Republic of Kenya

Kenya Health Sector Monitoring & Evaluation Plan

November 2019

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Abbreviations

AIDS	Acquired immunodeficiency syndrome
APR	Annual Performance Report
BMI	body mass index
CDC	Centre for Disease control
CDH	County Department of Health
CRVS	Civil Registration and Vital Statistics System
DANIDA	Danish International Development Agency
KHIS	District Health Information Software 2
GBD	Global Burden of Disease Study 2017
GDP	gross domestic product
GHO	Global Health Observatory of WHO
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
Global Fund	Global Fund to Fight AIDS, Tuberculosis and Malaria
HDC	Health Data Collaborative
HIV	human immunodeficiency virus
ICT	information and communication technology
IHR	International Health Regulations of 2005
iHRIS	iHRIS Manage software
IRA	Insurance Regulatory Authority
IU	international units
KDHS	Kenya Demographic and Health Survey
KEMSA	Kenya Medical Supplies Authority
KENAS	Kenya Accreditation Service
KENPHIA	Kenya Population-based HIV Impact Assessment
KEPH	Kenya Essential Package for Health
KHFA	Kenya Harmonized Health Facility Assessment
KHHEUS	Kenya Household Health and Expenditure Survey
KHIS	Kenya Health Information System
KHPOA	Kenya Health Professions Oversight Authority
KHRO	Kenya Health and Research Observatory
KHSSP	Kenya Health Sector Strategic Plan
KIBHS	Kenya Integrated Household Budget Survey

KMCHUL	Kenya Master Community Health Unit List application
KMHFL	Kenya Master Health Facilities List application
KMIS	Kenya Malaria Indicator Survey
KMLTTB	Kenya Medical Laboratory Technicians and Technologists Board
KNBS	Kenya National Bureau of Statistics
KNBTS	Kenya National Blood Transfusion Service
LMIS	Logistics Management Information System
MEDS	Mission for Essential Drugs and Supplies
MOH	Ministry of Health
MOT	Ministry of Transport, Infrastructure, Housing, Urban Development and Public Works
MTR	2016 midterm review of the KHSSP 2014–2018
MU	million units
NCD	non-communicable disease
NCI	National Cancer Institute
NHA	National Health Accounts
NHIF	National Health Insurance Fund
NPHLS	National Public Health Laboratory Services
NTSA	National Transport and Safety Authority
NVIP	National Vaccine and Immunization Program
PHC	primary health care
SDI	Service Delivery Indicators
STEPS	STEPwise Survey for Non-Communicable Diseases Risk Factors
TB	tuberculosis
TIBU	Tuberculosis Information from Basic Units system
UHC	universal health coverage
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WB	World Bank
WHO	World Health Organization

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The monitoring an evaluation plan 2018-2023 has been developed to monitor the Kenya Health Sector Strategic Plan (KHSSP) 2018-2023. This strategic plan is the third KHSSP in the implementation towards achievement of the objectives of the Kenya Health Policy 2030 which aims at achieving the highest attainable standard of health for Kenyans

This document was developed through the tireless efforts of a team that dedicated time and energy and who include; Dr. Janette Karimi, Dr. Hannah Kagiri, Rose Muthee, Pepela Wanjala, David Njuguna, Dr. Elizabeth Wangia, Dr. Jamlick Karumbi, Dr. Mutile Wanyee, Benedette Ajwang, Clara Gitonga, Anthony Komen , Sam Ontiri, Anthony Komen, Felix Mwendwa, Fridah Ngatha, Cynthia Kyule and Timothy Odhiambo .

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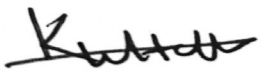

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Foreword

The KHSSP 2018–2023 is the second five-year strategic plan to have been developed under the Kenya Health Policy 2014–2030. It is the first, however, to be given the special focus of accelerating the health sector's progress towards the achievement of universal health coverage (UHC), in accordance with the "Big Four" agenda of the Government of Kenya.

With the coming into force of the KHSSP 2018-2023, concerted efforts need to be put together to adequately monitor the progress towards the set milestones and targets. This monitoring and evaluation plan builds on an integrated approach to monitoring the health sector is mandated to control, prevent and leverage on the limited available resources. The information generated will inform the implementers, decision-makers and various other stakeholders whether the development of the health sector is on track and when and where changes may be needed.

The KHSSP 2018–2023, the Draft Road Map Towards Universal Health Coverage in Kenya 2018–2022 and the Kenya Primary Health Care Strategic Framework 2019–2024 are the mani reference guides for this plan, which acts as a tracking guide for these plans.

Kenyan health sector in monitoring and evaluating its performance, focuses on the UHC agenda and KHSSP goals. Its aim is to provide the strategic information needed for evidence-based decision-making at both the national and subnational levels. In addition, it will be the basis of the "one monitoring framework" that integrates the information from the State actors (national and county ministries, departments, agencies), non-State actors (the private sector, faith-based organizations, civil society organizations, non-governmental organizations, professional associations) and external actors (development partners, technical partners).

1. Introduction

1.1 Vision and mission of the Ministry of Health

The Ministry of Health is responsible for the governance and stewardship of all health-related activities carried out by all actors in the health sector in Kenya. Its vision is the realization of a healthy, productive and globally competitive nation and its mission is to build a progressive, responsive and sustainable health-care system for the accelerated attainment of the highest standard of health for all Kenyans. The Ministry is committed to providing equitable, affordable, accessible and high-quality health care for all. It is mandated to deal with issues such as health policy; health regulation; national referral facilities; and capacity-building and technical assistance for the counties. The mandate of the counties includes health service delivery, with the exception of national referral services, through the management and oversight of county health facilities and pharmacies; ambulance services; the promotion of primary health care (PHC); the licensing and control of businesses that sell food to the public; veterinary services (excluding regulation of the profession); cemeteries, funeral parlours and crematoriums; and refuse removal, refuse dumps and solid waste disposal.

1.2 Background and context of the Kenya Health Sector Strategic Plan, Draft Road Map Towards Universal Health Coverage in Kenya 2018–2022 and the Kenya Primary Health Care Strategic Framework 2019–2024

1.2.1 Background and context of the Kenya Health Sector Strategic Plan

The Kenya Health Sector Strategic Plan (KHSSP) 2018–2023 provides the health sector with the medium-term focus, objectives and priorities needed to enable Kenya to move towards the achievement of the health goals described in the Constitution of 2010; national development agendas such as the Kenya Vision 2030 and the Kenya Health Policy 2014–2030; and global development commitments such the Sustainable Development Goals (SDGs) of the 2030 Agenda for Sustainable Development. It also details the desired health outcomes, the priority health investments needed to achieve the outcomes, the resource implications and financing strategy and the organizational frameworks (including the governance structure) required to implement the plan.

The investment areas of the policy are as follows:

1. **Health service delivery:** the organizational arrangements required for the delivery of services.
2. **Health leadership and governance:** the oversight required for service delivery.
3. **Human resources for health:** the human resources required for the provision of services.
4. **Health products and technologies:** the essential medicines, medical supplies, vaccines, health technologies and public health commodities required for the provision of services.
5. **Health financing:** the financial arrangements required for the provision of services.
6. **Health infrastructure:** the physical infrastructure, equipment, transport and information and communication technology (ICT) needed for the provision of services.
7. **Health information monitoring and evaluation:** the systems for generation, collation, analysis, dissemination and utilization of the health-related information required for the provision of services.
8. **Health research and development:** the creation of a culture in which research plays a significant role in guiding policy formulation and action to improve the health and development of the people of Kenya.

The KHSSP 2018–2023 seeks to contribute to achievement of the objectives of the Kenya Health Policy 2014–2030, which are:

1. To eliminate communicable conditions.
2. To halt and reverse the rising burden of non-communicable conditions and mental disorders.
3. To reduce the burden of violence and injuries.
4. To provide essential health care.
5. To minimize exposure to health risk factors.
6. To strengthen collaboration with the private and other sectors that have an impact on health.

The objectives of the KHSSP 2018–2023 itself are:

1. To reinforce and improve access to people-centred essential PHC services.
2. To increase access to and improve the quality of health services at all levels.
3. To institutionalize emergency preparedness and response, early recovery and resilience.
4. To build and strengthen partnerships and sector coordination mechanisms.
5. To strengthen the health system for effective delivery of health services.
6. To advocate and mobilize adequate financing for health at all levels.

The KHSSP 2018–2023 is the second five-year strategic plan to have been developed under the above-mentioned objectives of the Kenya Health Policy 2014–2030. It is the first, however, to be given the special focus of accelerating the health sector's progress towards the achievement of universal health coverage (UHC), in accordance with the "Big Four" agenda of the Government of Kenya. It also incorporates the priorities and strategies of flagship projects of county health departments and the Ministry of Health from the Third Medium-term Plan of the Kenya Vision 2030 and of the African Union Agenda 2063.

In preparation of the KHSSP 2018–2023, a midterm review of the KHSSP 2014–2018 was conducted by the Ministry of Health to take stock of the progress made during its implementation and to assess whether the health sector was achieving the set objectives. The review involved examination of the status of health sector inputs; systematic analysis of health data relating to various outputs and outcomes; analysis of the budgets and financial situation; and analysis of the implementation arrangements. The main findings are set out in the KHSSP 2018–2023.

1.2.2 Context of the Draft Road Map Towards Universal Health Coverage in Kenya 2018–2022

The Constitution provides the overarching legal framework to ensure a comprehensive rights-based approach to health delivery in Kenya. The Kenya Health Policy 2014–2030 gives directions that aim to help realign the health sector with emerging issues and to enable the country to attain its long-term goals, as outlined in the Kenya Vision 2030 and the Constitution. The Kenya Vision 2030 aims to transform Kenya into a newly industrializing, middle-income country

providing a high quality of life to all its citizens by 2030.

The Government has made a commitment to achieving UHC, the aim of which is to ensure access to high-quality health services for all people while protecting them from the risk of related financial hardship. Ensuring universal access to affordable, high-quality health services is critical for achieving the goal of ending extreme poverty and lays the foundation for economic growth and competitiveness grounded in the principles of equity and sustainability.

1. The following elements have been identified as key to guiding action to prioritize and implement UHC:
2. The right to health as a human right.
3. Leaving no one behind: equity in access to services, non-discrimination and a human rights-based approach.
4. Transparency and accountability in relation to results.
5. Evidence-based national health strategies and leadership aligning national development, social and health policies (enablers).
6. Health systems as the business of all: engagement of citizens, communities, civil society and the private sector.
7. Collaboration with all sectors to address the social determinants of health.
8. International cooperation based on mutual learning across countries and development-effectiveness principles.
9. Enhanced political will and social solidarity for the "Big Four" agenda to ensure coherence in the UHC policy across the country.
10. Sustainability.
11. Efficiency.

The Draft Road Map Towards Universal Health Coverage in Kenya 2018–2022 comprises the steps that the sector intends to take to scale up activities in key areas, as follows:

1. Human resources for health.
2. Essential medicines, commodities and equipment.
3. Health information systems and research.
4. PHC (primary care networks).
5. Community health services.
6. National social insurance model.

1.2.3 Context of the Kenya Primary Health Care Strategic Framework 2019–2024

The Kenya Primary Health Care Strategic Framework 2019–2024 is guided by the Constitution, the Kenya Vision 2030 and the Kenya Health Policy 2014–2030, which are complemented by the commitments made by the country at the global and regional levels.

The Kenya Primary Health Care Strategic Framework 2019–2024 specifies PHC as the means of achieving UHC. It also defines the management of PHC in the country. It is a follow-up to the efforts of the Ministry of Health to translate the 1978 Declaration of Alma-Ata, the 2018 Astana Declaration on Primary Health Care and the objectives of the Draft Road Map Towards Universal Health Coverage in Kenya 2018–2022 into an implementable programme.

The implementation of PHC over the next five years will be guided by the six strategic aims of the framework, as outlined below, which will be achieved through well-conceived interventions to meet strategic objectives:

1. Securing and strengthening political/ leadership commitment to achieve the PHC targets.
2. Building a strong workforce for health services at all PHC levels.
3. Improving access, availability, safety, efficiency and equitable service delivery in relation to PHC at all levels.
4. Enhancing financing for PHC.
5. Improving systems related to the supply chain, medical devices and infrastructure.
6. Improving the capacity to use data, research evidence and innovations for decision-making.

1.3 Purpose of the Monitoring and Evaluation Framework

The purpose of monitoring and evaluation is to track systematically the progress of the interventions suggested in the KHSSP 2018–2023,

the Draft Road Map Towards Universal Health Coverage in Kenya 2018–2022 and the Kenya Primary Health Care Strategic Framework 2019–2024 in order to evaluate the effectiveness, efficiency, relevance and sustainability of those interventions. The information generated will inform the implementers, decision-makers and various other stakeholders whether the development of the health sector is on track and when and where changes may be needed. Monitoring and evaluation form the basis of any modification of interventions and verification of the quality of the activities being conducted.

The present Monitoring and Evaluation Framework for the KHSSP 2018–2023, the Draft Road Map Towards Universal Health Coverage in Kenya 2018–2022 and the Kenya Primary Health Care Strategic Framework 2019–2024 serves as a guide for the Kenyan health sector in monitoring and evaluating its performance, with a focus on the UHC agenda and KHSSP goals. Its aim is to provide the strategic information needed for evidence-based decision-making at both the national and subnational (county, subcounty, etc.) levels. In addition, the present Monitoring and Evaluation Framework will be the basis of the "one monitoring framework" that integrates the information from the State actors (national and county ministries, departments, agencies), non-State actors (the private sector, faith-based organizations, civil society organizations, non-governmental organizations, professional associations) and external actors (development partners, technical partners). Use of the "one monitoring framework" along with the other elements of the "Three Ones" principle of the sector-wide approach (i.e. one planning framework and one budgeting framework), together with the operationalization of the draft Kenya Health Sector Partnership and Coordination Framework 2018–2030, will improve the overall efficiency, transparency and accountability of the health sector. The Monitoring and Evaluation Framework outlines the indicators to be tracked, when, how and by whom data will be collected and suggests the frequency and a timeline for collective, sector-wide performance reviews involving stakeholders.

Elements to be monitored include:

- National commitment to strengthen PHC to fast-track achievement of the overall goal of UHC, the commitments in the 2018 Astana Declaration on Primary Health Care and the Sustainable Development Goals
- Service statistics
- Service coverage/outcomes
- Client/patient outcomes (behaviour change, morbidity)
- Private sector investment outputs (public–private partnerships)
- Clients' access to services
- Quality of health services
- Impact of interventions

The evaluation plan outlined in part 6 of the present framework elaborates on the periodic performance reviews/surveys and special research that will complement the knowledge base formed from routine monitoring data. It addresses evaluation questions, samples and sampling methods, research ethics, data sources, data-collection and data-analysis methods, variables and indicators and scheduling.

1.4 Monitoring and evaluation team

The national and county monitoring and evaluation units or the equivalent will be responsible for the overall oversight of monitoring and evaluation activities at their respective levels. Linkage of the health sector to the Government's overall national intersectoral monitoring and evaluation will be done by the Monitoring and Evaluation Directorate of the State Department for Planning in the National Treasury and Planning. Health-sector monitoring and evaluation units at the national and county levels will be responsible for the day-to-day implementation and coordination of the monitoring and evaluation activities in the present framework.

County monitoring and evaluation units will take the lead in the conduct of joint performance reviews at the subnational level. County health management teams will prepare the quarterly

reports and, in collaboration with county stakeholders, organize county-level quarterly performance review forums. The national monitoring and evaluation unit will organize the annual health forum, which will bring together all stakeholders in the field of health to carry out a joint review the performance of the health sector for the year in question. The purpose of the joint reviews will be to evaluate performance, determine future priorities, develop action plans and ascertain the budget required for the subsequent period.

There are benefits to appointing the members of a monitoring and evaluation team at the start of the implementation period. The timely collection and assurance of the good quality of health data are more likely if there is a team tasked with these activities. Counties are therefore expected to strengthen their functioning in terms of monitoring and evaluation by investing in both the infrastructure and the human resources that are required. Technical capacity-building for data analysis could be promoted through collaboration with research institutions or through training for county monitoring and evaluation staff. In addition, the low level of data reporting, especially from lower-level health facilities, has been a problem and stems from use of manual data-entry methods. During the next five years, more investment in health information systems to facilitate online reporting is planned.

2. Framework for the Kenya Health Sector Strategic Plan 2018–2023

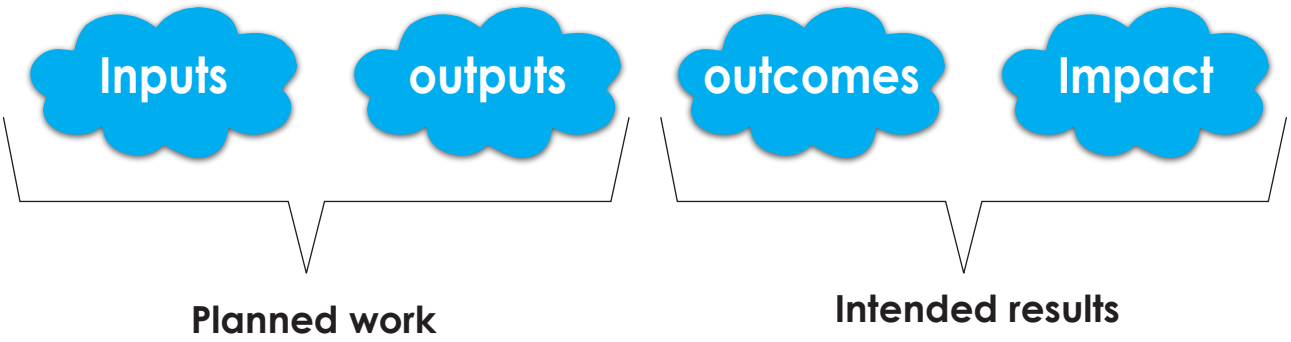
2.1 Introduction

Frameworks are key elements of monitoring and evaluation as they that contain the components of a project and the sequence of steps needed to achieve the desired outcomes.

2.2 Logic model

A logic model, as seen in figure 1, links programme inputs and activities/processes with theoretical assumptions about related outcomes in a systematic and visual way, to facilitate the planning and communication of objectives and promote shared understanding of the relationships between the resources required, the activities conducted and results expected.

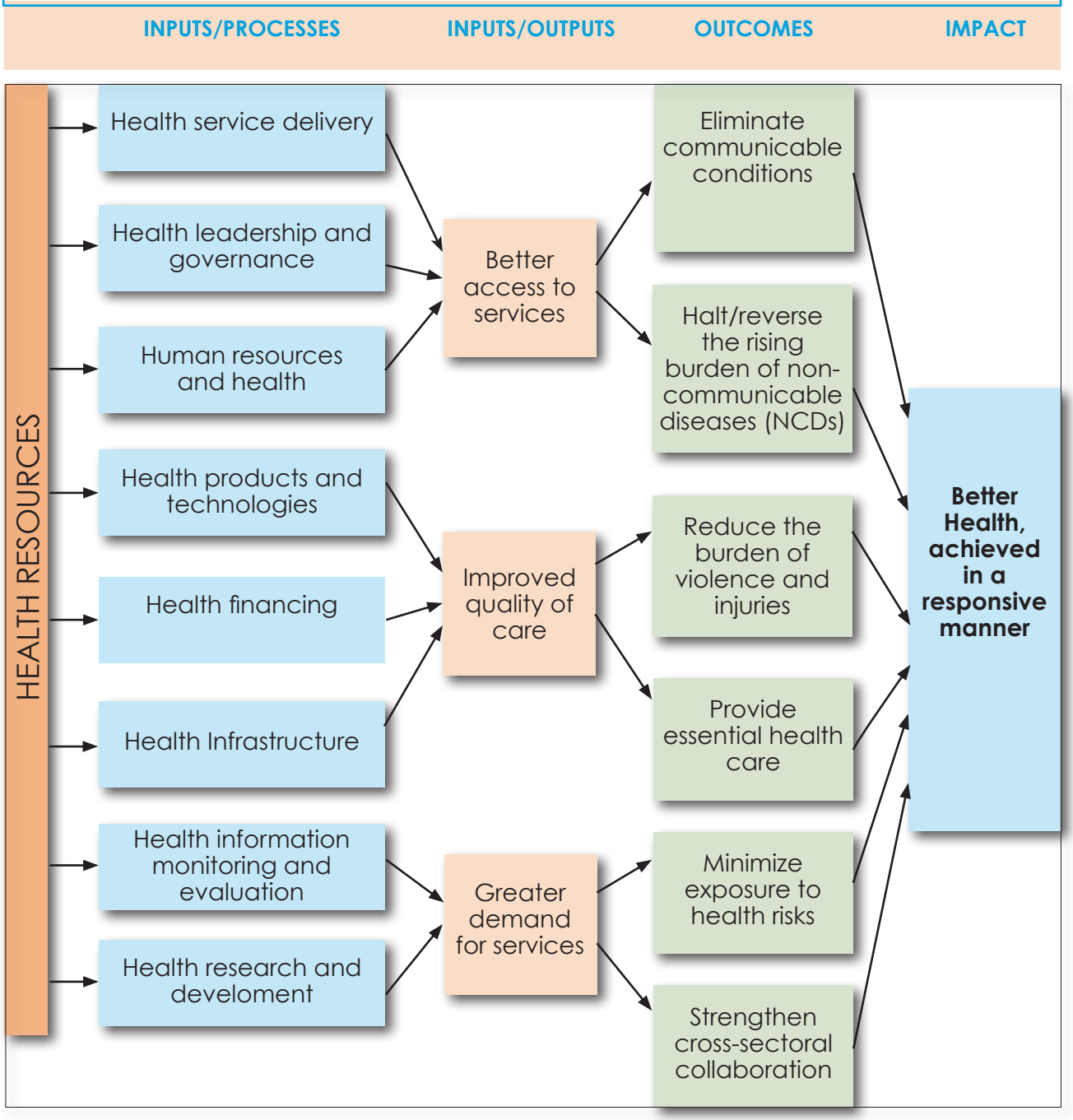
Figure 1: Logic Model



2.3 Conceptual framework

The Monitoring and Evaluation Framework will outline what is to be monitored and measured at each stage of implementation, with a clear logical chain between the chosen indicators at the input, activity, output, outcome and impact levels, as seen in figure 2.

