rate
1.0 Human Resources (HR)	11,313,607	11,233,456	80,151	99%
2.0 Travel related costs (TRC)	2,055,329	2,016,531	38,799	98%
4.0 Health Products - Pharmaceutical Products (HPPP)	8,443,564	7,451,968	991,597	88%
5.0 Health Products - Non-Pharmaceuticals (HPNP)	20,682,306	18,324,455	2,357,851	89%
6.0 Health Products - Equipment (HPE)	7,580,102	3,038,868	4,541,234	40%
7.0 Procurement and Supply-Chain Management costs (PSM)	2,453,331	1,967,688	485,643	80%
8.0 Infrastructure (INF)	20,168	20,095	73	100%
9.0 Non-health equipment (NHP)	2,122,162	356,057	1,766,104	17%
10.0 Communication Material and Publications (CMP)	428,900	383,449	45,451	89%
11.0 Indirect and Overhead Costs	4,399,982	4,367,929	32,053	99%
12.0 Living support to client/ target population (LSCTP)	5,294,699	3,421,746	1,872,952	65%
Grand Total	**64,794,151**	**52,582,242**	**12,211,909**	**81%**

Table 7: GF Grant expenditure per NSP cost category, FY 2020/2021

The table above shows the HIV NSP budget execution per cost category for the period of July 2020 to June 2021. It is clearly reflected that the expenditures incurred during this financial year reached 81% of the revised annual budget. The variance of 19% stands for end June commitments to be cleared during the first semester of the financial year 2021/2022.

The table above indicates that the cost category with the highest budget execution rate are Infrastructure (INF) with 100%, followed by Indirect and Overhead Costs and Human Resources (HR) with 99%. The third is Travel related costs (TRC) with 98%, which is followed by Communication Material and Publications (CMP) with 89%, then non-health equipment (NHP) and with 100%. The fifth is Health Products - Non-Pharmaceuticals (HPNP) with 89% followed by Health Products - Pharmaceutical Products (HPPP) with 88%. The seventh cost category is Procurement and Supply-Chain Management costs (PSM) with 80% followed by Living support to client/ target population (LSCTP) with 65%. The last two cost categories are Health Products - Equipment (HPE) with 40% and non-health equipment (NHP) with 17%.

Therefore, the total variance of 19% will be used to clear the related end June 2020 commitments that are highly related to nutrition support (RUTF and CSB); health commodities, health products and reagents; hepatitis drugs, non-health commodities as well as related management fees.

8.6. The USG/PEPFAR contribution

From 1st July 2020 to 30th June 2020, the US Government invested approximately $ 77,830,212 to the National HIV response in Rwanda. Because the US Government plans its budgeting periods using fiscal years in its PEPFAR Country Operational Plan (COP) that do not align with the Government of Rwanda budgeting period (i.e., the PEPFAR COP year begins on October 1 and ends on September 30 of the following year), this figure is an estimate based upon portions of two COP years - one quarter of July to September 2020 from the financial year starting from October 1, 2019 to September 30, 2020) and three remaining quarters of FY 2020/2021 starting from October 1, 2020 to June 30, 2021.

8.7. ONE UN Contribution

The One UN developed several flagship programs to fund HIV activities implemented from July 2020 to June 2021. The total budget for the flagships is USD 966,998. This was used as a planned funding level for ONE UN.

9. PARTNERSHIP IN HIV RESPONSE

9.1. Introduction

In order to reach the ultimate goal of the HIV program, various interventions are jointly implemented by different actors and at different levels. The national HIV program recognises this synergy and commits to achieve both international and national targets. The figure below shows the implementation flow, from the lower level towards ending AIDS.

