REPUBLIC OF RWANDA

MINISTRY OF HEALTH
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"ADDING VALUE TO GOOD COVERAGE"

MID-TERM REVIEW REPORT
OF
THE FOURTH HEALTH SECTOR STRATEGIC PLAN (HSSP IV)
(2018 - 2024)

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FOREWORD

The Health Sector Strategic Plan 2018-2024 (HSSPIV) has now passed the half-way mark of its implementation and the overall review of the performance of the health sector during the first half of this strategic plan is particularly important at this time when the sector is striving to continue its way forward to improve the health status of the Rwandan population in a context of diminishing external financial resources allocated to the sector and increasing domestic resources mobilization.

This landscape of limited financial resources is one of the challenges faced by the health sector in a situation where it has reached an impressive performance in terms of coverage of services, but a lot still needs to be done to improve the quality of health services. As stated in this report's subtitle: "Adding value to good coverage", this objective is a crucial one for the coming years.

How can the health sector ensure the provision of high-quality services to the population? And how can the mobilization of domestic financial resources be stimulated to ensure that there will be no gap in the funding of the sector?

These are some of the key questions that this report is aiming at answering, and the Ministry of Health and all the stakeholders of the health sector have the responsibility to put into action the key recommendations of this Mid-term Review to reach the targets set by the HSSP IV and ensure that the Rwandan population benefits from an ever-improving health status, particularly the most vulnerable, in our journey towards Universal Health Coverage.

I call upon all stakeholders from both Government and non-state actors to combine our efforts to this noble objective, during the remaining years of this HSSP IV and beyond in order to provide our population with high quality services.

MINISTRY OF HEALTH

Dr NGAMIJE M. Daniel
Minister of Health

EXECUTIVE SUMMARY

The MTR was conducted between July and December 2021. The overall objective of the review of HSSP4 (2018-2024) was to assess progress in attainment of targets and implementation of strategies. The review covered the period 2018-2021.

The 4 specific objectives for the review were defined as follows:

- To assess whether the health sector performance is on track as envisioned in the HSSP and the likelihood of achieving the targets,
- Assess the extent to which planned HSSP activities have been implemented
- Assess the relevance of the HSSP and its M&E framework in light of any new contextual changes, including COVID-19
- Provide recommendations to guide further implementation or re-orientation of the HSSP

A three-stream integrated approach was employed to implement the MTR as follows:

- Stream 1: Statistical Analysis review performed with data quality analysis to assess quantitative performance on inputs and outputs, outcomes and impact towards the HSSP targets.
- Stream 2: Assessed the status of implementation of planned activities and resources applied to HSSP using mixed qualitative and quantitative methods.
- Stream 3: This mostly qualitative approach assessed the context and operational environment and its influences to explain the observed performance on HSSP4 indicators

Findings from Stream 1: The performance indicators for diseases programs are overall very good for RMNCH and infectious diseases, with a few indicators lagging behind and that will need particular attention to achieve the end of period targets while NCD program is still suffering from insufficient data availability and requires fuller implementation of its M&E framework and needs more purposeful investment for awareness raising, early detection and treatment of NCDs. For the health systems inputs and actions indicators, the performance is overall less spectacular, several indicators are difficult to monitor because of unclear definition or incomplete data collection. This gap should be corrected immediately to ensure a better assessment of performance at the end of the strategic plan period.

Findings from Stream 2: The financial analysis of HSSP4 resources shows that COVID-19 has caused a GDP contraction of 0.2% in 2020, the first recession in Rwanda in more than 2 decades. The Total Health Expenditure (THE) increased by 41.4% in RWF (from 461b in 2017/18 to 652 billion in 2019-20, while the per capita expenditure increased from 38,167 RWF (43USD) to 51,526 RFW (56 USD). The proportion of health expenditures attributed to domestic sources remained almost constant in the period under review at 59% between 2017-18 and 2019-20 while the external resources as share

of THE fluctuated marginally around 41% in the period. The Out-of-Pocket expenditures (OOP) as a proportion of THE remained quite low in the period from 4.9% at baseline to 4.5% at mid- term. Overall adequate funding was provided for HSSP4 implementation with an allocation of RWF 1.71 trillion against HSSP4 costed projections of 1.65 trillion (3% increase) for the period. Rwanda Health Sector MTEF projections for the FY 2021/2022 to FY 2023/2024 show that there will not be additional resources for the health sector and therefore expansion of health care based on identified needs has to be through other innovative mechanisms.

Findings from Stream 3: The qualitative analysis of the operational environment has identified as a key factor of the good health sector performance the strong national leadership and governance which puts health as a priority for the national development. The alignment and harmonization of key stakeholders' interventions at central and decentralized levels (national and international partners) and the inter-sectoral collaboration also contribute largely to the effective implementation of HSSP4 strategies. Accountability is promoted at all levels.

The investments in the different health systems "building blocks" ensure the good functioning of the national health system, although each building block presents a number of challenges that need further attention (workforce, quality of services, infrastructure, health financing, including the private sector involvement, medical procurement and supply management, referral and PHC systems, health information system).

Special attention was given to review the impact of COVID-19 pandemic on the implementation of HSSP4. With global transportation and economies disrupted, some stockouts of commodities and delayed supplies were noticed. Restrictions on movements during the lockdown periods affected staff's provision and clients' access to some critical services (ART, ANC, malnutrition and NCD clinics), regular outreach campaigns and supervision and mentorship visits to decentralized health facilities, but services recovered quickly after the pandemic waves and were almost back to pre- COVID -19 utilization levels during the MTR. On the positive side, the pandemic enabled a strong embrace of technology and the massive ICT utilization gain has definitely been a positive impact of COVID -19. The PHC systems in Rwanda appears to have contributed well to the success of the COVID-19 response as well as helping to retain a high level of continuity of regular services. The national response to the pandemic was coordinated across all sectors, at central and the decentralized levels, to mobilize all entities against the common threat. This overarching coordinating mechanism put in place and quick adoption of innovations allowed the system to continue to function well. In conclusion, health security and resilience should become a strong cross-cutting aspect of future health policies, strategies and operations.

The health sector has an integrated health facility reporting system which is based on the DHIS2 supplemented by surveys such as Demographic and Health Survey (DHS) and other population-based surveys. However, some of the indicators have missing data or have limited disaggregation by

subnational levels such as provincial and district levels. The monitoring and evaluation system has also faced challenges with denominator data for some indicators. The ongoing strengthening of the system to determine the exact cause of deaths (civil registration and vital statistics (CRVS) system) should minimize issues with denominators.

In terms of data use for decision making and learning, there is considerable effort at the national level but progress is needed at the sub-national level. The MTR has also identified that there is a gap in feedback from the national level to the sub-national level.
The digitization of the health sector with implementation of electronic medical records (EMR)/electronic health records (HER) systems and the interoperability of various health information systems (HIS) will help to efficiently obtain disaggregated data on morbidity and mortality.

Some of the key recommendations from the MTR for better outcomes and impact of the strategies presented in the HSSP4 are the following:

Sustainability of health financing mechanisms:

- Develop innovative domestic resources to support the health system (particularly the community-based health insurance scheme, the community health system, the decentralized specialized care services, etc.);
- Address the remaining inequalities in health insurance coverage;
- Design monetary policy incentives to enhance public private partnerships (PPP) and private investment in relevant domains of the health sector;
- Foster the efficient use of existing resources to improve health sector's performance;
- Implement proposed interventions to strengthen strategic purchasing (benefit package harmonization, tariffs revision, re-imbursement of invoices from health care providers);
- Improve the health financing information system;

Human Resources for Health:

- Continue the deployment of specialist physicians in district hospitals, but also strengthen the skills of general practitioners who can provide selected specialized services when well trained (privileging and credentialing);
- Explore strategies for retention incentives to reduce the critical threat of staff turnover, particularly doctors and nurses;
- Conduct regular WISN exercises (assessment of workload in each health facility) to adjust the staffing needs in each facility;

Quality improvement:

- Expansion/Systematization of supportive supervision/mentorship of clinical staff;
- Promote quality improvement efforts in health facilities (strengthen technical assistance, including private healthcare providers and managers);
- Strengthen the medical infrastructure and equipment management plan (distribution, maintenance and rehabilitation, insurance, ...);

Management and governance:

- Strengthen the capacities of District Health Units for better coordination, management and monitoring of decentralized health services;
- Continue to strengthen the Primary health Care (PHC) and Community Health systems to improve access and quality of services;
- Review regularly the scope of practices of different levels of health facilities to enhance efficient use of existing services;

Health Information system

- Expand the routine NCDs and CRVS data collection system;
- Revise the health sector's M&E framework to respond better to quality and impact needs;
- Refine the disaggregation of data by population subgroups, locations and socio-economic classes for better analysis of quality, equity and sub-national variations and for evidence-based decision making; this includes also investment into Research, development and innovations;

Health security and resilience

- Ensure that health security is built into all future strategic and operational plans, including anticipated budgets for health security preparedness;
- Build effective capacity for health security and resilience with well-planned simulation and scenario exercises;

ABBREVIATIONS

AIDS: Acquired Immune Deficiency Syndrome
ARV Anti-Retroviral
AU: African Union
CBOs: Community Based Organizations
CHWs: Community Health Workers
CSOs Civil Society Organizations
DALYs Disability-Adjusted Life Year
DALYs: Disability Adjusted Life Years
DH: District Hospital
EAC; East African Community
ECD: Early Childhood Development
EDP External Development Partners
EDPRS: Economic Development and Poverty Reduction Strategy
FBOs: Faith Based Organization
GAVI The Vaccine Alliance
GF Global Fund
HIV: Human Immunodeficiency Virus
HMIS: Health Management Information System
HSSP: Health Sector Strategic Plan
IHME: Health Metrics and Evaluation
IMCI integrated management of childhood illnesses
KI: Key Informant
LMICs: Low-and Middle-Income Countries
M&E: Monitoring and Evaluation
MDGs: Millennium Development Goals
MIGEPROF: Ministry of Gender and Family Promotion
MINALOC: Ministry of Local Government
MOH Ministry of Health and Child Care
MOH: Ministry of Health
MTR Mid-Term Review
NCD: Non-Communicable Diseases
NGO: Non-Governmental Organization
NHP: National Health Policy
NSHPD: National Strategy for Health Professionals Development
NST1: National Strategy for Transformation
OOPs Out-Of-Pocket health expenditures.
PHC: Primary Health Care
RBC: Rwanda Biomedical Centre
RHCC: Rwanda Health Communication Centre
SDGs: Sustainable Development Goals
SOPs Standard Operating Procedures
TB: Tuberculosis
TOR: Terms of Reference
TWG Technical Working Groups
UHC Universal Health Coverage
USG United States Government
WB World Bank
WHO: World Health Organization
WISN Workload Indicators of Staffing Need

KEY MESSAGES

- Ongoing Epidemiologic and Demographic shifts and links to an increasing NCDs burden and resource needs
- Committed & growing health workforce but with some challenges of skills, retention, turnover and distribution
- Firm PHC foundations exist with good "close to people" services and an extensive CHW network
- Decentralization with an effective District Health System exists
- Inter-sector coordination works well with an impact on Equity & Social Determinants of Health
- Good governance and leadership system, with managerial improvements needed at operational levels
- Good Financial and Geographical Access expansion
- Well-distributed infrastructural expansion available at all levels
- HIS, M&E and Imihigo Performance Management system is effective
- Good & utilized Strategic & Guidance Documents, SOPs
- Evolving but well integrated Private Sector
- Evolving logistics/supply and maintenance systems.
- However, an excellent coverage and access to services now requires a nuanced focus on achieving good quality, and a focused targeting of resources to needs

SECTION 1: INTRODUCTION AND BACKGROUND

Rwanda's fourth health sector strategic plan (HSSP4), is fully integrated in the overall economic development plan of the Government, and highlights the country's priorities for the period from July 2018 to June 2024. It is anticipated to fulfil the country's commitments as expressed in the national Constitution, National Strategy for Transformation (NST1) and the aspirations of the Health Sector Policy 2015. The HSSP4 adheres to the Universal Health Coverage (UHC) principles of the Sustainable Development Goals (SDGs) and takes into consideration the significant achievements of HSSP3, including its improvements in impact and outcome indicators and in the country's health systems indicators. These achievements are attributed to bold and decisive leadership and strong implementation and accountability for the laid-out strategies and policies. However, it is acknowledged that sustaining these gains and tackling ongoing challenges, addressing indicators with slow progress, laying a foundation for reaching Vision 2050 and embracing the ambitious UHC agenda requires further commitment, innovation and effective management to attain the ambitious targets. High coverage has been attained for most services and going forward shall require stronger focus on addressing quality and targeting interventions at specific areas and population segments with higher needs.

HSSP4 Objectives

The Overall Objective of the health sector is to ensure universal accessibility (in geographical and financial terms) of **equitable and affordable quality health services (**including preventative, curative, rehabilitative and promotional services) for all Rwandans.

HSSP4 strategic Objectives

The overall objective was expected to be attained through four Strategic Objectives (SO):

1. Full implementation of the main health **programs** (improve demand, access and quality)
2. Strengthen the health **systems building blocks** (strengthen policies, resources and management)
3. Strengthen all levels of **service delivery** (organize the services effectively at all levels, referrals)
4. Ensure effective **governance** of the sector (strengthen decentralization, partnership, private sector coordination, aid effectiveness, and financial management)

The health sector seeks to evaluate its performance on delivering HSSP4 at mid-term in order to realign its efforts. The goal and objectives of the Mid-Term Review (MTR) are outlined below.

Objectives of MTR and Core review questions

The overall objective of the review was to assess progress in attainment of targets and implementation of strategies. The review covered the period 2018-2021. The 4 specific objectives were redefined for the review as follows:

- To assess whether the health sector performance is on track as envisioned in the HSSP and the likelihood of achieving the targets,
- Assess the extent to which planned HSSP activities have been implemented

- Assess the relevance of the HSSP and its M&E framework in light of any new contextual changes, including COVID19
- Provide recommendations to guide further implementation or re-orientation of the HSSP

The core MTR evaluation questions

The MTR covers 4 areas of review: (i) performance on the set targets, (ii) Trends in investments made to fulfill the strategic objectives, (iii) Understanding the various influences and drivers of implementation, (iv) what is needed in order to chart a new path forward. The questions are -

1. To what extent have the objectives of the HSSP4 been met?
2. To what extent did investments contribute to results (outcome and impact)?
3. To what extent are the existing strategic plans (e.g., programs specific strategic plans) aligned to HSSP4 and to what extent are the priority actions in the Annual Work Plans (AWP) align to the objectives set in the HSSP4?
4. What resources were invested to implement the HSSP4 at which level and by whom?
5. To what extent do the activities selected for funding correspond to the objectives of the HSSP4?
6. What was the resource gap in implementing the HSSP4?
7. How efficient were the investments in producing results and how might efficiency be improved using available resources to achieve results?
8. What were the drivers of achievements (Internal & external factors), and what were the threats)?
9. What needs be done to achieve the set targets in the HSSP4 during the remaining period of implementation?
10. How did the COVID19-19 pandemic affect the implementation of health programs, and of HSSP4 in general?
11. Is there a good alignment of the other programmatic strategies and plans to the HSSP4, i.e. alignment in terms of timelines, strategic objectives?

The MTR covered a period from July 2021 to December 2021, when initial validation was conducted and a "Final Draft" submitted to the MOH.

SECTION 2: POLICY & ORGANIZATIONAL ENVIRONMENT

Socio-economic and political context

Rwanda has a population of over 12.6 million in habitants with most of the population being young and rural. The HSSP4 is being implemented in the context of a very youthful population in the country with persons aged 15-35 and children aged 0-14 accounting for 38% and 40% of the population respectively. It's also at a time when projection is showing significantly improvement in life expectancy at 69.1 years currently. The Human development index is pegged at 0.543, which though low, has been growing over the last 10 years. The poverty rate stands at 38.2 % and the extreme poverty rate was 16% in 2017 with significant variation by geographic locations, particularly with high concentration in rural areas.[1]

Health Sector Structure and functions:

The health sector has a pyramidal structure with the Ministry of Health as policy making entity at the peak. The Ministry functions through implementation agencies, which are primarily the Rwanda Biomedical Centre (RBC), and complementary agencies of the Rwanda Food and Drug Administration (RFDA); Human Resources for Health Secretariat (HRHS); and Rwanda Medical Supplies Limited (RMS).