Figure 2: Implementation framework for the Kenya Health Sector Strategic Plan 2018–2023



2.4 Result framework

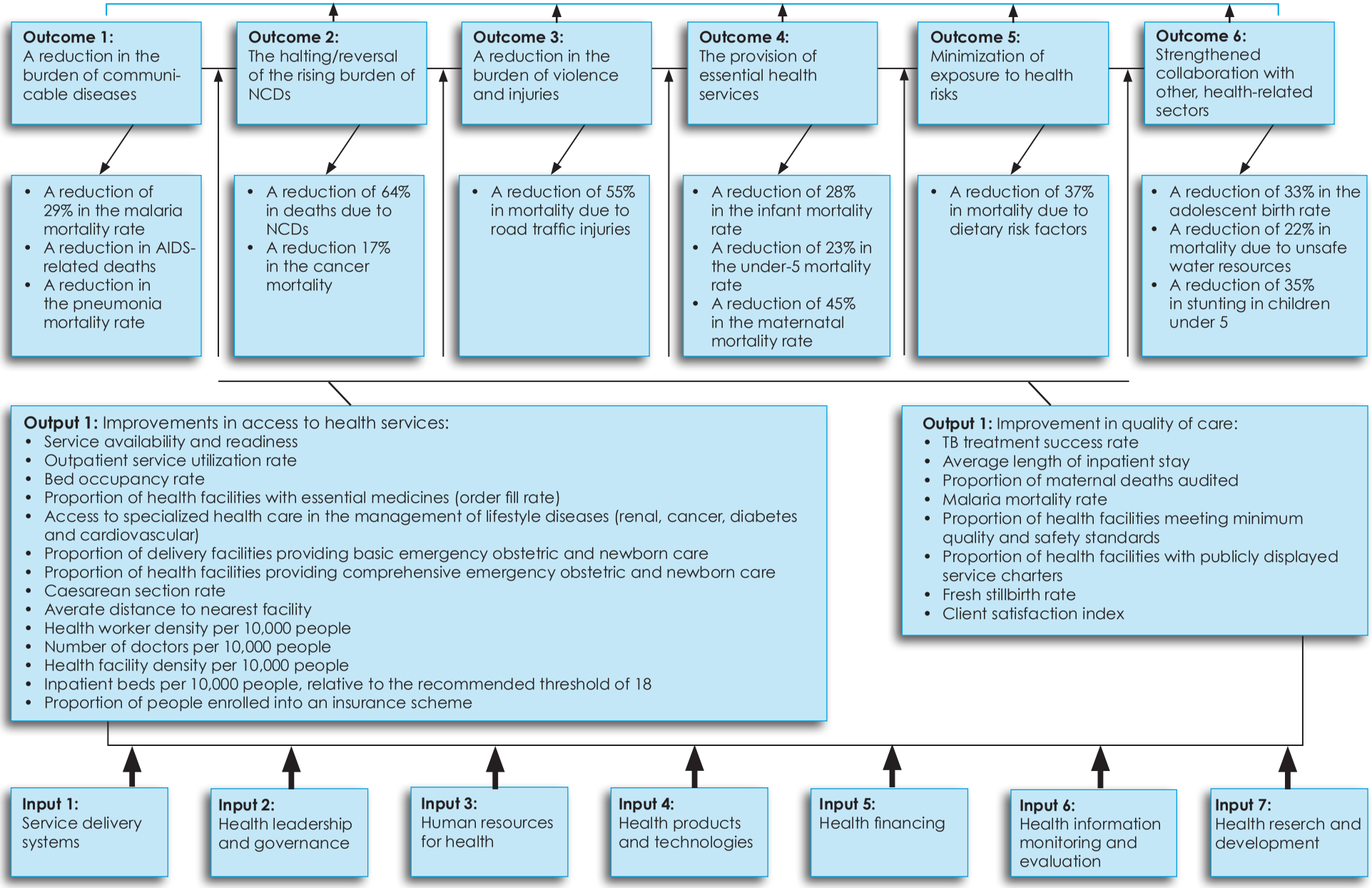
Figure 3 provides more details about each of the elements of the implementation framework at the input, activity, output, outcome and impact levels.

2.5 Critical assumptions

Some of the critical assumptions that will guide successful implementation of the KHSSP 2018–2023 include:

1. That adequate and appropriate resources (financial, human-resource, infrastructure, time) will be available for the implementation as it is planned;
2. That adequate and appropriate resources will be used efficiently during implementation;
3. That the quality, relevance and utility of the trainings offered in service and prior to service will result in knowledge gain and behaviour change;
4. That data, information and any other evidence used during the design and implementation of the KHSSP 2018–2023 are credible, relevant and useful and can be accessed in a timely manner;
5. That increased accountability to communities and various other stakeholders will have a positive impact on outcomes;
6. That partners' and stakeholders' requirements or conditions will not adversely affect implementation of the KHSSP 2018–2023;
7. That support from partners and other stakeholders will be harmonized and aligned for maximum benefit;
8. That implementation activities are sensitive to underlying, and often subtle and/or invisible challenges that might affect the success of the interventions;
9. That the policy and political environment will be conducive to implementation;
10. That peace and security will be maintained during the implementation period;
11. That outside initiatives or policies will favour implementation;
12. That the outputs achieved will result in the achievement of the expected outcomes and those outcomes, if achieved, will contribute to the achievement of the desired impact;
13. That the economic environment will favour implementation;
14. That the effects of environmental and climate change, among others, will be managed effectively.

Figure 3:Result framework for the Kenya Health Sector Strategic Plan 2018–2023



3. Implementation of the Monitoring and Evaluation Framework for the Kenya Heath Sector Strategic Plan 2018–2023, Draft Road Map towards Universal Health Coverage in Kenya 2018–2022 and Kenya Primary Health Care Strategic Framework 2019–2024

3.1 Introduction

Implementation of the Monitoring and Evaluation Framework will be spearheaded by the Ministry of Health in collaboration with development partners and stakeholders at the national and county levels to further enhance its success.

3.2 Critical actions to implement the framework

To ensure coordinated, structured and effective implementation of the framework, the national Ministry of Health and county departments of health will work together with partners and the private sector to do the following:

a) *Establish a common data architecture:*
- Develop data-exchange standards
- Develop new-generation integrated tools in consultation with stakeholders
- Orient health-care workers to the integrated tools
- Conduct training in use of the third edition of the Health Sector Indicator and Standard Operating Procedure Manual
- Develop standard operating procedures to guide monitoring and evaluation activities/ processes at all levels

b) *Improve the performance monitoring and review process*
- Develop a joint integrated supervision checklist
- Revitalize the joint annual review meeting
- Strengthen periodic performance review forums at all levels
- Develop standard operating procedures and guidelines on data management, data-quality assurance and performance reviews

c) *Enhance the sharing of data and use of information for evidence-based decision-making*
- Revitalize data-review forums at the programme, county and national levels
- Develop and disseminate appropriate information products
- Build a culture of data use for programme management, budgeting and planning
- Establish and put into operation the Kenya Health and Research Observatory

3.3 Roles and responsibilities of stakeholders

According to the draft Kenya Health Sector Partnership and Coordination Framework, there are three key interrelated stakeholder/actor groups within the health sector, namely State actors (national and county governments), non-State actors (civil society organizations, non-governmental organizations, for-profit organizations and not-for-profit organizations) and external actors (bilateral and multilateral development partners). All the activities proposed within the present framework will be spearheaded by State actors, primarily the Department of health sector monitoring, evaluation and informatics within the National Ministry of Health, in collaboration with external actors, with input from non-State actors and public participation. Stakeholder buy-in is crucial for ensuring uniform implementation of the Monitoring and Evaluation Framework and standardized reporting.

3.3.1 *Department of Health Sector Monitoring, Evaluation and Informatics*

Apart from overseeing all the activities, processes and stakeholders working to implement the Monitoring and Evaluation Framework, the Division of health sector monitoring and evaluation will have the following broad roles and responsibilities in accordance with its constitutional mandate of policy development, capacity-building and coordination:

- Dissemination of the Monitoring and Evaluation Framework throughout the health sector to ensure harmonization of activities
- Development of a detailed and costed implementation plan for the framework
- Development and dissemination of policies and operational guidelines for the different components of monitoring and evaluation and provision of support for counties in implementing them
- Organization of structured, competency-based capacity-building for county and programme health workers in different aspects of the Monitoring and Evaluation Framework
- Resource mobilization (financial and technical) for monitoring and evaluation activities
- Development of a data-analytics and data-utilization plan to ensure that the reports from monitoring and evaluation systems and research are used to guide programme interventions, policies and budgets and routine decision-making
- Preparation of national monitoring and evaluation reports
- The building of strong institutional collaboration, which is critical to the success of monitoring and evaluation

3.3.2 *Implementing partners and agencies*

The present framework will be implemented by agencies and institutions that will focus on monitoring and evaluating specific target areas of the KHSSP 2018–2023, the Draft Road Map Towards Universal Health Coverage in Kenya 2018–2022 and the Kenya Primary Health Care Strategic Framework 2019–2024, and the respective organizational annual work plans. These include line ministries, civil society organizations and private sector organizations. The implementers will report through the relevant monitoring system for the specific programmatic activity.

They will be responsible for:

- Aligning all of their monitoring and evaluation activities to ensure achievement of the goals of the present framework and the institutional monitoring and evaluation goals articulated in relevant sectoral, programmatic and county-specific plans;
- Using existing monitoring and evaluation systems and developing subsystems that utilize existing structures at all levels of the health information system;
- Using the data collected for decision-making;
- Supporting their respective client institutions in complying with mandatory reporting requirements in line with the Health Act of 2017 and other policies.

3.3.3 *Other line ministries, departments and agencies*

The achievement of the goals of the KHSSP 2018–2023, the Draft Road Map Towards Universal Health Coverage in Kenya 2018–2022 and the Kenya Primary Health Care Strategic Framework 2019–2024 will depend on activities implemented or monitored by other line ministries, departments and agencies. Once these activities have been negotiated and indicators for measuring progress have been agreed with those institutions, they will contribute to the implementation of the present framework. The specific roles of other line ministries, departments and agencies will be to:

- Monitor and report on progress in the implementation of key activities that fall within their mandates using jointly agreed indicators
- Participate in high-level monitoring and evaluation activities within the annual calendar of the Ministry of Health

Support the surveys and reviews needed to evaluate the impact of joint interventions

3.3.4 *Development partners*

Development partners are crucial for implementation of the present Monitoring and Evaluation Framework and the subsequent strengthening of the related systems. They will be expected to provide substantive technical and financial support to ensure that the systems are functional and that their reporting requirements and formats are in line with the indicators outlined in the framework. The partners are to ensure the alignment of their efforts with those of existing development partners and stakeholders on the basis of a single, agreed, country-level monitoring and evaluation system. In addition, they will use reports from the Department of Health Information Systems, Monitoring and Evaluation in decision-making, advocacy and engagement with other partners for the purposes of resource mobilization.

3.3.5 *County departments responsible for health services*

Counties are expected to play a significant role in the provision of technical services and the coordination of monitoring and evaluation activities at that level. A functional monitoring system will also meet their own needs for critical data for decision-making, beyond the routine information collated from the health information system. The broad roles and responsibilities of the county health management teams will be to:

- Establish and equip robust monitoring evaluation units aligned with their respective departmental organization charts;
- Provide a dedicated team of staff, comprising the mix of monitoring and evaluation professionals needed to implement the framework (monitoring and evaluation officers, human resource information officers, statisticians, planners, economics, epidemiologists)
- Coordinate and supervise the implementation of all monitoring and evaluation activities at the county, subcounty and facility levels

3.3.6 *Health facilities*

Given that implementation of programmes is undertaken at the health-facility level, it is imperative that the data collected and the reports generated are disseminated to and then used at the facilities. They should be used to monitor trends in the supply of basic inputs, routine activities and progress made, so that adjustments and informed decisions about programmes can be made and access to services and the quality of their delivery can be improved.

3.3.7 *Community health units*

The role of community units will be to identify and notify the health authority of all health and demographic events that occur at the community level and engage in related monitoring and evaluation. Events will be reported by the main actors of a community, such as community health workers, teachers and religious leaders, through a well-developed reporting mechanism, the Community Health Information System, developed by the Division of Community Health.

3.4 Resource mobilization

Funding for the present framework will be aligned with the roles and tasks envisaged for each category of stakeholder. With its primary oversight role in the implementation of the framework, the Department of Health Information Systems, Monitoring and Evaluation will be the focal point for resource mobilization activities for monitoring and evaluation in the health sector. At the county level, the county departments of health will play a similar role, in consultation with their respective departments of finance and planning. Primary sources of funding will include allocations from the Ministry of Health and county governments, along with cash and in-kind contributions from development partners, non-governmental organizations and the private sector. It is proposed that organizations, departments and units allocate at least 10 per cent of their resources to monitoring

and evaluation activities. This should be taken into account in all planning and budgeting for the development of data-collection tools, the conduct of training, improvement of computer hardware, the development of software such as monitoring and evaluation databases, communication and supportive supervision for on-the-job technical assistance.

3.5 Key guiding documents

A wide range of guidelines, protocols and standards will support implementation of different aspects of the present framework. While some of these exist already, the Ministry of Health will work with partners and stakeholders to develop other appropriate guidelines during the implementation period.

The following documents and mechanisms have been developed to steer the implementation of this framework:

- Guidelines for the Institutionalization of Monitoring and Evaluation in the Health Sector
- The Kenya Health Sector-Wide Approach: Code of Conduct, for partners supporting implementation of the KHSSP 2018–2023
- Specific monitoring and evaluation frameworks/plans at the programme, county and Ministry of Health levels
- Standard operating procedures for different aspects of the data value chain (data entry, data validation, data management, data-quality assurance, etc.)
- A protocol for data-quality assurance
- Joint supervision checklists and a log for tracking issues
- National- and county-level annual performance review templates and guidelines
- Guidance on the incorporation of the outcomes of research into standard operating procedures

3.6 Calendar of key monitoring and evaluation activities

The national Ministry of Health will oversee the development of sector-wide calendar for key monitoring and evaluation activities that is aligned to the accountability cycle of the health sector. This will ensure that resources and activities are aligned to meet the needs of the different actors in the health sector. The calendar will cover the key phases of programme implementation and the accountability cycle.

3.7 Updating of the framework

The present framework is aligned to the implementation of the KHSSP 2018–2023, the Draft Road Map Towards Universal Health Coverage in Kenya 2018–2022 and the Kenya Primary Health Care Strategic Framework 2019–2024 and covers the five-year period between 2018 and 2022. Regular updating of the framework will take place in the event that there are modifications to the implementation plans and/or the inclusion of new interventions during the implementation period. A midterm review of the framework will be conducted in 2020 to measure progress in its implementation and ascertain whether amendments are needed.

4. Indicators and Information Sources

4.1 Indicators of the Kenya Health Sector Strategic Plan 2018–2023

Indicators show which data need to be collected to assess progress in implementation of a strategy, project or programme and to see whether it is on track to achieve its goals and objectives.

4.1.1 Expected result (impact) indicators of the Kenya Health Sector Strategic Plan 2018–2023

Table 1 shows the impact indicators that will be monitored during implementation of the KHSSP 2018–2023.

Table 1: Expected result (impact) indicators and targets of the Kenya Health Sector Strategic Plan 2018–2023

Expected result (impact)	Indicator	Data source	Baseline	End target	Frequency of data collection
Mortality by age and sex			**2017–2018**	**2022–2023**	
Increase in overall life expectancy of 5 years	Life expectancy at birth in years	KDHS 2014	63	68	5 years
Increase in overall healthy life expectancy of 5 years	Healthy life expectancy in years	GHO 2016	58.9	63	5 years
Reduction in under-5 mortality rate of 23%	Under-5 mortality rate per 1,000 live births	KDHS 2014	52	40	5 years
Reduction in infant mortality rate of 28%	Infant mortality rate per 1,000 live births	KDHS 2014	39	28	5 years
Reduction in newborn mortality rate of 32%	Newborn mortality rate per 1,000 live births	KDHS 2014	22	15	5 years
Reduction in stillbirth rate of 35%	Stillbirth rate per 1,000 births	KDHS 2014	23	15	5 years
Mortality by cause					
Reduction in maternal mortality rate of 45%	Maternal mortality rate per 100,000 live births	KDHS 2014	362	200	5 years
Reduction in AIDS-related deaths	Number of AIDS-related deaths	Kenya HIV estimates 2018	28 200	13 266	5 years
Reduction in deaths from TB of 50%	TB mortality rate (%)	Annual WHO Global TB Report 2018	38	19	Annually
Reduction in malaria mortality rate of 30%	Malaria mortality rate (%)	KMIS 2015	5.6	4	5 years
Reduction in proportion of deaths due to NCDs (cardiovascular, cancer, diabetes, chronic respiratory) of 64%	NCD mortality rate (%)	STEPS 2015	55	20	5 years

Expected result (impact)	Indicator	Data source	Baseline	End target	Frequency of data collection
Reduction in cancer mortality rate of 17%	Cancer mortality rate in adults (%)	STEPS 2015	3	2.5	5 years
Reduction in mortality due to road traffic injuries of 55%	Mortality rate due to road traffic injuries (%)	KHIS	11	5	Annually
Reduction in mortality due to dietary risk factors of 37%	Mortality rate due to dietary risk factors per 100,000 people	GBD 2017	41.5	26	Annually
Morbidity					
Reduction in HIV prevalence rate of 14%	HIV prevalence rate (%)	KENPHIA 2019	4.9	4.2	Annually
Reduction in HIV incidence of 47%	HIV incidence rate (%)	KENPHIA 2019	0.19	0.1	5 years
Reduction in prevalence of diabetes of 58%	Diabetes disease prevalence rate per 100,000 people	STEPS 2016	1.2	0.5	5 years
Reduction in hepatitis B surface antigen prevalence rate of 29%	Hepatitis B surface antigen prevalence rate (%)	KENPHIA 2019	3	2.13	5 years
Reduction in TB incidence rate of 50%	TB incidence rate per 100,000 adults	Annual WHO Global TB Report	292	146	Annually
Reduction in malaria incidence rate among the population at risk of 22%	Malaria incidence rate per 100,000 people	KMIS 2015	166	130	3 years
Risk factors					
Reduction in stunting in children of 35%	Prevalence of stunting in children under 5 (%)	KDHS 2014	26	17	5 years
Reduction in prevalence of underweight among children under 5 of 36%	Prevalence of underweight among children under 5	KDHS 2014	11	7	5 years
Increase in exclusive breastfeeding rate of 14%	Exclusive breastfeeding rate for infants under 6 months old (%)	KDHS 2014	61.4	70	5 years
Reduction in deaths due to NCDs of 33%	NCD mortality rate (adults aged 18–59) per 100,000 people	WHO NCD Progress Monitor, Kenya Vital Statistics Report	161	108	2 years
Increase in prevalence of cervical cancer screening of 110%	Prevalence of women aged 25–49 who have been screened for cervical cancer (%)	STEPS 2015	16.6	35	5 years
Reduction in prevalence of tobacco use of 21.7%	Prevalence of current tobacco use among adults (%)	STEPS 2015	23	18	5 years
Reduction in prevalence of hypertension among adults aged 18+ of 50%	Age-standardized prevalence of raised blood pressure **(hypertension)** among adults aged 18+ (%)	STEPS 2015	23.8	12	5 years
Increase in proportion of people on medication for diabetes of 111%	Prevalence of raised blood glucose/ medication for diabetes among adults aged 18–69 years (%)	STEPS 2015	1.9	4	5 years

