REPUBLIC OF RWANDA

MINISTRY OF HEALTH

HEALTH RESOURCE TRACKING OUTPUT REPORT

Health Expenditures for FY 2017-2018, FY 2018-2019 and FY 2019-2020

January 2022

Foreword

Health resource tracking involves tracing financial flows throughout the health sector, from sources to ultimate health services produced. The generated information allows countries to assess how well resources are allocated to health system goals and priorities.
Producing national health expenditures estimates on a routine basis is important to ensure that the information remains up-to-date and relevant for policy making. It is, therefore, crucial to establish resource tracking as an integral and sustained part of Government operations.

Since 2010, the Government of Rwanda has been producing national health expenditures estimates using the Health Resource Tracking Tool (HRTT). This tool aimed at streamlining data collection processes across different resource tracking activities, lowering costs, and producing timely reports. Over the years, the tool has evolved to improve accuracy and completeness, include more stakeholders, and integrate interoperability features.

With the current report, Rwanda has conducted nine rounds of HRTT estimations between the fiscal years 2010-2011 and 2019-2020, allowing a comprehensive exploration and comparison overtime of health expenditures in Rwanda. Health expenditures estimates are disaggregated by funding sources and by the Medium Term Expenditure Framework (MTEF) programmes.

Over the last decade, the process of integrating resource tracking as a part of the Ministry of Health (MOH) operations occurred progressively, and the goal is to move towards an automated process that will support the production of quality resource tracking reports every year. Rwanda's substantial investments to carry out health expenditures estimations routinely is a strong indication to the country's commitment to increasing health system performance.

Dr NGAMIJE M. Daniel
Minister of Health

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Acronyms

AIDS	Acquired Immune Deficiency Syndrome
ESR	Epidemic Surveillance and Response
FY	Fiscal Year
GBV	Gender-Based Violence
GDP	Gross Domestic Product
GOR	Government of Rwanda
HC	Health Center
HF	Health Facility
HFSP	Health Financing Strategic Plan
HIV	Human Immunodeficiency Virus
HMIS	Health and Management Information System
HRTT	Health Resource Tracking Tool
IEC	Information, Education and Communication
IFMIS	Integrated Financial Management Information System
IGR	Internally Generated Revenues
M&E	Monitoring and Evaluation
MCH	Maternal and Child Health
MOH	Ministry of Health
MTEF	Medium Term Expenditure Framework
NCD	Non-Communicable Diseases
NGO	Non-Governmental Organization
NTD	Neglected Tropical Diseases
NST	National Strategy for Transformation
OOP	Out-of-Pocket
PBF	Performance-Based Financing
RBC	Rwanda Biomedical Center
RHCC	Rwanda Health Communication Center
RWF	Rwandan Francs
SAMU	Service d'Assistance Médicale d'Urgence
SBS	Sector Budget Support
SWAp	Sector Wide Approach
THE	Total Health Expenditures
UHC	Universal Health Coverage
UN	United Nations
USD	US dollars

Executive Summary

This Health Resource Tracking Output Report presents the health expenditures for the fiscal years 2017-2018, 2018-2019 and 2019-2020. This is the second round of Health Expenditure reports that includes households' expenditures, thanks to the increasing reporting of private sector actors, allowing a comprehensive exploration of health expenditures and comparison overtime.

As with the previous reports, this HRT output report relied on secondary sources for data analysis. Secondary sources included the following reporting systems: The Integrated Financial Management Information System (IFMIS) housed at the Ministry of Finance, the Health Information and Management System (HMIS) and the health Resource Tracking Tool (HRTT). Overall, 1074 institutions/organizations reported their expenditures.

Total Health Expenditures (THE) increased over the three fiscal years. THE amounted to RWF 461, 597, and 652 billion for the FY 2017-2018, 2018-2019, and 2019-2020 respectively. Per capita spending increased from RWF 38,167 (USD 43) in 2017-2018 to RWF 48,243 (USD 55) the following year and RWF 51,526 (USD 56) in 2019-2020. This is above the estimated USD 41 per capita health spending in low-income countries in 2017[1].

Domestic funding increased from 32% in 2010-2011 to 58% in 2019-2020, with public and private sources representing 33.5% and 24.1% respectively. Contributions from external sources declined from 68 % in 2010-2011 to 42 % in 2019-2020.

Out-of-pocket (OOP) expenditures went from RWF 32.8 to 29.2 billion between 2015-2016 and 2019-2020. As a percentage of THE, OOP spending dropped by 4 percentage points between 2016-2017 and 2017-2018 and remained stable around 4-5 % for the 2 following years. This is far lower than the low-income countries average share of OOP spending estimated at 41 % in 2017 and suggests an increase in public financing[1].

In 2017-2018, most of the spending was allocated to Health Human Resources, and closely followed by Disease Prevention and Control and Maternal Child and Health (MCH). This trend changed the two subsequent years as Disease Prevention and Control received most of the funding followed by MCH. The observed 20% increase in Disease Prevention and Control spending in 2019-2020, may be explained by the outbreak of the Covid 19 pandemic.

The introduction of HRTT allowed routine data collection and the availability of up-to-date information. Over the years, the tool has evolved, however, there are still challenges as described in this report, to producing comprehensive and timely health expenditure to inform policy decisions.

Emerging health threats such as Covid-19 and the sharp decline in external funding have put increased pressure on countries to make better use of their limited resources. More than ever, countries need to better understand how much they spend on health, where funds come from, and to what activity this money is spent on. Spending more efficiently and equitably is therefore crucial.

I. INTRODUCTION

1. Socio-economic context and health status

Rwanda is the most densely populated country in sub-Saharan Africa with a population density of 500 inhabitants per square kilometer in 2020 [2]. The country has a young population with a demographic pattern that is not different from many African countries. It has a large and rapidly growing young population with 43.4% of the population between the ages of 0-14 [2] and a population growth rate of 2.3% [3].

Rwanda's economy recorded good macro-economic performance and gains in poverty reduction in recent years. Despite the slowing global economy, economic growth averaged 6.1% over the period 2013-2016 against the target of 11.5% over the period 2013-2020[4]. Poverty reduced from 56.7% in 2005-2006 to 38.2% in 2016-2017 and extreme poverty from 35.8% to 16% over the same period [5].

In 2018, Rwanda along with Ethiopia, Djibouti, Kenya, and Tanzania, was among the countries with the highest economic growth in East Africa[6]. In 2019, the real GDP growth was 9.4% compared to 2018. However, the coronavirus outbreak, in 2020, had a severe impact on its growth, GDP per capita was estimated at USD 816 down from USD 836 in 2019 [2].

Rwanda's Government is committed to achieving key development targets through several policy frameworks and documents. Vision 2050 provides an overview of the development goals for Rwanda. The vision of the Government of Rwanda, as defined by this document, is to take Rwanda to high living standards by the middle of the 21st century and high-quality livelihoods and focuses on five broad priorities:

- High quality and standards of life
- Developing modern infrastructure and livelihoods
- Transformation for prosperity
- Values for Vision 2050
- International cooperation and positioning

Vision 2050 has implications for all sectors, including health. More specifically it calls for health policies to target the poor and achieve universal access to quality health services at an affordable cost. The National Strategy for Transformation (NST1) has also implications for the health sector. Its social transformation pillar includes priorities such as the eradication of malnutrition through enhanced prevention and management, the improvement of health care services, the enhanced capacity of the health workforce, and the strengthening of financial sustainability of the health sector [4].