The sector is also well integrated with a number of other government entities including the Military/Security Services Health System, The Rwanda Social Security Board (RSSB) which runs the Community Based Health Insurance scheme (CBHI) as well as the Public Servants Insurance scheme, and there is also good integration with an expanding private sector including a network of Private medical facilities and pharmacies etc.

The Ministry of Health is part of the Social Services Cluster of Ministries that provides a policy coordinating forum for social well-being at the National level.

The country's decentralization policy gives significant responsibility for health operations to District local government and District Health Management Teams (DHMTs) working under the office of the Vice-Mayor for Social Affairs. Provincial and Referral Hospitals have been established to create access to specialized care outside the capital Kigali and a structured referral system is in place.

SECTION 3: MTR PROCESS AND METHODOLOGY

The Mid-Term Review was led by the Head of Department for Planning, Health Financing and Monitoring and Evaluation in the Ministry of Health, coordinating 3 independent consultants, working with several Technical Working groups comprising of staff from the Ministry of Health and its agencies, External Development Partners in health, and various implementing partners and stakeholders. A list of team members involved with the MTR can be found in Annex 3.

[1] The Fifth Integrated Household Living Conditions Survey: EICV5, Poverty Profile Report 2016/17,INational Institute of Statistics of Rwanda (NISR) http://www.statistics.gov.rw/publication/eicv-5-rwanda-poverty-profile-report-201617

A summary of the approach used is summarised below

The MTR Work Streams: A **three-stream** integrated approach was employed as follows

- **Stream 1**: Statistical Analysis review performed with data quality analysis to assess quantitative performance on inputs and outputs, outcomes and impact towards the HSSP targets. Stream One's analyses was used as a basis for assessments by Stream 2 and 3 using key Informant sources to assess qualitative aspects of the results.
- **Stream 2:** Assessed the status of implementation of planned activities and resources applied to HSSP using mixed qualitative and quantitative methods. These covered (i) financing of the HSSP, and (ii) assessment of interventions implemented. This was done through documents reviews, an interventions analyses tool and interviews with key informants with validation by the TWGs.
- **Stream 3:** This mostly qualitative approach assessed the context and operational environment and its influences to explain the observed performance on HSSP4 indicators using *Key informant* interviews, document reviews and Focus Group Discussions. A SWOT analysis was performed on the sector.

Caveats, Risks, Assumptions of the MTR are as follows:

1. Data availability for all the HSSP Indicators
2. Key Informants would be available and forthcoming
3. The Independence and quality MTR process would be assured
4. The MTR remains largely at strategic level avoiding fungibility into detailed program specific assessments
5. The timeline of events and proposed milestones would occur as expected.
6. Planned complementary studies/surveys shall be available to cover key gaps
7. Funding is available for conducting MTR activities as budgeted

MTR Workplan/Timeline Summary

Phase 1. Inception Period (August 15th - 30th,2021)

- Structure of MTR and concept of process development
- Formation of TWGs and consultations on process
- Review of methods to consider COVID-19 restrictions
- Desk review of documents

Phase 2. Review & Data Collection phase (to 19th October 2021)

- Initiation of Streams 1 &2 data collection, processing and statistical analyses
- Synthesis of performance data
  (The 3 streams of work are outlined below)

Phase 3: Consolidation, Analyses, Reporting and Validations (10th – 28th October 2021)

- Stream 1 Statistical performance on key Indicators
- Stream 2 Analyses and synthesis report finalization and validations

- Stream 3 interviews, reviews and assessments

Phase 4: Report production, finalization, validation & dissemination (30th November 2021)

- Stream 3, Report conclusion
- Draft MTR report and review/validation meetings
- Finalization of MTR report and disseminating presentations

Methodology: Computation of "actual performance" indices

The calculation of the "actual performance" index not only compares the current result for each indicator to the expected target set in the HSSP IV for 2021, but also measures the progress made from the baseline (2016-17) to the current performance. The formula to be used to generate this "actual performance" index is the following:

$$\frac{\text{Achievement (Tn)} - \text{Baseline (To)}}{\text{Target (Tp)} - \text{Baseline (To)}}$$

Methodology for calculating the score card

For the computation of score cards, we partitioned the value space into three intervals and assigned weights as follows:

- a red colour below 0% (achievement below baseline value) and a weight of 1,
- colour orange and a weight of 2 for the range between 0% and 99% (achievement above baseline but below target value)'
- colour green and a weight of 3 for the indicators that achieved above 99%, reaching or surpassing their set targets.

However, these computations assume that the targets were prudently set. This, it should be noted, would be spurious if the targets where not set objectively i.e. overly ambitious or when they are modest targets.

Table 1:The color codes and their respective weights in the score card

Score	Below 0 %	>0 - 99%	>99%
Colour			
Weight, w_i	1	2	3

Methodology for computation of the index for sub-domains

The weighted index approach is aimed at normalizing the values within a range between 0 and 100, irrespective of the initial units of measurement, that is, whether they were initially numbers, rates, percentages, or ratios. Let the total number of indicators be N, and are divided into k domains each

containing n_i indicators where i, i = 1,2,..., k, is the number of indicators in the i-th domain. Then, the index for the i-th domain was calculated as follows:

$$I_i = \frac{\sum_{j=1}^{n_i} w_{ij}}{n_i * \max(w_i)} = \frac{\sum_{j=1}^{n_i} w_{ij}}{3n_i}$$

And the overall index is given by

$$I = \frac{\sum_{i=1}^{k}\sum_{j=1}^{n_i} w_{ij}}{3\sum_{i=1}^{k} n_i} = \frac{\sum_{i=1}^{k}\sum_{j=1}^{n_i} w_{ij}}{3N}$$

SECTION 4: KEY FINDINGS AND DISCUSSIONS

This section summarizes and discusses the finding from the three streams of work constituting the mid-term review – i.e., Streams one, two and three. It starts with a general SWOT analysis arising from document reviews and qualitative interviews conducted by the MTR team as well as issues raised by various key informants. The section makes an effort to respond to each of the 4 objectives of the MTR combining the first two under the section on *"Achievement of targets/Implementation of activities"*, and addressing the rest within the sections of *"The Context: Influences of Operational Environment"*; *"Resourcing HSSP4: Financing Analyses"*, and *"The Monitoring and Evaluation System for HSSP4"*.

Sub-sections further cover discussions on the impact of COVID1919 on HSSP4, and the effects of Rwanda's health sector governance systems on implementation of HSSP4 objectives.

Summary of Strength, Weaknesses, Opportunities and Threats (SWOT)

Figure 2 below summarizes a SWOT analysis performed based on feedback from key informants, group interviews and focus group discussions. These were further processed by the MTR teams of all three streams of work into the table below.

Rwanda's health sector has fundamental strengths related to a strong national governance and leadership system that prioritizes the health sector in development planning, and promotes strong accountability for results, with significant investments to establish an effective PHC system, and good coordination and management mechanisms at all levels. This has led to very high coverage of priority interventions. A key weakness according to informants is gaining value from the high coverage through better quality of care, effective services management capacity, financial viability of non-communicable diseases burdens and a significant challenge in human resources availability, distribution, retention and skills.

Despite the high coverage, the system has major opportunities to consolidate its gains and address its weaknesses, including its embrace of digital health technology systems; its potential to become a major health player in the EAC region and beyond, and expanding its service industry potential to

include medical tourism and manufacturing of medical commodities and equipment. The larger sub-regional markets and economies, and the level of external financing of health, the changing demographics and epidemiology towards chronic and non-communicable diseases are recognized threats to the very positive trajectory of health development in the country.

Table 2: Overall SWOT analysis

Strengths	**Weaknesses**

- Leadership, Governance systems
  o Laws, regulations and policy frameworks;
  o Political commitment to sector - budget allocation/Abuja Targets
  o Accountability & performance monitoring
  o Decentralization and Intersectoral coordination at District level
- Good Coverage of priority programs, Infrastructure expansion & improved geographical access
  o Accreditation system & quality improvement
  o Financing/CBHI coverage
- PHC system, Community awareness /*CHWs
- ICT Infrastructure and utility
- Structured Public Private Partnership arrangements
- COVID Response experiences
	- Quality of care issues: Delays in service delivery, insufficient staff capacity, non-compliance with standards, Access to specialized services (tertiary care)
	- NCD program still need data improvement and establishment of additional data systems
	- Management capacity at Local levels
	- HRH Issues: numbers, distribution, turnover, Norms etc.
	- Financial viability of Health posts model
	- RMS/Supply Logistics challenges/Waivers
	- Infrastructure & Equipment standardization and maintenance
	- Categorization of Facilities (scope issues)
	- Tariff standardization (eg private health capacity)
	- Vulnerable groups – Mental Health, Disabled, Remote area residents
	- Traditional Medicine regulation and impact (new law not yet approved)

Opportunities	**Threats**

- EAC Integration – markets, and harmonization
- ACFTA (Africa Free Trade Area)
- COVID19 * investments
- Expanding Inter-sector impact on NCD
- Private Sector – in Manufacturing etc
- Medical Tourism and tertiary care quality
- Local Manufacturing of products and commodities
- ICT potential & Innovations
	• Practice & service Scope & norms restrictions
	• Regional integration & harmonization issues (Preparedness and response to Covid-19 pandemic)
	• Sustainability issues;
	  • Infrastructure, CBHI/Financing
	  • Long term Capacity
	  • Domestic vs external finance
	  • CHW system
	• NCDs financing and equity;
	• Staffing and expertise; brain drain
	• Logistics & Supplies systems capacity
	o Demography; Urbanization risks etc
	o New Pandemics and health security threats
	o Socio-cultural and traditional healer roles in resistance to some services

Progress on Achievement of HSSP4 Objectives

Achievement of targets/Implementation of activities

Domain	Performance Index
Impact indicators	75
Pregnancy, early life and children	94.44
Infectious Diseases	88.89
Non-Communicable Diseases (NCDs) & Injuries	73.33
Health promotion and prevention	83.33
Health security	100
Quality assurance and improvement programs	62.96
Outputs index	**85.07**
Health Workforce	77.78
Service Delivery including infrastructure	83.33
Health Products, Medicines and Commodities	33.33
Leadership and Governance	57.14
Health Information systems and research	75.00
Health Financing	66.67
Inputs index	**62.87**
Overall performance	**73.82**

IMPACT INDICATORS

Indicator	Baseline (2015)	Target 2021	Target 2024	Current result (2020)	Progress in actual performance towards targets	Performance index	Source of data
Maternal mortality rate	210	168	126	203	17%	73%	Dhs
Neo-natal mortality rate	20	18	15.2	19	50%		Dhs
Under five mortality rate	50	48	35	45			Dhs
Infant mortality rate	32	28	22.5	33			Dhs

The country's performance by the end of 2020, while excellent, had shown varied performance for specific age cohorts, particularly for adult, infant and child mortality as shown by the mortality trends from RDHS 2019-20. The 2019-20 RDHS recorded an under 5 mortality rate of 45 deaths /1000 live births, a decline from a rate of 50/1000 recorded in 2014/15. On the other hand, the **Infant Mortality Rate remained largely unchanged** in the HSSP4 implementation period, at 33/1000 live births from 32/1000 live births recorded in 2014/15. **This was attributed to the unchanging neonatal mortality rate component** recorded at 19/1000 live births in 2019/20 from 20/1000 live births in 2014/15.

For Maternal mortality, there has been marginal decline over the last 3 years, but not enough to achieve the MTR target. It is however worth noting that the MMR result of 203 falls within the 95% confidence (125-281). After a long period of spectacular decline in key impact indicators, the overall levelling off observed in the latest data calls for in-depth changes in the planning of national strategies for improvement of health status of the population. **Careful analysis of disaggregated data will help to identify the root causes of persisting high levels of mortality and appropriate strategies to address these causes.**

ESSENTIAL SERVICES ACROSS THE LIFE COURSE
Performance Indicators

1.Pregnancy, early life and children	Baseline 2016-17	Target 2021	Target 2024	Current result 2020-21	Progress in actual performance towards targets	Performance Index	Source of data
Maternal & Neonatal and Child Health (MNCH)							
Percentage of births attended by skilled health professionals	91	>95	>95	94	75%		DHS
ANC coverage (4 standards visits)	44	47	51	47			DHS
% New-borns with at least one PNC visit within the first two days of birth	19	25	35	70			DHS
Teenage pregnancy rate	7.3	<7	<7	5			DHS
Adolescent birth rate (aged 10-14 years; aged 15-19 years) per 1,000 women in that age group	5.5	<5	<5	0 (<15) 3.2 (15-19)			DHS
Proportion of children with diarrhoea receiving oral rehydration solution (ORS)	12	>10	>10	34.1			DHS
Modern contraceptive prevalence rate (mCPR)	48	54.6	60	58.4			DHS
Unmet need for family planning	19	17	15	13.6			DHS
EPI indicators							
% Children 12-23 months fully immunized	93	>93	>93	96		50	DHS
% Exclusive breastfeeding <6 months	87	>90	>90	80.9			DHS
Nutrition indicators							
Prevalence of Malnutrition (stunting) among children under 5 years	38	29.9	19	33	62%	62	DHS

The performance for Pregnancy, early life and children programmatic area is excellent, the only indicators that show **less than good performance are in the area of nutrition, with exclusive breastfeeding and prevalence of stunting showing encouraging progress, but not enough to reach the ambitious set targets.** Further analyses are needed to understand the bottlenecks hindering the targeted improvement of children's nutritional status and identify the innovative strategies that should be adopted to reach the set targets.

Implementation of strategies

Program	Status of Implementation	Performance				
		Not started	Started but stalled	On good progress	Completed	No information
MCCH (Pregnancy; early life and children)	All 31 priority interventions and innovations on track			31(100%)		
Nutrition	Implementation of all planned priorities is on track	0	0	11(100%)	0	
Community health services	Progress on implementation of planned activities on track			8(100%)		
Adolescent, sexual and Reproductive Health (ASRH) and GBV	Implementation of all planned activities on track			10(100%)		
Healthy aging and palliative care	2 of the 8 (25%) priority areas had not been started: Progress on 3 out of 8 (37.5%) was started but stalled: While implementation of the rest of the priorities (37.5%) was on good track	2 (25%)	3 (37.5%)	3 (37.5%)		

Implementation of interventions for the MCCH Division strategies shows uniform good progress, all planned activities are on track for MCH, Nutrition, Community Health and ASRH. This outstanding implementation is in line with the overall performance in this area of services across the life course, except for those **targeting the elderly and palliative care, where implementation has to be strengthened.**

COVERAGE OF ESSENTIAL HEALTH INTERVENTIONS
Infectious Diseases Performance Indicators

2. Infectious Diseases	Baseline 2016-17	Target 2021	Target 2024	Current result 2020-21	Progress in actual performance towards targets	Performance Index	Source of data
HIV and Hepatitis B							
HIV prevalence among people aged 15-49 years	3	3	<3	3		240	RPHIA
Number of new HIV infections per 1,000 uninfected population, by sex, age and key population	2.7	2.3	2	0.8			DHIS2
Proportion of persons diagnosed with HIV infection receiving sustained ART	82.7	85	90	92.5			DHIS2
HIV Incidence/1,000 population	2.7	2.5	2	0.8			DHIS 2
Percentage of infants born to HIV + mothers free from HIV by 18 months	95	>95	>95	98.3			DHIS2
Hepatitis B incidence per 100,00 population	NA	<3	<2	3			
TB							
TB Incidence per 100,000	58	45	31.8	58	0%	-121	WHO Global TB report
TB treatment coverage rate	80.4	86	88	73.5			Annual Statistical booklet
TB treatment success rate (TSR) for all forms of TB cases (DS & DR TB cases)	85	87	>87	88.2			Annual Statistical booklet
Malaria and other parasitic diseases							
Proportion of households with at least one LLIN	81	84	85	66		-77	DHS 2019/20
Malaria incidence per 1000	308	200	122	114			Malaria and OPD Annual report 2020-2021

Malaria proportional mortality rate	5.7	4.5	3	0.8			Malaria and OPD Annual report 2020-2021
Proportion of children under five years old who slept under a LLIN the previous night	80	84	85	56			DHS 2019/20
Proportion of targeted population who received MDA	96	97	98	95			Malaria program report
Prevalence of soil transmitted helminthiasis (STH)	45.2	35	<20	48			Malaria program report
Prevalence of schistosomiasis(SCH)	1.9	1	0.5	1			Malaria program report
Neglected Tropical Diseases (NTD)							
Proportion of newly diagnosed leprosy with grade 2 disability	19	13	10	21		-33	Annual Statistical booklet

The performance of Infectious diseases programs is generally very good, particularly for HIV/AIDS, where all indicators are on or above targets. TB and Malaria programs are also performing well, but **for TB, there is a decline in the treatment coverage rate**, which is observed over the past few years, and **for Malaria, a decrease in availability and use of LLINs, strategies need to be revised in order to reach targets** for these indicators.