Expected result (impact)	Indicator	Data source	Baseline	End target	Frequency of data collection
Reduction in prevalence of raised cholesterol of 32%	Prevalence of raised total cholesterol in adults (%)	STEPS 2015	13.3	9	5 years
Reduction in prevalence of obese-overweight and obese of 28%	Prevalence of obese-overweight and obese among adults aged 18+ (%)	STEPS 2015	27.9	20	5 years
Reduction in proportion of population with low level of total physical activity of 37%	Proportion of population with low level of total physical activity (%)	STEPS 2015	10.8	6.8	5 years
Reduction in incidence of people involved in road traffic accidents of 7%	Incidence of adults aged 18+ involved in road traffic accidents in the preceding year (%)	STEPS 2015	5.8	5.4	5 years
Reduction in physical and/or sexual violence prevalence rate of 22%	Physical and/or sexual violence prevalence rate in the last 12 months (%)	KDHS 2014	25.5	20	5 years
Reduction in early child marriages of 99%	Proportion of women aged 25–49 married by the age of 18 (%)	KDHS 2014	28.7	20	5 years
Reduction in incidence of female genital mutilation/ cutting and related maternal complications of 24%	Proportion of women aged 15–49 circumcised (%)	KDHS 2014	21	16	5 years
Fertility					
Reduction in adolescent birth rate by 33%	Adolescent birth rate (%)	KDHS 2014	18	12	5 years
Reduction in total fertility rate by 21%	Total fertility rate (%)	KDHS 2014	3.9	3.1	5 years
Financial risk protection					
Reduction in proportion of population incurring catastrophic health expenditures of 60%	Proportion of population incurring catastrophic health expenditures (%)	KHHEUS 2018	4.9	2	5 years
Reduction in out-of-pocket expenditure on health as a proportion of total health expenditure of 52%	Out-of-pocket expenditure on health as a proportion of total health expenditure (%)	NHA 2015/16	31.5	15	3 years
Increase in the proportion of people living healthy lives and the promotion of well-being for all at all ages	UHC Service Coverage Index* of essential health services (%)	KHIS (2018/19)	77	100	Annually

**The UHC Service Coverage Index (see section 4.2) includes the following 10 indicators: percentage of women of reproductive age (15–49) who have their need for family planning satisfied with modern methods; percentage of infants receiving three doses of Penta3 (HIB/Hib/DPT3); percentage of pregnant women who have completed four or more antenatal care visits; percentage of skilled deliveries conducted in health facilities; percentage of children under 5 with diarrhoea treated with oral rehydration salts and zinc; TB treatment success rate for all forms of TB : percentage of HIV-positive pregnant women who are currently on antiretroviral therapy; percentage of women aged 15–49 who have been screened for cervical cancer; diabetes incidence rate (per 100,000 outpatient cases); and hypertension incidence rate (per 100,000 outpatient cases). A score can be calculated for each indicator as follows: (1 – ((end target current performance)/end target))*100. The score for the composite index is the average of all 10 indicator scores.*

The metrics in table 1 relate to the results expected upon implementation of the interventions outlined in the KHSSP 2018–2023. By the end of the period 2022/23, the health sector commits to having improved live expectancy at birth by five years, from 63 to 68 years. The sector also commits to reducing infant and under-5 mortality by 23 and 28 per cent, respectively, from the current 39 and 52 per cent to the targeted 28 and 40 per cent.

The sector acknowledges the challenges in terms of high maternal mortality rates across the country and plans to reduce the rate by 30 per cent, from 362 to 250 deaths per 100,000 live births. Malaria has been drastically reduced except in the highly endemic zones in western and coastal regions. The KHSSP aims to reduce the malaria mortality rate further, from 5.6 to 4 per cent. Stunting has been a big challenge, with some counties reporting proportions slightly higher than the national average of 26. The plan aims to reduce the prevalence of stunting in children under 5 by 35 per cent, to 17 per cent by 2023. NCDs contribute to slightly more than half (55 per cent) of all reported deaths. The KHSSP 2018–2023 aims to reduce this by two-thirds. Road traffic deaths have consistently remained high, with close to 5,000 lives reported lost each year. The KHSSP aims to reduce this by more than 50 per cent from 11 deaths per 100,000 people to 5 per 100,000 people.

It is envisaged that reductions in child mortality, stunting, NCDs and maternal deaths will have a direct impact on UHC and in a way transform the health systems by reducing the proportion of the population incurring catastrophic expenditures from 4.9 to 2 per cent by 2023. The results shall be measured using the various data sources outlined.

4.1.2 Indicators by strategic objective of the Kenya Health Policy 2014–2030

Tables 2–7 in this subsection outline the indicators and targets related to the six objectives of the Kenya Health Policy 2014–2030.

4.1.2.1 Policy objective 1: Eliminate communicable conditions

Table 2: Eliminate communicable conditions – indicators and targets

Indicator	Baseline (2017–2018)	2018–2019 target	2019–2020 target	2020–2021 target	2021–2022 target	2022–2023 target	Data source	Frequency of collection	Responsibility
Proportion of children fully immunized (%)	74	76	79	80	82	85	KHIS	Monthly	MOH
Proportion of infants receiving three doses of Penta3 (HIB/Hib/DPT3) (%)	80	83	87	90	92	95	KHIS	Monthly	MOH
TB treatment success rate (all forms of TB) (%)	81	83	85	86	88	90	TIBU	Quarterly	MOH
TB case notification rate (per 100,000 people)	185 (2018)	187 (2019)	189 (2020)	191 (2021)	193 (2022)	195 (2023)	TIBU	Annually	MOH
Proportion of HIV-positive pregnant women currently on antiretroviral therapy (%)	94	95	96	97	98	98	KHIS	Monthly	MOH
Antiretroviral therapy coverage among adults (%)	67	70	72	74	75	77	KHIS	Monthly	MOH

Indicator	Baseline (2017–2018)	2018–2019 target	2019–2020 target	2020–2021 target	2021–2022 target	2022–2023 target	Data source	Frequency of collection	Responsibility
Antiretroviral therapy coverage among children (%)	84	85	88	89	90	93	KHIS	Monthly	MOH
Proportion of children under 5 with diarrhoea treated with oral rehydration salts and zinc (%)	25	50	60	65	70	75	KHIS	Monthly	MOH
Proportion of targeted pregnant women provided with long-lasting insecticide-treated nets (%)	88	89	90	92	94	95	KHIS	Monthly	MOH/KNBS
Total confirmed malaria cases (per 1,000 people)	62 (2016)	60	53	47	31	15	KHIS/ KMIS	Annually	MOH Division of National Malaria Programme
Proportion of infants in malaria-endemic areas who sleep under long-lasting insecticide-treated nets (%)	56	60	63	66	68	70	KDHS/ KMIS	3-5 years	MOH/KNBS
Proportion of women in malaria-endemic areas who sleep under long-lasting insecticide-treated nets (%)	58	60	64	66	68	70	KDHS/ KMIS	3-5 years	MOH/KNBS
Malaria prevalence rate per 1000 people	8	8	7	6	6	5	KDHS/ KMIS	3-5 years	MOH/KNBS

The current epidemiologic situation shows that the country is experiencing a shift away from communicable conditions to an increasing burden involving NCDs. The health sector aims to force a further reduction of the burden of communicable diseases in the medium term by:

- Enhancing the all-inclusive control and elimination of communicable diseases through the use and application of integrated health-service provisions, tools, mechanisms and processes;
- Integrating the delivery of interventions for more comprehensive provision of services, with a view to ensuring that people have access to all the interventions available in each service area;
- Increasing access to and utilization by the population of key interventions addressing the communicable conditions that cause the heaviest burden of ill health and death.

In order to measure success in the implementation of these objectives, 13 indicators have been proposed and any eight indicator measurements could be used to generate an index. The sector aims to ensure that immunization coverage is increased in all counties to at least 80 per cent. Penta3 (HIB/Hib/ DPT3) will be used to measure immunization and it is expected that, during the

five-year period, the current immunization rate of 80 per cent will move to 95 per cent. This will also assure herd immunity among the population. TB treatment success and completion rates are good, and the KHSSP plans to maintain them at over 90 per cent. It also aims to increase and maintain antiretroviral coverage for pregnant women at 95 per cent, and bring antiretroviral therapy coverage for adults and children to over 75 per cent. The KHSSP aims to ensure that by the end of the five-year period 1.6 million Kenyans, if not all those who need them, will be on antiretroviral therapy as per the current guidelines. The other measurements relate to malaria interventions in epidemic and endemic areas in terms of the provision of the insecticide-treated nets to 70 per cent of women and infants.

4.1.2.2 Policy objective 2: Halt and reverse the rising burden of non-communicable conditions and mental disorders

NCDs include cardiovascular diseases, cancers, diabetes and chronic respiratory diseases. WHO estimates that noncommunicable diseases (NCDs) kill 41 million people each year, equivalent to 71 per cent of all deaths globally.

Table 3: Halt and reverse the rising burden of non-communicable conditions and mental disorders – indicators and targets

Indicator	Baseline 2017–2018	2018–2019 target	2019–2020 target	2020–2021 target	2021–2022 target	2022–2023 target	Data source	Frequency of collection	Responsibility
Prevalence of raised blood pressure (hypertension) among adults aged 18 years and above(%)	23.8	20	18	16	14	12	STEPS	5 years	MOH/KNBS/ WHO
Hypertension incidence rate (per 100,000 people)*	2 557	2 853	2 903	2 953	3 003	3 053	KHIS	Monthly	MOH
Diabetes incidence rate (per 100,000 outpatient cases)*	890	921	951	981	1 011	1 041	KHIS	Monthly	MOH
Proportion of health facilities offering cardiovascular disease treatment (readiness) (%)	55	60	65	68	72	75	KHFA	3 years	MOH
Proportion of women aged 25–49 who have been screened for cervical cancer (%)	16	20	24	28	32	35	STEPS	5 years	MOH/KNBS/ WHO
Proportion of women aged 25–49 screened for cervical cancer in the past year (%)	1.9	5	8	10	15	20	KHIS	Monthly	MOH

Indicator	Baseline 2017–2018	2018–2019 target	2019–2020 target	2020–2021 target	2021–2022 target	2022–2023 target	Data source	Frequency of collection	Responsibility
Cancer incidence rate (per 100,000 people)	94 GLOBOCAN estimates	90	85	82	78	75	Cancer Registry	Monthly	MOH/NCI
Human papillomavirus immunization coverage for 10-year-olds (%)	0.8	1	30	50	70	80	NVIP	Monthly	MOH

** The goal is to detect more cases initially with better diagnosis and improved data collection with the aim of reducing the real burden.*

Each year, 15 million people die from an NCD between the ages of 30 and 69 years; over 85 per cent of these "premature" deaths occur in low- and middle-income countries. WHO further estimates that NCDs were responsible for 64 per cent of the total deaths in 23 low- and middle-income countries, in which 47 per cent were of people younger than 70[1]. Cardiovascular diseases account for most NCD deaths, or 17.9 million people annually, followed by cancers (9.0 million), respiratory diseases (3.9 million), and diabetes (1.6 million). These four groups of diseases account for over 80 per cent of all premature NCD deaths.

NCDs have been steadily on the rise in Kenya. The Kenya STEPwise Survey for Non-Communicable Diseases Risk Factors Report of 2015 established that 27 per cent of all deaths in the country resulted from NCDs, while half of hospital admissions were as a result of NCDs. A total of 23 per cent and 3.1 per cent of Kenyans had high blood pressure and impaired fasting glucose, respectively, while 27 per cent were obese or overweight. Routine data from the health system show that there has been a steady increase in the number of patients visiting facilities due to high blood pressure and diabetes. Hypertension cases were higher in Kenya in 2016/17 compared with 2013/14, at over 2,000 per 100,000 people, up from 1,500 per 100,000 people. Recent data show that 55 per cent of hospital deaths in Kenya are as a result of NCDs.

The most important risk factors for NCDs include tobacco use, alcohol consumption, an unhealthy diet and physical inactivity. The costs of treatment for NCDs can be high, which can confine families to poverty. The 2015 STEPwise Survey found that 19.3 per cent of Kenyans drank alcohol regularly, of which 13 per cent drank daily and 12.7 per cent engaged in episodic heavy drinking. More men (23 per cent) than women (4.1 per cent) smoked, with a smoking prevalence of 13.1 per cent. On the basis of existing evidence, Kenya should develop and implement a health promotion programme to educate the public in the prevention of NCDs, augment and implement fiscal and legislative measures such as the taxation of and the restriction of advertising for harmful foods/products, enforce laws to curb consumption of harmful products and integrate NCDs into PHC services.

In order for the health sector to halt and reverse the burden of NCDs, a focus on community interventions, early screenings and treatments will be key. A total of **eight indicators** have been proposed and any three or four indicators could be used to generate an index. The KHSSP will ensure that healthy lifestyles are promoted and interventions to reduce the influenceable risk factors relating to NCDs are implemented. The aim is to reduce by 50 per cent, from 23.8 to 12 per cent, the prevalence of raised blood pressure among adults aged 18 and over. This will go hand in hand with an increase in treatment coverage to more than two-thirds. It is also planned to increase diabetes treatment coverage by 111 per cent and this should translate into a reduction of the prevalence of

1 Noncommunicable diseases factsheet, World Health Organization. See www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases.

the disease from 1.9 to 1.5 per cent. Regular screening of women of reproductive age for cervical cancer should increase from 1.9 to 20 per cent.

4.1.2.3 Policy objective 3: Reduce the burden of violence and injuries

Policy objective 3 as outlined in table 4 aims to halve total deaths and injuries from road traffic accidents. There is scarcity of data on the leading causes of morbidity and mortality among adolescents, with injuries and accidents, substance and drug abuse, mental health issues and violence being inadequately reported. The current number of road traffic fatalities per 100,000 people is 12.4. The KHSSP aims to reduce this to 5 per 100,000 people by 2022/23. At the same time, gender-based violence has been on the increase, with some incidents still going unreported. The KHSSP aims to reduce gender-based violence by 50 per cent. The percentage contribution of road traffic injuries in outpatient departments as a percentage of all new diagnoses currently stands at 2.5 per cent. The KHSSP aims to reduce this to 1.5 per cent of all diagnoses. The **three indicators** will be used to generate an index for the present policy objective.

Table 4: Reduce the burden of violence and injuries – indicators and targets

Indicator	Baseline 2017–2018	2018–2019 target	2019–2020 target	2020–2021 target	2021–2022 target	2022–2023 target	Data source	Frequency of collection	Responsibility
Proportion of road traffic injuries in outpatient departments among all diagnoses (%)	2.5	2.2	2.0	1.8	1.6	1.5	KHIS	Monthly	MOH
Proportion of women aged 15–49 who experienced gender-based violence in the past year (%)	20	18	16	14	12	10	KDHS	Annually/ 5 years	MOH/KNBS
Road traffic fatalities per 100,000 people	6.9 (NTSA, 2015) 12.4 (CRVS, 2015)	10	9	8	6	5	NTSA/ CRVS/ KHIS	Annually	MOH/CRVS

4.1.2.4 Policy objective 4: Provide essential health care

Table 5: Provide essential health care – indicators and targets

Indicator	Baseline (2017–2018)	2018–2019 target	2019–2020 target	2020–2021 target	2021–2022 target	2022–2023 target	Data source	Frequency of collection	Responsibility
Proportion of skilled deliveries conducted in health facilities (%)	59	65	67	70	73	75	KHIS	Monthly	MOH
Proportion of hospitals providing comprehensive emergency obstetric and newborn care services (public, private, primary, secondary and tertiary) (%)	25	30	35	40	45	50	KHFA	N/A	N/A
Couple-years of protection (million)	1.63	3	5	7	10	15	KHIS	Monthly	MOH
Proportion of women of reproductive age (15–49 years) who have their need for family planning satisfied with modern methods (%)	53 (KDHS, 2014)	N/A	N/A	65	N/A	70	KDHS	5 years	KNBS/MOH
Proportion of women of reproductive age with unmet needs for family planning (%)	18	N/A	N/A	15	N/A	13	KDHS	5 years	MOH
Proportion of pregnant women who have completed four or more antenatal care visits (%)	49	51	53	55	57	59	KHIS	Monthly	MOH
Fresh stillbirth rate per 1,000 births in health facilities	12.8	10	9	8	7	6	KHIS	Monthly	MOH
Proportion of infants with low birth weight in health facilities (%)	5	4	3	3	2	2	KHIS	Monthly	MOH
Maternal mortality rate in health facilities per 100,000 deliveries	102	95	92	89	86	83	KHIS	Monthly	MOH
Proportion of adolescents (10–19 years) who are pregnant (%)	18	17	17	16	16	15	KHIS*	Monthly	MOH

**The denominator is not yet well defined in the KHIS.*

To ensure that health and health interventions are organized in accordance with people's legitimate needs and expectations, interventions that prioritize community involvement and participation are favoured. The health sector will focus on improving health security for Kenyans, reshaping the current health systems to ensure they are able to provide the required essential health services. The health system should also be resilient enough to absorb shocks resulting from health threats posed by epidemics or disasters, frequent changes in human resources for health, unrest and inadequate availability of essential commodities. This calls for a rethink of how communities are empowered to take control of and manage health events, together with a focus on identifying and addressing the availability, functionality and readiness of systems to provide both the routine essential health package and emergency services. To measure success in this objective, a total of **ten indicators** have been proposed and four to six of them will be adequate to generate an index to measure progress in the provision of essential services.

The KHSSP aims to increase the percentage of skilled deliveries conducted in health facilities from the current 59 per cent to 75 per cent by 2022/23. This will reduce the current number of maternal deaths in health facilities from 102 to 83 per 100,000 live births. The current fresh stillbirth rate is quite significant, at 12 per 1,000 births in health facilities. The KHSSP aims to reduce this significantly, by over 40 per cent, to 7 stillbirths per 1,000 births as health facilities improve service quality. Among the main current challenges is antenatal care. The KHSSP aims to increase the proportion of pregnant women attending four or more antenatal appointments from 49 to 59 per cent by 2022/23. The proportion of women of reproductive age receiving family planning support or who have their need family planning satisfied with modern methods is 53 per cent, with the KHSSP planning to increase this to 65 per cent while reducing the proportion of women with unmet needs from the current 18 per cent to 13 per cent.

4.1.2.5 Policy objective 5: Minimize exposure to health risk factors

Table 6: Minimize exposure to health risk factors – indicators and targets

Indicator	Baseline 2017–2018	2018–2019 target	2019–2020 target	2020–2021 target	2021–2022 target	2022–2023 target	Data source	Frequency of collection	Responsibility
Proportion of children under 6 months old who are exclusively breastfed (%)	61	62	65	67	69	70	KDHS	5 years	MOH/KNBS
Proportion of adult population (men) who smoke (%)	20	19	18	17	16	15	STEPS	5 years	MOH/ KNBS/ WHO
Proportion of adults aged 18–69 who consume excess alcohol* (%)	19	18	17	15	13	12	STEPS	5 years	MOH/KNBS/ WHO
Proportion of the population overweight/obese (%)	28	28	26	24	22	20	STEPS/ KHIS	3–5 years/ monthly for overweight	MOH/KNBS/ WHO
Proportion of antibiotics classed as under reserve prescribed in level 4 or lower-level facilities** (%)	N/A	0	0	0	0	0	Health surveys	Annually	MOH-Division of Health Products

** 60 g or more of pure alcohol (6+ standard drinks) consumed on a single occasion in a month.*

*** Antibiotics under reserve (colistin, ertapenem, fosfomycin, linezolid, meropenem, polymyxin, teicoplanin, tigecycline, vancomycin) should be stocked only in level 5 and 6 facilities.*

Health and health care are very personal issues. Assuring the health of the public, however, goes beyond a focus on the health status of individuals; it requires an approach to the health of the population as a whole. Personal health care is perhaps the least powerful of the determinants of health. The most important ones are genetic, behavioural, social and environmental. To change these, actors in the health sector and the intersectoral public health system must identify and exploit the full potential of new options for digitalization, innovation, models and strategies in relation to health policy and action.