Rwanda's health sector has made impressive progress in improving the health status of its population. The maternal mortality rate declined from 750 deaths per 100,000 live births in 2005 to 203 deaths per 100,000 live births in 2019-20 while under-5 mortality dropped from 152 in

2005 to 45 deaths per 1,000 live births in 2019-20 [7]. Life expectancy at birth increased from 51.2 years in 2002 to 67.7 years in 2020. Improved access to and use of health services contributed significantly to reducing mortality.

Rwanda Ministry of Health has developed and is implementing its first Health Financing Strategic Plan (HFSP 2018-2024) in 2018, an essential instrument for accelerating progress towards achieving Universal Health Coverage (UHC); this document was inspired by the Health Sector Strategic Plan 2018-2024 (HSSP IV) and the 2015 Health Sector Policy [8]. Following a thorough assessment of the health financing system in Rwanda, the document lays out the major strategies that will address the challenges faced by the country and ensure that Rwanda is on track to achieve UHC by 2030 [9].

In addition to this, the Health Resource Tracking Tool (HRTT) has been identified as a strategic tool to track various health financing indicators that are also needed for both national and international reporting requirements (SDG, NST1 and HSSP IV) to measure countries performance and progress towards achieving UHC.

2. Resource tracking

Health resource tracking involves tracing financial flows throughout the health sector, from sources to ultimate health services where the money is spent. It employs various tools and methodologies to measure and track the flow of funds through a country's health system and helps policymakers understand, for a specified period, where the money for health comes from, how much is spent, what is spent on and where it is spent. The generated information allows stakeholders to assess how well resources are allocated to health system goals and priorities and how they can be spent more efficiently and equitably. Additionally, this information helps to understand and prioritize essential underfunded areas of the sector.

Producing national health expenditures estimates on a routine basis is important to ensure that the information remains up-to-date and relevant for policy discussions and decisions. It is, therefore, crucial to establish resource tracking as an integral and sustained part of Government operations.

To streamline data collection processes across different resource tracking activities, lower the costs and produce timely reports, the Government of Rwanda (GOR) through the Ministry of Health with the support of development partners developed and used the Health Resource Tracking Tool (HRTT). The HRTT is a web-based tool that allows annual data collection of both expenditures and budget data from Government institutions, development partners, and all stakeholders in the health sector.

Over the years the tool has evolved to improve accuracy, completeness, to include more stakeholders, and to integrate interoperability features. Every year, reporting organizations enter

descriptions of their health projects and activities, funding received, expenditures for the previous fiscal year and budget for the current fiscal year. Thus far, data collected using the HRTT have been used to produce annual health expenditures reports since 2010.

II. METHODOLOGY

1. Data collection processes and sources

After the last HRTT data reported in FY 2017-18, the web-based system has encountered recurring technical challenges. Due to this reason, the data collection of the fiscal years 2017-18, 2018-2019, and 2019-20 were conducted with the aid of a manual tool.
Drawing upon the HRTT data entry needs, an excel template was developed to collect expenditure data from different organizations. A team of trained data collectors supported organizations to report with the data collection excel tool. The limited functionalities of the manual tool meant that only expenditure data were collected. Budget information which is also critical in analyzing the sector's resource flow and allocations were not collected.

Data collection relied as well on secondary data reported through different reporting systems: the Health Information and Management System (HMIS), the Integrated Financial Management Information System (IFMIS) housed at the Ministry of Finance and the HRTT.
Public health facilities (referral, provincial, district hospitals and health centers) report their expenditures and revenues in IFMIS every fiscal year. The information gathered through IFMIS is then transferred to HRTT for data analysis. Likewise, private health facilities and pharmacies expenditures collected through the ISHYIGA platform and HMIS are then transferred to HRTT.
The data cleaning process involved the following steps:

- Harmonization of funding sources, agents, implementers, input categories across all levels of stakeholders,
- The use of exchange rates for the 3 fiscal years to report expenditures in one currency, Rwanda Franc,
- Examination of the flow of funds from the sources to agents and implementers or service providers. The team also compared reporting by funding sources and agents, ensuring that all possible double-counting are identified and addressed.

Data analysis was conducted using Excel and consisted of:

- Mapping interventions/activities with Medium Term Expenditure Framework (MTEF) programs and sub-programs respectively renamed domains and sub-domains of intervention.
- Crosschecking and establishing linkage between each implemented activity and its purpose
- Using pivot tables to compute health expenditures by studied dimension.

2. Reporting institutions

Overall, 1074 institutions/organizations reported their expenditures for this exercise. Table 1 presents the list of institution types that reported by organization type. The reporting rate is above 70 % and with more than 95% for the core implementing health related agencies and institutions.

Table 1: List of institutions that reported health expenditures

Organization type	Number of Institutions expected to report	Number of Institutions that reported	Reporting rate
Administrative Districts	30	30	100%
Bilateral agencies	2	2	100%
District Hospitals	36	36	100%
GOR institutions	8	8	100%
Health centers	508	508	100%
Health professionals Councils	4	4	100%
International NGOs	58	58	100%
Local NGOs	34	34	100%
Private Health Facilities	157	154	98%
Private insurances	4	4	100%
Private pharmacies	489	209	43%
Private Universities	1	1	100%
Provincial Hospitals	4	4	100%
Referral Hospitals	8	8	100%
Specialized hospitals/centers	5	5	100%
Social Health Insurances	4	4	100%
UN Agencies	5	5	100%
Total	**1357**	**1,074**	**79%**

3. Data analysis

To eliminate double-counting, the team compared information reported by different data sources with possible overlapping expenditures (e.g. funding agency and NGO). During data cleaning, the data analysis team did manual checks and kept the entry that provided the most details. Each expenditure was mapped to a specific funding source type (Public, Private and External sources) and activity purpose as defined by the domain of intervention (Table 2).

Table 2: List of activity purposes

Domains of Intervention	Sub-domains of Intervention
Administration and support services	Business strategy
	Corporate services
	Planning and Monitoring & Evaluation (M&E)
Clinical services	Accreditation

Domains of Intervention	Sub-domains of Intervention
	Environmental Health
	Nursing
	Pharmacy
	Private health facilities
	Public health facilities
	Specialized health services
Disease prevention & control (other)	Epidemic Surveillance and Response (ESR)
	Mental Health
	Rwanda Health Communication Center (RHCC)
District Operations	Disease control
	Health Infrastructure, equipment, & goods
	Health staff management
Geographic Accessibility	Geographic accessibility
Health Financing	Community-Based Health Insurance
	Performance-Based Financing (PBF)
Health Service Delivery	Medical Research Center
	National Center for Blood Transfusion
	National Reference Laboratory
	SAMU
Health Support Systems	Decentralization
	Human Resource for Health
	Medical Technology & Infrastructure
Leprosy	Care & Treatment
	M&E
	Prevention
	Social Support for Leprosy patients
Non-Communicable Diseases (NCD)	Community sensitization for behavioral change & early detection
	Prevention & control of NCDs risk factors
	Primary & specialized care and treatment
Planning & Information	Information & Technology
	Planning and M&E
	Sector Wide Approach (SWAp)
Resource Mobilization	Pooled Financing
	Sector Budget support
Maternal, Child, & Community Health	Adolescent sexual reproductive health & rights
	Child Health
	Community Health
	Family Planning
	Gender-based Violence (GBV)
	Maternal & Neonatal Health