Implementation of strategies

Infectious diseases						
Program	Status of Implementation	Performance				
		Not started	Started but stalled	On good progress	Completed	No information
HIV/AIDs/STIs and viral hepatitis	Great progress was made in this result area with 3 out of 11 priority areas (27.3%) having been implemented to completion in the period under review while the implementation of the rest of the priorities (72.7% is on track).			8 (72.7%)	3 (27,3%)	
TB, other respiratory communicable diseases, and leprosy	Twenty five percent (2 out of 8) interventions were completed in the period under review while the rest are on good track			6	2	
Malaria and other parasitic diseases	85.6% (6 out of 7) of planned interventions are on course. The innovation of engaging the private sector in local production of vector control commodities and materials not achieved e.g., nets /insecticides for IRS	1		6		
Neglected Tropical Diseases						
Neglected Tropical diseases	Great progress made- one intervention out of 5 was complemented during the period under review; Implementation of the other 4 is on track			4(80%)		

Implementation of interventions for Infectious diseases is generally on track, corresponding to the good performance described above. The only intervention lagging behind is for the local production of insecticides by private sector partners for malaria prevention, not yet started.

Non-Communicable Diseases (NCDs) & Injuries - Performance Indicators

3. Non-Communicable Diseases (NCDs) & Injuries	Baseline 2016-17	Target 2021	Target 2024	Current result 2020-21	Progress in actual performance towards targets	Performance Index	Source of data
NCDs							
Percentage of NCD combined high risk factors in the population aged between 15-64 years	16.4	15	12	5.4			STEPs survey (2022)
Percentage of reduction of premature mortality (under 40 years old) due to NCDs (Cancer, HTA and diabetes)	NA	50	80	NA			No data
Percentage of reduction of premature mortality (under 40 years old) due to NCDs due to road traffic accidents (RTA) as the leading cause in non-intentional injuries	NA	50	80	NA			No data
Teeth and gum diseases morbidity rate at health facility level	4%	2.07%	1.84%	4.5%		47	Annual Sector Performance Report
Eye diseases problem morbidity rate at health facility level	3	<2	<2	2.5	50%		Annual Sector Performance Report
Cataract Surgical rate (number of cataract surgeries per million)	400	700	1,000	504.8	35%		Annual Sector Performance Report
Age-standardized prevalence of current tobacco use among persons aged 15 years and older (outcome)	12.9	9.03	6.32	5.7%			STEPs survey (2022)
Age-standardized prevalence of overweight and obesity in persons aged 18+ years	17.1%	<17.1%	<17	18.6%			STEPs survey (2022)
Mental Health							
Proportion of new cases treated in health facilities for mental disorders	0.1	0.2	0.6	0.4		300	Annual Statistical booklet
Health promotion and prevention							
Percentage of health centres without water	16	0	0	1	94%	134.5	Indicate data source

% of Public Health facilities (RH, PH, DH and HC) with effective waste management systems according to MOH/WHO standards	76	84	100	90			Indicate data source
4. HEALTH SECURITY							
Proportion of outbreaks with a case fatality rate below recommended threshold	80	100	100	100		100	Annual Sector Performance Report
International Health Regulations (IHR) Core capacity index	76	46	100	74			SPAR, 2020

NCDs is a program area where the data availability is still insufficient. Several indicators were measured through the STEPS study (2022), but for several NCD indicators, there are issues with how they were formulated and defined. **The program requires fuller implementation of its M&E framework** (based on the STEPS Survey, CRVS system for mortality data etc) to address a cluster of diseases that are quickly becoming the main cause of mortality and morbidity in the country.
Mental Health, Health Promotion and Health security show very good performance, according to their respective indicators.

Implementation of strategies

Non-Communicable conditions, injures and disabilities						
		Performance				
Program	Status of Implementation	Not started	Started but stalled	On good progress	Completed	No information
NCDs; injuries, disabilities	2 of the 17 planned interventions not implemented 2 stalled while 13 are on track	2 (12%)	2 (12%)	13 (76%)		
Mental Health	Implementation of priority areas on track			11(100%)		
Healthy aging and palliative care		2 (25%)	3 (37.5%)	3 (37.5%)		

Health Promotion; prevention & Environmental Health - Performance Indicators

Health Promotion; prevention & Environmental Health	status	not started	stalled	on track	complete	No data/ report
Health Promotion	91% (10 out of 11) of planned interventions are on good progress while there was no data /no information on status of one intervention (9%)			**10 (91%)**		**1(9%)**
Environmental Health	Implementation of all the 14 planned interventions was on good track			**14(100%)**		
Health Security; Epidemic Surveillance and Response	82% (18 out of 22) of planned interventions are on course. 4 (18%) Were not started	**4 (18%)**		**18 (82%)**		

The assessment of implementation of NCDs detection and treatment interventions highlighted the **insufficient financial resources for awareness raising, early detection and establishment of specialized treatment centers of NCDs.** The CBHI scheme does not give access to certain medicines (e.g., for chemotherapy, ...) and other NCD treatment specialized services.

Healthy aging and palliative care have several interventions that are either not started or stalled. This is a warning sign that more attention has to be given to this increasingly important programmatic area.

The two interventions that are not started in the **Health Security program** are linked to **risk assessment and risk management strategies**, the reason for the delay being the emergency interventions for response to the COVID-19 pandemic. These interventions remain crucial for **strengthening of the national preparedness for possible future outbreaks** and should be implemented as soon as the current crisis is under control.

HEALTH SYSTEMS: INPUTS & ACTIONS
Performance Indicators

5. Quality assurance and improvement programs	Baseline 2016-17	Target 2021	Target 2024	Current result 2020-21	Progress in actual performance towards targets	Performance Index	Source of data
% Malpractice cases assessed and addressed	NA	>95%	>95%	85%	89.5%		RGB Report, 2020-21
Percentage of the population satisfied with health services	74.9	>80	>80	73.7		133	RGB Citizen Report Card (2020-21)
Independent accreditation body in place and functional	0	1	1	1			RMDC report
Number of National referral and teaching Hospitals accredited	1	3	5	1			Hospital annual progressive assessment report
Number of newly upgraded referral hospitals that have achieved level three of the national accreditation process	0	2	3	0			Hospital annual progressive assessment report
Number of Provincial Hospitals that have achieved level three of the national accreditation process	0	2	4	0			Hospital annual progressive assessment report
Number of DH that have achieved level two of the	0	15%	50%	14%	93%		Hospital annual progressive

national accreditation process							assessment report
Number of laboratories reaching 5-star (Five Star) accreditation	1	2	5	3			NRL report
% Private HFs (polyclinics and hospitals) enrolled and pursuing level 1 of accreditation process	0	10%	>95%	74% (26/35)			Accreditation baseline assessment report
6. Health Systems Inputs and Actions	**Baseline 2016-17**	**Target 2021**	**Target 2024**	**Current result 2020-21**	**Progress in actual performance towards targets**	**Performance Index**	**Source of data**
Health Workforce							
Doctor/pop ratio (GP and Specialists as well)	1/10,055	1/9,000	1/7,000	1/8,247		139.72	MOH SPR 2019/20
Nurse/pop ratio	1/1,094	1/900	1/800	1/1,198			MOH SPR 2019/20
Midwife/pop ratio (women aged from 15-49)	1/4,064	1/3,500	1/2,500	1/2,340			MOH SPR 2019/20
Pharmacist /pop ratio	1/16,871	1/16,000	1/15,500	1/16,848	2.6%		MOH SPR 2019/20
Lab Technicians /pop ratio	1/10,500	1/9,000	1/7,500	1/6,401			MOH SPR 2019/20
Doctor attrition rate	NA	<10%	<5%	NA			No data
Service Delivery including infrastructure							
Number of sectors without a health centre	17	8	0	11	67%	240	District Consultation forum report
Number of health posts constructed/rehabilitated in a cell previously without any other health post	473	593	623	1,091			National Leadership retreat report
Number of super specialised health facilities (to reduce the referrals abroad and promote medical tourism)	4	6	8	NA			No data

Surgical procedures per 100,000 population	971	1,500	3,000	1,294	61%		MOH SPR/ 2019/20
Peri-operative mortality rate (due to surgical procedure)	3.1	2.5	2	0.51			MOH SPR/ 2019/20
Ratio ground ambulance / population	1/50,505	1/50,000	<1/50,000	1/45,327			MOH SPR/ 2019/20
Average time to walk to a nearby HF (in minutes)	56	50	45	49.9			EICV 2016/2017
Number of hospitals with functional basic maintenance system (trained manpower, available tools and space for operations)	8	42	50	78			MOH SPR/ 2019/20
Number of referral hospitals with functional telemedicine facilities	1	3	4	3			Clinical services Department Annual Report (2020)
Percentage of health centres without electricity (not connected to a nearby grid)	17.2	0	0	0.5	97%		Clinical services Department Annual Report (2020)
Percentage of Health centres with functional internet and local area network connectivity	36.5	70	100	95			Clinical services Department Annual Report (2020)
National Service availability readiness score	NA	60	80	NA			

Health Products, Medicines and Commodities	**Baseline 2016-17**	**Target 2021**	**Target 2024**	**Current result 2020-21**	**Progress in actual performance towards targets**	**Performance Index**	**Source of data**

% of health products and health technologies available at the Central Medical Warehouse	55	80	90	91		66.67	RMS Annual Report (2020)
% HFs with < 5% of medical products stock-outs	87	>95	>95	NA			RMS Annual Report (2020)
Leadership and Governance							
Citizen level satisfaction rate with services	77	80	80	73.7		-12	RGB Report card
Existing of an umbrella for all health professional regulatory bodies	0	1	1	0			
Health Information systems and research							
% causes of deaths are reported according to ICD10	NA	100	100	50.44	50.44%	58.83	Rwanda Vital Statistics Report, 2020
% births registered according to the CRVS	NA	100	100	85.86	85.86%		
% of public health facilities (DH,PH and RH) using EMR full package system	4	43	72%	52%			MOH IT report (2021)
% private HF (dispensaries, clinics, polyclinics and hospitals) regularly reporting through national data collection systems (DHIS-2 and e-IDSR)	54	100	100	95	95%		Health Sector performance Report
Health care Financing							
Proportion of population covered by health insurance	90	>95	>95	85.6	90.11%	-40	CBHI financial sustainability plan. - 2021
% Household expenditure on health as a share of total household income	NA	<25	<10	6.3			NISR study based on EICV 3,4,5

The performance of the health systems inputs and actions wasmodest, **several indicators are difficult to monitor** because they are either not well defined or the health information system is not collecting the data regularly.

For the **Quality improvement program**, no hospital enrolled in the national Accreditation program has yet reached level three, but there is a strong determination by the health sector leadership to mobilize **health facilities to improve their compliance to quality standards** and this is recognized as a key priority for quality improvement of services to the population.

The health information system is undergoing major changes, with the strengthening of the **reporting system for causes of deaths** at health facilities and at community level, and the **digitalization of the medical records** in hospitals and health centers, **and interoperability** of this system **with the existing health data bases**. These important projects should improve the performance of the national HMIS in the coming years.

Regarding the **two Health financing indicators** included in the M&E framework, the following observations can be made:

- **Health Insurance coverage**: According to RDHS 2019-2020, 86% of households in Rwanda have at least one member with health insurance coverage. The **Community based health insurance (CBHI)** is the most popular form of insurance with 77% of women and 78% of men having CBHI respectively according to RDHS 2019-20. The CBHI enrollment data from RSSB reports show that CBHI coverage has increased from 72% in FY 2018/19 to 79% for FY 2019/20 and 85% for FY 2020/21. More specifically for FY 2020/21, the **coverage stands at 85.9%** as of June as shown in the figure below.

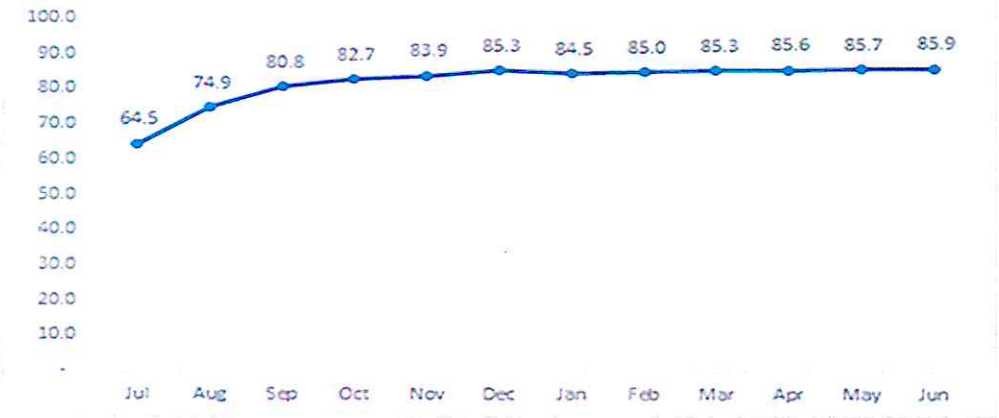

Figure 1: CBHI enrolment data FY 2020-21(Source: RSSB)

- **Out of Pocket expenditures**:

  The last EICV population survey (Integrated Household Living Conditions survey) measuring Out of Pocket (OOP) expenditures as a part of total household expenditures was conducted in 2016-17. As a proxy for actual measurement of household expenditures, we took the results from the last three EICV surveys (2010-11, 2013-14 and 2016-17) and extrapolated the

results from these studies to estimate the OOP expenditures against total household income/expenditures in 2019-20.

OOP health spending accounted for about 3.33%, 5.13% and 4.83% of total household income (or total household consumption) in 2010/11, 2013/14 and 2016/17 respectively.

Using the Linear forecast formula to predict future values from past values, the estimated OOP as a share of total HH income is 6.55%. The Compound Annual Growth Rate (CAGR) for the data on OOP as a share of total HH income for the past 3 EICVs is 0.13 %. This was added to the previous EICV 2016/2017 and the estimated value is 4.96%.

Data from the Health Resources Tracking Tool (HRTT) can be analyzed to estimate the proportion of Total Health Expenditures coming from OOP. For the last three years where data is available (FY 2017-18, 2018-19 and 2019-20) there is a decreasing trend of this proportion, with an estimate in the last available year (2019-20) of 4.5% of THE coming from OOP expenditures. See the following figure:

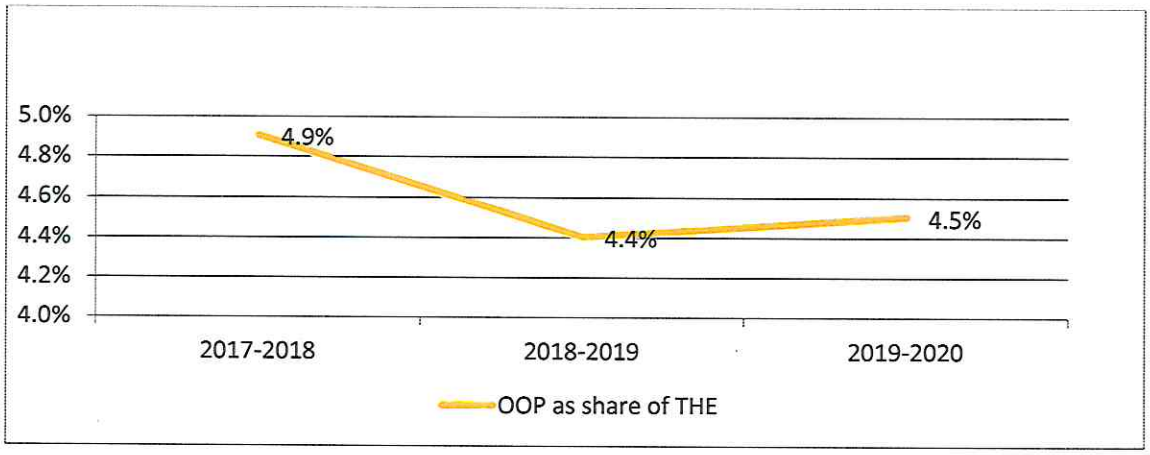

Figure 2: Trends in Out of pocket expenditure as a share of THE (2017-18 to 2019-20) (Source: HRTT data, 2017/18, 2018/19, and 2019/20

The limitation of this methodology is obviously that it does not take into account the specificities of the current situation (impact of the Covid-19 pandemic on OOP health expenditures). We adopted this method because of the absence of more recent studies, but the **recommendation to have household surveys as source of data** to measure this indicator remains pertinent.