A total of **five indicators** have been proposed, of which three could be used to generate a health index. The KHSSP aims to employ measures that will address the data gap relating to this policy objective. The health sector will work to increase the percentage of children under 6 months who are exclusively breastfed, from 61 to 70 per cent. Smoking tobacco is a major issue and the KHSSP aims to reduce this from 20 to 15 per cent. The other major concern is excessive alcohol-drinking, which will also be reduced, by 37 per cent.

4.1.2.6 Policy objective 6: Strengthen collaboration with the private sector and other sectors that have an impact on health

Health inequities and inequalities within and across counties in Kenya are widening. There is greater need to address the root causes of ill-health, disabilities and premature deaths by taking action with regard to the key determinants

Table 7: Strengthen collaboration with health-related sectors – indicators and targets

Indicator	Baseline (2017–2018)	2018–2019 target	2019–2020 target	2020–2021 target	2021–2022 target	2022–2023 target	Data source	Frequency of collection	Responsibility
Proportion of households using improved sanitation facilities (%)	52	55	60	65	68	70	KMIS/ KDHS	5 years	MOH/KNBS
Proportion of households using improved safe water facilities (%)	71	73	75	78	79	80	KMIS/ KDHS	5 years	MOH/KNBS
Proportion of health facilities with access to a source of power (%)	71	75	80	85	87	90	KHFA	3–-5 years	MOH/KNBS/ WHO
Proportion of health facilities with access to an improved water source (%)	86	88	90	92	94	96	KHFA	3–5 years	MOH/KNBS/ WHO
Proportion of women who have completed secondary education (%)	27	35	45	50	55	60	MOH/ KNBS	Annually	MOH/KNBS
Proportion of health facilities with internet connectivity (%)	31	35	45	50	55	60	KHFA	2 years	MOH/ICT
Proportion of health facilities on an accessible road network (%)		65	70	75	80	85	KHFA	Annually	MOH/KNBS/ MOT
Proportion of children under 5 who are stunted (%)	26	24	22	20	18	17	KDHS	5 ears	MOH/KNBS
Proportion of children under 5 who are underweight (%)	10	9	8	7	6	5	KDHS/ KHIS	Annually	MOH/KNBS

of health. Intersectoral collaboration, which refers to cooperation among different social groups for the purposes of addressing common problems, is central to reducing inequality and improving health outcomes. As most of the factors that influence health outcomes lie beyond the exclusive jurisdiction of the health sector, the health sector must engage with other sectors of government and society to address the determinants of health and well-being. Intersectoral collaboration exists at multiple levels, including the local, national, regional and global levels, and involves various players, including citizens, civil society organizations, academics and local and international partners.

The current unacceptable state of health delivery in many counties in Kenya is attributable to the low level of investment in sectors that affect social determinants of health, such as water, energy, sanitation, food security, housing and road safety. There is a lack of clear vision and planning for health financing and insufficient use of evidence to guide development and implementation of national health-financing policies and strategies. At the same time, there is a high level of interest and commitment among leaders, decision makers and policymakers at the national, regional and local levels to move forward with addressing the social determinants of health, also involving other sectors to ensure that their policies address health issues. To this end, it is important to strengthen the leadership and stewardship roles of the Ministry of Health to coordinate and advocate for multisectoral interventions to address the social determinants of health; to ensure public/social participation and dialogue to engage communities; to form partnerships, alliances and engage in networking to harness resources, including expertise for intersectoral action; and to gather evidence and document progress in implementing intersectoral collaboration.

In relation to this policy objective, the KHSSP aims to increase the percentage of households using improved sanitation facilities from 52 to 70 per cent by 2022–2023 and the percentage of households using improved safe water facilities from 71 to 80 per cent. The prevalence of stunting in children under 5 remains high, at more than 35 per cent in some counties and a national average of 26 per cent. The KHSSP aims to reduce the average to 15 per cent by 2022–2023. One of the critical measures for improving health is to ensure that women have completed secondary education. Through collaborative efforts, the KHSSP aims to increase the proportion of women who have done so from the current 27 per cent to 60 per cent. It also aims to reduce by 50 per cent the number of children under 5 years of age who are underweight. A total of **nine indicators** have been proposed and four of them will be used to generate an index to measure the progress in achievement of this objective.

There are a number of key opportunities at present that could help the health sector to achieve optimal results in this objective:

- The SDGs cover the economic, environmental and social pillars of sustainable development, with a strong focus on equity considering national realities, capacities, policies and priorities. This is a prime opportunity for the entire Government to engage in intersectoral collaboration.
- The SDGs underscore the importance of governance for health at the national and regional levels. Governance for health, however, can also have a positive impact in areas such as trade, medicines, intellectual property, sustainable energy, income, migration, food security and sustainable consumption and production.
- The aspiration to achieve UHC and the meet the SDGs means "leaving no one behind." Intersectoral collaboration, however, does not always involve the intended beneficiaries themselves, namely individuals, households and communities, in the policymaking and decision-making processes, including planning, implementation, evaluation, documentation and dissemination. The present framework recognizes the role of the Constitution in providing for people's participation and the goals of the Kenya Health Policy 2014–2030 and the SDGs in providing an opportunity to redress inequity.

4.1.3 Indicators of improvements in service capacity and accessibility and demand for care

To assess the service capacity and levels of access, as well as demand for such care, the KHSSP includes 15 indicators. On that basis, it will be possible to:

- Assess the availability of essential health services and the readiness of health facilities to provide those services.
- Assess the extent to which access to health services has increased, to improve the health outputs, outcomes and impact.
- Determine trends in inputs, effectiveness, efficiency, quality and equity.
- Document lessons learned, innovations and best practices.

The KHSSP aims to increase the service availability and readiness of the health facilities to provide essential services from the current 63 per cent to 85 per cent in 2022/23. The plan is also to reduce the average distance to a health facility from 9.8 to 5 km and increase health facility density per 10,000 population. The KHSSP aims to improve outpatient utilization, moving from the current 1.4 visits per person per year to the recommended five visits. Bed occupancy will be increased to 70

Table 8: Improving service capacity and accessibility and demand for care – indicators and targets

Indicator	Baseline (2017–2018)	2018–2019 target	2019–2020 target	2020–2021 target	2021–2022 target	2022–2023 target	Data source	Frequency of collection	Responsibility
Service availability and readiness (%)	63	65	70	75	80	85	KHFA	3–5 years	MOH/KNBS/ WHO
Outpatient service utilization rate per person per year	1.4	2	2.5	3	3.5	4	KHIS	Monthly	MOH
Bed occupancy rate (%)	45	50	55	60	65	70	KHIS	Monthly	MOH
Proportion of health facilities with essential medicines (order fill rate) using the agreed list of essential drugs from the Division of Health Products and Technologies (%)	85	88	90	92	94	96	KEMSA/ MEDS	Annually	MOH
Proportion of population with access to specialized health care in the management of lifestyle diseases (renal diseases, cancer, diabetes and cardiovascular diseases) (%)	12	16	20	22	47	50	KHIS	Annually	MOH
Proportion of delivery facilities providing all seven basic emergency obstetric and newborn care services (%)	12	20	30	40	50	55	KHFA	3-5 years	MOH

Indicator	Baseline (2017–2018)	2018–2019 target	2019–2020 target	2020–2021 target	2021–2022 target	2022–2023 target	Data source	Frequency of collection	Responsibility
Proportion of hospitals (public, private, primary, secondary and tertiary) providing comprehensive emergency obstetric and newborn care services (%)	25	30	35	40	45	50	KHFA	3-5 years	MOH
Caesarean section rate (%)	14.5	15	15	15	15	15	KHIS	Annually	MOH
Average distance to the nearest health facility (km)	9.8	9	8	7	6	5	KHHEUS, KDHS	3–5 years	MOH/KNBS/ WHO
Core health worker density per 10,000 people (nurses, doctors, registered clinical officers)	15.4	16.5	18.5	20	21.6	23.5	Emory University/ iHRIS report	Annually	MOH/CDC/ Emory University
Number of doctors per 10,000 people	1.5	1.7	2.5	3	3.5	4	Emory University / iHRIS report	Annually	MOH/CDC/ Emory University
Number of nurses per 10,000 people	11.3	12	12.5	13	13.5	14	Emory University/ iHRIS report	Annually	MOH/CDC/ Emory University
Number of health facilities per 10,000 people	2.4	2.5	2.5	2.5	2.5	2.5	KMHFL	Annually	MOH
Number of inpatient beds per 10,000 people, relative to the recommended threshold of 18	13.2	14	15	16	17	18	KMHFL/ KHIS	Annually	MOH
Proportion of people enrolled in an insurance scheme (%)	19	30	60	80	90	100	NHIF/ KHHEUS/ KDHS	Annually	MOH/KNBS/ WHO/WB

per cent and bed density will increased from 13 beds per 10,000 people to the recommended 18 beds per 10,000 population. Health worker density is also projected to improve from 9 to 14 per 10,000 people. To improve access to essential services as required for UHC, the plan is to increase the percentage of people enrolled into an insurance scheme from 19 to 100 per cent, which could be achieved by making it mandatory. A total of **16 indicators** have been proposed, but eight or nine will be used to generate an index.

4.1.4 Indicators by health-system investment area

4.1.4.1 Health service delivery and quality

The KHSSP looks at the organization of services at different levels (community, primary, county and national) and the provision of sufficient supportive supervision to ensure the delivery of high-quality preventive and promotive services. It also covers emergency and referral services, efficient coordination and the response to

national disasters. With UHC in mind, the focus is on ensuring the delivery of care of equitable quality, improving demand for preventive and promotive heath care and strengthening health systems to be responsive and resilient to public health emergencies. The indicators therefore measure the performance in those three areas.

Table 9: Health service delivery – quality indicators and targets

Indicator	Baseline (2017–2018)	2018–2019 target	2019–2020 target	2020–2021 target	2021–2022 target	2022–2023 target	Data source	Frequency of collection	Responsibility
Proportion of planned community health units established (%)	55	65	70	80	90	100	KHIS	Annually	MOH
Proportion of fully functional community health units (%)	66	70	85	90	95	100	KHIS	Annually	MOH
Proportion of counties with functional primary care networks (%)	N/A	N/A	30	40	50	70	Joint supervision report	Annually	MOH
Number of counties implementing the National Action Plan for Health Security	0	5	12	15	18	22	National/ county reports	Annually	MOH
Number of Health Emergency Operations Centres in the country (National/county governments)	1	5	5	7	9	10	National/ county reports	Annually	MOH
Number of county dispatch centres linked to the national ambulance command centre	0	10	15	20	30	35	National/ county reports	Annually	MOH
Proportion of facilities inspected at least once in the past two years by the independent regulatory authority for quality standards (%)	N/A	40	60	70	75	80	KHPOA reports	Annually	MOH
Proportion of existing laboratories accredited (%)	N/A	60	70	85	90	95	KENAS	Annually	KMLTTB
Number of planned regional comprehensive diagnostic centres (laboratory and imaging) accredited (%)	0	0	2	6	8	10	National/ county reports	Annually	KMLTTB

Indicator	Baseline (2017–2018)	2018–2019 target	2019–2020 target	2020–2021 target	2021–2022 target	2022–2023 target	Data source	Frequency of collection	Responsibility
Proportion of counties implementing at least 4 joint/ integrated supportive supervision exercises annually	20	45	60	75	85	100	Joint assessments	Annually	MOH
TB treatment success rate (all forms of TB) (%)	81	83	85	86	88	90	TIBU	Annually	MOH
Average length of inpatient stay (days)	7.8	7	6	5	4	4	KHIS	Monthly	MOH
Proportion of facility maternal deaths audited (%)	80.4	82	85	87	90	94	KHIS	Monthly	MOH
Facility maternal mortality rate per 100,000 deliveries	102	95	92	89	86	80	KHIS	Monthly	MOH
Facility newborn mortality rate per 1,000 live births	10.1	9	8	7	6	5	KHIS	Monthly	MOH
Malaria inpatient case fatality rate (per 100 malaria admissions)		5	4.5	4	3.5	3	KHIS	Monthly	MOH
Fresh stillbirth rate per 1,000 births in health facilities	12.8	10	9	8	7	6	KHIS	Monthly	MOH
Client satisfaction index (%)	78.2	80	82	84	86	88	Survey	Annually	MOH/WHO
Proportion of facilities meeting minimum quality and safety standards (%)	N/A	40	60	70	75	80	KHPOA reports	Annually	MOH
Proportion of suspected malaria cases arriving at facilities tested with rapid diagnostic tests or microscopy (%)	59	70	90	95	100	100	KHIS	Monthly	MOH
Proportion of facilities that perform inpatient mortality reviews (%)	43	53	60	70	80	100	KHFA	3Yearly/ Yearly	MOH
Proportion of hospitals with a functional facility quality improvement team (%)	53	60	70	80	90	100	KHFA	3 Yearly	MOH

Improved access to quality diagnostic and forensic services will increase demand for and use of these services. The Government is committed to establishing 10 comprehensive laboratories and accrediting 95 per cent of existing laboratories by 2022–2023.

To enhance access to high-quality care and treatment services, an independent regulatory authority for enforcement of standards, including the Kenya Quality Model for Health, will be established and the number of inspections carried out to ensure that high-quality services are provided will be monitored. By 2022–2023, 70 per cent of facilities should be inspected for quality at least once in two years.

4.1.4.2 Leadership and governance

Table 10: Leadership and governance – indicators and targets

Indicator	Baseline (2017–2018)	2018–2019 target	2019–2020 target	2020–2021 target	2021–2022 target	2022–2023 target	Data source	Frequency of collection	Responsibility
Improve health-system stewardship and public and social accountability at all levels									
Number of KEPH documents revised	1	N/A	N/A	1	N/A	N/A	MOH	Annually	MOH
Number of annual workplans developed on time (by 30 June)	47	30	48	48	48	48	Council of Governors and MOH	Annually	County and national governments
Number of planning units with annual performance reports	47	30	48	48	48	48	Council of Governors and MOH	Annually	County and national governments
Number national and county health departments conducting at least one annual customer satisfaction survey	10	10	48	48	48	48	Council of Governors and MOH	Annually	County governments
Number of national and county health departments conducting at least one annual client, employee and work-environment satisfaction survey	10	10	48	48	48	48	Annual health reports (county/ national)	Annually	Council of Governors and MOH
Implement appropriate health governance structures at the national and 47 county levels									
Number of Intergovernmental Consultative Forums held in a reporting year	N/A	4	4	4	4	4	Council of Governors and MOH	Annually	County and national governments
Establish and coordinate health and strategic partnership arrangements at all levels									
Number of health sector stakeholder consultative health meetings held.	N/A	4	190	190	190	190	Council of Governors and MOH	Annually	County and national governments
Advocate increased health-system support and investment at all levels among policymakers and parliamentarians									

Indicator	Baseline (2017–2018)	2018–2019 target	2019–2020 target	2020–2021 target	2021–2022 target	2022–2023 target	Data source	Frequency of collection	Responsibility
Number of counties with functional financial protection mechanisms in place	3	48	48	48	48	48	Annual health reports	Annually	County governments
Number of new or reviewed pieces of legislation related to health	2						MOH registry		MOH

4.1.4.3 Human resources for health

The key challenge facing human resources for health is an inadequate and inequitable distribution of health workers in the sector.

The WHO recommendation for optimal density of human resources for health is 23 health-care workers per 10,000 people. The health sector will increase this from 14 to the recommended level by 2022/23.

Table 11: Human resources for health – indicators and targets

Indicator	Baseline 2017–2018	2018–2019 target	2019–2020 target	2020–2021 target	2021–2022 target	2022–2023 target	Data source	Frequency of collection	Responsibility
Core health worker density per 10,000 people (nurses, doctors, registered clinical officers)	15.4	16.5	18.5	20	21.6	23.5	Emory University/ iHRIS	Annually	MOH
Number of doctors per 10,000 people	1.5	1.7	2.5	3	3.5	4	Emory University/ iHRIS	Annually	MOH
Number of nurses per 10,000 people	11.3	12	12.5	13	13.5	14	Emory University/ iHRIS 2018	Annually	MOH
Number of health facilities per 10,000 people	2.4	2.5	2.5	2.5	2.5	2.5	KMHFL	Annually	MOH
Number of community health volunteers per 5,000 people	7.8	8	8.2	8.4	8.6	8.8	KMCHUL	Annually	MOH
Number of community health volunteers in the country	60 850	72 021	85 266	90 534	95 802	101 070	KMCHUL	Annually	MOH
Number of county health management teams trained in health systems management	32 (MTR)	35	40	45	47	47	APRs	Annually	MOH

Indicator	Baseline 2017–2018	2018–2019 target	2019–2020 target	2020–2021 target	2021–2022 target	2022–2023 target	Data source	Frequency of collection	Responsibility
Proportion of health workers with a valid licence from the authorized professional board (%)	30	50	70	80	90	100	APRs	Annually	MOH
Percentage of staff attrition	4	4	3	3	2	2	iHRIS	Annually	MOH

The KHSSP will look at ways to attract and retain health-care workers by monitoring the staff density, attrition rates and the level of achievement of the staffing norms and standards.

4.1.4.4 Health products and technologies

The KHSSP investment in health products and technologies will strengthen regulation through the enactment of the Health Products and Technologies Act that will cover all such products and technologies from pre-market controls to post-market monitoring.