Domains of Intervention	Sub-domains of Intervention
	Nutrition
	Vaccination Program
Malaria and Other Parasitic Diseases	Care & Treatment
	Coordination
	Information Education Communication (IEC)
	Monitoring & Evaluation
	Neglected Tropical Diseases (NTD)
	Prevention
	System Strengthening
Tuberculosis & Other Respiratory Diseases	Care & Treatment
	Coordination
	IEC
	Monitoring & Evaluation
	Prevention
	System Strengthening
HIV/AIDS and STIs Diseases	Care & Treatment
	Coordination
	Health System Cost
	Impact Mitigation
	Monitoring & Evaluation
	Prevention
Medical Procurement and Production	Medical Procurement
	Medical Production

Out-of-pocket (OOP) expenditures were estimated from data reported by private health facilities and pharmacies as direct payments for services received or co-payment from users. Furthermore, OOP payments were also estimated from internally generated revenues (IGR) reported by public health facilities. Assuming that health insurances clients pay on average 10%of their total bills, this was applied to the total reported IGR to deduct OOP payments at public health facilities.

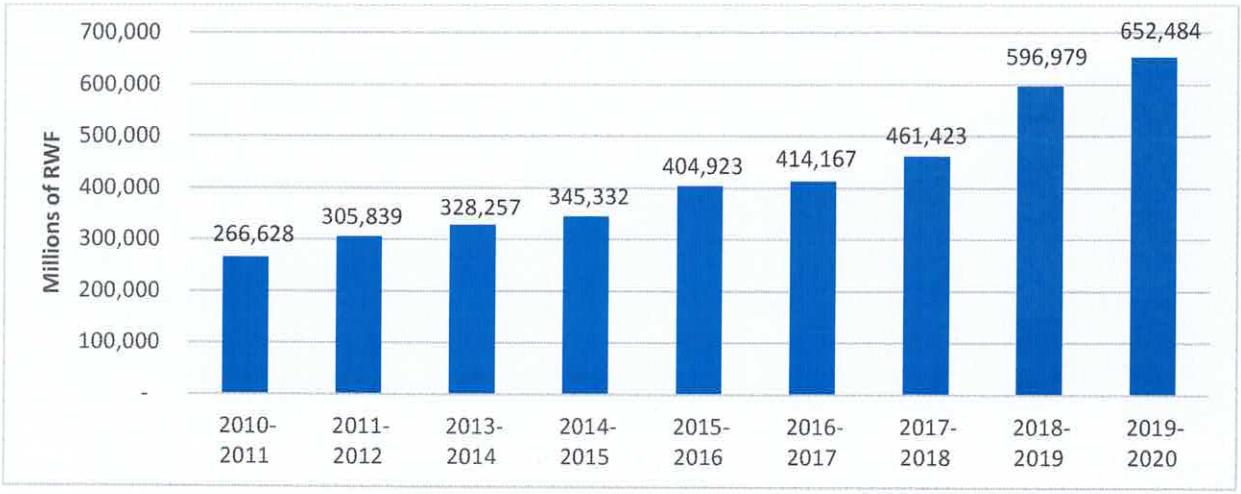
III. FINDINGS

This section presents estimates of the total health expenditure (THE) for three consecutive fiscal years: 2017-18, 2018-19, and 2019-20 and compares them with previous estimates to examine the pattern of health financing in Rwanda.

1. Summary of Statistics for the Total Health Expenditures

Rwanda spent approximately RWF 461, 597, and 652 billion on health during the FY 2017-18, 2018-19, and 2019-20 respectively (Figure 1). Per capita spending increased from RWF 38,167 (USD 43) in 2017-18 to RWF 48,243 (USD 55) the following year and RWF 51,526 (USD 56) in 2019-2020.

Figure 1: Trends in Total Health Expenditures (THE), 2010-2020



The ratio of health spending compared to total spending in the economy provide an insight into how much countries spent on health. This ratio can vary over time due to differences in the growth of health spending compared to overall economic growth. Over the years, THE as a share of GDP did not change considerably, slightly decreasing in the middle of the period and taking off again in 2018-2019 (Figure 2).

Figure 2: THE versus THE as a share of GDP

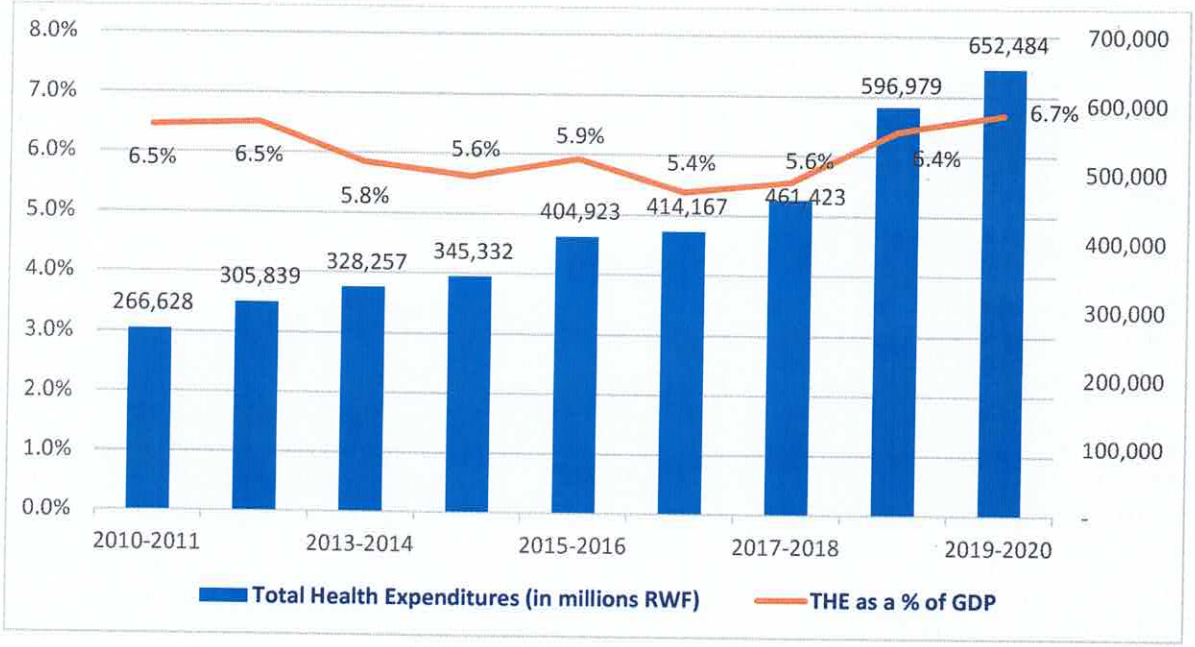


Table 3: Health expenditures summary statistics FY 2017-2018, 2018-2019 and 2019-2020