Implementation of strategies

Program	Status of Implementation	Performance				
		Not started	Started but stalled	On good progress	Completed	No information

Service delivery organisation	Two interventions out of 16 (12.5%) were completed during the period under review; Implementation of the other 11 (69%) is on track while there was no data /information on status of 2 (12.5%) Interventions and implementation of I (6%) intervention did not start	1(6%)		**12(69 %)**	**2 (12.5 %)**	**2(12 .5%)**
Service delivery Quality Improvement	75 % (6 out of 8) of planned interventions are on course while there was no data on status on 2 (25%) of the interventions			6(75%)		2(25 %)
Health workforce	Progress on implementation is on track			**5(100 %)**		
Health infrastructure	9 out of 14 priorities-on track: 1 not started; I stalled; no adequate information on progress for others	1 (7.1%)	1 (7.1 %)	9 (64.3%)		3 (21.4 %)
Health commodities	Implementation of all planned activities is on track			100%		
Health information system	Implementation of all (100%) the priority areas is on track. This includes the planned innovations			100%		
Health Research	Good progress made. 5 out of 9(56%) interventions fully implemented and 4(44%) are on good course			44%	56%	
Health financing	9 out of 10 (90%) priority areas are on track, one not started	1 (10%)		9 (90%)		
Leadership and Governance	Excellent performance -50% of the planned interventions completed during the period under review while the rest are on track			50%	50%	

Implementation of interventions for the health systems are generally on track, the only ones that are delayed concern the improvement of the pre-hospitalization and emergency/ambulance system, the development of standards for infrastructure maintenance system and the introduction of Health bonds as an innovative health financing scheme.

These interventions are important for the strengthening of the national health system and should be implemented in the coming years.

Context: Influences of Operational Environment

An important influence on HSSP4 and its implementation is the broad and in-depth stakeholder engagement in its development and design and also a level of continued engagement that was largely

integrated with the strategic and operation plans of the MOH's departments and health sector agencies (RBC, RFDA, RMS, HRHS etc). The feedback from key informants at all levels is that strong awareness and understanding of HSSP4 and its objectives existed.
This awareness fades somewhat further down the decentralization ladder, as District Strategic Plans (derived from HSSP4) become the central focus for stakeholder involvement and guidance. All external Technical and financial partners interviewed were fully involved.

Given the partnership and involvement in its development, our interviews indicated broad **alignment and harmonization** of sub-sector and programs strategies with HSSP4. Development partners interviewed were also well aligned and harmonized in terms of the objectives and content areas though in some cases, differences existed in fiscal years used but this was not seen to be a major problem. There are exceptions in respect of new units created after the launch of the HSSP4 which are not therefore aligned as would be expected (e.g. Medical Technology Division, in December 2020).
All annual operational plans have followed HSSP4 guidance even if timing of activities funding did not always align fully and were at times disrupted by the COVID-19 pandemic.

A major element for successful realization of HSSP4 objectives was the integral roles expected of other **sectors and inter-sectoral linkages** appeared strong, and this was especially key at district and community levels. The social sector cluster of ministries (MIGEPROF, MINALOC, MINECOFIN, MINAGRI, MININFRA, MINEDUC) offered a platform for strong policy collaboration and coordination, with various "inter-sectoral working groups" established to coordinate implementation efforts. Several of the most challenging indicators (Nutrition, Family Planning, ANC, etc.) need more intersectoral collaboration in order to reach the ambitious HSSP4 targets. Further efforts have to take place for continuing strong performance based on intersectoral coordination.

All health sectors function through a set of inputs that provide a functioning system and in Rwanda's context, much effort has been made at investing in various **health systems "building blocks"** which have generally functioned well though with a number of challenges and issues that may need further attention.

An essential health system input is the **workforce** which is also potent in creating an environment for successful implementation of policies and interventions. Rwanda has made much effort to expand a workforce decimated during the 1994 genocide with significant expansion of numbers of key cadres (general as well as specialized staff) before and during the HSSP4 implementation period. Workload related staffing norms were recently established for each facility and is gradually being implemented from the previous situation of fixed norms for each category of facility, without much flexibility – a continuing feedback from the interviews, along with a demand for more staff in many locations though not all. There is high demand for services in many places, especially in urban settings and high workload complaints were frequently made. The private sector however, seems to be quite able to attract staff, which perhaps contributes to a high turnover seen in public sector facilities.

Workforce distribution remains a factor for service interventions and the more rural and remote areas often suffer from low staffing and poor retention with housing and schooling for children being cited as factors, with some locations actually facilitating/subsidizing transport back and forth from urban areas to work.

A well-structured and regulated **referral system** exists, requiring clearance from one level to the next. This is further facilitated by the delegation of specialist services to district level. However, there were some complaints on the quality of referrals (without good information, or even person not really needed referral) that will need to be resolved. This also linked to workload issues and to the issues of scopes of practice. The team is aware of efforts to credential specific services at various levels to allow scopes of practice to be changed legally.

A doubling in **primary care infrastructure** (especially health posts) mostly during the HSSP period has seen much improved physical access to basic services. This has included increased access to much needed district, provincial and referral institutions and specialist services to reduce the high demand for services on Kigali. There has also been significant investment in equipment at all levels including health posts level, with some effort to provide equipment and diagnostics for the decentralized specialist referral services. Most hospitals appear to have functional asset management systems.

Some of the existing infrastructure (e.g. Gitwe, Rwamagana Hospitals) are said to be quite old and in need of redesign and rehabilitation. A number of the designated specialist and referral centres may also need additional infrastructure and equipment to become effective. Another issue coming from interviews was that of maintenance capacity and keeping equipment in use and having spares available. This is also linked to previously getting equipment from various sources and therefore with difficulty to maintain and source spares for. About every level has also expressed the need for additional infrastructure and equipment to enhance their utility to the catchment area and expand scopes of services offered. Others indicated simple shortages of some logistics such as beds.

Financing the health system is dealt with in a subsequent section, but the summary of issues influencing the operational context include the positive inclusion of NCD medications in the I list of essential medicines to be reimbursable by CBHI, the expanding private sector roles at new health posts creating good access in a public private partnership, and the management of claims to CBHI in particular which creates some delays in receiving reimbursements and rejection of claims in certain instances that have created a cycle of debt as the service and medicines have already been offered. Interviews indicate that despite reductions in out-of-pocket payments in health, a fairly significant amount occurs (due to having to procure unavailable medicines from private pharmacies) perhaps more commonly in CBHI beneficiaries which may not be easily captured and raising issues around equity and expenditure that may impoverish. Some high end NCD medicines e.g. for cancer treatment, also remain uncovered by CBHI. There was also some feedback that Ubudehe category 2 (not exempted from CBHI premiums) were at an income level where paying premiums etc. may affect them as negatively as Ubudehe 1 clients.

The **logistics, commodities and supplies** system drives availability of services and effective utilization and the recently established Rwanda Medical Supplies (RMS) company system is beginning to become effective around the country, taking over the former district pharmacies. It is clearly an evolving situation as branch managers begin to take charge and hospital pharmacists are now deployed widely. Staffing facilities with medicines management staff with capacity for good estimation and care of stores will help under supervision of pharmacists. Below hospital level, nurses in rotation, manage the facility pharmacies and supplies.
Continuity of supplies has been a challenge with "non-availability" resulting in delays in obtaining the mandatory waivers to procure from elsewhere, leading to patients sometimes having to buy medicines at their own cost. These may be a result of RMS supply pipeline issues. A mechanism has been set up to manage supply issues with facilities allowed to hold debts to RMS for up to three months while awaiting reimbursement from RSSB/CBHI.

Rwanda has **a strong PHC system** which plays an essential role in the health sector's effectiveness and its approach to Universal Health Coverage (UHC). Our findings are that the PHC system played a key role in the effectiveness of HSSP4 implementation. There are about 60,000 Community Health Workers well distributed throughout the country with well-defined roles and in constant touch with their communities. Their areas of focus are on Maternal and child health, infectious diseases control, CBHI motivation and more recently on expanding NCD awareness and detection provides and essential foundation to the referral chain. The community system is supervised by the catchment Health Centre as one of its key roles, and linked to other district levels and performance assessments. A decision taken recently to review the focus on CHWs towards multi/polyvalent cadreship will mean some change in how the system will function. The increasing span of roles CHWs are required to play with a rather high workload in many areas, continues to test their effectiveness along with report issues of high turnover in some locations. There is also some level of debate on CHW remuneration and whether this will be a good model, affordable and its links to other community development cadres from other sectors. Whatever their roles, they are key to community engagement, awareness creation and acceptance and utilization of needed services and should be sustained.
Community and client voices have been structured into the PHC systems with their representation in health committees and platforms at all levels. We could not explore in detail how effective they have been.

The **Private Sector in Rwanda** is well integrated with the public sector and an important partner represented in various MOH and RBC working groups. They are involved significantly in service delivery at all levels (with a new health post push) and also in health workforce training and development. New roles are being discussed to be played in local manufacture of equipment, medications and vaccines, and in providing hyper-specialist services as part of a move towards encouraging medical Tourism. The collaboration in reporting employment, data on patients seen and medicament sources is well documented though some feedback was received in terms of more data that needed to be part of the health information system to truly illustrate the sub-sector's roles. Again, issues exist of being prescribed limited scopes of services even when they could deliver broader and more specialized services, also the set tariffs chargeable for services to be claimed from

insurance were said to be too low even as other costs increased. Bank loans for expanding or building new facilities come at high interest rates, limiting the incentives to expand the sub-sector further.

In general, the priority programs (*Communicable diseases (HIV, TB), RMNCAH, FP, health promotion, nutrition*) seem to have flourished within this operational context, facilitated by the good community engagement, the multi-sector government approach to health, and the clear guidelines and SOPs that guide operations, along with good monitoring and performance assessment systems and continuing capacity building. NCDs care is evolving and still faces some challenges in comparison with the much better establish infectious diseases programmes. There is also some need expressed to improve adolescent friendly services and enhance the supply of key commodities.

Organization of the system - Governance and leadership

Effective leadership and governance at all levels of the health system as well as across public and private sectors, is one of the key pillars of the HSSP4. This includes oversight, coordination, organization, management, regulation and accountability systems. Good governance is central to the success of any sector it is prioritized in all policies including the current Vision 2050.

Effective governance is evident in HSSP4 as half of planned interventions were completed while the rest are on track. The interventions were geared towards ensuring availability of relevant laws, policies and regulations to guide the health sector; interventions towards strengthening decentralization; and strengthening of vertical and horizontal accountability across the sector. Citizen satisfaction with health service delivery also showed considerable improvement. The percentage of citizens satisfied with health service delivery decreased slightly from 77.9% in 2016 to 73.7 %[2] in 2021 short of the 80% target at HSSP4's mid-point. However, some needs have been identified during the MTR review process and these are highlighted below.

The health sector has legal frameworks which defines the roles and responsibilities regarding central, decentralized health services and community health programs. During the last few years, several strategic documents were developed including Community Health Policy (which is under approval process currently); Ministerial instructions on the recruitment, supervision and work scope of CHWs (which also is under approval process); and a law for establishing a CHW umbrella (which is under development). A new Health Policy is also under development and is almost final. Furthermore, various programs have relevant guiding documents including program specific strategies and operational plans. The MoH has also developed a draft law for establishing the health professions authority and is in consultation with key stakeholders.

The development of policies and strategies largely followed participatory and inclusive approaches although it is difficult to engage all levels equally. For example, for the development of HSSP4 itself, the level of involvement by multiple stakeholders of the health sector was strong especially at the central level (MOH divisions, line ministries), district hospitals as well as technical and financial partners. At the decentralized and operational levels (health centers, etc.), there is some awareness

[2] Rwanda Governance Scorecard 8th Edition 2021.

and greater involvement with the District Health Strategies normally derived from the HSSP. There was some private sector representation but peripheral facilities (health posts) were not directly involved nor deeply aware of the HSSP4.

Good leadership and political commitment to health has been lauded for the successes registered. Furthermore, health policy makers and managers commitment at the various levels of the health system has catalyzed progress in advancing the health agenda with attribution to the functional management structures within the sector. The Ministry has agencies that coordinate the implementation of various priorities such as the HRH secretariat. and the RMS responsible for improving availability of health commodities.

The sector has given emphasis for cross sector collaboration, decentralization and Sector-Wide Approaches (SWAp). Accountability is promoted at all levels, with community engagement and participation as key elements for the critical primary health care activities. The strong collaboration and communication between health sector entities and private sector, NGO's, CSO, development partners and FBOs using the Health Sector Working Group and its Technical Working Groups and coordination between the social cluster ministries have contributed to ensuring vertical and horizontal accountability.

The MoH has a SWAP guideline which is regularly updated in line with HSSP4 and this is currently being reviewed. The aim is to improve alignment in stakeholders' implementation of HSSP4. Once the guideline is issued, all sector stakeholders are trained including health staff from both central and lower levels.

The MOH has effectively decentralized the leadership and governance with clearly defined roles and responsibilities at all levels. The MoH is responsible for oversight, leadership and coordination to ensure that the sector achieves its stated goals and objectives and it provides technical implementation guidance at the various levels. District Health Units (DHUs) in all districts provide administrative support, and coordinate the decentralized health system making sure health facilities deliver the approved healthcare packages. They also manage logistics and supplies and supervise Community Health Workers (CHWs). There is some observation that the capacity of DHUs were limited, sometimes hampering effective coordination and monitoring. The MoH has issued a District Health System Guidelines (2019) and Ministerial instructions on establishment of health committees in health facilities which have since been implemented.

Health facility managers have also been trained on various tools including Integrated Financial Management Information Systems (IFMIS) for finance management and Workload Indicators of Staffing Need (WISN) for HR planning and management. However, our observation is that the new human resource structures were not fully filled.

Private Sector Engagement (PSE) has made strong progresses including the dissemination of private sector market analysis report, the development of PSE Master Guide, and the establishment of a PSE Core Team in the Planning and Health Technical Working Group.

As part of Public Private and Community Partnerships (PPCP), the MoH has co-opted private sector involvement in establishing health posts. A health post guideline is being developed. Health Post Providers have complained about profitability due to restricted service packages (e.g., no lab services beyond RDT for malaria), low tariffs, and a requirement not to run other businesses. This has led to the closure of some health posts or taken back under health centers.

EFFECT OF COVID-19 ON HSSP4 IMPLEMENTATION

The impact of COVID-19 was reviewed through key informant interviews at national level and group interviews utilized especially during the field trips, to try and elicit how respondents felt COVID-19 had impacted their work and the health systems. The responses came from all levels of the system but reflected issues related to managing the outbreak, sustaining regular services continuity, the effect on inputs and systems, the governance response, the influence on resources and logistics and also some feedback on its impact on Primary health Care systems. It is understood that the MOH and other stakeholders had commissioned various reviews on the impact of COVID-19 on the health sector and it is not intended to duplicate those efforts but to reflect in general terms, a summary of the likely positive or negative impact, as well as the innovations applied to sustain or revise HSSP4 implementation. The feedback to the MTR team was that, the ongoing outbreaks of Ebola in neighboring Democratic Republic of Congo (DRC) created a momentum in Rwanda with alert, preparedness and response systems having been put in place before COVID-19 hit the country. This created some significant capacity as a foundation that was built upon during the response to COVID-19.

Effects on priority programs and service delivery continuity

Rwanda was at the mid-point of HSSP4 when COVID19 became a global pandemic which affected many aspects of health as well as all aspects of economic and social life. Respondents indicated that the strict "lockdowns" instituted to control the pandemic were some of the actions that influenced health systems performance and implementation of HSSP4 most: (i) restrictions on movements affected staff being able to get to work initially; (ii) it also restricted clients access to some critical routine services such as obtaining ARVs and attending ANCs, and NCDs clinics (iii) Regular outreach campaigns to communities and supervision and mentorship actions on health centers, health posts and community health workers dropped significantly. Other activities planned by various programs were also disrupted and delayed with the likelihood of HSSP4 targets being affected.