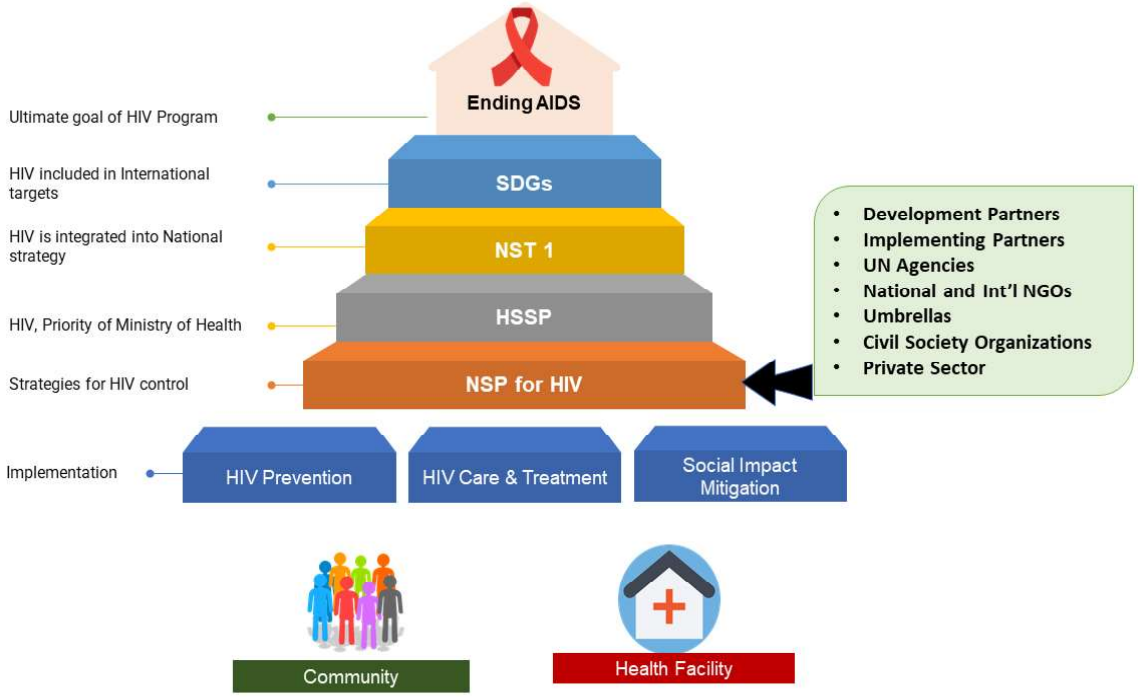


Figure 30: Partnership in HIV response

9.2. Role of development and implementing partners in HIV response

Development partners, implementing partners, UN agencies largely contributed to the HIV response by providing financial support, expertise and technical assistance to implement the HIV national strategic plan. During this fiscal year, more focus was put on optimisation of HIV biomedical interventions to contain HIV epidemic, sustain the gain, from central, health facility and community levels.

9.3. Community engagement and civil society organisations involvement

Along this year (2020-2021), efforts were enhanced to reduce HIV infections, eliminate stigma and discrimination mainly among key populations and vulnerable groups through various interventions implemented by civil society organizations gathered in six umbrellas, namely RNGOF, RRP+, UPHLS, RICH, PSF and ABASIRWA. Strategies that lead to effective implementation during this year plan, will be upgraded and applied to more engagement of the community, private sector, people with disabilities, media and other stakeholders to reduce HIV burden especially among priority and high-risk groups.

9.4. Partnership towards HIV Fast Track City

The Fast-Track Cities initiative is a global partnership between cities and municipalities around the world and four core partners – the International Association of Providers of AIDS Care (IAPAC), the Joint United Nations Programme on HIV/AIDS (UNAIDS), the United Nations Human Settlements Programme (UN-Habitat), and the City of Paris. Launched in December 2014, the partnership has grown to more than 350 cities and municipalities that have committed to accelerate their local HIV, tuberculosis (TB), and viral hepatitis (HBV and HCV) responses to achieve Sustainable Development Goal (SDG) 3.3 by 2030. IAPAC is delivering technical assistance to and engaging in direct interventions with almost 150 priority cities and municipalities worldwide. Advanced collaboratively with local stakeholders, our work includes data generation/monitoring, implementation planning, capacity-building, community engagement, stigma elimination, and quality of care and life assessments.
The City of Kigali (CoK) has recommitted to the fight against HIV/AIDS by signing of the Paris Declaration on ending the epidemic in cities and urban areas, a year after the global strategy was adopted, December, 2015. As of June 2021, the City of Kigali has made good progress towards 90-90-90 global targets, at 91-94-89, respectively.

IAPAC and UNAIDS have been technically supporting the Ministry of Health and Rwanda Biomedical center, HIV program to carry out the four key components including:

1. **Support City of Kigali to strengthen HIV service delivery and implementation by working with key partners:** In collaboration with city of Kigali, IAPAC and UNAIDS supported Health and environment department of CoK to organize stakeholders' meetings. At least 4 meetings occurred.

2. **Utilize data to inform action for Fast-Tracking the HIV response in Kigali:** The mapping of HIV data sources was accomplished. In addition to exploration data triangulation approaches. The exercise was conducted in collaboration CoK, RBC and Network of people living with HIV in Rwanda.