Indicators	2017-2018	2018-2019	2019-2020
Total Population*	12,089,721	12,374,397	12,663,116
Current GDP (in billion RWF) *	8,302	9,315	9,746
Exchange rate (USD/RWF) **	885	882	919
Total Health Expenditures (in billion RWF)	461.4	597.0	652.5
Total Health Expenditures (in million USD)	521.4	676.8	710.0
Total Health Expenditures as % of GDP	5.6%	6.4%	6.7%
Total Health Expenditures per capita (RWF)	38,167	48,243	51,526
Total Health Expenditures per capita (USD)	43	55	56
Government budget on health as a share of total Government budget	17.2%	16.6%	15.3%
Funding sources			
Domestic Expenditures on Health	272,580,959,084	332,800,621,432	375,585,563,162
Public Expenditure on Health (Tax rev, etc.)	148,426,301,722	192,320,972,268	218,345,488,994
Private Expenditures on Health - Total	124,154,657,362	140,479,649,164	157,240,074,168
Private Expenditure on Health - Not OOP	101,670,313,045	113,940,425,273	128,067,957,708
Internally Generated Revenue (Public HF)	*71,513,702,094*	*80,073,404,388*	*94,495,147,309*
Private Expenditure on Health (Private HF and Pharmacies)	*30,156,610,951*	*33,867,020,886*	*33,572,810,399*
Out-of-pocket (OOP) - Total	22,484,344,317	26,539,223,891	29,172,116,460
OOP - Private HF and pharmacies (co-payment and OOP)	*14,538,377,417*	*17,642,178,959*	*18,672,655,648*
OOP - Public HF (co-payment) with an assumption of 10% of IGR	*7,945,966,899*	*8,897,044,932*	*10,499,460,812*
External (On & Off budget)	188,842,455,326	264,178,438,551	276,898,470,090
SBS - On budget	*60,872,869,891*	*63,536,951,420*	*69,972,616,233*
External -On budget[1]	17,778,418,839	48,424,059,665	53,533,212,543
External -Off budget	110,191,166,596	152,217,427,466	153,392,641,315
Funding sources (% of THE)			
Domestic as % of THE	59.1%	55.7%	57.6%
Public as a % of THE	*32.2%*	*32.2%*	*33.5%*
Private as a % of THE	*26.9%*	*23.5%*	*24.1%*
External as % of THE	40.9%	44.3%	42.4%
OOP as % of THE	4.9%	4.4%	4.5%

* National Institute of Statistics of Rwanda (NISR). Rwanda Statistical Yearbook. 2020
** Rwanda Ministry of Finance and Economic Planning. Budget Call Circular 2.

Table 3 above presents a summary of the key findings. Per capita spending on health increased over the three years from USD 43 to USD 56 in 2019-20, standing USD 15 higher than the average health spending in low-income countries in 2017[1]. Domestic spending represented 59, 56, and 58% for 2017-18, 2018-19, and 2019-20 respectively while external resources 41, 44, and 42% of the THE for the same fiscal years respectively. The Government budget on health as a share of

[1] *External -On budget: External grants and loans channeled through GoR institutions*

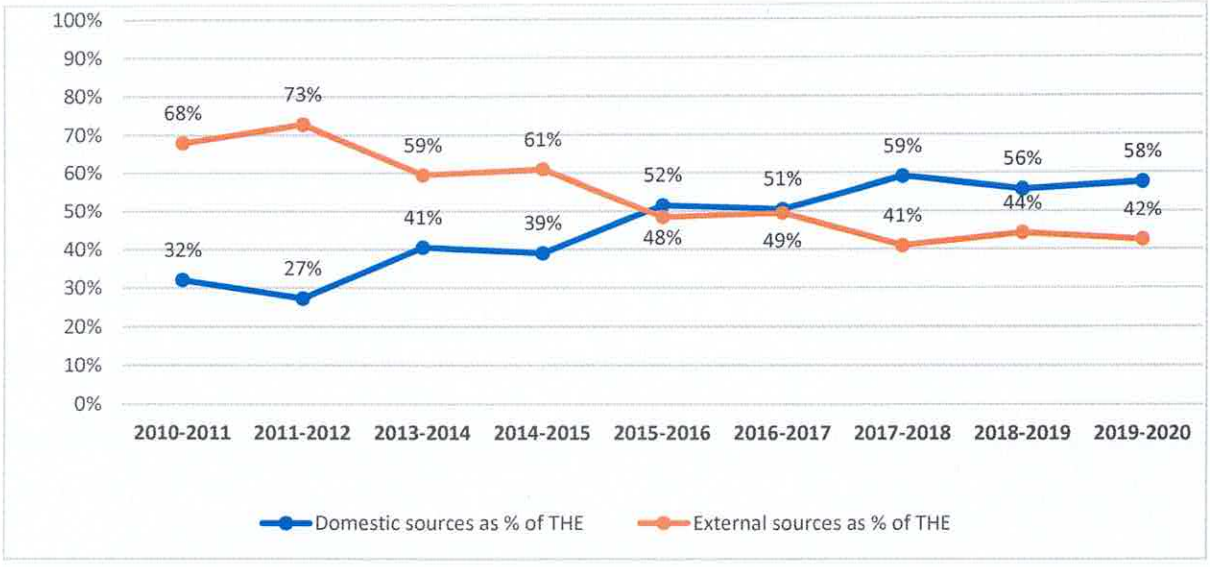
total Government budget over the three years has been above the 15% as per the target of the 2001 Abuja declaration on Government budget allocation to health.

2. Total Health Expenditures by Funding Sources

Funding or financing sources are organizations that contribute funds to finance health care. These organizations include Government institutions, private companies, development partners, and households and are grouped into three big categories: (i) Public, (ii) Private, and (iii) External sources on health. Public and private sources are combined to produce domestic sources on health.

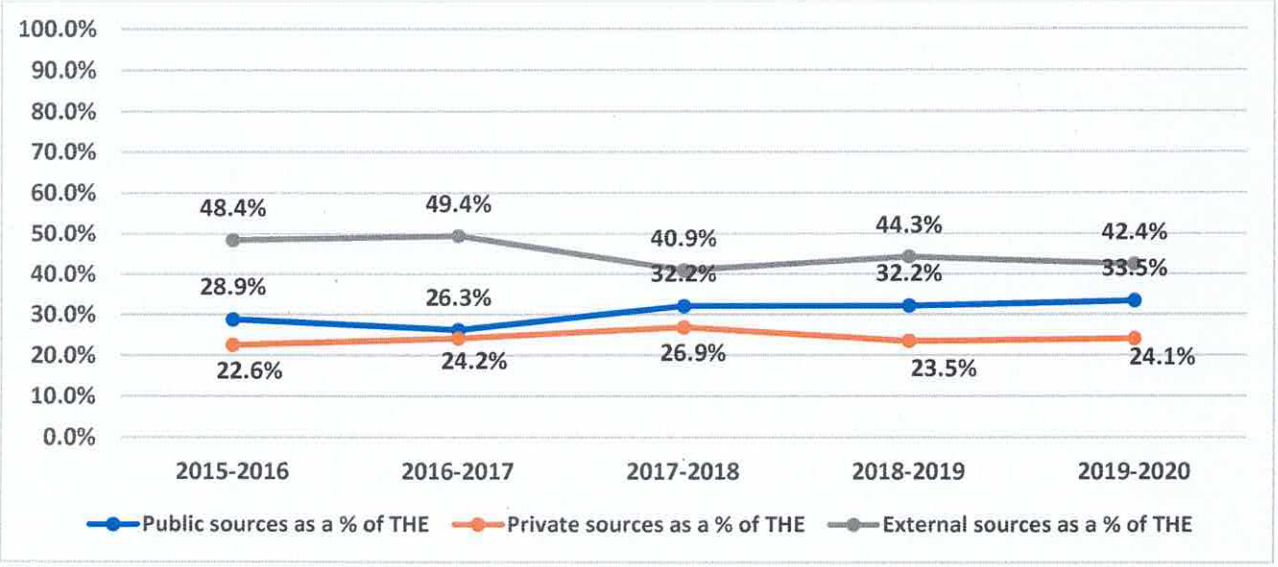
Over the past decade, the contribution from external sources declined from 68% in 2010-11 to 42% in 2019-20. Meanwhile, domestic contributions increased from 32% in 2010-11 to 58% in 2019-2020. Over the last 3 fiscal years, levels of domestic as well as external funding remained steady with a small increase and decrease for external and domestic resources respectively.