Staff had to be redeployed from their usual functions in order to respond adequately to the pandemic, and this included redeploying staff from whatever source i.e., projects and various special programs to join in the response. Fear of infection by staff and restrictions on movement; isolation of COVID-19 affected personnel, caused some absenteeism among staff. Referrals were also difficult and more costly as transport arrangements were unavailable or required more direct payments.

In general, bigger facilities e.g., provincial hospitals were able to establish isolation rooms and sometimes ICUs and several oxygen plants were installed to support the care of patients. The pandemic response created a situation where most facilities reached their 2-3 year goals on availability of handwashing facilities and practices, within a much shorter timeframe. After an initial difficulty, health workers had some PPEs and sanitizers at their disposal. When vaccines became available, Rwanda had done well to deploy it quickly to health workers and as vaccines became more available the Kigali city hotspot has been largely covered and the MTR team's field visits indicated a nationwide deployment of staff to conduct the vaccinations.

Another area likely to have long term impact was the disruption of nutrition services in communities which may affect the stunting reduction targets of Rwanda. Overall, services have recovered fairly well and the team saw very busy work locations. Coping with COVID-19 disruptions and developing new ways to function with continuity of routine services, was eventually re-established with services almost back to pre-COVID-19 utilization levels during the MTR. All facilities providing services are abiding by the protocols and PPEs are available as well as materials for procuring IPC materials and cleaning agents.

Health Systems Inputs

Human resources: The effects of COVID-19 beyond services delivery impacted on how health systems inputs were affected. COVID-19 enabled a strong embrace of technology that improved on communication and reporting e.g., for COVID-19 tests; admissions; vaccinations status etc. But the COVID-19 pandemic also has aggravated the issue of insufficient human resources as well as the impact on staff infected with COVID-19 which affected their availability.

As indicated earlier, part of the Human Resources impact was due to fear and inability to reach duty stations, but other factors included psychological burnout and the mental health tolls on staff, who were also unable to apply for their due leave during a period of much increased workload.

Respondents alluded to a massive ICT utilization gain as a positive impact of COVID-19. New models were developed for mobilizing and deploying the health workforce from all programs to respond to the urgent situations arising.

Research and Innovations testing should have better investment as part of building resilience and the appropriate institutions should be resourced to do this even better.

Financing and logistics Resources: With global transportation and economies disrupted, some stockouts of commodities and delayed supplies were noticed. The availability of COVID-19 tests was a welcomed change and well-organized step but the costs of the vaccines was said to be a challenge. COVID-19 has challenged the carefully crafted plans and operational activities in health and it was important to access the experiences and rethink what resilience would mean for Rwanda's health system, including reviewing financing for the response and what it has meant for both domestic and external revenue sources. There is also a need to leverage available funding to build back better e.g., providing regular Oxygen supply in all referral wards, making WASH infrastructure universally available, and building workforce capacity to redesignate and deploy staff to respond effectively while diminishing risks to their well-being and efficiency.

The regular funding available for HSSP4, as well as most flexible funding was directed to fight the pandemic and ensure the logistics and HR are reallocated appropriately.

Health information system and Research: COVID-19 provided a great opportunity for use of Technology especially in health information systems, to collect and maintain a routine COVID-19 database; (e.g. tests done; number infected; contact tracing; recoveries, etc.) from all parts of the country. A dashboard provided real time data on the COVID-19 status with an increased use of information for decision making, making sure that the response measures such as lockdown orders were informed by the data. It enabled the public to be kept abreast on the pandemic's status using the generated data from all sectors.

Genomic sequencing and identification of the COVID-19 variants was part of the high attention paid on research by policy makers with additional research resources sourced through various grants.

The PHC System: The PHC systems in Rwanda appears to have contributed well to the success of the COVID-19 response as well as helping to retain a high level of continuity of regular services. The test, trace and treat steps required full focus of the health sector.

CHWs have provided homebased care for COVID-19 affected people, and people unable to access some services. Very high workloads were seen at community level covering services such as malaria treatment and other routines. A CHW interviewed felt they experienced a risk of infection, even though some basic protections were provided (sanitizers, gloves and masks, face shields,) by their supervisory health centres (in one catchment area, only 3 out of 48 CHWs tested COVID-19 positive. They played major roles in health education and advice, and in creating public awareness on the self and community protection protocols and acted as contact tracers to transfer cases to care centers as needed.

Referrals processes was one of the provision areas that suffered with COVID-19. While COVID-19 had a negative effect in terms of its impact on existing health education and awareness campaigns, with CHWs playing major roles in the containment of COVID-19. There is said to be an increased attrition of CHWs over the HSSP4 period perhaps due to the risk and possibly stigma of COVID-19.

Leadership and Governance: Sector Governance appears to have functioned well during the pandemic, with an overarching coordinating mechanism put in place and quick adoption of innovations that allowed the system to continue to function well. The national response to the pandemic was coordinated across all sectors, at central and the decentralized levels, to mobilize all entities against the common threat.

Meetings and other physical contact activities were drastically reduced which affected some areas of work but also enabled a pause to review the entire system and its vulnerabilities.

A key challenge for the sector leadership was on how to protect the coverage and impact gains the sector had achieved over the decades before being faced with the COVID-19 disruptions.

The resource situation was shaky with donor financing flows disrupted due to increased internal needs of the donor countries. COVID-19 challenged the resilience of the system and allowed the sector to assess its situation and rethink what true resilience will imply in future. It clearly demonstrated the utility of digital and ICT systems in health service provision and governance.

The COVID-19 impact studies mentioned earlier on different populations/sectors will hopefully inform how key priorities and strategies are set in future, in order to create better continuity of services, and improved resilience and sustainability. These studies and assessments shall also inform new evidence-based programming of resources and interventions.

Health security should become a strong cross-cutting aspect of future health policies, strategies and operations in a different way from the strategic responses designed against the threat of Ebola. These should help in creating an armory of coping strategies and structures for future responses.
The shortage of even some basic stocks and consumables has accelerated the demand for core local manufacturing of various critical inputs to ensure a certain level of self- reliance and sustained effort in future disruptions.
Moving Forwards on health security and resilience: Lessons have been gained by identifying a number of gaps in health systems planning, monitoring, partnerships and various collaboration systems with other sectors, making sure that the potential for similar disruptions is reduced. The lessons have also increased the importance and appreciation of how health sector strategies impact the overall country ecosystem, with health now being even more prioritized by MINECOFIN. Health sector resilience now has to be built into operations at all levels with good staff and technical capacity foundations.

International travel and transport restrictions has also meant a need for self-reliance in ways that were not fully comprehended before, with international transport and supply chains for many health commodities shut down, and with situations where important health equipment couldn't be repaired as the engineers could not be flown in. The enhanced use of technology is a major gain which must be leveraged going forward.

Future strategic and operational plans should be tested/screened for their contribution to resilience, sustainability and utilization of local content.
There will be need for well-planned simulation exercises and response mapping in order to build effective capacity and regularly test the response systems.
Innovations and Research institutions should be encouraged to model various options and scenarios so as to generate better continuity of services innovations (urban, rural, remote, etc)
Critical to future resilience will be documented assessment and estimation of health security resource needs and it will require even more effective collaborations and partnerships, including regional and south to south collaboration.

1. Resourcing HSSP4: Financing Analyses

3.1 The Macro-Economic Situation

The country's Gross Domestic Product stands at a nominal rate of $11.061bn at year 2020, with a per capita nominal rate being $873 placing the country as a developing country. COVID-19 however has been attributed as responsible for a GDP contraction with the government's estimated decline in GDP at 0.2 percent for 2020, the first recession in more than two decades, (WB 2021). Inflation stands at 6.6% in 2020 increasing from the sustained low inflation of 3.8 that was experienced between 2017-2019 (WB 2021)

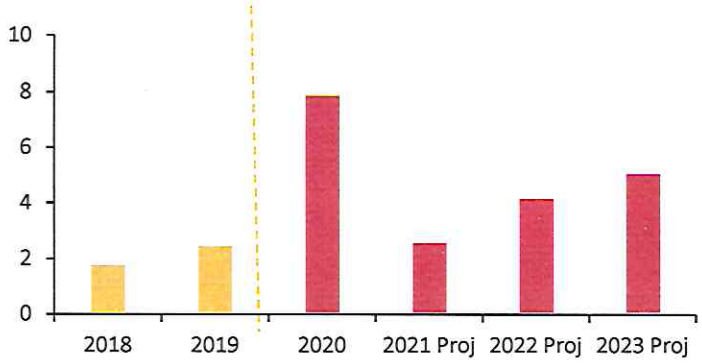

Figure 3 Trends in inflation (source: UN -Rwanda common country analysis 2021)

The fiscal deficit is projected to narrow to 7.8% of GDP in 2021 and to 7.2% in 2022 due to a planned fiscal consolidation in the 2021/22 fiscal year. The current account deficit is projected to narrow to 10.4% of GDP in 2021 and further improve to 9.1% in 2022, mainly because a rollout of COVID-19 vaccines should trigger a rebound in tourism and foreign direct investment. Rwanda's public debt was 58% of GDP in 2019 due to elevated spending on key infrastructure investment and a decline in aid flows. The COVID-19 crisis caused an increase in health-related spending and a decline in tax revenues, resulting in an increase in public debt to 66% of GDP in 2020, which is expected to reach 72% of GDP in 2021, above the safe debt ratio of 65%. In anticipation, the country's debt distress was raised from low to moderate by the International Monetary Fund and World Bank, effective in June 2021. (WB 2021)

3.2 Sources of Funding for HSSP

Financial analysis has shown that resources were available for HSSP4 Implementation in the period under review. The Total Health Expenditure (THE) increased by 41.4% in RWF (from 461b in 2017/18 to 652 billion in 2019-20, while the per capita expenditure increased from 38,167 RWF (43USD) to 51,526 RFW (56 USD). This increase in per capita expenditure is a good trend towards the recommended per capita spending for developing countries, which is pegged at $90 per capita. The proportion of health expenditures attributed to domestic sources remained almost constant in the period under review at 59% in 2017-18 to 58% in 2019-20 while the external resources as share of THE increased marginally from 41% to 42% in the period.

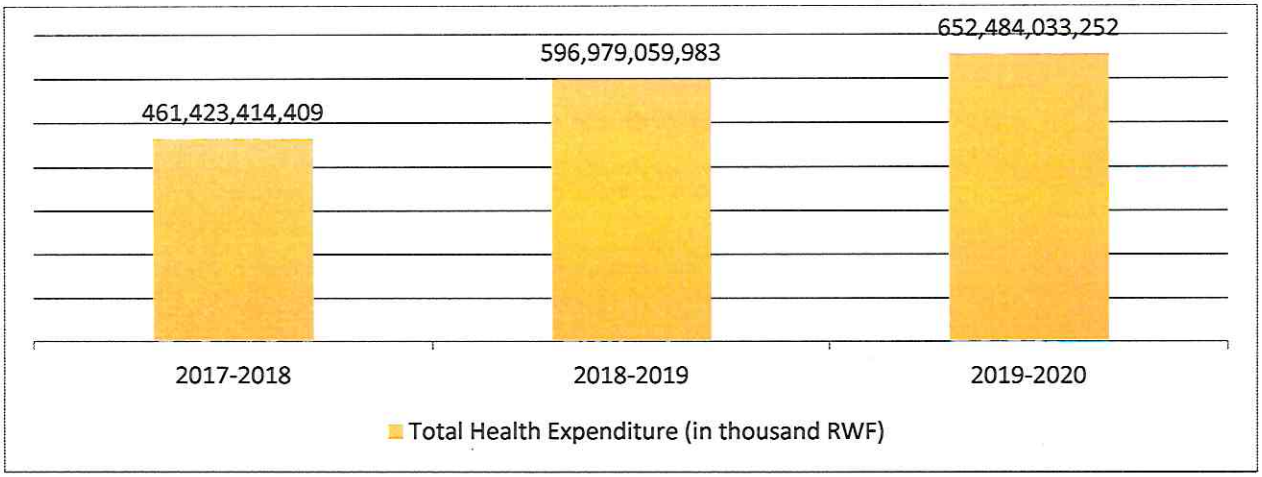

Figure 4: Trends in total Health expenditure in RFW (2017-18 to 2019-20) (Source HRTT data)

The government and external expenditure as percentage of total health expenditure increased in the period from 32% to 33.9% and 40.9 to 42.4% respectively. The OOP as a proportion of THE remained quite low in the period from 4.9% at baseline to 4.5% at mid- term. This could be associated to increased revenue from other sources as well as demonstrated increased coverage with insurance.

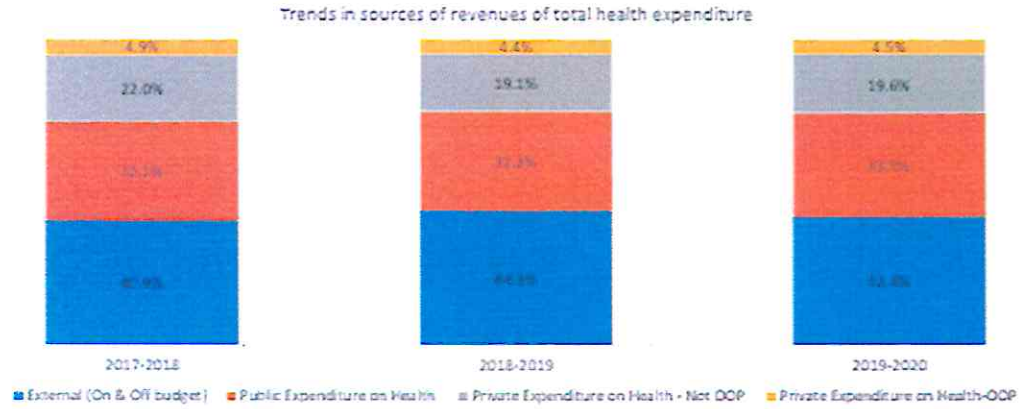

Figure 5: Trends in sources of Total Health expenditure (2017-18 to 2019-20) (source HRTT data)

3.3 Budget Allocation to HSSP4 planned activities (Health expenditure & allocative efficiency)

Overall adequate funding was provided for HSSP4 implementation with an allocation of RWF 1.71 trillion against HSSP4 costed projections of 1.65 trillion (3% increase) for the period. The allocation in the first year of implementation (2017-18) was 36% more than the estimated cost; the 2018-19 saw a 17% reduction on the allocations against the estimated cost for the year while the third year (2019-20) saw an increase of 9% budget allocation.

Its however noteworthy that other priorities that had not been included in the HSSP4 plan have been implemented in the period, such as HRH program, response to COVID19 pandemic and may therefore have contributed to the increase in resources.

3.3.1 Budget Allocations across the different programs

Most of the mobilized health funds were used to fund disease prevention and control ranging from 21% of the resources in 2017-18 to 26% of resources in 2019-20; then maternal and child health services at from 16% to 22% and human resources for health taking up 21% and 19% of the total

health expenditure in financial years 2017/18 and 2019/20 in that order. The programs with the least allocations out of the mobilized funds were health sector planning and information; policy development and health service regulation (see figure 4)

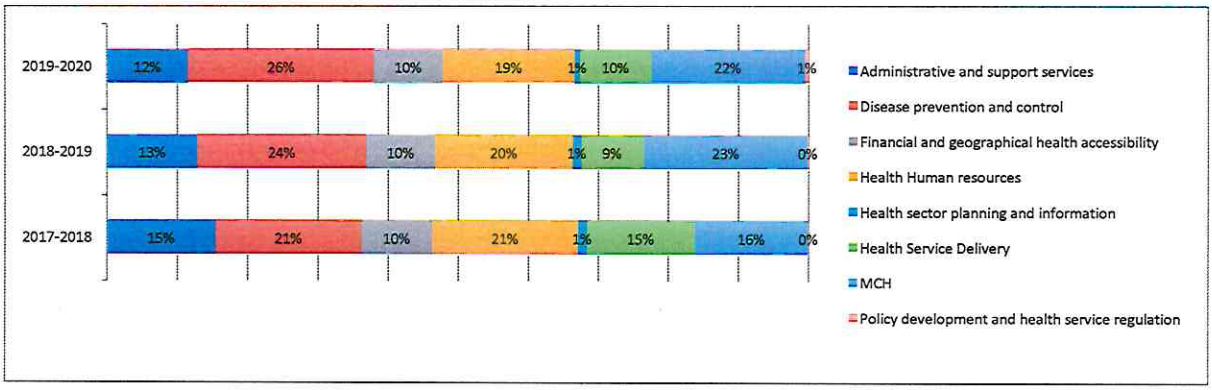

Figure 6: Allocation of funds to various programs (2017-18 to 2019-20) source HRTT

The analysis could not establish the adequacy of financing across the programs since the overall HSSP4 cost plan was done by levels of care from the community level to national level and for health system costs and therefore were not comparable with the funding domains indicated in figure 4 above.