Table 12: Health products and technologies – indicators and targets

Indicator	Baseline 2017–2018	2018–2019 target	2019–2020 target	2020–2021 target	2021–2022 target	2022–2023 target	Data source	Frequency of collection	Responsibility
To increase access to all health commodities									
Order fill rate of the 22 tracer pharmaceutical commodities* (%)	85	90	90	95	95	100	KEMSA	Monthly	MOH
Order fill rate of the 23 tracer non-pharmaceutical commodities** (%)	85	90	90	95	95	100	KEMSA	Monthly	MOH
Proportion of health facilities without stock of any of the 20 tracer non-pharmaceutical commodities for 7 consecutive days in a month (%)	44	40	30	20	10	0	KHFA/KHIS	3 yearly/ Monthly	MOH
Proportion of health facilities without stock of any of the 22 tracer medicines for 7 consecutive days in a month (%)	44	40	30	20	10	0	KHFA/KHIS	3 yearly/ Monthly	MOH

Indicator	Baseline 2017–2018	2018–2019 target	2019–2020 target	2020–2021 target	2021–2022 target	2022–2023 target	Data source	Frequency of collection	Responsibility
Amount of funding allocated to KEMSA for essential medicines and commodities (millions of Kenya Shillings)	8 800	8 800	14 000	16 500	18 000	19 937	KEMSA	Annually	MOH
Proportion of the procurement value of health products and technologies allocated to local manufacturers (%)	12.16	12.16	18	20	20	20	KEMSA	Annually	MOH
Proportion of the government contribution in co-financing for public health commodities in public health programmes (HIV, TB, malaria, nutrition, vaccines and family planning) (%)	<2	2	4	6	8	10	MOH	Annually	MOH
Proportion of hospitals with parenteral feeds (level 4, 5 and 6 facilities) (%)	N/A	20	35	50	65	80	KHIS/KHFA	3-5 years	MOH
To assure the quality of all health commodities									
Number of functional medical and therapeutics committees at the county level	2.12 (1 county)	100	100	100	100	100	Surveys/MTR	3-5 years	MOH
Availability of end-to-end visibility regarding tracer health products and technologies through automation (%)	0	100	100	100	100	100	KEMSA/MOH/ counties	Annually	MOH
To ensure prudent management of health commodities									

Indicator	Baseline 2017–2018	2018–2019 target	2019–2020 target	2020–2021 target	2021–2022 target	2022–2023 target	Data source	Frequency of collection	Responsibility
Number of counties familiarized with the essential medicines list	N/A	47	47	47	47	47	Division of Health Products and Technologies	Annually	MOH
Proportion of counties with functional commodity security technical working groups (%)	80	80	90	100	100	100	Division of Health Products and Technologies	Annually	MOH
Proportion of antibiotics classed as under reserve prescribed in level 4 or lower-level facilities***	N/A	0	0	0	0	0	Surveys	Annually	MOH
To enhance support supervision in relation to health commodities									
Number of joint (national and county) supply-chain audits conducted	N/A	4	4	4	4	4	National and county health reports	Quarterly	MOH
To ensure an adequate, safe and equitable supply of blood and blood products									
Proportion of annual requirement of safe blood available for transfusion (%)	N/A	30	40	50	60	70	KNBTS	Annually	MOH

*** Pharmaceutical tracer items**

	Pharmaceutical tracer items	Facility stocking level
1	Adrenaline Injection 1mg/ml	2
2	Albendazole Tab. 400mg	1
3	Amoxicillin Capsules, 500mg	2
4	Amoxicillin Dispersible Tablets, 250mg	2
5	Benzyl penicillin Injection 1 MU	2
6	Benzyl penicillin Injection 5 MU	2
7	Chlorhexidine gel, 7.1% (as digluconate) (20 g tube)	2
8	Gentamicin Injection, 40mg/2ml	2
9	Hydrocortisone Injection 100mg	2
10	Insulin, Premix (short acting +intermediate acting) Human [30 regular + 70 NPH) Injection 10ml Bottle	4
11	Loratadine Tablets, 10mg	2
12	Magnesium Sulphate Injection, 500mg/mL (50%), 10mL	2
13	Metronidazole Tablet, 400mg	2

	Pharmaceutical tracer items	Facility stocking level
14	Midazolam Injection 5mg/ml, 3ml	4
15	Nystatin oral suspension 100IU/ml	2
16	ORS Co-Pack (4 sachets of low osmolarity ORS (500ml formulation) + 10 tablets of dispersible zinc sulphate tablets 20mg)	2
17	Oxytocin Injection 10 I.U.	2
18	Paracetamol Syrup/Suspension, 120mg/5ml	2
19	Paracetamol Tablets, 500mg	2
20	Sodium chloride, 0.9% (isotonic), (500mL bottle)	2
21	Sodium hypochlorite solution 4-6%	2
22	Tetracycline eye ointment, 1%, 3.5g tube	2

** Non-pharmaceutical tracer items (should be available in facilities of level 2 and above)

	Non-pharmaceutical tracer items
1	Autoclaving Tape, 3/4''
2	Bandage, Cotton, L/Woven BP (5 cm x 4.5m)
3	Catheter, Foley's, 18FG 30mL 2-way
4	Cord Clamp
5	Cotton Gauze Plain, 36" x 100yds, 1,500g
6	Cotton Wool, Absorbent, 400g
7	Gloves, Latex, Examination, Medium
8	Gloves, Surgical, Size 7.5 (Sterile)
9	IV cannula 18G
10	IV cannula 20G
11	IV infusion Giving Set with Air Inlet
12	Maternity Pad, 26cm x 9cm x 1cm
13	Nasal Prongs for Oxygen Delivery, Adult Size
14	Nasal Prongs for Oxygen Delivery, Pediatric Size
15	Safety Boxes (WHO Specifications)
16	Solusets for Fluids
17	Suction Catheter with Regulatory Valve, 16 FG
18	Surgical Blade with Handle, Size 23
19	Suture Nylon No.2/0,3/8 Circle, 45mm, 100cm, RCN
20	Suture Polyglactin 2/0 75cm On 40Mm ½ Circle RBN
21	Syringe 2mL + needle 23G x 1"
22	Syringe 5mL + needle 21G x 1.5"
23	Zinc Oxide Strapping, 7.5cm x 4.5m

***** Antibiotics under reserve (should only be stocked in level 5 and 6 facilities)**

1. **Colistin**
2. **Ertapenem**
3. **Fosfomycin**
4. **Linezolid**
5. **Meropenem**
6. **Polymyxin**
7. **Teicoplanin**
8. **Tigecycline**
9. **Vancomycin**

4.1.4.5 Health financing

Table 13: Health financing – indicators and targets

Indicator	Baseline (2017–2018)	2018–2019 target	2019–2020 target	2020–2021 target	2021–2022 target	2022–2023 target	Data source	Frequency	Responsibility
Government allocation to health as a proportion of the total government budget (%)	6.8 (2017)	8	11	13	15	15	Budget estimates/ county health budget analysis (revised estimates in the supplementary budget)	Annually	MOH
Government spending on health as a proportion of total government spending (%)	6.8 (2017)	8	11	13	15	15	Audited financial reports of Office of the Auditor General	Annually	MOH
Government spending on health as a proportion of total health expenditure	37 (2015/16)	43	N/A	N/A	55	N/A	NHA	3 years	MOH
Government spending on health as a proportion of GDP (%)	2.5 (2015/16)	3	N/A	N/A	5	N/A	NHA	Annually	MOH
Government per capita health spending (US$)	27 (2015/16)	35	N/A	N/A	50	N/A	NHA	Annually	MOH
Proportion of total health expenditure contributed by donors (%)	23.4 (2015/16)	20	N/A	N/A	15	N/A	NHA	3 years	MOH
Out-of-pocket expenditure as a proportion of total health expenditure (%)	31.5 (2015/16)	25	N/A	N/A	15	N/A	NHA	3 years	MOH
Proportion of population covered by any kind of insurance (%)	19.9 (2018)	N/A	N/A	75	N/A	N/A	KHHEUS/KIBHS	3 years	MOH
Proportion of population covered by the National Health Insurance Fund (%)	17.5	20	25	30	35	40	NHIF/KHHEUS	Annually	MOH

4.1.4.6 Health infrastructure

The availability and functionality of diagnostic medical equipment is critical to patient care. With the rising demand for western-standard therapeutic and diagnostic equipment comes an increased need ensure that the skill set required for its operation is available and that there is regular maintenance.

Table 14: Health infrastructure – indicators and targets

Indicator	Baseline (2017–2018)	2018–2019 target	2019–2020 target	2020–2021 target	2021–2022 target	2022–2023 target	Data source	Frequency of collection	Responsibility
To expand and improve physical infrastructure – buildings, plants, utilities, energy sources and others									
Proportion of health facilities complying with health infrastructure norms and standards (%)	N/A	17	34	51	68	85	KHFA/county reports	Annually	MOH
Proportion of the population within 5 km of a health facility (%)	62 (2018)	69	75	82	88	95	AccessMod tool	Annually	MOH
Proportion of counties with approved budgets for maintenance of physical infrastructure (%)	20 (2018)	30	50	75	100	100	KHFA/county reports	Annually	MOH
Proportion of health facilities implementing preventive maintenance plans for physical infrastructure (%)	16 (2018)	33	50	66	83	100	KHFA/county reports	Annually	MOH
To expand and improve use of equipment – medical devices, hospital equipment and other technologies									
Proportion of health facilities complying with medical equipment and devices norms and standards (%)	-	17	34	51	68	85	KHFA/county reports	Annually	MOH
Proportion of counties with approved budgets for maintenance of medical equipment and devices (%)	20 (2018)	30	50	75	100	100	KHFA/county reports	Annually	MOH

Indicator	Baseline (2017–2018)	2018–2019 target	2019–2020 target	2020–2021 target	2021–2022 target	2022–2023 target	Data source	Frequency of collection	Responsibility
Proportion of health facilities implementing preventive maintenance plans for medical equipment and devices (%)	16 (2018)	33	50	66	83	100	KHFA/county reports	Annually	MOH
To improve ICT for all facilities									
Proportion of public hospitals(level 4 and above) with functional electronic health records (%)	0 (2018)	16	32	48	64	80	County EMR implementation report	Annually	MOH

4.1.4.7 Health information monitoring and evaluation

KHIS has improved reporting coverage and completion rates and the timeliness of submission. Current completion and timely submission rates are 89 and 77 per cent, respectively.

Table 15: Health information monitoring and evaluation – indicators and targets

Indicator	Baseline 2017–2018	2018–2019 target	2019–2020 target	2020–2021 target	2021–2022 target	2022–2023 target	Data source	Frequency of collection	Responsibility
Proportion of health facilities submitting timely information (%)	77	78	83	87	90	92	KHIS	Monthly	MOH
Proportion of community health units submitting timely information (%)	61	65	70	75	80	85	KHIS	Monthly	MOH
Proportion of health facilities submitting complete information (%)	89	85	88	90	93	95	KHIS	Monthly	MOH
Proportion of community health units submitting complete information (%)	69	73	77	80	83	85	KHIS	Monthly	MOH
Proportion of hospital deaths that have a certified cause (%)	N/A	55	60	70	75	80	CDH/ KHIS	Annually	MOH
Number of counties with completed annual health performance review reports	30	47	47	47	47	47	County reports	Annually	MOH
Proportion of all deaths (in health facilities and in the community) reported (%)	41.2	53	65	77	85	90	CRVS report/ KHIS	Annually	MOH

Indicator	Baseline 2017–2018	2018–2019 target	2019–2020 target	2020–2021 target	2021–2022 target	2022–2023 target	Data source	Frequency of collection	Responsibility
Proportion of hospitals reporting on inpatient morbidity and mortality (%)	30	40	50	60	65	70	KHIS tracker	Monthly	MOH
Proportion of public hospitals (level 4 and above) with functional electronic health records (%)	0 (2018)	16	32	48	64	80	MOH/ ICT	Annually	MOH
Number of county quarterly data-review meetings held	30	47	94	131	160	188	MOH/ county reports	Annually	MOH

4.1.4.8 Health research and development

The KHSSP has outlined ways in which the research will generate data and information for the decision-making process in Kenya.

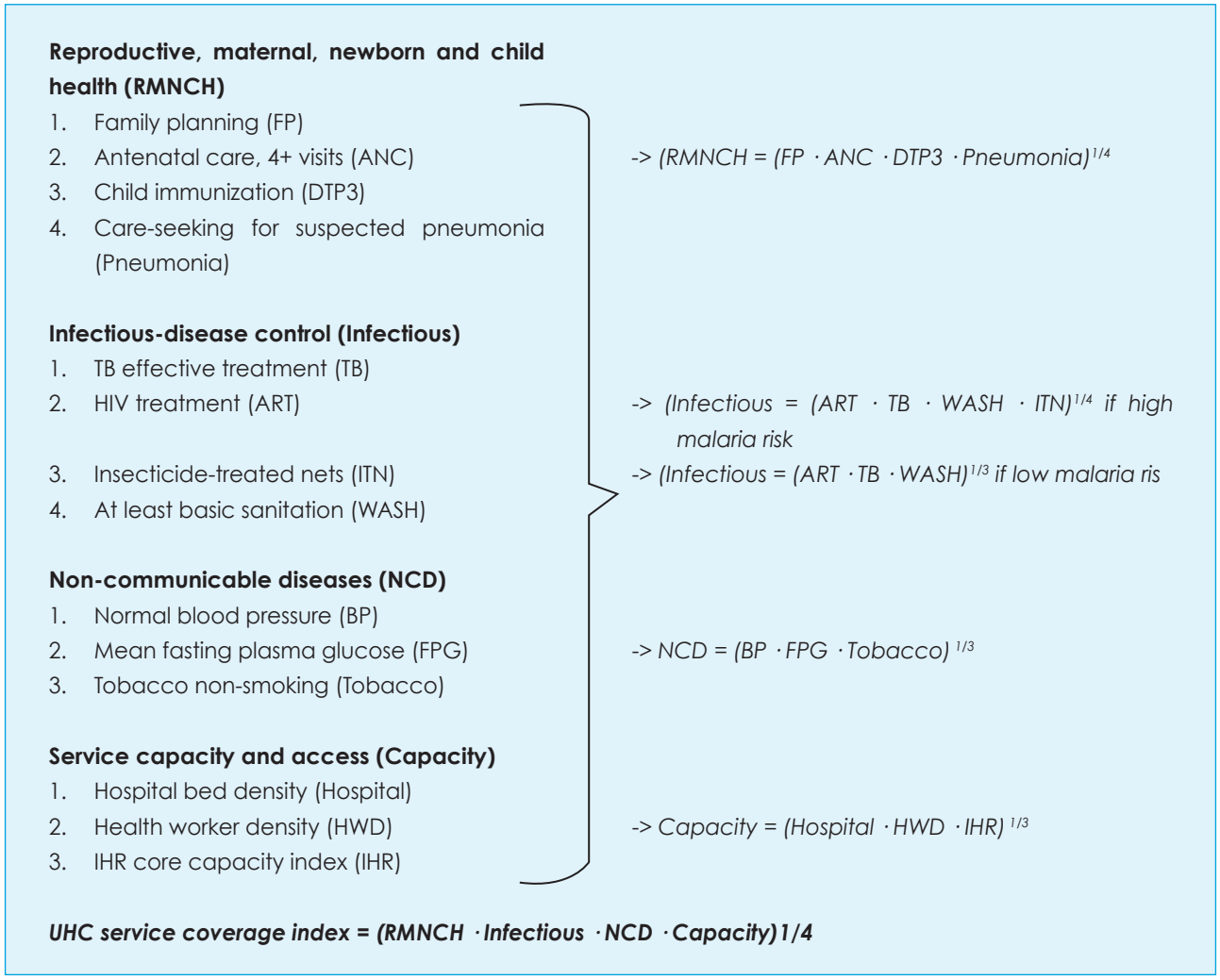
Table 16: Health research and development – indicators and targets

Indicator	Baseline (2017–2018)	2018–2019 target	2019–2020 target	2020–2021 target	2021–2022 target	2022–2023 target	Data source	Frequency of collection	Responsible
1. To develop an integrated research plan and capacity-building initiative at the national and county levels									
Number of counties with health research committees in place	N/A	10	20	30	40	47	County annual health reports	Annually	County Governments
Number of national level staff undergoing capacity-building in knowledge translation	N/A	5	10	15	20	30	Training reports	Annually	MOH
2. To enhanced investment in research and evidence generation for effective policy and programme development									
Proportion of health budget allocated to research (%)	<2	3	5	7	9	10	National and county annual health reports	Annually	MOH
Number of policy briefs developed to inform using evidence	N/A	1	3	4	4	4	Uploads on to KHRO	Annually	MOH
3. To strengthen research links with academic institutions									
Number of counties with a memorandum of understanding on research with at least one academic institution	N/A	5	15	20	25	30	National and county annual health reports	Annually	MOH/ County Governments

4.2 Indicators of universal health coverage

WHO has proposed indicators for UHC, as outlined in figure 4.

Figure 4: World Health Organization Service Coverage Index for universal health coverage: summary of tracer indicators and computation



Kenya has contextualized the index using data collected routinely in the Kenya Health Information System to allow for continuous monitoring. The UHC Service Coverage Index for Kenya includes the following 10 KHSSP indicators:

Reproductive, maternal, newborn and child health

Percentage of women of reproductive age (15–49 years) who have their need for family planning satisfied with modern methods;
Percentage of infants receiving three doses of Penta3 (HIB/Hib/DPT3);
Percentage of pregnant women who have completed four or more antenatal care visits;
Percentage of skilled deliveries conducted in health facilities;
Percentage of children under 5 with diarrhoea treated with oral rehydration salts and zinc;

Infectious disease control

TB treatment success rate for all forms of TB
Percentage of HIV-positive pregnant women who are currently on antiretroviral therapy;

Non-communicable diseases

Percentage of women aged 15–49 who have been screened for cervical cancer;
Diabetes incidence rate per 100,000 outpatient cases;
Hypertension incidence rate per 100,000 outpatient cases.

A score is calculated for each indicator as follows: "*(1–((end target–current performance)/ end target)) *100*". The score for the composite index is the average of all 10 indicator scores = 77.

The indicators that will guide the monitoring of achievement of UHC are outlined in tables 17–27.

4.2.1 Expected result (impact) indicators related to universal health coverage

Table 17 shows the impact indicators and targets relating to the achievement of UHC as set out in the KHSSP. Most of the indicators are still monitored under the KHSSP but these listed in the tables below are key indicators narrowed down on to assess progress in achieving UHC.

Table 17: Expected result (impact) indicators related to universal health coverage

Expected result (impact)	Indicator	Data source (year of publication of baseline report)	Baseline	Midterm target	End target	Frequency of data collection
Mortality by age and sex			**2017–2018**	**2020–2021**	**2022–2023**	
Increase in overall life expectancy of 5 years	Life expectancy at birth in years	KDHS 2014	63	66	68	5 years
Increase in overall healthy life expectancy of 5 years	Healthy life expectancy in years	GHO 2016	58.9	61	63	5 years
Reduction in under-5 mortality rate of 23%	Under-5 mortality rate per 1,000 live births	KDHS 2014	52	45	40	5 years
Reduction in infant mortality rate of 28%	Infant mortality rate per 1,000 live births	KDHS 2014	39	31	28	5 years
Reduction in newborn mortality rate of 32%	Newborn mortality rate per 1,000 live births	KDHS 2014	22	17	15	5 years
Reduction in stillbirth rate of 35%	Stillbirth rate per 1,000 births	KDHS 2014	23	17	15	5 years
Mortality by cause						
Reduction in maternal mortality rate of 45%	Maternal mortality ratio per 100,000 live births	KDHS 2014	362	230	200	5 years
Reduction in AIDS-related deaths	Number of AIDS-related deaths	Kenya HIV Estimates 2018	28 200	17 936	13 266	5 years
Reduction in deaths from TB of 50%	TB mortality rate (%)	Annual WHO Global TB Report 2018	38	25	19	Annually
Reduction in malaria mortality rate of 30%	Malaria mortality rate (%)	KMIS 2015	5.6	4.5	4	5 years

Expected result (impact)	Indicator	Data source (year of publication of baseline report)	Baseline	Midterm target	End target	Frequency of data collection
Reduction in proportion of deaths due to NCDs (cardiovascular, cancer, diabetes, chronic respiratory) of 64%	NCD mortality rate (%)	STEPS 2015	55	35	20	5 years
Reduction in cancer mortality rate of 17%	Cancer mortality rate in adults (%)	STEPS 2015	3	2.6	2.5	5 years
Reduction in mortality due to road traffic injuries of 55%	Mortality rate due to road traffic injuries (%)	KHIS	11	8	5	Annually
Reduction in mortality due to dietary risk factors of 37%	Mortality rate attributable to dietary risk factors per 100,000 people	GBD 2017	41.5	28	26	Annually
Morbidity						
Reduction in HIV prevalence of 14%	HIV prevalence rate (%)	KENPHIA 2019	4.9	4.5	4.2	Annually
Reduction in HIV incidence of 47%	HIV incidence rate (%)	KENPHIA 2019	0.19	0.15	0.1	5 years
Reduction in prevalence of diabetes of 58%	Diabetes disease prevalence rate per 100,000 people	STEPS 2016	1.2	0.7	0.5	5 years
Reduction in hepatitis B surface antigen prevalence of 29%	Hepatitis B surface antigen prevalence (%)	KENPHIA 2019	3	2.71	2.13	5 years
Reduction in TB incidence of 50%	TB incidence rate per 100,000 people	WHO Global Annual Report	292	234	146	Annually
Reduction in malaria incidence among the population at risk of 22%	Malaria incidence rate per 100,000 people	MIS 2015	166	150	130	3 years
Fertility						
Reduction in adolescent birth rate of 33%	Adolescent birth rate (%)	KDHS 2014	18	16	12	5 years
Reduction in total fertility rate of 21%	Total fertility rate (%)	KDHS 2014	3.9	3.4	3.1	5 years
Financial risk protection						
Reduction in proportion of population incurring catastrophic health expenditures of 60%	Proportion of population incurring catastrophic health expenditures (%)	KHHEUS 2018	4.9	2	2	5 years

Expected result (impact)	Indicator	Data source (year of publication of baseline report)	Baseline	Midterm target	End target	Frequency of data collection
Reduction in out-of-pocket expenditure on health as a proportion of total health expenditure of 52%	Out-of-pocket expenditure on health as a proportion of total health expenditure (%)	NHA 2015/16	31.5	25	15	3 years
Increase in the proportion of people living healthy lives and the promotion of well-being for all at all ages	UHC Service Coverage Index of essential health services	KHFA 2018	77	86	100	Annually

4.2.2 Expected result (outcome) indicators related to universal health coverage

4.2.2.1 Risk factors

Tables 18 and 19 show the outcome indicators and targets relating to the achievement of UHC.