3. **To develop, launch, and maintain city-specific data dashboards and a "learning collaborative" platform on the Fast-Track Cities webportal (**www.fast-trackcities.org**):** The mapping of HIV data sources was accomplished. In addition to exploration data triangulation approaches. The exercise was conducted in collaboration CoK, RBC and Network of people living with HIV in Rwanda.

4. **To strengthen the capacity of clinicians and PLHIV in Fast-Track Cities to achieve and maintain optimal HIV prevention and care continua leading to attaining the 90-90-90 targets:** (i) The IAPAC standard developed modules for continuous clinician capacity building and stigma modules were incorporated in Ministry of health E-learning system. This will enable clinicians beyond City of Kigali to access trainings. (ii) The 500 people including clinicians, Para health staff, key populations were offered capacity building trainings using both online and workshops.

Currently, the capacity building of clinician, U=U strategy and data use are among key activities to be carried out in collaboration with HIV stakeholders in the City of Kigali.

HIV key performance indicators, July 2020 – June 2021

Indicator	Data Source	Results July 2020 - June 2021
HIV prevalence (15-64 years)	RPHIA, 2018-19	**3%**
HIV incidence	RPHIA, 2018-19	**0.08 pyr**
HIV prevalence among female sex workers	IBBSS, 2019	**35.5%**
HIV prevalence among men who have sex with men	IBBSS, 2020	**4.3%**
Number of HIV tests conducted	HMIS, July 2020 - June 2021	**3,348,337**
HIV sero-positivity rate (overall)	HMIS, July 2020 - June 2021	**0.48%**
VCT/PIT	HMIS, July 2020 - June 2021	***0.51%***
ANC Women	HMIS, July 2020 - June 2021	***0.25%***
ANC Male partners	HMIS, July 2020 - June 2021	***0.59%***
VMMC	HMIS, July 2020 - June 2021	***0.07%***
Maternity	HMIS, July 2020 - June 2021	***0.09%***
Index testing	HMIS, July 2020 - June 2021	***5.33%***
Percent of HIV recent infections among patients initiating ART	HMIS, July 2020 - June 2021	***315 (3.6%)***
Percent of HIV infected pregnant women in PMTCT	HMIS, July 2020 - June 2021	**2.08%**
Pregnant women who received ART to reduce mother to child transmission	HMIS, July 2020 - June 2021	**95.0%**
% of infants born to HIV+ mothers, who are not infected by 24 months (MTCT)*	Cohort data (health facility registers)	**98.57%**
Number of medical male circumcisions performed according to national standards	HMIS, July 2020- June 2021	**480,260**
Surgical circumcision	HMIS, July 2020- June 2021	***462,479***
Medical circumcision	HMIS, July 2020- June 2021	***17,781***
Prevalence of male circumcision (number of males circumcised on the total male population)	RPHIA, 2018-19	**39.90%**
Number of female sex workers followed at health facility	HMIS, Jun-21	**296.43**
Number of HIV negative female sex workers on PrEP	HMIS, Jun-21	**87.72**
% of adults and children retained on treatment 12 months after ART initiation	Cohort data (health facility registers)	**92.30%**
% of adults & children currently receiving ARVs (ART coverage)	HMIS, June 2021 And EPP Spectrum, 2021	**207,089 (92.4%)**
% of people living with HIV and on ART, who have a suppressed viral load at 12 months (<1000 copies/ml)	Facility registries review, July 2019-June 2020	**93.63%**
Number of new patients initiating ART	HMIS, July 2020 - June 2021	**11,535**
Number of condoms distributed	July 2020-June 2021	**33,461,867**
Number of people aged 15 years and above have been screened for HCV	HMIS, 2019 - June 2021	**5,062,018**
Number of people with HCV RNA positive	HMIS, 2019 - June 2021	**52,142**
Number of people initiated HCV treatment	HMIS, 2019 - June 2021	**51,722**
Treatment with a cure rate	HMIS, 2019 - June 2021	**92%**
Number of people vaccinated against HBV	HMIS, July 2020 - June 2021	**98,342**
Number of people screened for HBV	HMIS, July 2020 - June 2021	**680,433**
Number of people screened HBV positive	HMIS, July 2020 - June 2021	**12,657**
Number of people screened for STIs	HMIS, July 2020 - June 2021	**4,865,320**
Number of people confirmed with at a least one STI	HMIS, July 2020 - June 2021	**221,251 (4.54%)**

Table 8: HIV key performance indicators, July 2020 - June 2021

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