Figure 3: Trends in domestic versus external sources for health, 2010-2020



Domestic sources were further disaggregated into public and private sources. As displayed in Figure 4, over time public sources increased slightly while private source contributions did not change much.

Figure 4: Trends in public, private and external resources, 2015-2020

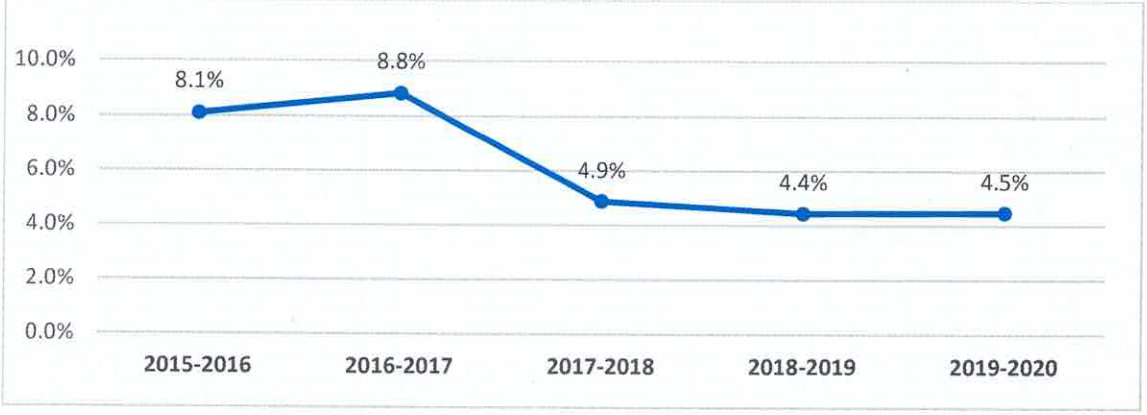


3. Out-of-pocket spending

Out-of-pocket spending (OOP) is a payment by households directly to providers to obtain services and health products. It includes individual payments to health facilities and pharmacies, official patient cost-sharing (co-payments) within benefit packages, and informal payments.

OOP spending shows how much a health system relies on households' direct payment to finance health care and how exposed are households to catastrophic expenditures.

Figure 5: OOP spending as a share of THE, 2015-2020



OOP expenditures went from RWF 32.8 to 29.2 billion between 2015-16 and 2019-20. As a percentage of THE, OOP spending dropped by 4 percentage points between 2016-17 and 2017-18 and remained stable around 4-5% for the 2 following years. This is far lower than the average

share of OOP spending, 41%, in low-income countries in 2017 and indicates that the health system depends less on households' direct payments [1].

4. Total Health Expenditures by activity/purpose

This section presents health spending by activity/ purpose. The HRTT tool organizes health activities based on the Medium-Term Expenditures Framework (MTEF) categories.

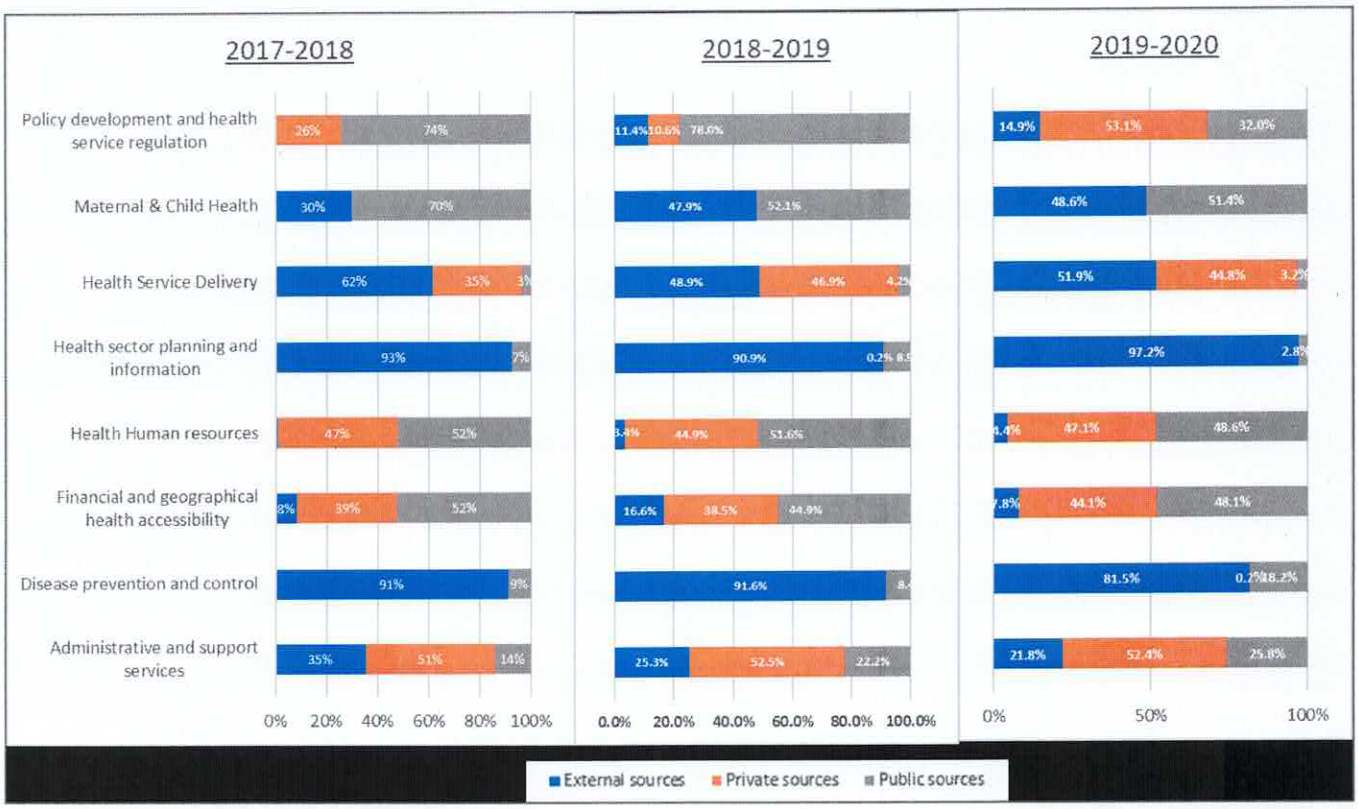
As shown in Table 4, the majority of THE was allocated to Health Human Resources (RWF 95.9 billion), closely followed by Disease Prevention and Control (RWF 95.7 billion) and Maternal Child and Health (MCH) (RWF 74.8 billion) in 2017-18. This trend changed the two subsequent years as Disease prevention and control took the lead followed by MCH in 2018-19 and 2019-2020. The 20% increase in health spending in Disease Prevention and Control may be explained by the Covid 19 pandemic in 2019-2020. A similar increase (approximately 25%) was observed for Health Service Delivery and a significant decrease of 30% in spending in Health Sector Planning & Information.