Table 18: Expected result (outcome) indicators related to universal health coverage – risk factors

Expected result (outcome)	Indicator	Data source (year of publication of baseline report)	Baseline	Midterm target	End target	Frequency of data collection
Risk factors						
Reduction of stunting in children by 35%	Prevalence of stunting in children under 5 (%)	KDHS 2014	26	20	17	5 years
Reduction in prevalence of underweight among children under 5 of 36%	Prevalence of underweight among children under 5 (%)	KDHS 2014	11	8.5	7	5 years
Increase in the exclusive breastfeeding rate of 14%	Exclusive breastfeeding rate for infants under 6 months old (%)	KDHS 2014	61.4	65	70	5 years
Reduction in deaths due to NCDs of 33%	NCD mortality rate (adults 18–59 years) per 100,000 people	WHO NCD Progress Monitor, Kenya Vital Statistics Report	161	135	108	2 years
Increase in prevalence of cervical cancer screening of 110%	Prevalence of women aged 25–49 who have been screened for cervical cancer (%)	STEPS 2015	16.6	28	35	5 years
Reduction in prevalence of tobacco use of 21.7%	Prevalence of tobacco use among adults (%)	STEPS 2015	23	20	18	5 years
Reduction in prevalence of hypertension among adults aged 18+ of 50%	Age-standardized prevalence of raised blood pressure (hypertension) among adults aged 18+ (%)	STEPS 2015	23.8	16	12	5 years
Increase in proportion of people on medication for diabetes of 111%	Prevalence of raised blood glucose/ medication for diabetes among adults aged 18–69 (%)	STEPS 2015	1.9	2.5	4	5 years

Expected result (outcome)	Indicator	Data source (year of publication of baseline report)	Baseline	Midterm target	End target	Frequency of data collection
Reduction in prevalence of raised cholesterol of 32%	Prevalence of raised total cholesterol in adults (%)	STEPS 2015	13.3	11	9	5 years
Reduction in prevalence of obese-overweight and obese of 28%	Prevalence of obese-overweight and obese among adults aged 18+ (%)	STEPS 2015	27.9	22	20	5 years
Reduction in proportion of population with low level of total physical activity of 37%	Proportion of population with low level of total physical activity (%)	STEPS 2015	10.8	8.8	6.8	5 years
Reduction in incidence of people involved in road traffic accidents of 7%	Incidence of adults aged 18+ involved in road traffic accidents in the preceding year (%)	STEPS 2015	5.8	5.6	5.4	5 years
Reduction in physical and/or sexual violence prevalence rate of 22%	Physical and/or sexual violence prevalence rate in the last 12 months (%)	KDHS 2014	25.5	23	20	5 years
Reduction in early child marriages of 99%	Proportion of women aged 25–49 married by the age of 18 (%)	KDHS 2014	28.7	24	20	5 years
Reduction in incidence of female genital mutilation/cutting and related maternal complications of 24%	Proportion of women aged 15–49 circumcised	KDHS 2014	21	18	16	5 years

4.2.2.2 Population coverage

Table 19: Expected result (outcome) indicators related to universal health coverage – population coverage

Indicator	Baseline (2017–2018)	2018–2019 target	2019–2020 target	2020–2021 target	2021–2022 target	2022–2023 target	Data source	Frequency of collection
Proportion of women of reproductive age (15–49 years) who have their need for family planning satisfied with modern methods (%)	53	NA	NA	65	NA	70	KHIS	Monthly
Proportion of infants receiving three doses of Penta3 (HIB/Hib/DPT3) (%)	80	83	87	90	92	95	KHIS	Monthly
Proportion of pregnant women who have completed four or more antenatal visits (%)	49	51	53	55	57	59	KHIS	Monthly
Proportion of skilled deliveries conducted in health facilities (%)	59	65	67	70	73	75	KHIS/ KDHS	Monthly
Proportion of children under 5 with diarrhoea treated with oral rehydration salts and zinc (%)	25	50	60	65	70	75	KHIS	Monthly
TB treatment success rate (all forms of TB) (%)	81	83	85	86	88	90	TIBU	Quarterly

Antiretroviral therapy coverage among adults (%)	67	70	72	74	75	77	KHIS	Monthly
Antiretroviral therapy coverage among children) (%)	84	85	88	89	90	93	KHIS	Monthly
Proportion of HIV-positive pregnant women who are currently on antiretroviral therapy (%)	94	95	96	97	98	98	KHIS	Monthly
Proportion of women aged 25□49 who have been screened for cervical cancer	16	20	24	28	32	35	STEPS	5 years
Diabetes incidence rate per 100,000 outpatient cases	890	921	951	981	1 011	1 041	KHIS	Monthly
Hypertension incidence rate per 100,000 outpatient cases	2 557	2 853	2 903	2 953	3 003	3 053	KHIS	Monthly
UHC Service Coverage Index*	77	80	83	86	92	100	KHIS	Annually
International Health Regulations: capacity and health emergency preparedness index	82	84	86	89	95	100	IHR/ NPHLS	Annually

***** *The UHC Service Coverage Index includes the following 10 indicators: percentage of women of reproductive age 15□49 years) who have their need for family planning satisfied with modern methods; percentage of infants receiving three doses of Penta3 (HIB/Hib/DPT3); percentage of pregnant women who have completed four or more antenatal care visits; percentage of skilled deliveries conducted in health facilities; percentage of children under 5 with diarrhoea treated with oral rehydration salts and zinc; TB treatment success rate for all forms of TB; Percentage of HIV-positive pregnant women who are currently on antiretroviral therapy; percentage of women aged 15□49 years who have been screened for cervical cancer; diabetes incidence rate (per 100,000 outpatient cases); and hypertension incidence rate (per 100,000 outpatient cases). A score can be calculated for each indicator as follows:*
*(1 □ ((end target □ current performance)/end target))*100. The score for the composite index is the average of all 10 indicator scores.*

4.2.2.3 *Expected result (output) indicators related to universal health coverage*

Tables 20 and 21 shows the output indicators and targets relating to the achievement of UHC.

Service quality

Table 20: Expected result (outcome) indicators related to universal health coverage – service quality

Indicator	Baseline (2017–2018)	2018–2019	2019–2020	2020–2021	2021–2022	2022–2023	Data source	Frequency
Fresh stillbirth rate per 1,000 births in health facilities	12.8	10	9	8	7	6	KHIS	Monthly
Maternal mortality rate in health facilities per 100,000 deliveries	102	95	92	89	86	80	KHIS	Monthly
Facility newborn mortality rate per 1,000 live births	10.1	9	8	7	6	5	KHIS	Monthly
Proportion of hospitals with functional facility mortality committees (%)	45	53	60	70	80	100	Joint Facility Assessments	Annually
Proportion of facilities meeting minimum quality and safety standards (%)	N/A	40	60	70	75	80	KHPOA reports/ KHIS	Annually
Average length of inpatient stay (days)	7.8	7	6	5	4	4	KHIS	Monthly
Proportion of facility maternal deaths audited (%)	80.4	82	85	87	90	94	KHIS	Monthly

Indicator	Baseline (2017–2018)	2018–2019	2019–2020	2020–2021	2021–2022	2022–2023	Data source	Frequency
Client Satisfaction Index	78.2	80	82	84	86	88	Client Satisfaction Survey	Annually
Proportion of counties implementing at least 4 joint/ integrated support supervision exercises annually (%)	20	45	60	75	85	100	Joint Facility Assessments	Annually
Service Quality Index*	34	45	60	78	90	100	KHIS	Annually

***** *The Service Quality index includes the following four indicators: the fresh stillbirth rate; the facility newborn mortality rate; the average length of inpatient stay; and the proportion of facility maternal deaths audited. A score is calculated for each indicator as follows: (1 – ((end target – current performance)/end target))*100. The score for the composite index is the average of all four indicator scores.*

Improved access

Table 21: Expected result (outcome) indicators related to universal health coverage – improved access

Indicator	Baseline (2017–2018)	2018–2019 target	2019–2020 target	2020–2021 target	2021–2022 target	2022–2023 target	Data source	Frequency of collection
Number of health facilities per 10,000 people	2.4	2.5	2.5	2.5	2.5	2.5	KMHFL	Annually
Proportion of the population within 5 km of a health facility (%)	62	69	75	82	88	95	Access modelling	Annually
Proportion of delivery facilities providing all seven basic emergency obstetric and newborn care services (%)	12	20	30	40	50	55	KHFA	Annually
Number of inpatient beds per 10,000 people	13.3	14	15	16	17	18	KHIS	Monthly
Outpatient service utilization rate per person per year	1.4	2.0	2.5	3.0	3.5	4.0	KHIS	Monthly
Availability of tracer essential medicines (%)	44	60	70	80	90	100	LMIS/ KHFA	Quarterly/ Annually
Availability of tracer basic equipment (%)	77	80	85	90	95	100	KHFA	3-5 yearly
Availability of tracer diagnostic equipment (%)	56	65	75	85	95	100	KHFA	3-5 yearly
Service Access Index*	**51**	**68**	**76**	**82**	**92**	**100**	**KHIS**	**Annually**

***** *The Service Access Index includes the following five indicators: the number of health facilities per 10,000 people; the percentage of delivery facilities providing all seven basic emergency obstetric and newborn care services; the number of inpatient beds per 10,000 people; the outpatient service utilization rate per person per year; and the availability of tracer essential medicines. A score is calculated for each indicator as follows: (1 – ((end target – current performance)/end target)) *100. The score for the composite index is the average of all five indicator scores.*

4.2.3 Process indicators related to universal health coverage

Table 22 shows the process indicators relating specifically to the achievement of UHC.

Table 22: Process indicators related to universal health coverage

Human resources for health
Proportion of counties with functional public service boards
Proportion of counties that have placed Public Service Commission interns in PHC facilities Proportion of Public Service Commission interns deployed to PHC facilities
Proportion of counties submitting quarterly reports on Public Service Commission interns deployed in PHC facilities
Proportion of counties submitting quarterly staff reports (through iHRIS)
Proportion of counties that have staff allocated to UHC mobile clinics
Proportion of counties that have placed staff on a three-year Public Service Commission contract in PHC facilities Proportion of staff on a three-year Public Service Commission contract deployed in PHC facilities
Proportion of counties submitting quarterly reports on staff on a three-year Public Service Commission contract deployed to the national Ministry of Health
Infrastructure and basic equipment
Proportion of counties that have mapped, per facility, the gaps in basic equipment in level 2 and 3 facilities
Proportion of facilities per county keeping an inventory of health infrastructure and equipment
Proportion of existing community health units per county keeping an inventory of health infrastructure and equipment
Proportion of counties with a budget for basic equipment maintenance/repair
Primary health care, including community health
Proportion of counties with county health management teams that have been familiarized with primary care networks
Proportion of counties that have identified subcounty areas where primary care networks can be set up
Proportion of counties that have mapped the facilities needed to constitute a primary care network Proportion of level 4 facilities with a linked primary care network per county
Proportion of counties with multidisciplinary teams for each primary care network
Proportion of people per county that have registered with a primary care network
Proportion of counties that have identified gaps and locations without community health units
Proportion of counties that have identified community health volunteers to be trained to establish community health units
Proportion of counties that have identified community health extension workers to supervise community health volunteers per community health unit
Proportion of counties paying stipends to community health workers/volunteers
Proportion of counties conducting biannual household registration exercises and social mapping through community health volunteers
Proportion of facilities per county conducting medical outreach
Quality of care
Proportion of government health facilities in counties monitoring quality of care using the electronic Kenya Quality Model for Health
Proportion of health facilities in counties inspected using the joint health inspection checklist
Proportion of government facilities with functional quality improvement teams
Proportion of government health facilities with infection prevention committees
Monitoring and evaluation
Proportion of counties with functional monitoring and evaluation units
Proportion of counties conducting quarterly performance review meetings
Proportion of counties with monitoring and evaluation units with the capacity to report on health financing

Health products and technologies
Proportion of counties with functional commodity security committees
Proportion of facilities per county with established medicines and therapeutic committees for level 4 and 5 hospitals and county level
Proportion of facilities per county that conduct an annual needs quantification and forecasting for health products and technologies
Proportion of counties reporting monthly on the health products and technologies available and out of stock in KHIS2
Health financing
Proportion of counties allocating at least 30 per cent of their budget to health care
Proportion of counties that have worked on regulations to ensure ring-fencing of funds for health
Proportion of counties that have enacted laws enabling ring-fencing of health funds
Proportion of counties with a special purpose account to fund UHC
Governance
Proportion of counties ensuring that UHC is on the agenda of the monthly management meetings at the county level
Proportion of facilities per county with functional health facility committees/boards
Proportion of county health management teams conducting supportive supervision at health facilities at least quarterly
Enabler general assessment
Proportion of government health facilities per county assessed for their ICT infrastructure readiness
Proportion of government health facilities per county assessed for their connection to the national grid and sufficient internal wiring
Proportion of government health facilities per county assessed for the availability of a reliable clean water source
Proportion of government health facilities per county assessed for access to a good road network
ICT
Proportion of health facilities per county assessed for their ICT infrastructure readiness
Proportion of health facilities per county with a local area network
Proportion of health facilities per county with a fibre-optic connection
Proportion of health facilities per county with an electronic medical record system
Power connectivity
Proportion of all health facilities per county in need of a power upgrade
Proportion of all health facilities per county assessed for their connection to the national grid and sufficient internal wiring
Proportion of all health facilities per county with a bill of quantities for electricity installation or upgrade
Water
Proportion of all health facilities per county with a reliable clean water source
Proportion of all health facilities per county assessed for the availability of a reliable clean water source
Road connectivity
Proportion of all health facilities per county with access to a good road network
Proportion of health facilities per county assessed for access to a good road network

4.2.4 Input indicators related to universal health coverage

4.2.4.1 Human resources for health

Tables 23–26 show the input indicators relating to the achievement of UHC.

Table 23: Input indicators related to universal health coverage – human resources for health

Indicator	Baseline (2017–2018)	2018–2019 target	2019–2020 target	2020–2021 target	2021–2022 target	2022–2023 target	Data source	Frequency of collection
Core health worker density per 10,000 people (nurses, doctors, registered clinical officers)	15.4	16.5	18.5	20	21.6	23.5	Emory University/ iHRIS report	Annually
Number of doctors per 10,000 people	1.5	1.7	2.5	3	3.5	4	Emory University/ iHRIS report	Annually
Number of nurses per 10,000 people	11.3	12	12.5	13	13.5	14	Emory University/ iHRIS report	Annually
Number of community health volunteers per 5,000 people	7.8	8	8.2	8.4	8.6	8.8	KHIS	Annually
Number of community health volunteers in the country	60 850	72 021	85 266	90 534	95 802	101 070	KHIS	Annually
Number of health workers (diploma interns and community health assistants) deployed to primary-level facilities	N/A	4 000	6 000	8 000	10 000	12 000	iHRIS	Annually
Number of county health management teams trained in health systems management	32 (MTR)	35	40	45	47	47	Training reports	Annually
Human Resources for Health Index*	**58**	**65**	**72**	**82**	**93**	**100**	**KHIS**	**Annually**

***** *The Human Resource for Health Index includes the following four indicators: core health worker density per 10,000 people; number of doctors per 10,000 people; number of nurses per 10,000 people; and number of community health volunteers per 5,000 people. A score is calculated for each indicator as follows: (1 – ((end target – current performance)/ end target)) *100. The score for the composite index is the average of all four indicator scores.*

4.2.4.2 *Availability of Health Products and Technologies*

Table 24: Input indicators related to universal health coverage – availability of essential medical commodities and equipment

Indicator	Baseline (2017–2018)	2018–2019 target	2019–2020 target	2020–2021 target	2021–2022 target	2022–2023 target	Data source	Frequency of collection
Proportion of health facilities without stock of one or more of the 18 tracer medicines for 7 consecutive days in a month (%)	44	40	30	20	10	10	LMIS/KHFA	Monthly
Proportion of health facilities without stock of one or more of the 20 tracer non-pharmaceutical commodities for 7 consecutive days in a month (%)	44	40	30	20	10	0	MOH	KHFA
Proportion of PHC facilities with a package of basic equipment by level of care (%)	20	25	35	40	45	50	KHFA/SDI report	Survey
Proportion of annual requirement of safe blood available for transfusion (%)	N/A	30	40	50	60	70	KNBTS	Annually
Proportion of functional medical and therapeutics committees at the hospital level (%)	N/A	0	60	80	100	100	KHIS/KHFA	Quarterly
Proportion of hospitals with parenteral feeds (level 4, 5 and 6 facilities) (%)	N/A	20	35	50	65	80	KHIS	Monthly
Proportion of hospitals that report being out of stock of blood for 7 consecutive days in a month (%)	N/A	50	62	74	86	100	KHFA	Survey
Percentage of hospitals without stock of one or more of the tracer basic lab diagnostic items for 7 consecutive days in a month (HIV diagnosis, malaria diagnosis, syphilis rapid test, urine test for pregnancy, blood glucose test, urine dipstick test for glucose, urine dipstick for protein, haemoglobin test)	N/A	17	27	37	47	60	KHFA	Survey
Health facility order fill rate (%)	70	88	90	92	94	96	LMIS/KHFA	Quarterly
Proportion of the procurement value of essential medical commodities and equipment allocated to local manufacturers (%)	12.16	12.16	18	20	20	20	KEMSA	Annually
Health Products and Technologies Index*	23	35	50	75	85	100	KHIS	Annually

***** *The Health Products and Technologies Index includes the following five indicators: percentage of health facilities without stock of one or more of the 18 tracer medicines for 7 consecutive days; the percentage of health facilities without stock of one or more of the 20 tracer non-pharmaceutical commodities for 7 consecutive days; the percentage of PHC facilities with a package of basic equipment by level of care; the percentage of hospitals without stock of one or more of the tracer basic lab diagnostic items for 7 consecutive days (HIV diagnosis, malaria diagnosis, syphilis rapid test, urine test for pregnancy, blood glucose test, urine dipstick for glucose, urine dipstick for protein, haemoglobin test); and the percentage health facility order fill rate. A score is calculated for each indicator as follows: (1 – ((end target – current performance)/ end target))*100. The score for the composite index is the average of all five indicator scores.*

4.2.4.3 *Strategic health information*

Table 25: Input indicators related to universal health coverage – strategic health information

Indicator	Baseline (2017–2018)	2018–2019 target	2019–2020 target	2020–2021 target	2021–2022 target	2022–2023 target	Data source	Frequency of collection
Proportion of health facilities submitting timely information (%)	77	78	83	87	90	92	KHIS	Monthly
Proportion of community health units submitting timely information (%)	61	65	70	75	80	85	KHIS	Monthly
Proportion of health facilities submitting complete information (%)	89	85	88	90	93	95	KHIS	Monthly
Proportion of community units submitting complete information (%)	69	73	77	80	83	85	KHIS	Monthly
Proportion of hospitals reporting on inpatient morbidity and mortality (%)	30	40	50	60	65	70	KHIS Tracker	Monthly
Proportion of public health facilities with functional electronic health records (%)	0	10	15	20	25	30	Joint inspection report	Annually
Number of county quarterly data review meetings held	30	47	94	131	160	188	Joint supervision report	Annually
Number of counties holding data-quality audit reviews	1	24	28	30	34	47	Joint supervision report	Annually
Strategic Health Information Index*	**48**	**60**	**72**	**85**	**92**	**100**	**KHIS**	**Annually**

***** *The Strategic Health Information Index includes the following four indicators: percentage of health facilities submitting complete information; percentage of community health units submitting complete information; proportion of public health facilities with functional electronic health records; and the number of county quarterly data review meetings. A score is calculated for each indicator as follows: (1 – ((end target – current performance)/end target))*100. The score for the composite index is the average of all four indicator scores.*

4.2.4.4 Financial risk protection

Table 26: Input indicators related to universal health coverage – financial risk protection

Indicator	Baseline (2017–2018)	2018–2019 target	2019–2020 target	2020–2021 target	2021–2022 target	2022–2023 target	Data source	Frequency of collection
Health budget as a proportion of total budget at the county level (average) (%)	28	30	33	35	35	35	County budget implementation review reports	Annually
PHC expenditure as a proportion of current health expenditure at the county level (%)	24	30	40	45	50	55	County budget implementation review reports	Annually
Out-of-pocket expenditure as a proportion of total health expenditure (%)	32	25	N/A	N/A	15	N/A	NHA	3 years
Government spending on health as a proportion of total health expenditure (%)	37	43	N/A	N/A	55	N/A	NHA	3 years
Proportion of the population covered by health insurance (%)	20	35	55	75	100	100	NHIF/IRA	Quarterly
Government spending on health as a proportion of GDP (%)	2.5	3	N/A	N/A	5	5	NHA	3 years
Government per capita health spending (US$)	27	35	N/A	N/A	50	50	NHA	3 years
Cost subsidy for Kenya Essential Package for Health (%)	25	35	50	65	70	75	MOH	Annually
Proportion of population incurring catastrophic health expenditures (%)	4.9	N/A	N/A	N/A	2	2	NHIF/IRA	Quarterly
Financial Risk Protection Index*	**25**	**35**	**50**	**75**	**85**	**100**	**KHIS**	**Annually**

***** *The Financial Risk Protection Index includes the following seven indicators: health budget as a percentage of total budget at the county level (average); proportion of funds allocated by the county to the UHC fund; PHC expenditure as percentage of current health expenditure; out-of-pocket expenditure as a percentage of total health expenditure; percentage of the population covered by health insurance; percentage cost subsidy for the Kenya Essential Package for Health; and percentage of population incurring catastrophic health expenditures. A score is calculated for each indicator as follows: "(1 – ((end target – current performance)/end target))*100". The score for the composite index is the average of all seven indicator scores.*

4.2.4.5 *Universal health coverage – cross-cutting indicators for assessing primary-health-care systems*

Table 27 shows the cross-cutting indicators and targets for assessing PHC systems.