3.3.2 Source of funding by programs/domain areas

An analysis was done on the allocation of the domestic and external funding to the main domain /program's areas. This section highlights two domains (disease prevention and control and service delivery) as examples while the detailed MTR financial analysis report provides more details of sources of funds for each domain.

Most of the funding for disease prevention and control was mainly from bilateral and multilateral partners, from 67% to 24% and 17% to 42% in 2017-18 and 2019-20 respectively. It is worth noting the increased trend in funding for the same program by GOR ranging from 9% to 18% in the same period (a good trend towards sustainability) as shown in figure 5.

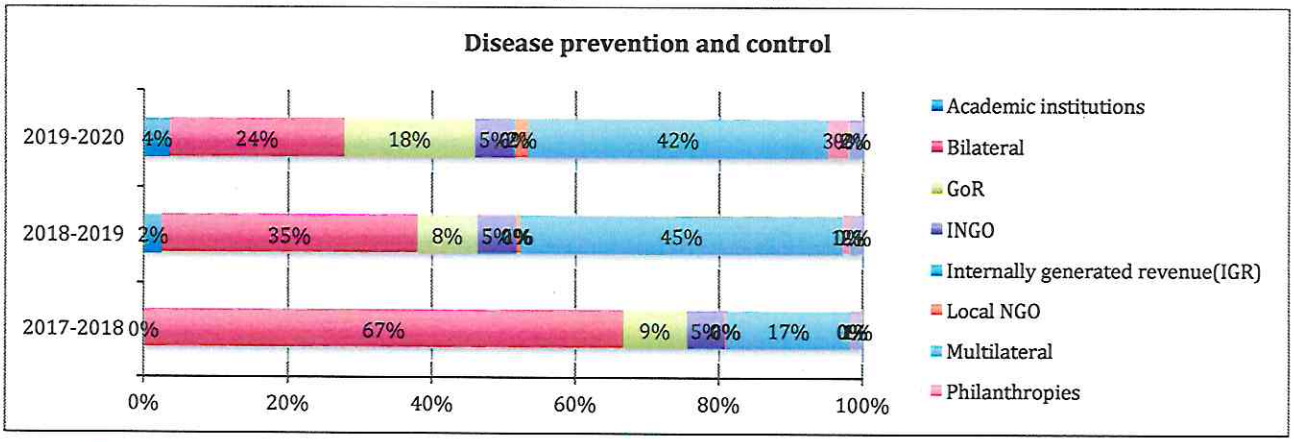

Figure 7: sources of funding for disease prevention and control program (2017-18-2019-20)

The funding for service delivery was mainly from internally generated revenue (35% in 2018-19 to 45% in 2019-20) and from bilateral organisations (5% in 2017-18 to 42% in 2019-20) (figure 6 below).

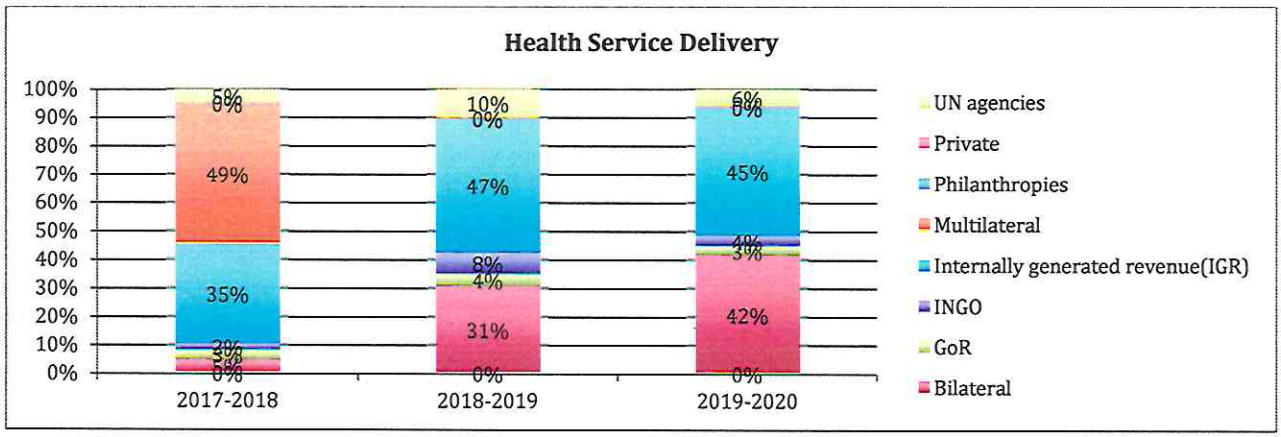

Figure 8: sources of funding for health service delivery program (2017-18 to 2019-20)

The two sampled scenarios show the relative importance /role of the different sources of funding for the different programs (both external and domestic) while demonstrating the increasing role of domestic resources towards sustainability.

3.4 Financing COVID19 and impact on HSSP funding

Investments were also channelled towards containment of COVID-19. The resources were mobilised from MINECOFIN, as well as from stakeholders -partners, philanthropists among others. The reported flexibility in re-allocation of budgets under MOH to COVID-19 was helpful to the response. The COVID-19 allocations at central level were channelled to the Rwanda Biomedical Centre (RBC) to facilitate quick implementation of interventions. The funds were mainly for:

- Disease prevention and control
- Increased laboratory diagnostic capacity and biosafety
- Enhance central and district-level surveillance
- Strengthen infection, prevention, and control
- Provision of PPEs
- Provision of commodities and supplies
- Capacity building e.g., Training frontline public health workers

Additionally, districts were also allocated budgets for operational costs including costs of treatment; payment of health workers; food for clients who were quarantined.

3.5 Resources projections for the next phase of HSSP4

Rwanda Health Sector MTEF projections for the FY 2021/2022 to FY 2023/2024 includes budget projections for the Ministry of Health (MoH) and its agencies and has captured both domestic and on-budget external sources (but do not include all off budget support from partners). The projection for the FY 2021-2022, is a total of FRW 311,562,277,695, representing 47.7 % less than the 2019/2020

allocation of RFW 652,484,033,252. For each of the succeeding years, (2022/23 and 2023-24), the projected budgets are higher than the preceding years by 6.5% and 2% respectively.

Overall, while there is a growth of the total projected figures between 2021 and 2024, in absolute terms, there is slowing down of the growth from 6.5% to 2% between the year 2022-23 and 2023-24. In practical terms, this means there will not be additional resources for the health sector based on these MTEF projections and therefore expansion of health care based on identified needs has to be through other innovative mechanisms.

The financial data obtained through HRTT and from other sources are still incomplete and give a partial perspective on the availability of resources for different programs for the remaining period of the HSSP4.

2. Monitoring and Evaluation System for HSSP4

The health sector has an integrated health facility reporting system which is based on the DHIS2. The facility data is supplemented by surveys such as Demographic and Health Survey (DHS), which is conducted every 5 years, STEP survey (expected to be completed in February 2022), Harmonized Health Facility Assessment etc. The routine data generated from the health facilities for the estimation of coverage of selected indicators were found to be of good quality. The sector has achieved near universal data coverage in terms of completeness and reporting. This level of completeness and reporting could be partly due to the existing mechanism for ensuring data quality through monthly data validation meetings prior to the HMIS closure for further editing.

However, there are indicators identified in the HSSP4 that are not captured in the routine HMIS and DHS.

As such, data analysis for the MTR is completed for 89% of the indicators with the remaining 11% of the indicators lacking data at the time the MTR ended. Some of the indicators with missing data will be re-evaluated by the sector when data becomes available. Another key issue with available data is limited disaggregation by subnational levels such as provincial and district levels. Only 18% of the indicators accessed by the MTR team are disaggregated by district and provincial level with the rest of the indicators limited to the national level. National level data can obscure discrepancies in performance across districts and provinces, limiting opportunities to address inequities. The indicators that are disaggregated by district and province have shown such a situation whereby some districts performed very well uplifting the national performance but there are also districts that saw deterioration in performance in 2020/21 compared to 2016/17 such as for HIV incidence rate.

The monitoring and evaluation system has also faced challenges with denominator data for some indicators. Coverage indicators rely on projected population data from the 2012 census and since the total fertility rate has decreased from 4.6 to 4.1 during this time period there is a likely over-estimation of eligible population for some services perhaps resulting in an under-estimation of utilization rates. For example, this can explain the apparent decrease in the proportion of expected pregnant women receiving antenatal care and delivering in a health facility and the proportion of children vaccinated. The use of proxy indicators (such as deliveries against BCG vaccination) has been applied informally in the interim to monitor progress internally. Some coverage indicators have also been reported as achievements of more than 100% indicating that there is a problem with

denominator data or generally with the quality of data. Strengthening of the civil registration and vital statistics (CRVS) system, (which collects- births and deaths data etc) provides an efficient way of obtaining regular and accurate vital statistics that should minimize issues with denominators.

In terms of data use for decision making and learning, there is considerable effort at the national level with health sector experts and leaders meeting on weekly basis to review and discuss data for selected programs and services. However, the same is not happening at the sub-national level and there is a need to cascade the same efforts at the lower level of the health system. The health sector needs to create and foster a culture of data analysis, review and use for course correction, learning and decision making at the local level, perhaps as part of the Rwanda Health Observatory's (RHO) processes. The MTR has also identified that there is a gap in feedback from the national level to the sub-national level. This also needs to change during the remaining half of the HSSP4 period. The feedback mechanism can be complemented with identification of data management challenges and capacity building at district and health facility levels. For example, 46% of the ICD codes are not usable and coverage on reporting of mortality data is at 29.9% of all data. These challenges can be addressed through systematic training and technical support at all levels.

In addition, the HSSP4 monitoring and evaluation framework need to inform annual performance indicators and the annual performance reports need to assess progresses on all applicable indicators. The data system also needs to be set-up in a way that makes it easy to monitor progresses towards SDGs, by ensuring their integration into the routine reporting systems and mechanisms. Additionally, it is important to include indicators that will help assess quality of the coverage. New indicators can be designed for specialist care, medical tourism, quality in disaggregated form etc.

The digitization of the health sector with implementation of electronic medical records (EMR)/electronic health records (HER) systems, along with strengthened administrative systems (e.g., civil registration and vital statistics (CRVS)); and ensuring the interoperability of various health information systems (HIS) helps to efficiently obtain disaggregated data on morbidity and mortality.

SECTION 5: MAIN EMERGING ISSUES AND CONCLUSIONS:

The MTR team has reviewed the available data and indicators, and analyzed the resources applied and the implementation of activities, as well as seeking key informants and focus groups insights on the sector and the factors that drove the performance on HSSP4. This section summarizes our conclusions based on the findings above

1. The sector's performance is largely on track despite the disruptions caused by the COVID-19 pandemic in terms of financing shifts, redeployment of staffing and in operations. However, it has indicated a level of positive resilience of the health system and it remains likely that a significant majority of HSSP4 targets shall be met despite COVID-19.

2. The HSSP4 development had strong stakeholder involvement and continuing engagement and almost all strategies and operations within the sector (and across relevant sectors and development partner interventions) are aligned. Harmonization of timelines may differ moderately but did not take away from good coherence.

3. Implementation of sub-sector strategies and operational plans have been derived from HSSP4 and are well aligned. These have been on track and coverage of service delivery points and their services have expanded significantly and remain generally high for the sector's priority services.

4. The health systems inputs as assessed have functioned generally well though issues remain with each of the building blocks that need to be resolved around the areas of workforce, supplies, infrastructure, equipping and scopes of service delivery at various levels.

5. Rwanda's decentralization policy has provided a good framework for PHC implementation with strong local government engagement and accountability based on the Imihigo system for local Mayors as well as management.

6. There is a well-structured private sector well linked to the public sector, but there remains much opportunity for expansion beyond service delivery and training, to enhance local manufacturing of medicaments and key consumables, and for vaccines as already planned. It can also play a major role in the future plans to promote medical tourism.

7. The COVID-19 pandemic affected aspects of the sector negatively in terms of resources shifts and disruptions in interventions due to steps taken to control the pandemic. However, it has also created major opportunities for high IPC coverage; enhanced used of ICT for alerts, care, communication, information systems, mobilization of more resources, more focus /attention on health by other sectors etc, and in general, personal hygiene and WASH targets were rapidly reached.

8. HSSP4 indicators did reflect the performance needs relevant to the sector. However, with a rather high coverage of services, new indicators and data sources are needed from routine data to

provide better real-time utility and provide for disaggregation on quality of care, equity, subnational variation and social determinants of health.

9. The MTR shows that government budgets and expenditures increased over the implementation period (3% above budget) with some further expansion in financial access through the community-based health insurance. External resources levels appear to have remained stable during the period with out-of- pocket expenditure as a share of total health expenditure estimated at a quite low 4.5% by HRTT. However, field visits and other data sources seem to indicate procurement of medicines especially, from outside the system when unavailable, which may not be easily tracked. It also appears that the Ubudehe social classification still left a group of people especially Ubudehe 2 group likely to be prone to impoverishment based on the proportion of household incomes spent on health.

   Sustainability of resources flows to support the positive expansion of infrastructure and services remain a source of some concern even with external resources at about 42.4% of Total Health Expenditure (THE). Significant domestic mobilization of resources earmarked to health has taken place and it will be useful to find new ways to assess and monitor sustainability of key foundations such as the PHC system.

10. The Public Financial Management system is well established and functions well. Designing further allocative efficiencies and gearing incentives to improve sector productivity including through links to workload and utilizing capitation for funding service delivery.

11. Our review found the key drivers of the achievements on HSSP implementation to include the following:
    - **Good Leadership and governance** systems, with laws, regulations and policy frameworks on the health sector that are well implemented. Several strategic and operational guidelines and SOPs exist and are in use to guide implementation. A high political commitment to health exists and responsibilities and **accountability for performance** are well laid out and effectively monitored
    - There is good **coverage of priority health programs** enhanced by infrastructure expansions and improved geographical access as well as expanded scopes of care.
      The quality of care and provider skills in some areas remain a cause for concern. An accreditation system has been initiated as a tool for quality improvement and discussions have started around credentialing specific services to expand scopes closer to the periphery.
    - **Public and Community awareness** are the backbone of the PHC system along with a committed cadre of 60,000 CHWs, whose motivation remains paramount and should continue to be motivated through innovative public-spirited means.
    - Good **financial access** with high (sometimes fluctuating) CBHI coverage has been an essential aspect of Rwanda's UHC. Long term sustainability is a challenge and a draft CBHI sustainability plan was already being discussed during the MTR exercise.

- The expansion in the **ICT Infrastructure** and its utility in the health sector has made a very positive impact during COVID19 as well as on health services in general and must remain a core foundation for the future in terms of utility for improving quality and accountability.

SECTION 7: RECOMMENDATIONS

The MTR team recognized the tremendous efforts that went into sustaining services and implementation of HSSP4 despite the impact of COVID-19 indicating the inbuilt resilience factors in the health system. The impressive performance can however be further leveraged to produce even better outcomes and impact, through improving the skills and the capacity to ensure good quality outcomes from investments in health services. We therefore make these recommendations, while well aware of the extensive coverage that exists and also aware from our interviews that a number of steps had been initiated to address some of these issues.