Table 4: Trends of THE by activity/purpose, 2017-2020

Domain of intervention	2017-2018	2018-2019	2019-2020
Administrative & support services	71,039,026,808	76,464,644,240	75,288,642,710
Disease prevention & control	95,662,922,539	143,377,330,493	172,266,658,485
Financial & geographical health accessibility	46,713,697,252	58,598,067,190	64,011,307,616
Health Human resources	95,946,330,283	117,238,039,777	122,623,265,074
Health sector planning & information	5,689,541,965	7,235,884,652	5,064,690,173
Health Service Delivery	71,358,128,327	53,229,052,235	66,282,405,627
Maternal & Child Health	74,759,464,294	139,936,217,249	143,607,869,185
Policy development & health service regulation	254,302,941	899,824,147	3,339,194,381

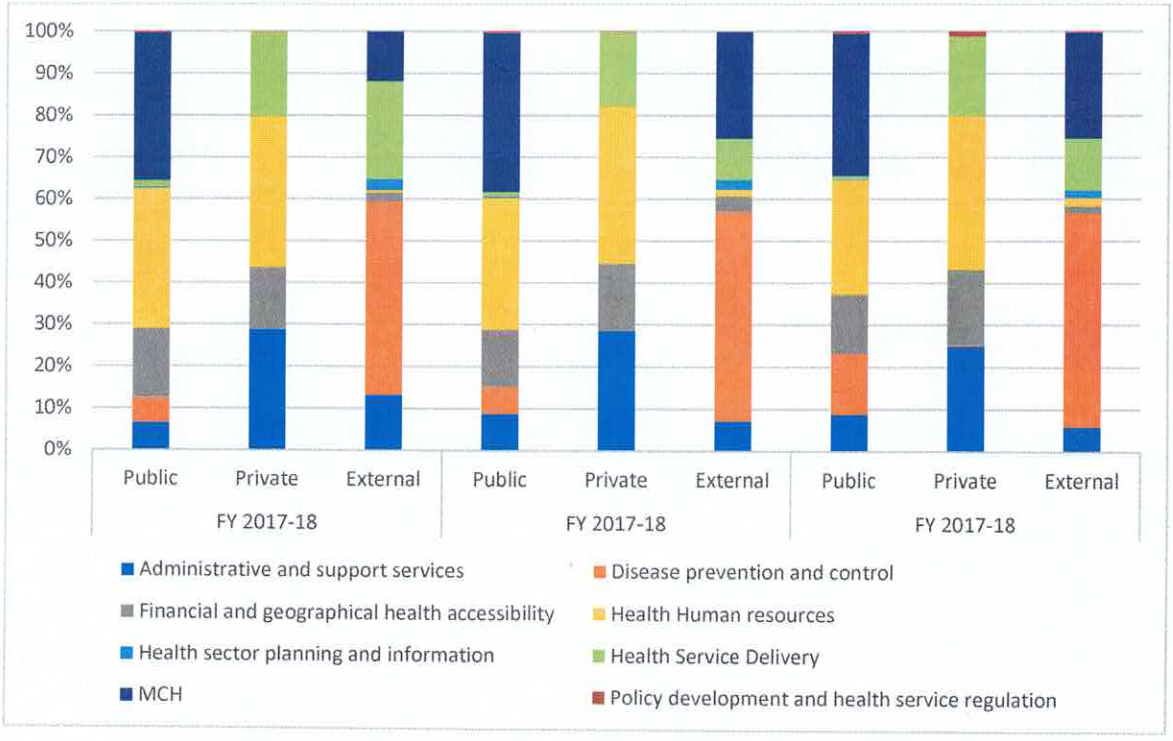
As illustrated in Figure 6, administrative and support services were funded mainly through private sources; disease prevention and control by external funding although the last year we observed a doubling of public funds allocated to this domain of intervention. Financial and geographical health accessibility was funded mostly by public sources, however, over the 3 years, we saw an increase in private funds. Health human resources were funded through public and private sources. The latter is possible, as health facilities use IGR to hire additional staff. Health sector planning and information were predominantly funded by external sources over the 3 years. Health service delivery has been financed by private and external sources while MCH was financed by public sources predominantly during the first year and jointly with external sources for the two following years. Policy development and health service regulation were financed through public funds during the two first years and private funds at 53% the third year.

Figure 6: Distribution of funding sources by domains of intervention, 2017-2020



As illustrated in Figure 7 below, 50 to 75% of external funds went to Disease control and prevention and MCH over the studied period, while approximately two-thirds of public funds were allocated to Human resources and MCH. Over the 3 fiscal years, there has been a consistent decrease in external funding for Administrative and support services. Public funding for Health Service delivery decreased consistently but increased steadily for Disease control and prevention.

Figure 7: Domains of intervention by type of funding sources, 2017-2020



More than 60% of private funds financed Human resources and Administrative and support services.

IV. CONCLUSION, LIMITATIONS, AND RECOMMENDATIONS

4.1. Conclusion

The HRTT output analysis shows an increasing trend in overall health spending in Rwanda. Total health spending stood at RWF 461 in 2017-2018, increased to RWF 597 and RWF 652 in 2018-2019 and 2019-2020 respectively. Over the years, domestic sources have increased to fund almost 60% of total health spending in 2019-2020 with 33 and 24% from public and private sources respectively. Increase reliance on domestic public sources in health show a strong and consistent commitment from the Government in investing in health towards achieving UHC. In addition to this, OOP expenditures have been decreasing to an impressive level of 4.5% of THE in 2019-20 suggesting improvement in financial protection of the population while accessing health services.

Over the three fiscal years, the allocation of funding in health has significantly increased in three domains of intervention: Health human resources, Disease prevention and control, and MCH. A

20% increase was observed in Disease Prevention and Control spending in 2019-2020 most likely reflecting the impact of the Covid 19 pandemic and general increasing burden on non-communicable diseases.

4.2. Limitations

Health resource tracking employs a variety of tools and methodologies to not only measure health expenditures but also track the flow of funds through the country's health system.

In developing countries, resource tracking has been mostly conducted through periodic surveys among health stakeholders and has produced disaggregated health expenditures to the end-use. However, these exercises are expensive and often the reports are available after a considerable lag of time and miss the opportunity to influence current policy discussion.

The introduction of HRTT allowed routine data collection and the availability of up-to-date information. Over the years, the tool has evolved, however, there are still challenges to producing comprehensive and timely health expenditure to inform policy decisions. These constraints are due to:

i. Timely reporting and data completeness

Given the nature of this exercise, quality resource tracking relies on timely reported, complete, and detailed data to allow proper mapping of health spending. It is therefore essential that i) stakeholders report complete data and on time, and ii) the reporting structure allows a detailed breakdown of information to allow a thorough analysis of expenditure data. Delay in reporting affects timely reports production and the decision making processes in terms of priorities setting and resources allocation

ii. Staff turnover and capacity.

Resource tracking activities require dedicated staff to undertake regular training of respondents, supervision of data collection, cleaning, and validation of data, data analysis, and production of the annual report. With limited or no staff turnover, routine production of annual health expenditures will be possible and result in higher quality data as the technical capacity of the team will improve with each round of estimations.

iii. Interoperability challenges.