Table 27: Cross-cutting indicators for assessing primary-health-care systems

Indicator	Type of indicator	Baseline (2017–2018)	2018–2019 target	2019–2020 target	2020–2021 target	2021–2022 target	2022–2023 target	Data source	Frequency of collection
Proportion of people (men) who use tobacco (%)	Outcome (risk factor)	23	22	21	20	19	18	STEPS	5 years
Proportion of people with a BMI greater than 25 (%)	Outcome (risk factor)	28	26	24	22	21	20	STEPS	5 years
Proportion of households using improved sanitation facilities (%)	Outcome (risk factor)	52	55	60	65	68	70	KDHS/KHIS	Quarterly
Proportion of households using improved safe water facilities (%)	Outcome (risk factor)	71	73	75	78	79	80	KDHS/KHIS	Quarterly
Proportion of clients who feel they have been adequately informed, by health workers, about their health and care, including examinations	Outcome (service quality)	N/A	50	55	60	65	67	PHC exit survey/ future KHHEUS	Annually
Health worker absenteeism rate in dispensaries (%)	Output	44.5	40	30	25	20	15	SDI report	5 years
Proportion of planned community health units established (%)	Output	55	65	70	80	90	100	KMCHUL	Annually
Proportion of fully functional community health units (%)	Output	66	70	85	90	95	100	KMCHUL	Annually
Proportion of counties with functional primary care networks (%)	Output	N/A	N/A	30	40	50	70	Joint supervision report	Annually
Proportion of PHC facilities providing screening for cervical cancer (VIA/VILI) (%)	Output	22	24	27	31	35	38	KHFA	Annually
Proportion of PHC facilities with access to an improved water source (%)	Input (infrastructure)	86	88	90	92	94	96	KHFA	3–5 years
PHC Index*		72	77	83	88	95	100	KHIS	Annually

***** *The PHC Index includes the following four indicators: percentage of functional community health units; percentage of PHC facilities providing screening for cervical cancer (VIA/VILI); percentage of households using improved sanitation facilities; and percentage of households using improved safe water facilities. A score is calculated for each indicator as follows: 1 – ((end target – current performance)/end target))*100. The score for the composite index is the average of all four indicator scores.*

4.3 Indicators of the Kenya Primary Health Care Strategic Framework 2019–2024

The indicators that will guide the monitoring of implementation of the Kenya Primary Health Care Strategic Framework 2019–2024 are outlined in tables 28–31.

4.3.1 Expected result (impact) indicators of the Kenya Primary Health Care Strategic Framework 2019–2024

Table 28: Expected result (impact) indicators of the Kenya Primary Health Care Strategic Framework 2019–2024

Field of expected result	Indicator	Baseline (2017–2018)	2020–2021 midterm target	2022–2023 End target	Data source (baseline data)	Frequency of collection	Responsibility
Health status	Life expectancy at birth in years	63	66	68	KDHS 2014	5 years	MOH/KNBS
	Under-5 mortality rate per 1,000 live births	52	45	40	KDHS 2014	5 years	MOH/KNBS
	Infant mortality rate per 1,000 live births	39	31	28	KDHS 2014	5 years	MOH/KNBS
	Newborn mortality rate per 1,000 live births	22	17	15	KDHS 2014	5 years	MOH/KNBS
	Maternal mortality rate per 100,000 live births	362	230	200	KDHS 2014	5 years	MOH/KNBS
	TB mortality rate (%)	38	25	19	Annual WHO Global TB Report	Annually	MOH/WHO
	Number of AIDS-related deaths	28 200	17 936	13 266	Kenya HIV estimates 2018	Annually	MOH
	Malaria mortality rate (%)	5.6	4.5	4	KMIS 2015	5 years	MOH/KNBS
	Proportion of deaths due to NCDs (cardiovascular, cancer, diabetes, chronic respiratory) (%)	55	35	20	STEPS 2015	5 years	MOH/KNBS/ WHO
	Cancer mortality rate in adults (%)	3	2.6	2.5	KHIS/STEPS 2016	Annually	MOH
	Mortality rate due to dietary risk factors per 100,000 people	41.5	26	26	GBD 2017	Annually	MOH/KNBS/ WHO
	Malaria incidence rate per 100,000 people	166	150	130	KMIS	3 years	MOH/KNBS
	HIV incidence rate (%)	0.19	0.15	0.1	KENPHIA 2019	5 years	MOH/KNBS
	TB incidence rate per 100,000 people	292	234	146	Annual WHO Global TB Report	Annually	MOH/WHO
	Hypertension incidence rate per 100,000 people	2 557	2 953	3 053	KHIS	Monthly	MOH
	TB case notification rate per 100,000 people	185	191	195	TIBU	Annually	MOH

Field of expected result	Indicator	Baseline (2017–2018)	2020–2021 midterm target	2022–2023 End target	Data source (baseline data)	Frequency of collection	Responsibility
Financial risk protection	Out-of-pocket expenditure on health as a proportion of total health expenditure (%)	31.5	25	15	NHA (2015/16)	3 years	MOH
	Proportion of the population incurring catastrophic health expenditures (%)	4.9	2	2	KHHEUS 2018	5 years	MOH/KNBS

Table 29: Expected result (outcome) indicators of the Kenya Primary Health Care Strategic Framework 2019–2024

Field of expected result	Indicator	Baseline (2017–2018)	2018–2019 target	2019–2020 target	2020–2021 target	2021–2022 target	2022–2023 target	Data source	Frequency of collection	Responsibility
Coverage of interventions	Proportion of women of reproductive age (15–49 years) who have their need for family planning satisfied with modern methods (%)	53	N/A	N/A	65	N/A	70	KDHS	5 years	MOH/KNBS
	Proportion of pregnant women who have completed four or more antenatal care visits (%)	49	51	53	55	57	59	KHIS	Monthly	MOH
	Proportion of skilled deliveries conducted in health facilities (%)	59	65	67	70	73	75	KHIS	Monthly	MOH
	Proportion of children under 5 with diarrhoea treated with oral rehydration salts and zinc (%)	25	50	60	65	70	75	KHIS	Monthly	MOH
	Coverage of vitamin A supplementation among children aged 6 to 59 months (%)	65	67	69	71	73	75	KHIS/Kenya Micronutrient Survey)	Monthly/2 years	MOH
	Proportion of infants receiving three doses of Penta3 (HIB/Hib/DPT3) (%)	80	83	87	90	92	95	KHIS	Monthly	MOH
	Antiretroviral therapy coverage among adults (%)	67	70	72	74	75	77	KHIS	Monthly	MOH
	Antiretroviral therapy coverage among children (%)	84	85	88	89	90	93	KHIS	Monthly	MOH
	Proportion of diabetes cases attended to at primary level facilities (%)	59	63	66	69	72	75	KHIS	Annually	MOH
	Proportion of hypertension cases attended to at primary level facilities (%)	73	75	77	78	79	80	KHIS	Annually	MOH
	Proportion of women aged 25–49 who have been screened for cervical cancer (%)	16	20	24	28	32	35	STEPS	5 years	MOH/KNBS/ WHO

Field of expected result	Indicator	Baseline (2017–2018)	2018–2019 target	2019–2020 target	2020–2021 target	2021–2022 target	2022–2023 target	Data source	Frequency of collection	Responsibility
Risk factors	Proportion of children under 6 months old who are exclusively breastfed (%)	61	62	65	67	69	70	KDHS	5 years	MOH/KNBS
	Prevalence of stunting in children under 5 (%)	26	24	22	20	18	17	KDHS	5 years	MOH/KNBS
	Proportion of households using improved sanitation facilities (%)	52	55	60	65	68	70	KDHS/KHIS	5 years	MOH/KNBS
	Proportion of households using improved safe water facilities (%)	71	73	75	78	79	80	KDHS/KHIS	5 years	MOH/KNBS
Wellness	Proportion of men who use tobacco (%)	23	22	21	20	19	18	STEPS	5 years	MOH
	Proportion of people with a BMI greater than 25 (%)	28	26	24	22	21	20	STEPS	5 years	MOH

4.3.3 Expected result (output) indicators of the Kenya Primary Health Care Strategic Framework 2019–2024

Table 30: Expected result (output) indicators of the Kenya Primary Health Care Strategic Framework 2019–2024

Field of expected result	Indicator	Baseline (2017–2018)	2018–2019 target	2019–2020 target	2020–2021 target	2021–2022 target	2022–2023 target	Data source	Frequency of collection	Responsibility
Service access and availability	Proportion of households registered by community health volunteers (%)	N/A	60	70	80	90	100	KHIS	Annually	MOH
	Proportion of the population within 5 km of a health facility (%)	62	69	75	82	88	95	AccessMod tool	Annually	MOH
	First antenatal care meeting utilization rate (%)	86.5	88	90	92	94	95	KHIS	Annually	MOH
	Availability of and readiness for basic emergency obstetric and newborn care services in PHC facilities (%)	9	12	15	20	25	30	KHFA	Annually	MOH
	Proportion of level 3 facilities providing screening for cervical cancer (VIA/VILLI) (%)	22	24	27	31	35	38	KHFA	Annually	MOH
	Average availability of essential medicines in PHC facilities (%)	41	45	55	65	75	80	KHFA	Annually	MOH
	Average availability of basic diagnostic tracer items in PHC facilities (%)	45	50	55	60	65	70	KHFA	Annually	MOH
	Proportion of level 4 facilities with mapped primary care networks (%)	N/A	N/A	N/A	30	50	70	County reports	Annually	MOH
	Proportion of primary care networks that have conducted community health and promotion outreach on at least one occasion (%)	N/A	N/A	60	70	90	100	KHIS	Monthly	MOH
	Proportion of planned community health units established (%)	55	65	70	80	90	100	KMCHUL	Annually	MOH
	Proportion of fully functional community units (%)	66	70	85	90	95	100	KMCHUL	Annually	Access
	Proportion of community health units submitting timely information (%)	61	65	70	75	80	85	KHIS	Monthly	MOH

Field of expected result	Indicator	Baseline (2017–2018)	2018–2019 target	2019–2020 target	2020–2021 target	2021–2022 target	2022–2023 target	Data source	Frequency of collection	Responsibility
Service quality and safety	Facility maternal mortality rate per 100,000 deliveries	102	95	92	89	86	83	KHIS	Monthly	MOH
	Proportion of facility maternal deaths audited (%)	80.4	82	85	87	90	94	KHIS	Monthly	MOH
	TB treatment success rate (%)	81	83	85	86	88	90	TIBU	Quarterly	MOH
	Satisfaction among family-planning clients at dispensaries (%)	79.7	82	84	86	88	90	SDI survey/ customer satisfaction survey	Annually/5 years	MOH
	Adherence to clinical guidelines (percentage of relevant history and examination questions asked by the care provider)	43.5	N/A	N/A	55	N/A	70	SDI survey/ customer satisfaction survey	5 years	MOH
	Diagnostic accuracy (percentage of cases correctly diagnosed out of the number of patients examined, according to clinical vignettes on multiple common conditions)	67.5	N/A	N/A	75	N/A	90	SDI survey/ customer satisfaction survey	5 years	MOH
	Proportion of rooms (family-planning, sick child, antenatal and NCD) in which all infection-control tracer items are present (%)	12	N/A	N/A	35	N/A	50	SDI survey/ customer satisfaction survey	5 years	MOH
	Adequacy of waste disposal (average percentage score for adherence to standards for disposing of medical and hazardous waste and sharp objects and for having guidelines for waste disposal in place)	64	N/A	N/A	75	N/A	90	SDI survey/ customer satisfaction survey	5 years	MOH

Field of expected result	Indicator	Baseline (2017–2018)	2018–2019 target	2019–2020 target	2020–2021 target	2021–2022 target	2022–2023 target	Data source	Frequency of collection	Responsibility
Person Centeredness	Proportion of clients who feel they have been adequately informed, by health workers, about their health and care, including examinations (%)	N/A-	50	55	60	65	67	PHC exit survey/ HHEUS	5 years	MOH
	Proportion of facilities in which the physical environment allows privacy (%)	86	87	89	90	92	94	KHFA	Yearly	MOH
	Health worker absenteeism rate in dispensaries (%)	44.5	40	30	25	20	15	SDI survey	5 years	MOH
	Proportion of facilities offering youth friendly services for victims of youth violence (%)	17	20	25	30	35	40	Survey/KHFA	Yearly	MOH
	Proportion of women aged 15–49 who have reported problems in accessing health care owing to the cost of treatment (%)	37	N/A	N/A	22	N/A	18	KDHS 2014	5 years	MOH
	Proportion of women aged 15–49 who have reported problems in accessing health care owing to the distance to the health facility (%)	23	N/A	N/A	20	N/A	18	KDHS 2014	5 years	MOH

Table 31: Input and process indicators of the Kenya Primary Health Care Strategic Framework 2019–2024

Field of expected result	Indicator	Baseline (2017–2018)	2018–2019 target	2019–2020 target	2020–2021 target	2021–2022 target	2022–2023 target	Data source	Frequency	Responsibility
Health financing	Total expenditure on health as a proportion of GDP (%)	37 (2015/16)	43	N/A	N/A	55	N/A	NHA	Annually	MOH
	PHC expenditure as proportion of current health expenditure at the county level (%)	24	30	40	45	50	55	NHA	3 years	MOH
	Government per capita health spending on PHC (US$)	11.42	N/A	N/A	18	N/A	25	NHA	3 years	MOH
	Proportion of government domestic health spending allocated to PHC (%)	9.6	N/A	N/A	15	N/A	20	NHA	3 years	MOH
	Government domestic PHC spending as a proportion of current PHC spending (%)	64	N/A	N/A	70	N/A	75	NHA	3 years	MOH
Health governance	Number of PHC county-level focal persons	N/A	N/A	N/A	47	N/A	47	PHC survey	Annually	MOH
	Number of county annual work plans for PHC	N/A	N/A	N/A	47	N/A	47	PHC survey	Annually	MOH
	Number of county-level activity and financial reports submitted to track PHC progress	N/A	N/A	N/A	47	N/A	47	PHC survey	Annually	MOH
	Proportion of PHC facilities that use external support supervision (%)	97.4	N/A	N/A	99	N/A	100	PHC survey/ KHFA	Annually	MOH
	Number of counties with public participation forums for health-related matters for social accountability	N/A	N/A	N/A	47	N/A	47	PHC survey	Annually	MOH
	Number of biannual national PHC stakeholder engagement meetings held	1	N/A	N/A	2	N/A	2	National APR report	Annually	MOH

Field of expected result	Indicator	Baseline (2017–2018)	2018–2019 target	2019–2020 target	2020–2021 target	2021–2022 target	2022–2023 target	Data source	Frequency	Responsibility
Health infrastructure	PHC facility density per 10,000 people	1.1	N/A	N/A	1.3	N/A	1.5	KMFL	Annually	MOH
	Proportion health facilities with access to a source of power (%)	71	75	80	85	87	90	KHFA	3–5 years	MOH/KNBS/ WHO
	Proportion of PHC facilities with access to an improved water source (%)	85	88	90	92	94	96	KHFA	Annually	MOH
	Proportion of PHC facilities with internet connectivity (%)	22	27	32	37	42	45	KHFA	Annually	MOH
	Proportion of PHC facilities on an accessible road network (%)	-	50	55	60	65	70	KHFA	Annually	MOH/MOT
	Proportion of PHC facilities with access to an ambulance for emergency referral services within 15 minutes (%)	87	90	92	94	96	98	Joint assessment report 2018	2 years	MOH
	Proportion of PHC facilities with a package of basic equipment by level of care (%)	20	25	35	40	45	50	KHFA/SDI survey	Survey	MOH
Health workforce	Number of clinical officers per 10,000 people	2.6	2.8	3.5	4	4.6	5.5	iHRIS 2018	Annually	MOH
	Number of nurses per 10,000 people	11.3	12	12.5	13	13.5	14	iHRIS 2018	Annually	MOH
	Number of community health volunteers in the country	60 850	72 021	85 266	90 534	95 802	101 070	KMCHUL	Annually	MOH
	Number of community health volunteers per 5,000 people	7.8	8	8.2	8.4	8.6	8.8	KMCHUL	Annually	MOH
Health information	Proportion of health facilities submitting complete information (%)	89	85	88	90	93	95	KHIS	Monthly	MOH
	Proportion of community health units submitting complete information (%)	69	73	77	80	83	85	KHIS	Monthly	MOH
	Proportion of health facilities submitting timely information (%)	77	78	83	87	90	92	KHIS	Monthly	MOH
	Proportion of community health units submitting timely information (%)	61	65	70	75	80	85	KHIS	Monthly	MOH
	Proportion of PHC facilities conducting quarterly data-review meetings (%)	N/A	50	60	70	75	80	PHC survey/ county reports	Annually	MOH

5. Monitoring Plan

5.1 Monitoring process for implementation of the Kenya Health Sector Strategic Plan 2018–2023

This section describes the monitoring measures foreseen to ensure that the KHSSP 2018–2023 is implemented as planned and its goals achieved. The Division of health sector monitoring and evaluation within the Ministry of Health will provide a robust monitoring system using effective policies, tools, processes and systems to meet stakeholders' information needs. Through the collection, tracking and analysis of data, it will be possible to determine what is happening, where and to whom. The Monitoring and Evaluation Unit, or the equivalents at the county level, will nurture an inclusive and focused monitoring culture to make implementation effective and facilitate the collection and analysis of data to guide decision-making. The critical elements to be monitored are: resources (inputs); service delivery statistics (processes); investment-area outputs; service coverage outcomes; client/patient outcomes (behavioural change, morbidity); access to services; and impacts.

The key monitoring processes are outlined in figure 5 below.

5.1.1 Data generation

Monitoring of the progress made in implementing the priorities of the KHSSP will require the use of data from multiple sources; strong multisectoral collaboration, particularly in relation to the social determinants of health; and collaboration with research institutions and the Kenya National Bureau of Statistics, which collect data of relevance to health. Various types of data will be collected from different sources to monitor the implementation progress. These data are collected in various ways, including through routine methods, surveys, sentinel surveillance and periodic assessments. Routine data will be generated using the existing mechanisms and uploaded to the Kenya Health Information System monthly. Efforts will be made to ensure that well-functioning data sources meet stakeholders' needs and are fitting for the all-inclusive plans for the sector. Other management information systems will be strengthened to respond to the data needs of the Ministry of Health.

Data flow from the primary source through the levels of aggregation to the national level will be aided by reporting guidelines and standard operating procedures. Data from all reporting entities should reach the Ministry of Health

Figure 5: Key monitoring processes of the implementation of the Kenya Health Sector Strategic Plan 2018–2023

according to the timeline agreed for that particular level.

The Ministry of Health will strengthen the data repository to contain all data needed in relation to the relevant indicators to aid management decisions, research and performance monitoring. Apart from routine data, the present Monitoring and Evaluation Framework relies on data from periodic health surveys such as the Kenya Demographic Health Survey and the Kenya Service Availability and Readiness Assessment Mapping . The Monitoring and Evaluation Unit will support the implementation of various policies, guidelines, protocols and standard operating procedures and ensure adherence to the monitoring and reporting requirements and standards of the Ministry of Health. New tools will be developed for new indicators while existing tools may also be revised to accommodate emerging needs.