1. The health sector in Rwanda has a well-functioning governance and leadership system which is an essential factor for the current performance observed. A number of guidance documents, policies, strategies and guidelines, covering various areas (Accreditation reform; Facilities Structure; Credentialing; Human Resources distribution and retention in rural areas; Medical Supplies, Traditional Medicine) should be completed to provide a foundation for quality efforts for the remaining period of the HSSP4.
   Intersectoral coordination has shown great progress in recent years, but further efforts have to be done to ensure achievement of targets, particularly for the programmatic areas that are dependent on intersectoral collaboration.
2. **Sustainability** is an ongoing issue even as the economy grows towards attaining middle income status. We make recommendations in two key areas of sustainability:
   a. Overall financing of the sector and reducing the external proportion of the "Total Health Expenditure" (THE) needs further development of innovative sources for expanding domestic revenue to support the community-based health insurance scheme and the community health system.
   b. The MTR noted that the MTEF projections do not cover all funding sources entirely e.g., and with the possibility of reduced external funding, it is critical to be more comprehensive and secure more sustainable investment into the new sector priorities (decentralized specialized care; new referral and provincial hospitals etc.,.) which will exert pressure on available sector resources. Some of the strategies to address sustainability include:
      - Mobilization of additional GOR /domestic resources towards health is necessary despite meeting the Abuja declaration targets, as the per capita costs increases may require higher resources than from the proportion of budget.
      - While the shift towards more domestic resources is well noted, efforts should be made by both the health sector and international development partners to ensure more predictable resources with a longer-term dimension.
      - Several Innovative financing mechanisms have been initiated including using a mobile communication levy, road fines and transport ownership transfer levies. This is commendable and we recommend that further effort is made within the

country and the east African sub-region to find new ways of funding health and health security. As people comply with the current levies, behaviors tend to change to avoid the levies which may reduce their effect.

- Rwanda's public private partnerships and now engagement at primary health care level (health posts) is positive. We recommended regular evaluation of their "profitability, effectiveness and viability with regular renewal of incentives aimed at increasing their presence in the health sector (e.g., Engaging MINECOFIN for provision of monetary policy incentives through tax breaks; low interest financing to critical areas such as manufacturing of medical supplies and goods, Etc.)
- More money is needed but increasing efficiency from existing resources can also produce gains. These include efficiencies from decentralizing certain services and expanding practice scopes at lower levels which tend to be less expensive.
- Strengthening strategic purchasing: Some actions have been initiated in this direction with potential for increased efficiencies in the sector. Some of proposed interventions include:
    - Progressive Harmonization of benefit package.
    - Progressive revision and standardization of tariffs
    - Embracing technology for more visibility of claims including improving on re-imbursements to the health providers e.g. use of e-claims systems

3. The health financing information system. There is need to have more comprehensive data sources on health financing and the MTR recommends utilizing multiple methods including households Surveys data to complement the HRTT with greater input of household indicators of financial protection in tracking possible catastrophic Health expenditure
4. Human Resources for Health. The MTR commends the increasing specialization especially with physicians and their deployment to district services. While specialists are indeed needed, enhancing the core skills of the General practitioners to manage emergency and critical needs will treat more people at less cost.
5. Quality of care relies on various factors of which the human resources is a primary one. The issue of adequate skills has come up and is being fulfilled by utilizing mentors and supportive supervision. We recommend that these supervisory efforts be continued and expanded and perhaps may involve arranging sabbaticals from recognized practitioners from other countries to serve similar purpose in the short to medium term. Quality efforts are required for all aspects of services through the life course, incorporating a "no-blame culture", and for core infection prevention and control (IPC) practices and to continue to manage effects of possible antimicrobial resistance at all levels of the health system.
6. The expansion in numbers of doctors and nurses being produced has successfully reduced the physicians per population ratio and aims to counter reported out-migration by rapidly filling in the numbers. Migration and wastage also steal experienced practitioners, and undermine the passing down of critical skills. We therefore recommend further studies on retention incentives and motivators in order to have stability that nurtures good quality care.
7. Health Infrastructure and Equipment: In addition to having an Infrastructure/facilities "master plan"/strategic plan", and set standards for design of new medical infrastructure and for major

rehabilitation as well as for medical equipment entering Rwanda, key areas of needs are (i) Maintenance and rehabilitation plan for older district hospitals (some may need redesign). (ii) A plan for equipment supply and distribution will be useful along with plans to standardize and ensure common maintenance systems. We therefore recommend investment in development of a maintenance and rehabilitation **workforce and equipment**, working to standardize the high technology tools in use and maximally reduce the number of equipment/machinery that are unusable at any time.(iv) Very expensive equipment are in use at various levels and it is important that the capacity of providers is built to (a) understand and use the equipment appropriately, (b) have and use a local management and maintenance system to be monitored via utility (rather than simple availability of the equipment). (c) The investment in infrastructure and equipment is an expensive one with continuing recurrent costs of maintenance and repair which must be managed – The MTR supports and recommends an insurance system in case of damage or fire or other mishaps that make these important items unusable.

8. The MTR recognized the increasing impact of NCDs on Rwandans and commends the plans to hold a STEPS survey within the next few months. We recommend the expansion of routine NCD data collection through the use of disease registries (e.g. cancer registry) and strengthening NCD reporting system and as part of the health information systems. This is to expand the availability of data on NCDs as part of routine HMIS. This will be further facilitated by a good CRVS system and well-designed indicators.
9. **Moving Forwards on health security and resilience:** Health systems planning, monitoring, partnerships and collaborations must be redesigned to reduce the potential for outbreak disruptions to have the major health and economic impacts COVID-19 had. Studies have been carried out and lessons learnt. The MTR had wanted to get data on the cost of COVID-19 disruptions as a way of illustrating the importance and impact of health sector strategies on the overall country ecosystem. Health Security should be seen as an economic and social good.
    a. Health sector resilience factors and indicators must be built into all health operations plans at all levels, including plans to maintain staff and technical systems capacity and skills.
    b. The proposals to foster pharmaceutical and commodity self-reliance through local manufacturing is an important one requiring thorough analyses of supply chains of raw materials, holding "strategic reserves" that can assist the country fight an outbreak quickly and effectively even when supply routes are temporarily closed.
    c. It is important to build as much local capacity as possible but also integrate policies to allow waivers and exceptions to international travel with arrangements for equipment spare-parts systems.
    d. MTR recommends standardization of equipment types and sources in a way that allows for easier maintenance planning and skills transfer for maintenance and repairs.
    e. The enhanced use of ICT technology was a major gain during COVID-19 and so again maintenance and backup for these systems will be crucial to keep going even if disruptions do occur.

f. Future health sector strategic and operational plans should pass a health security and resilience "test" of their contribution to resilience, sustainability and utilization of local content.
g. There will be a need for well-planned and regular simulation exercises and mapping of response systems for building effective capacity and documenting regularly tests of alerts, preparedness and response systems. Innovations and Research institutions should be encouraged to model various options and scenarios to generate better continuity of services (urban, rural, remote, etc.)
h. MTR also recommends that regular assessments and estimation of health security resource needs and infrastructure especially in conjunction with neighboring countries where possible to foster effective inter-country collaborations.
i. Review existing surveillance system, identify weaknesses, and strengthen it including for emerging diseases.
j. Strengthen the "One Health" approach including in designing and implementing programs, coordination and synergy with appropriate multi-sector actors to address critical health threats in human, animal, and environment. This also needs to be included in the M&E framework to track progresses.

10. Strengthening Primary Health Care (PHC) and Community Health Systems in Rwanda continues to be an important investment for development. The MTR recommends a continued focus on improving aspects of PHC and community health that improves access to services or impactful quality.
    a. Polyvalent CHWs are endorsed as useful in expanding scope and permitting swapping of roles in the absence of another CHW. However, we recommend that the expanded roles of CHWs take into consideration the anticipated workload from polyvalency, and also the effort needed to ensure performance in all critical areas.
    b. The community health system has been a pillar of UHC in Rwanda and has functioned well as non-salaried volunteers. This success must not be taken for granted as Rwanda society evolves, the economy grows and health needs evolve. We recommend a review of the incentive mechanisms for CHWs to revise existing motivating approaches to reflect the times and their importance to PHC.

11. Data Evidence and Information systems: as indicated in the theme of this MTR report the health information systems have functioned relatively well and denote an extensive coverage of priority interventions. The need now is to translate that coverage with quality into health impact beyond what exists currently. We therefore recommend a review of (a) the set of input and output, outcome indicators in ways that demonstrate their different effect on various population subgroups, locations and socio-economic classes to help nuance and target interventions better. (b) Revise the Monitoring and Evaluation Framework of the health sector in ways that responds to the quality and impact needs of the sector and feeds into an "observatory" on health. (c) The MTR also recommends review and revision of a number of indicators with (i) definitional problems; (ii) denominator issues (iii) data source challenges (iv) focus on impact. (d) improve availability of community level mortality data through CRVS (e) harmonize the different data sources. (f) The MTR also recommends further assessment of functionality of the sub national

health systems to identify further areas of focus and the influences of local context, that will help build on the good progress already made.

HSSP4 indicators did reflect the performance needs but having a rather high coverage of services means that some indicators and data sources (HRTT, DHS, MMR, other Analyses) shall need to be changed in order to provide better decision-making utility by providing a more nuanced disaggregation on quality, equity, and areas of subnational variations. Health security indicators must also have greater prominence, to measure outbreak/pandemic readiness measures and capacity better.
Investments into Research, development and Innovation in the health sector can help fill some of the gaps and nuances needed to appreciate data and the impact of health at different sub national situations and populations levels.

12. Expanding and decentralizing specialist clinical services: The country made significant effort to expand access to clinical specialist services at provincial and district levels though still with challenges around retention, skills and scopes of practice limitations. delegating skills, and creating more effective referral systems. The MTR recommends (i) That the MOH explores some skill delegation (e.g., emergency surgery – ectopic, hernias to trained GPs or "Family Practice" specialists to avoid the need to station multiple specialists in a single location (ii) the credentialing of increased scopes to permit CBHI to reimburse service competently carried out in district hospitals or health centres which helps with equity and costs of care. (iii) Asides from the mentoring system now initiated to improve certain skills, permitting short term attachments for district level specialists to take place in tertiary care locations may also help improve and embed certain skills.
13. The categorization of hospitals and health centres and their accreditation provides a framework for addressing quality issues. However, scopes of practice restrictions may contribute to unnecessary referrals with associated costs for the patient and accompanying family. The MTR recommends enhancing the ongoing review of practice scopes to recognize the variations with each facility category and expand availability where the capacity exists. This may mean regular reviews of the criteria.
    The fluctuations in accreditation scores of hospitals point to the need to strengthen the technical assistance to stabilize quality improvement efforts in health facilities. Private health providers and managers should be involved in this technical assistance for quality improvement of health care services.
14. The Private sector is evolving rapidly in Rwanda and increasingly an integral part of health services delivery and expanding into areas of products manufacturing and vaccine production as well as into possible medical tourism. The MTR recommends a review of incentives and motivators needed to drive private investment to the right needs. 3 key issues requesting address are (i) Tariffs restrictions while costs increase; (ii) cost of investment loans and high interest rates; (iii) Similar scope of practice issues and fit with official categorizations. As such, the MTR team recommends review of these and inclusion of incentive packages such as low interest rates, revision of tariffs to reflect inflation, implement credit guarantees, and simplify the accreditation and registration processes. These actions will help fulfill the objectives of

the newly developed Private Sector Engagement Master Guide which motivates private sector to invest in priority investment areas identified within the master guide. The PPCP effort with health posts have worked well in some instances and not well in others. The MTR recommends a review of the conditions that facilitate health post viability and to factors these into determining locations where PPCP will be most feasible.

15. MTR recommends further participatory and inclusive approaches in the development and implementation of policies, strategies and guidelines by ensuring the involvement of all key stakeholders at all levels. We also recommend the review of indicators and M&E framework of programs and at operational levels to ensure how these contribute to the overarching HSSP indicators. This helps to create better common purpose, awareness and utilization of strategies to guide work across public and private sector domains.
16. The role of District Health Units (DHUs) in coordination, management and monitoring of decentralized health service delivery system is critical. An observation of the MTR is that further effort is needed to build the capacity of the DHUs to further engage fully with the service delivery points. This may include mentoring and twinning arrangements between well-functioning and poorly functioning districts and health centers. The instructions and guidelines issue that mandates sector operations needs further translation as the basis of supervision for it to be effective at all levels.
17. Health Facilities: Staffing of health facilities at district level has been defined through recent PM Instruction which define the staffing level for all major facilities. A clear plan is needed to ensure that for the most critical hospitals, any vacancies are quickly filled.

    The new structures for hospital staffing make sense with current workload and catchment areas built into the norms. In the rapidly developing context of Rwanda, these workloads may shift quickly, and the Ministry should have a system for routine and regular reviews of the new norms and the impact they are having on services delivery. The MTR team recommends the overall improvement of HRH density ratio through capacity building, continuous professional development, worker retention in public health facilities, and more workers training, and deployment including doctors, nurses, and midwives and extend that to pharmacists, lab technicians, CHWs etc. Of new interest is "core Specialists" such as obstetricians and gynecologists, pediatricians, surgeons, internists and other specialists that have so far been difficult to index and measure and that, it is recommended that there is a need to review current rates of production of such specialists, deployment and distribution across the country and major health facilities. The MTR team also recommends conducting regular periodic WISN at the central and operational levels (frequency to be determined by the MOH based on need and utility), and/or to check routine workload trends and give some flexibility for adding or removing excess staff.
18. The MTR however noted the fact that demand and utilization of services did not fit neatly with catchment areas and often catchment borders are crossed for a convenience of access. We therefore advice regular monitoring of patient flows around key facilities to better define utility, workloads and catchment.
19. A positive Private Sector Engagement system exists and is clearly national policy. The private sector's respondents indicate the high cost of investment (high bank interest rates), combined

with stagnant tariff levels and strict categorization of scopes of services needed to be examined to remove likely disincentives to local investments. A mechanism could be put in place to review and trigger tariff changes with clear indices for monitoring its impact.

The private sector also requested deeper engagement on flexibility with scopes of practice, generating information for planning and standardization of tariffs for similar services offered across the private health facility categories.

The Public Private and Community Partnerships (PPCP) approach is a promising strategy for expanding access to health posts service delivery through private individuals. It faces several challenges and the MTR recommends an examination of possible incentive packages, a revision of service packages and/or tariffs to ensure the financial viability and sustainability of the PPP Health post model.

20. Addressing the inequalities in health insurance coverage. Health insurance coverage is very high though there is need to address disparities across gender, residence (urban/rural), and by wealth quintiles. At household level, implementation of COVID19 containment measures were likely to depress employment in both the formal and informal sectors. The sector needs more deliberate efforts to cushion more households through health insurance subsidies. Some information suggests that Ubudehe2 category households currently may be the most impacted by health costs.
21. The three past years of MTR implementation has been affected by COVID-19, Ebola preparedness as well as some natural disasters etc. The MTR recommends that this review be followed by a review of costs and anticipated budgets over the remaining period especially with a view to include anticipated health security preparedness and disruption costs as a link to ensuring further resilience.
22. **COVID-19 Issues:** MTR recognizes the accomplishments in moderating the impact of COVID-19 while retaining fairly good performance on HSSP targets. The Review recommends that (i) Future strategic and operational plans should include criteria that tests their readiness and contribution to resilience, security, sustainability and utilization of locally manufactured health products content. (ii) That plans be made for well-planned simulation and scenario exercises to map responses efforts and build effective capacity that is regularly tested. (iii) Innovations and Research institutions should be encouraged to model various options and scenarios so as to generate better continuity of services innovations (urban, rural, remote, etc.). Critical to future resilience will be to assess and estimate health security resource needs including required collaborations and partnerships, including at regional and other south-south collaborations.

Lessons learnt from the MTR

1. The Mid-Term Review provided an opportunity to reexamine approaches for doing such reviews and for agreeing its scope and feasibility. It is important to set clear boundaries on the scope of the review and focus on "value added" areas of assessments. It is important also to understand that an HSSP MTR is separate from program specific strategic plan reviews.
2. It is recognized that a number of programs and innovations may require specific in-depth reviews and these should be planned for as part of the MTR TORs

3. Each program should eventually perform detailed reviews of their strategies in the same way as their strategies were derived from the HSSP4. These require subject specific expertise. In other situations, an MTR is performed alongside in-depth review of one or two programs assessed by experts in those domains
4. It may also be useful to identify specific thematic/program areas needing special attention, and engage expertise/specialists on those areas, for example "Costing" the plan (requiring an economist), or HIV Logistics, requiring an HIV expert to address its specific issues.
5. Substantial "Preparatory -work" is needed to have data and documentation available as well as making appropriate appointments with key stakeholders in order to make effective use of the consultants' time.
6. The role and functioning of MTR management and technical working groups (TWGs) need to be defined carefully and early in the process to ensure effective stakeholder participation.
7. MTRs involve data collection from outside the sector (e.g., MINECOFIN, MINALOC) and perhaps it will help to set out a template and obtain permissions or have a focal point assigned by each sector
8. Validation, Dissemination & Communication are essential aspects of an MTR that tends to happen well after the exercise process have ended and the consultants may have moved on to other things. We found the involvement of a well-informed local consultant who can follow up and coordinate with the international team a useful practice that should be well institutionalized.