There are opportunities to improve the production of health expenditures using existing data information systems such as the IFMIS, HRTT, and Electronic Medical Records (EMR). However, the ability to exchange information between these systems is very limited and should be explored to simplify data collection and allow routine production of health expenditures reports.

4.3. Recommendations

New and emerging health threats such as Covid 19 and the sharp decline in external funding have put increased pressure on countries to make better use of their limited resources. More than ever, countries need to better understand how much they spend on health, where funds come from, and to what activity this money is spent on. Spending more efficiently and equitably is therefore crucial.

Hence, to improve resource tracking, the following is required:

i. Apply a thorough methodology for collecting and analyzing health expenditures. The methodology should provide a systematic, comprehensive, and consistent framework for measuring, tracking and monitoring resource flows in the health systems.
ii. Redesign the HRTT system and processes. Review and adapt data collection templates to reflect data needs, strengthen data entry training, and continuously engage the leadership of stakeholder's organizations to improve ownership and accountability of the reporting.
iii. Improve staff retention and build capacity. The availability of dedicated staff improves the timely production of quality health expenditure reports.
iv. Undertake a comprehensive mapping of stakeholders involved in the health sector and data sources to identify data collection gaps and propose strategies for improvement
v. Explore the opportunity for interoperability between existing data systems in Rwanda. This will reduce the existing burden on the organization's respondents and improve the quality of data reporting.

Over the last decade, the process of integrating resource tracking as a part of Government operations occurred progressively, and the goal is to move towards producing quality resource tracking reports every year. Routine production of health spending will result in higher quality data, as the systems for gathering needed inputs and the technical capacity of the team will improve with each round of estimations.

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VI. APPENDICES

Table 5: Health Expenditures summary statistics, 2010-2020

Indicators	2010-11	2011-12	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Total Population	10,209,683	10,515,973	10,831,452	10,996,891	11,262,564	11,809,300	12,089,721	12,374,397	12,663,116
Current GDP (in billion RWF)	4,131	4,700	5,619	6,147	6,842	7,694	8,302	9,315	9,746
Exchange rate	580	595	680	689	710	819	885	882	919
Total Health Expenditures (in billion RWF)	266.6	305.8	328.3	345.3	404.9	414.2	461.4	597.0	652.5
Total Health Expenditures (in million USD)	459.7	514.0	482.7	501.2	570.3	505.7	521.1	677.1	710.1
THE as % of GDP	6.5%	6.5%	5.8%	5.6%	5.9%	5.4%	5.6%	6.4%	6.7%
THE per capita (RWF)	26,115	29,083	30,306	31,403	35,953	35,071	38,167	48,243	51,526
THE per capita (USD)	45	49	45	46	51	43	43	55	56
Funding sources (in billion RWF)									
Domestic Expenditures	85.5	83.2	133.1	134.8	208.9	209.4	272.6	332.8	375.6
Public Expenditure on Health (Tax rev, etc.)					117.2	109.0	148.4	192.3	218.3
Private Expenditures on Health - Total					91.7	100.4	124.2	140.5	157.2
Private Expenditure on Health - Not OOP					58.8	63.9	101.7	113.9	128.1
Internally Generated Revenue (Public HF)							71.5	80.1	94.5
Private Expenditure on Health (Private HF & Pharmacies)							30.2	33.9	33.6
Out-of-pocket (OOP) - Total					32.8	36.6	22.5	26.5	29.2
OOP - Private HFs and pharmacies (co-payment & OOP)							14.5	17.6	18.7
OOP - Public HFs (co-payment) with an assumption of 10% of IGR							7.9	8.9	10.5
External (On & Off budget)	181.2	222.6	195.2	210.6	196.0	204.7	188.8	264.2	276.9
SBS - On budget							60.9	63.5	70.0
External -Off budget							128.0	200.6	206.9
Funding sources (% of THE)									
Domestic as % of THE	32%	27%	41%	39%	52%	51%	59%	56%	58%
Public as a % of THE					29%	26%	32%	32%	33%
Private as a % of THE					23%	24%	27%	24%	24%
External as % of THE	68%	73%	59%	61%	48%	49%	41%	44%	42%
OOP as % of THE					8%	9%	5%	4%	4%

Table 6: Total Health Expenditures by Organization types, 2017-2020

Organization types	2017-2018	2018-2019	2019-2020
Administrative District	37,917,744,571	40,216,932,571	45,422,539,583
Bilateral agencies	623,094,654	4,976,052,535	219,100,219
District Hospital	19,486,380,097	26,386,720,264	25,741,751,109
GOR institutions	183,765,309,591	252,708,973,649	274,108,634,032
Health center	33,059,603,045	30,987,265,695	32,343,129,173
Health Professionals councils	588,425,422	1,009,811,849	791,764,470
International NGOs	84,148,749,248	116,331,539,031	120,163,513,811
Local NGOs	11,524,074,921	21,557,153,499	32,664,001,227
Private health facilities	28,176,101,369	31,186,107,082	26,660,626,571
Private Pharmacies	16,725,673,940	20,628,156,554	25,902,739,682
Private Universities	5,833,801,658	4,465,563,959	7,333,031,988
Provincial Hospital	2,096,963,829	2,262,553,889	1,655,831,852
Referral Hospital	22,848,712,184	27,661,983,212	39,967,131,461
Social health insurances	5,520,360,629	5,904,391,915	8,234,136,824
UN Agencies	9,108,419,251	10,695,854,279	11,276,101,251
Grand Total	**461,423,414,409**	**596,979,059,983**	**652,484,033,252**

Table 7: Trends of THE by activity/purpose, 2017-2020

Domain of intervention	2017-2018	2018-2019	2019-2020
Administrative & support services	71,039,026,808	76,464,644,240	75,288,642,710
Disease prevention & control	95,662,922,539	143,377,330,493	172,266,658,485
Financial & geographical health accessibility	46,713,697,252	58,598,067,190	64,011,307,616
Health Human resources	95,946,330,283	117,238,039,777	122,623,265,074
Health sector planning & information	5,689,541,965	7,235,884,652	5,064,690,173
Health Service Delivery	71,358,128,327	53,229,052,235	66,282,405,627
Maternal & Child Health	74,759,464,294	139,936,217,249	143,607,869,185
Policy development & health service regulation	254,302,941	899,824,147	3,339,194,381

Table 8: Sources of funding by activity/purpose, 2017-2020

Fiscal Years/ Funding sources	FY 2017-18			FY 2018-19			FY 2019-20		
Domains of Intervention	***Public***	***Private***	***External***	***Public***	***Private***	***External***	***Public***	***Private***	***External***
Administrative and support services	14.1%	50.5%	35.4%	22.2%	52.5%	25.3%	25.8%	52.4%	21.8%
Disease prevention & control	8.9%	0.0%	91.1%	8.4%	0.0%	91.6%	18.2%	0.2%	81.5%
Financial & geographical health accessibility	52.3%	39.3%	8.4%	44.9%	38.5%	16.6%	48.1%	44.1%	7.8%
Health Human resources	52.1%	46.8%	1.1%	51.6%	44.9%	3.4%	48.6%	47.1%	4.4%
Health sector planning & information	7.2%	0.0%	92.8%	8.9%	0.2%	90.9%	2.8%	0.0%	97.2%
Health Service Delivery	3.3%	34.9%	61.7%	4.2%	46.9%	48.9%	3.2%	44.8%	51.9%
Maternal & Child Health	70.2%	0.0%	29.8%	52.1%	0.0%	47.9%	51.4%	0.0%	48.6%
Policy development & health service regulation	73.8%	26.2%	0.0%	78.0%	10.6%	11.4%	32.0%	53.1%	14.9%