ANNEXES

Annex 1. Draft Stakeholders & Key Informant Groups

a. Health Sector
   a. National Level - MOH & RBC HQ ; Related Agencies, RSSB etc
   b. National Level – External partners/Donors, Technical Agencies, INGOs/CSOs
   c. Service Provision entities – RH, PHs, DHs, District Teams;
   d. Community and Sub-District levels – Health Posts and Health Centres; CHWs;

b. Other related Sectors
   a. National level – Ministerial Clusters – Social, Economic, Governance
   b. National Level – MOEd, MINECOFIN, MINIFRA, MIGEPROF; MINALOC, etc
   c. District Mayors
   d. Others

c. Health Sector Beneficiaries – Patient Groups; Welfare groups; community leaders

d. Private Sector

e. Academia

Persons Met

Name	Position	Date	Type of interview
Alphonsine MUKAMUNANA	Environmental Health	1/10/2021	KII
Fulgence KAMALI	Health Promotion	4/10/2021	KII
Francine UMUTESI	Medical Technology Division	4/10/2021	KII
Dr Felix SAYINZOGA	MCCH Division	5/10/2021	FGD
Dr Francois UWINKINDI	NCD Division	5/10/2021	KII
Stella TUYISENGE Mercy MUNGAI, Daphrose NYIRASAFARI Kondwane NGOMA, Emmanuel MANZI	UN Agencies WHO UNFPA UNICEF	6/10/2021	FGD
Samson RADENY	COP Ingobyi Project (USAID)	6/10/2021	KII
Robin MARTZ Djordje GIKIC	Bilateral Agencies USAID Enabel	7/10/2021	FGD
Maurice NSABIBARUA Claude INGABIRE Godfrey K	MINALOC M&E Planning department	8/10/2021	FGD
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Nyabihu District DUSENGE Pierre MUGABO Fiston MUNYAMAGAJU Ildephonse NDAYISABA Peter MUSABYIMANA Modeste Dr NSENGIYUMVA Fabien	Nyabihu District Director of Health RSSB Branch Director RMS Branch manager District ECD focal point DAF Shyra DH Ag Clinical Director Shyira DH	12/10/2021	FV

MUKANKURUNZIZA Rosine NKURUNZIZA Michel NZABARINDA Jean Pierre BIMENYIMANA Jean Claude NDAHAYO John Francis	Ag Director Nursing Shyira DH Head Pharmacy Shyira DH Head Labo Shyira DH Nurse Shyira DH Accountant Shyira DH		
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Rwamagana District: Loic-Pierre RUKUNDO Marie-Jeanne UMUTONI Jean-Baptiste NIYIOMUGABO Dr Guido Joseph	Rwamagana District District Dir. Of Health Vice-Mayor Social Affairs RMS Disrict Branch Rwamagana PH Director of clinical services Director of Public relations Nurse in charge of Health Post	12/10/2021	FV
Musanze District MANIRIHO Israel NYIRABYIMANA Jacqueline NSHIMIYIMANA Robert NSHIMIYIMANA Aimable NSANZUMUHIRE Wellars Uwiragiye Emmanuel	Musanze District CBHI Officer/Health Unit Head of Gatagara Health Center RSSB Branch Manager Rep. of Pharmacists in DHMT DAF Ruhengeri RH Pediatrician Ruhengeri RH	13/10/2021	FV
Gasabo District Maurice Alphonse Dr Daniel NYAMWASA Dr Lysine TUYISENGE Jessica NYIRINKWAYA Willy AMIZERO	Gasabo District. Data Manager, Kibagabaga H District Health Director CoP & DG Kacyiru District Hospital CHUK, Director of Medical Services Hopital Croix-du-Sud (HCDS) Manager HCDS IT manager DHMT Legacy Hospital	13/10/2021	FV
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Clarisse MUSANABAGANWA	RIDS	20/10/2021	KII
Dr Sabin NSANZIMANA	DG RBC	20/10/2021	KII
Dr Patrick NDIMUBANZI	E.S. HRH Secretariat		KII
Dr Daniel NGAMIJE Dr Tharcisse MPUNGA	Hon. Minister of Health MOS Min. of Health	21/10/2021	FGD
Dr. Regis HITIMANA	DDG-Benefits, RSSB	22/10/2021	KII
Dr Parfait UWILAYIRE Donatien NGABO	HOD Planning, HF and M&E Director of Planning/M&E	27/10/2021	KII
Dr Corneille NTIHABOSE Edward KAMUHANGIRE	HOD Clinical Services/MOH Director of Quality of Services	11/11/2021	KII

Dr Angeline MUMARARUNGU Pascal KAYOBOTSI Vital NSENGIMANA	Director of Health Financing /MOH and colleagues	15/11/2021	FGD

Annex 2. Core Documents Review

- HSSP4 (2018-2024) and related policies and strategic plans
- (HIV, TB, Malaria, NTD, MNCH, ASRH and FP, Health Financing, HRH)
- Health sector M&E plan (2018-2024)
- District specific plans
- Rwanda vision 2050
- 7-year Government Program/National Strategy for Transformation (NST1) (2017-24)
- Program specific strategic plans
- DHS 2020 report
- Health Sector performance report (2019-2020)
- Rwanda Health Sector Policy (2015)
- Rwanda Health Policy review Synthesis report (2021)
- Annual Sector and Departmental performance reports
- Partner and Donor reports
- Sampling of reports of key operational units (Teaching, Provincial and District Hospitals; DHMTs)
- Published articles on Rwanda's health sector
- African Union Health Strategy and annual reports
- EAC Health Strategy and reporting
- Workload Indicators of Staffing Need (WISN) Report, Application in the Health Facilities in Rwanda, MOH, April 2019
- The World Bank. Socio-Economic Analysis of Health Insurance in Rwanda. *Findings from EICV5 Household Survey, November 18, 2019.* By: Pia Schneider, Shohei Nakamura and Haoyu Wu
- Health Resource Tracking Tool (HRTT) Report 2017-2020, MOH (2022)

Annex 3 The MTR Team

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  - Mary HADLEY, ENABEL
  - Brenda KATEERA, CHAI
  - Tiwadayo BRAIMOH CHAI

Annex 4 HSSP4 Logical Framework

HSSP4 LOGICAL FRAMEWORK: INDICATORS, BASELINE, TARGETS & RESULTS

HSSP 4 IMPACT INDICATORS

Indicator	Baseline 2015	Target 2021	Target 2024	Current result (2020)	Source of data
Maternal mortality rate	210	168	126	203	DHS
Neo-natal mortality rate	20	18	15.2	19	DHS
Under five mortality rate	50	48	35	45	DHS
Infant mortality rate	32	28	22.5	33	DHS

HSSP 4 OUTCOME & OUTPUT INDICATORS

1.Pregnancy, early life and children	Baseline 2016-17	Target 2021	Target 2024	Current result 2020-21	Source of data
Maternal & Neonatal and Child Health (MNCH)					
Percentage of births attended by skilled health professionals	91	>95	>95	94	DHS
ANC coverage (4 standards visits)	44	47	51	47	DHS
% New-borns with at least one PNC visit within the first two days of birth	19	25	35	70	DHS
Teenage pregnancy rate	7.3	<7	<7	5	DHS
Adolescent birth rate (aged 10-14 years; aged 15-19 years) per 1,000 women in that age group	5.5	<5	<5	0 (<15) 3.2 (15-19)	DHS
Proportion of children with diarrhoea receiving oral rehydration solution (ORS)	12	>10	>10	34.1	DHS
Modern contraceptive prevalence rate (mCPR)	48	54.6	60	58.4	DHS
Unmet need for family planning	19	17	15	13.6	DHS
EPI indicators					
% Children 12-23 months fully immunized	93	>93	>93	96	DHS

% Exclusive breastfeeding <6 months	87	>90	>90	80.9	DHS
Nutrition indicators					
Prevalence of Malnutrition (stunting) among children under 5 years	38	29.9	19	33	DHS
2. Infectious Diseases	**Baseline 2016-17**	**Target 2021**	**Target 2024**	**Current result 2020-21**	**Source of data**
HIV and Hepatitis B					
HIV prevalence among people aged 15-49 years	3	3	<3	3	RPHIA
Number of new HIV infections per 1,000 uninfected population, by sex, age and key population	2.7	2.3	2	0.8	DHIS2
Proportion of persons diagnosed with HIV infection receiving sustained ART	82.7	85	90	92.5	DHIS2
HIV Incidence/1,000 population	2.7	2.5	2	0.8	DHIS 2
Percentage of infants born to HIV + mothers free from HIV by 18 months	95	>95	>95	98.3	DHIS2
Hepatitis B incidence per 100,00 population	NA	<3	<2	3	
TB					
TB Incidence per 100,000	58	45	31.8	58	WHO Global TB report
TB treatment coverage rate	80.4	86	88	73.5	Annual Statistical booklet
TB treatment success rate (TSR) for all forms of TB cases (DS & DR TB cases)	85	87	>87	88.2	Annual Statistical booklet
Malaria and other parasitic diseases					
Proportion of households with at least one LLIN	81	84	85	66	DHS 2019/20
Malaria incidence per 1000	308	200	122	114	Malaria and OPD Annual

					report 2020-2021
Malaria proportional mortality rate	5.7	4.5	3	0.8	Malaria and OPD Annual report 2020-2021
Proportion of children under five years old who slept under a LLIN the previous night	80	84	85	56	DHS 2019/20
Proportion of targeted population who received MDA	96	97	98	95	Malaria program report
Prevalence of soil transmitted helminthiasis (STH)	45.2	35	<20	48	Malaria program report
Prevalence of schistosomiasis(SCH)	1.9	1	0.5	1	Malaria program report
Neglected Tropical Diseases (NTD)					
Proportion of newly diagnosed leprosy with grade 2 disability	19	13	10	21	Annual Statistical booklet

3. Non-Communicable Diseases (NCDs) & Injuries	Baseline 2016-17	Target 2021	Target 2024	Current result 2020-21	Source of data
NCDs					
Percentage of NCD combined high risk factors in the population aged between 15-64 years	16.4	15	12	NA	
Percentage of reduction of premature mortality (under 40 years old) due to NCDs (Cancer, HTA and diabetes)	NA	50	80	NA	
Percentage of reduction of premature mortality (under 40 years old) due to NCDs due to road traffic accidents (RTA) as	NA	50	80	NA	

the leading cause in non-intentional injuries					
Teeth and gum diseases morbidity rate at health facility level	4%	2.07%	1.84%	4.5%	Indicate data source
Eye diseases problem morbidity rate at health facility level	3	<2	<2	2.5	Indicate data source
Cataract Surgical rate (number of cataract surgeries per million)	400	700	1,000	504.8	Indicate data source
Age-standardized prevalence of current tobacco use among persons aged 15 years and older (outcome)	12.9	9.03	6.32	3.9%	DHS 2019/20
Age-standardized prevalence of overweight and obesity in persons aged 18+ years	17.1%	<17.1%	<17	NA	
Mental Health					
Proportion of new cases treated in health facilities for mental disorders	0.1	0.2	0.6	0.4	Annual Statistical booklet
Health promotion and prevention					
Percentage of health centres without water	16	0	0	1	Clinical Department Report
% of Public Health facilities (RH, PH, DH and HC) with effective waste management systems according to MOH/WHO standards	76	84	100	90	Indicate data source
4. HEALTH SECURITY					
Proportion of outbreaks with a case fatality rate below recommended threshold	80	100	100	100	Indicate data source
International Health Regulations (IHR) Core capacity index	76	46	100	74	SPAR, 2020

5. Quality assurance and improvement programs	Baseline 2016-17	Target 2021	Target 2024	Current result 2020-21	Source of data

% Malpractice cases assessed and addressed	NA	>95%	>95%	85%	RGB Report, 2020-21
Percentage of the population satisfied with health services	74.9	>80	>80	73.7	Administrative report, 2020
Independent accreditation body in place and functional	0	1	1	1	RMDC report
Number of National referral and teaching Hospitals accredited	1	3	5	1	Hospital annual progressive assessment report
Number of newly upgraded referral hospitals that have achieved level three of the national accreditation process	0	2	3	0	Hospital annual progressive assessment report
Number of Provincial Hospitals that have achieved level three of the national accreditation process	0	2	4	0	Hospital annual progressive assessment report
Number of DH that have achieved level two of the national accreditation process	0	15%	50%	14%	Hospital annual progressive assessment report
Number of laboratories reaching 5-star (Five Star) accreditation	1	2	5	3	NRL report
% Private HFs (polyclinics and hospitals) enrolled and pursuing level 1 of accreditation process	0	10%	>95%	74% (26/35)	Accreditation baseline assessment report
6. Health Systems Inputs and Actions	**Baseline 2016-17**	**Target 2021**	**Target 2024**	**Current result 2020-21**	**Source of data**
Health Workforce					
Doctor/pop ratio (GP and Specialists as well)	1/10,055	1/9,000	1/7,000	1/8,247	MOH SPR 2019/20
Nurse/pop ratio	1/1,094	1/900	1/800	1/1,198	MOH SPR 2019/20
Midwife/pop ratio (women aged from 15-49)	1/4,064	1/3,500	1/2,500	1/2,340	MOH SPR 2019/20
Pharmacist /pop ratio	1/16,871	1/16,000	1/15,500	1/16,848	MOH SPR 2019/20
Lab Technicians /pop ratio	1/10,500	1/9,000	1/7,500	1/6,401	MOH SPR 2019/20
Doctor attrition rate	NA	<10%	<5%	NA	
Service Delivery including infrastructure					

Number of sectors without a health centre	17	8	0	11	District Consultation forum report
Number of health posts constructed/rehabilitated in a cell previously without any other health post	473	593	623	1,091	National Leadership retreat report
Number of super specialised health facilities (to reduce the referrals abroad and promote medical tourism)	4	6	8	?	Indicate data source
Surgical procedures per 100,000 population	971	1,500	3,000	1,294	MOH SPR/ 2019/20
Peri-operative mortality rate (due to surgical procedure)	3.1	2.5	2	0.51	MOH SPR/ 2019/20
Ratio ground ambulance / population	1/50,505	1/50,000	<1/50,000	1/45,327	MOH SPR/ 2019/20
Average time to walk to a nearby HF (in minutes)	56	50	45	49.9	EICV 2016/2017
Number of hospitals with functional basic maintenance system (trained manpower, available tools and space for operations)	8	42	50	78	MOH SPR/ 2019/20
Number of referral hospitals with functional telemedicine facilities	1	3	4	3	
Percentage of health centres without electricity (not connected to a nearby grid)	17.2	0	0	0.5	
Percentage of Health centres with functional internet and local area network connectivity	36.5	70	100	95	
National Service availability readiness score	NA	60	80	NA	
Health Products, Medicines and Commodities					
% of health products and health technologies available at the Central Medical Warehouse	55	80	90	91	Clinical Department Report

% HFs with < 5% of medical products stock-outs	87	>95	>95	NA	
Leadership and Governance					
Citizen level satisfaction rate with services	77	80	80	81.9	RGB Report card
Existing of an umbrella for all health professional regulatory bodies	0	1	1	0	
Health Information systems and research					
% causes of deaths are reported according to ICD10	NA	100	100	50.44	Rwanda Vital Statistics Report, 2020
% births registered according to the CRVS	NA	100	100	85.86	
% of public health facilities (DH,PH and RH) using EMR full package system	4	43	72%	52%	MOH IT report (2021)
% private HF (dispensaries, clinics, polyclinics and hospitals) regularly reporting through national data collection systems (DHIS-2 and e-IDSR)	54	100	100	95	Health Sector Performance Report
Health care Financing					
Proportion of population covered by health insurance	90	>95	>95	85.6	NISR study based on EICV 3,4,5
% Household expenditure on health as a share of total household income	NA	<25	<10	NA	Community based health insurance financial sustainability plan. - 2021

% HFs with < 5% of medical products stock-outs	87	>95	>95	NA	
Leadership and Governance					
Citizen level satisfaction rate with services	77	80	80	81.9	RGB Report card
Existing of an umbrella for all health professional regulatory bodies	0	1	1	0	
Health Information systems and research					
% causes of deaths are reported according to ICD10	NA	100	100	50.44	Rwanda Vital Statistics Report, 2020
% births registered according to the CRVS	NA	100	100	85.86	
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