Table 9: Implementing organizations that reported

Organization type	Organization unit
GOR institutions	MOH
	MIGEPROFE
	MINAGRI
	MINALOC
	MINEDUC
	MININFRA
	Rwanda Biomedical Center
	Rwanda FDA
Administrative District	BUGESERA
	BURERA
	GAKENKE
	GASABO
	GATSIBO
	GICUMBI
	GISAGARA
	HUYE
	KAMONYI
	KARONGI
	KAYONZA
	KICUKIRO
	KIREHE
	MUHANGA
	MUSANZE
	NGOMA
	NGORORERO
	NYABIHU
	NYAGATARE
	NYAMAGABE
	NYAMASHEKE
	NYANZA
	NYARUGENGE
	NYARUGURU
	RUBAVU
	RUHANGO
	RULINDO
	RUSIZI
	RUTSIRO
	RWAMAGANA
UN Agencies	UNAIDS
	UNFPA

Organization type	Organization unit
	UNHCR
	UNICEF
	WHO
Bilateral agencies	ENABEL
	Swiss Development Cooperation
Referral Hospital	King Faisal Hospital
	CHUB
	CHUK
	NEURO PSYCHIATRIC HOSPITAL OF NDERA (HNN)
	Rwanda Military Hospital
	Rilima Specialized hospital
	Gahini Rehabilitation Center
	HUYE ISANGE REHABILITATION CENTER Specialized hospital
	HVP Gatagara Specialized hospital
	Inkuru Nziza Orthopedic Specialized Hospital
	Kibungo
	Kibuye
	Ruhengeri
Provincial Hospital	Bushenge
	Kinihira
	Ruhango
	Rwamagana
District Hospital	Butaro
	Byumba
	Gahini
	Gakoma
	Gihundwe
	Gisenyi
	Gitwe
	Kabaya
	Kabgayi
	Kabutare
	Kaduha
	Kibagabaga
	Kibilizi
	Kibogora
	Kigeme
	Kirehe
	Kirinda
	Kiziguro
	Masaka
	Mibilizi

Organization type	Organization unit
	Mugonero
	Muhima
	Muhororo
	Munini
	Murunda
	Nemba
	Ngarama
	Nyagatare
	Nyamata
	Nyanza
	Remera-Rukoma
	Ruli
	Rutongo
	Rwinkwavu
	Shyira
	KACYIRU Hospital
Health center	Health center
Health professionals' councils	National Council of Nurses And Midwives
	National Pharmacy Council
	Rwanda Allied Health Professionals Council
	Rwanda Medical and Dental Council
International NGOs	ABT Associates
	ADRA
	Affordable Human Needs
	AHA
	AIDS Healthcare Foundation RWANDA (AHF)
	American Refugees Committee
	Better world Rwanda
	Catholic Relief Service
	CHAI
	Chemonics International Inc/GHSC-PSM
	CHF-Global Communities
	Christian Blind Mission (CBM)
	Compassion International
	Concern Worldwide
	Cure International / Hope Walks
	DelAgua Health Rwanda Implementation (Korea) Ltd
	EDCTP
	Fondation Aide Dentaire Afrique
	Fondation Heron
	FOOD FOR THE HUNGRY
	Fred Hollows International

Organization type	Organization unit
	FXB RWANDA
	Gardens for Health International
	Global Health Corps
	Global Humanitarian and Development Foundation
	Handicap International
	Health Poverty Action
	ICAP
	IDRC
	Intrahealth
	IOWD
	JHPIEGO
	JSI-BIXBY CENTER
	Management Sciences for Health (MSH)
	Maryland Global Initiatives Corporation
	Medicus Mundi
	ONE SIGHT
	Partners in Health (PIH)
	PEPFAR / CDC
	PEPFAR / DOS
	PEPFAR/ DOD
	Red Cross Rwanda
	Save the Children International Rwanda
	Sight and Life Foundation
	SOS CHILDREN'S VILLAGES RWANDA
	Starkey Hearing Foundation
	Team Heart, Inc
	Tear fund Rwanda
	TradeMark East Africa (TMEA)
	US Peace Corps
	Vision for a Nation Foundation
	VSO
	WaterAid
	WFP
	World Bank
	World Relief Rwanda
	World Vision
Local NGOs	Access to Health
	AEE Rwanda
	Alliance for Healthy Communities
	ARBEF
	Breast Cancer Initiatives East Africa Inc.
	Caritas Rwanda

Organization type	Organization unit
	Center for Family Health Research
	Faith Victory Association
	Fondazione Leonardo Del Vecchio Rwanda
	Girl Effect Rwanda
	Global Epileptic Connection (GECO)
	Health Alert Volunteers (HAV)
	Health Builders
	Health Development Initiative
	Health Development Performance
	Health[e]Foundation
	Ihangane Project
	Imbuto Foundation
	One Family Health - Rwanda
	Oral Health Solutions Organization (OHSO)
	Palliative Care Association of Rwanda (PCAR)
	PMC- Umurage Communication for Development-UmC
	Projet San Francisco
	Rinda Ubuzima
	Rwanda International Institute of Ophthalmology
	Rwanda Legacy of Hope
	Rwanda Palliative Care and Hospice Organization
	Society for Family Health (SFH Rwanda)
	Solid'Africa
	Strive Foundation Rwanda
	Survivors Fund
	UPHLS
	We-Actx For Hope
	Women for Women Rwanda
Private health facilities	Babyl Rwanda Ltd
	Hospitals, Clinics and dispensaries
Private health insurances	Britam Insurance Rwanda
	Radiant Insurance Company
	SANLAM Insurance Rwanda
	UAP Insurance Rwanda
Private Pharmacies	Private Pharmacies
Academic institutions	University of Global Health Equity (UGHE)
	Carnegie Mellon University
Social health insurances	FARG
	MIS UR Insurance Rwanda
	MMI
	RSSB

Table 10: Domains and sub domains of interventions

	Domain of intervention	Sub domain of intervention
1	Administrative and support services	Administrative and support services
2	Disease prevention and control	Health promotion and prevention
		COVID-19 response
		Ear and Hearing care
		Epidemic Infectious diseases
		Eye health
		HIV/AIDS, STIs and other blood borne diseases
		Malaria and other parasitic diseases
		Mental health
		NCD
		Oral health
		TB and other respiratory communicable diseases
		Vaccine Preventable Diseases
3	Financial and geographical health accessibility	Health insurance
		Infrastructure and Equipment
4	Health Human resources	HRH
5	Health sector planning and information	E-health
		Planning and M&E
6	Health Service Delivery	Blood transfusion
		Diagnostics capacity (Laboratory)
		Digital Health
		Prehospital and emergency health Service
		Quality improvement
		Refugee and migrant health
		Specialized health services
		Supply chain and distribution
7	MCH	ASRH
		Community Health
		Environmental health
		Family Planning
		GBV
		Maternal, Neonatal and Child Health (MNCH)
		Nutrition
8	Policy development and Health Service Regulation	Food and drug regulation
		Policy development and health service regulation