5.1.2 Data validation

Timely, reliable and accurate data are a prerequisite for ensuring the validity of conclusions and decisions made on the basis of the results of monitoring and evaluation. Data validation will take place to verify whether the information about the reported progress is of the highest quality and ensure that data are captured correctly in the various tools and management information systems. This will involve conducting regular assessments of data quality and enhancing the capabilities of the management information systems to validate the data entered. There will also be oversight activities, such as periodic monitoring/ fields visits, supportive supervision and joint assessments, at all levels within the health sector. Data verification will take place on a quarterly and annual basis for all indicators.

5.1.3 Data analysis

The effectiveness of the health sector's response to deviations from expected performance depends on its ability to analyse and use information on time. Data analysis involves the transformation of data into information that can be used for decision-making at the community, health-facility, subcounty, county and national levels and in related sectors. The data will be transformed in products based on the audience's needs The analysis will be guided by the existing standard operating procedures and analytics guidelines will be developed to strengthen the process. The Ministry of Health will analyse and interpret data from the different levels and stakeholders and generate regular sector reports.

Data analysis will take place three levels, as follows:

- ***Operational-level analysis:*** This level of analysis relates to assessment of the day-to-day performance of the programmes or stakeholder institution at all levels and enables the detection of deviations and appropriate remedial action.
- ***Managerial-level analysis:*** This level of analysis relates to assessment of the efficiency and effectiveness of implementation of Ministry of Health plans.
- ***Strategic-level analysis:*** This level of analysis relates to the strategic policy considerations of access, quality and equity.

5.1.4 Information dissemination

An appropriate feedback system motivates stakeholders to improve their performance in general, and specifically with respect to the quality information. The information products developed will be routinely disseminated to key stakeholders and the public as part of the quarterly and annual reviews in order to solicit feedback on the progress and make plans for corrective measures. The findings of the reviews will be presented and discussed at the Kenya Health Summit. Information products such as the quarterly and annual review reports will be made available for download on the website of the Ministry of Health and the Kenya Health and Research Observatory. Those forums will also be used to identify lessons or good practices and emerging issues and to share knowledge of them and promote good practices among stakeholders and policymakers. Supportive monitoring and supervision with a focus on capacity-building will be provided to improve

the overall performance and accountability of the sector.

5.1.5 Stakeholder collaboration

The determinants of health are not exclusively under the influence of the health sector. There is therefore a need to engage effectively other relevant ministries, departments and agencies and the wider private sector in the health sector monitoring and evaluation process. These stakeholders generate, and require, information specific to their functions and responsibilities. The information generated by all these stakeholders is required collectively for the overall assessment of the performance of the health sector. Mechanisms will be put in place to ensure that all requisite health-related data are obtained for the review of progress. The Ministry of Health will strengthen the monitoring and evaluation partnership coordination mechanism to ensure alignment, harmonization, synchronization of strategies/approaches and accountability to results by all the various stakeholders. Key stakeholders will also take part in the all-inclusive annual and quarterly performance/data reviews.

5.2 Monitoring mechanisms related to the achievement of universal health coverage

Table 32 shows the various mechanisms for monitoring progress in the achievement of universal health coverage.

Table 32: Monitoring mechanisms related to the achievement of universal health coverage

Level	Activity	Process	Output	Frequency	Responsibility
National	Monthly review of routine UHC indicators	Performance review using the UHC dashboard and other dynamic health-sector performance scorecards relating to reproductive, maternal, newborn, child and adolescent health and the Kenya Health and Research Observatory for performance management and accountability	Monthly UHC progress report	Monthly	UHC Secretariat/ Department of health sector monitoring, evaluation and informatics
	Quarterly monitoring of UHC progress	Stakeholder reviews of indicators and joint field assessments	Quarterly UHC progress report	Quarterly	
	Bi-annual joint supportive supervision	Joint supportive supervision to complement performance reviews	Joint supervision reports	Bi-annually	
	Annual UHC performance review	Health stakeholder reviews of the sector's performance including progress in accelerating achievement of UHC, focusing on service and financial protection coverage Kenya Health Forum	Annual UHC report	Annually	
	Annual health-facility assessment	Annual health-facility assessment/mini surveys relating to UHC	Annual health-facility assessment report	Annually	
	Annual health-systems assessment	Annual health-systems assessment relating to UHC	Annual health-systems assessment report	Annually	
	Annual data-quality audit	Onsite data verification or routine data-quality assessment using the Kenya Health Sector Data Quality Assessment Protocol	Data quality report	Annually	
	Improvement of health metrics (data use, knowledge translation, knowledge synthesis)	Data visualization (Kenya Health and Research Observatory, dynamic dashboards (bottleneck analysis, UHC, vital signs profiles), capacity-building in the communication of data for impact	Dashboards, Factsheets	Quarterly	Department of health sector monitoring, evaluation and informatics

Level	Activity	Process	Output	Frequency	Responsibility
County	Monthly review of routine UHC indicators	Performance review using the UHC dashboard	Monthly UHC progress report	Monthly	County health management teams /KHIS/ monitoring and evaluation units
	Quarterly monitoring of UHC progress	Stakeholder reviews of health-sector performance including progress in accelerating achievement of UHC and bottleneck analysis. County health-stakeholder forums	Quarterly UHC county progress report	Quarterly	
	Quarterly integrated supportive supervision	Integrated supportive supervision to complement performance reviews	Supportive supervision reports	Quarterly	
	Annual UHC performance review	County health accounts; county budget analysis	Annual county UHC reports	Annually	
	Annual health-facility assessment	Annual health-facility assessment/mini surveys relating to UHC	Annual health-facility assessment reports	Annually	
	Annual health-systems assessment	Annual health-systems assessment for UHC	Annual health-systems assessment reports	Annually	
	Annual data-quality audit	Onsite data verification or routine data-quality assessment using the Kenya Health Sector Data Quality Assessment Protocol	Data-quality reports	Annually	
Facility	Monthly multidisciplinary performance reviews	Monthly performance-review meetings	Monthly facility performance reports	Monthly	Facility management
		Review of facility scorecards Institutionalization of the use of facility-level dynamic dashboard reports to strengthen evidence-based decision-making	Facility scorecards report and action plans		
Community	Quarterly community health dialogue days	Community engagement on progress in and acceleration of the achievement of UHC	Community dialogue day reports	Quarterly	Community health extension workers
	Biannual community scorecard	Citizen engagement and feedback loop for social accountability	Scorecard reports and action plans	Biannually	Community health extension workers
	Annual, biannual and quarterly performance monitoring of community health services	Establishment of community health units Running of community health units Reporting by community health units	Community health service performance monitoring reports	Annually, biannually, quarterly	Community health extension workers

5.3 Monitoring mechanisms related to the Kenya Primary Health Care Strategic Framework 2019–2024

Table 33 shows the various mechanisms for monitoring progress in implementation of the Kenya Primary Health Care Strategic Framework 2019–2024.

Table 33: Monitoring mechanisms related to implementation of Kenya Primary Health Care Strategic Framework 2019–2024

Level	Activity	Process	Output	Frequency	Responsibility
Community	Reporting on community-level indicators	Completion and submission of reports on community health indicators using the MOH 515 tool	Community health extension worker summary reports	Monthly	Community health extension workers/ subcounty health records and information officers
	Community health dialogue days	Review of community indicators and health concerns as outlined in MOH tool 516 (chalk board)	Community health dialogue day reports	Quarterly	Community health extension workers
	Quality improvement team meetings	Quality improvement meetings held by community health volunteers and community health extension workers to review the quality of services at the community level	Quality improvement team reports	Quarterly	Community health extension workers
	Community health committee meetings	Community health committee review meetings	Community health committee reports	Monthly	Chairs of community health committees
Facility	Reporting on PHC service indicators	Completion and submission of reports on the PHC service indicators using MOH tools such as MOH 711	PHC service indicators summary reports	Monthly	Facility management; subcounty health records and information officers
	Reporting on commodity indicators	Completion and submission of reports on the health commodity indicators	Commodity reports; commodity dashboards	Monthly	Facility management; subcounty health records and information officers
	Facility data-review meetings	Review of service and logistics data and health concerns	Service and logistics data reports	Quarterly	Facility management
	Facility health management committee meetings	Health management meetings on diverse matters including resource management and activity implementation	Minutes of meetings	Quarterly	Chairs of health management committees
	Facility staff meetings	Facility staff meeting on operations and management	Minutes of meetings	Monthly	Facility management

Level	Activity	Process	Output	Frequency	Responsibility
County/ subcounty	PHC performance review meetings	Review of progress in achievement of the PHC targets	County/ subcounty PHC performance progress reports	Quarterly	County health management teams/ subcounty health management teams
	Updating of the PHC vital signs profile	Completion of the vital signs profile template using the latest data	Updated vital signs profile	Quarterly	County health management teams/ subcounty health management teams
	Management of the Kenya Master Community Health Units List	Management the KMCHUL	Updated KMCHUL	Continuous	Department of health sector monitoring, evaluation and informatics/county health management teams/subcounty health management teams
	Updating of the primary care networks	Updating of service delivery points on the Kenya Master Health Facility List	Updated KMHFL	Continuous	Department of health sector monitoring, evaluation and informatics/county health management teams/subcounty health management teams
	Reporting on PHC outreach	Documentation of and reporting on PHC outreach	PHC outreach reports	Monthly	County health management teams/ subcounty health management teams
	Routine data-quality audit	Conduct of routine data-quality audits	Routine data-quality audit reports	Quarterly	County health management teams/ subcounty health management teams
	Joint/integrated supportive supervision	Conduct of multidisciplinary supportive supervision	Supervision checklist and reports	Quarterly	County health management teams/ subcounty health management teams/ other sectors
National	PHC performance-review meetings	Review of progress in achievement of PHC targets	National PHC performance progress reports	Biannually	MOH Department of Primary Health Care/ Department of Health Information Systems, Monitoring and Evaluation
	PHC vital signs profile updates	Completion of the vital signs profile template using the latest data	Updated vital signs profile	Quarterly	MOH Department of Primary Health Care/ Division of health sector monitoring and evaluation
	Routine data-quality audit	Conduct of routine data-quality audit	Routine data-quality audit reports	Biannually	MOH Department of Primary Health Care/ Department of Health Information Systems, Monitoring and Evaluation
	Joint/integrated supportive supervision	Conduct of multisectoral supportive supervision	Supervision checklist and reports	Quarterly	MOH Department of Primary Health Care/ Department of health sector monitoring, evaluation and informatics/ partners/ other sectors

5.4 Monitoring reports

Table 34 outlines the kinds of monitoring reports that are produced and when.

Table 34: Monitoring reports produced and their timing

Report	Frequency	Responsibility	Timeline
Annual work plans	Annually	All levels and planning units	By end of June
Surveillance reports	Weekly	District Disease surveillance coordinator (DDSC) and health-facility management	By close of business on Fridays
Health-data reviews	Quarterly	All levels and planning units	By end of each quarter
Monthly service delivery reports	Monthly	Facilities and community units	By day 5 of every month
Quarterly service delivery reports	Quarterly	All levels and planning units	By day 21 of the following quarter
Biannual performance reviews	Every 6 months	All levels	By end of January and end of July
Annual performance reports and reviews	Annually	County and national MOH levels	Beginning in July and ending in November
Monthly expenditure reports	Monthly	All levels	By day 5 of every month
Annual expenditure reports	Annually	All levels and planning units	Beginning in July and ending in November
Health assessment reports	As needed	MOH/relevant unit	As needed
County health forums	Annually	Counties	By end of October
Kenya health forum	Annually	National MOH, partners and counties	By end of November

6. Evaluation of the Kenya Health Sector Strategic Plan 2018–2023

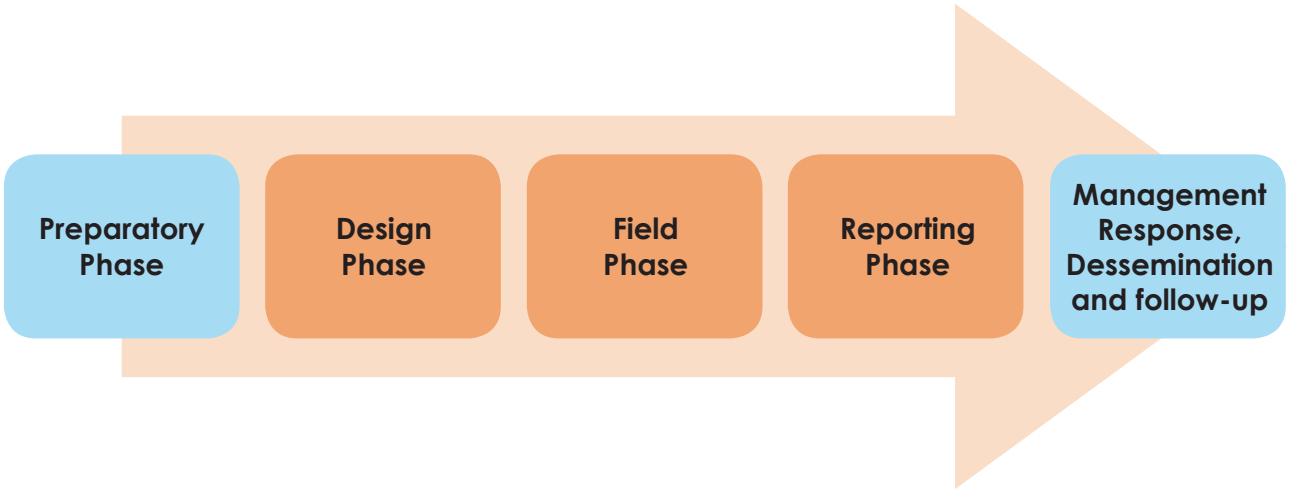
6.1 Why evaluate?

Implementation of the Kenya Health Sector Strategic Plan 2018–2023, Draft Road Map Towards Universal Health Coverage in Kenya 2018–2022 and Kenya Primary Health Care Strategic Framework 2019–2024 are intended to improve access to high-quality health services for the population without it leading to financial catastrophe. It is anticipated that there will be improvements in health outcomes. Evaluations aim to determine whether the changes that have been envisioned are actually achieved. The present evaluation process is designed to assess whether the implementation of the KHSSP achieves the intended goals of improving the health and well-being of the population. It is intended to provide an evidence base for policymaking related to strategic objectives by ensuring that there is robust and credible information on performance and documentation of what worked and what did not.

The evaluation process is intended to determine whether changes in health outcomes can be attributed to the implementation of the KHSSP, the Draft Road Map Towards Universal Health Coverage in Kenya 2018–2022 and the Kenya Primary Health Care Strategic Framework 2019–2024. It will ascertain whether the existing system and governance are sufficient to achieve the goals for KHSSP and compare them with alternatives so that Kenya can be confident that the reforms are leading the country in the right direction.

The findings of the evaluation will be used to spur further action. Even if the intended changes have not occurred, if sufficient data have been collected, it should be possible to analyse what went wrong (such as the hypothesis, chosen time frame, inputs, external factors, etc.).

Figure 6: Evaluation for the process for the Kenya Health Sector Strategic Plan 2018–2023



6.2 Evaluation processes

The evaluation of the KHSSP will also encompass an evaluation of the UHC and PHC indicators. This will happen in five phases: the preparatory phase, the design phase, the field phase, the reporting phase and the management response, dissemination and follow-up phase.

6.3 Evaluation of the Kenya Health Sector Strategic Plan 2018–2023

The evaluation of the KHSSP is meant to ensure the accountability of the various stakeholders and to facilitate learning with a view to improving the relevance and performance of the health sector over time. A midterm review and an end evaluation will be undertaken to determine the extent to which the objectives of the KHSSP have been met.

6.4 Evaluation criteria

For an effective evaluation of the KHSSP, there need to be clear evaluation questions. Evaluators will analyse the relevance, efficiency, effectiveness and sustainability of the KHSSP. The proposed evaluation criteria are further elaborated on below.

a) Relevance:

The extent to which the objectives of the KHSSP corresponded to the needs of the population at the national and county levels (those of vulnerable groups) and were aligned throughout the programme period with government priorities as stipulated in the Third Medium-term Plan of the Kenya Vision 2030

The criterion of relevance relates to the correspondence of the objectives and support interventions of the KHSSP with the needs of the population, government priorities and global policies and strategies.

It will also include an evaluation of the responsiveness (dynamic relevance) of the system to changes such as additional requests from national and county governments and shifts caused by external factors in an evolving country context (such as a change of governmental orientation or a humanitarian crisis).

This subcriterion evaluates the ability of the Ministry of Health to respond to:

- Changes in population and development needs and in priorities within national strategies or shifts caused by major events (such as natural disasters, conflicts, etc.)
- Specific requests from the national government, such as for universal health coverage under the "Big Four" agenda

Evaluators will assess:

- The speed and timeliness of the response (response capacity)
- Whether the scale of the response was adequate in relation to the magnitude of the demand (quality of the response)
- The balance between the short-term responsiveness and long-term development objectives embedded in the Third Medium-term Plan

b) Efficiency

The extent to which KHSSP objectives have been achieved with the appropriate resources (funds, expertise, time, administrative costs, etc.).

The efficiency criterion captures how resources (funds, expertise, time, etc.) have been utilized by the stakeholders in the health sector and converted into results along the result chain.

c) Effectiveness

The extent to which KHSSP objectives have been achieved and the extent to which the achievement of those objectives has contributed to the achievement of the intended outcomes.

Assessment of the effectiveness of the KHSSP will require a comparison of the intended goals, outcomes and outputs with the actual results achieved. In line with the logic of the theory of change, evaluators will need to

assess the extent to which the KHSSP objectives have been achieved and the extent to which those achievements have contributed to the achievement of priority goals at the national level.

d) Sustainability

The extent to which the benefits of a KHSSP-related intervention continue after it has ended, in particular with respect to continued resilience to risks.

Sustainability relates to the likelihood that benefits from investments in the health sector continue beyond the transformation of the health system and the achievement of universal health coverage. Evaluators need to consider the flow of benefits after the interventions have ended and the overall resilience of the benefits to risks that could affect their continuation.

6.5 Evaluation mechanisms related to the achievement of universal health coverage

Table 35 shows the various mechanisms for evaluating achievement of universal health coverage

Table 35: Evaluation mechanisms related to the achievement of universal health coverage

Level	Activity	Process	Output	Frequency	Responsibility
National	Midterm and end evaluations of the Draft Road Map Towards Universal Health Coverage in Kenya 2018–2022/KHSSP	Financial evaluation	Financial evaluation report	December 2022	UHC Secretariat/ Department of health sector monitoring, evaluation and informatics
		Outcome (service coverage, utilization and access) evaluation	Outcome evaluation report		
		Impact evaluation	Impact evaluation report		
		KHFA	KHFA reports		
		Customer satisfaction surveys	Customer satisfaction survey reports		
	Biennial/annual mini surveys/ assessments/ evaluations	Multiple Indicator Cluster Surveys; STEPS; KMIS; Kenya National Micronutrient Survey; long/short rains assessments; Integrated Food Security Phase Classification; annual national inventory of cold-chain equipment; health technology assessments; health workforce assessments; food consumption survey	Survey/assessment reports	Biennially/ annually	
		KHFA	KHFA reports	Annually	
		Subnational burden of disease analysis	Subnational burden of disease report	Annually	
	Outcome/ effectiveness evaluation	Rapid-cycle evaluation methodology; data triangulation–geostatistical modelling; theory-based evaluations; contribution analysis	Effectiveness evaluation reports	Annually	
County	County health accounts; county budget analysis	County health accounts and county budget analysis	County health accounts/county budget analysis reports	Annually	UHC Secretariat/ Department of health sector monitoring, evaluation and informatics

6.6 Evaluation mechanisms related to the Kenya Primary Health Care Strategic Framework 2019–2024

Table 36 shows the various mechanisms for evaluating the implementation of the Kenya Primary Health Care Strategic Framework 2019–2024.

Table 36: Evaluation mechanisms related to the implementation of the Kenya Primary Health Care Strategic Framework 2019–2024

Level	Activity	Process	Output	Frequency	Responsibility
National	Annual PHC evaluation	Conduct of a multisectoral PHC evaluation - Household survey - Indicator evaluation/ equity evaluation	Annual PHC evaluation report	Annual	MOH Department of Primary Health Care/ Division of health sector monitoring and evaluation/partners/other sectors
	PHC costing study	Conduct of a multisectoral PHC costing study	PHC costing study report	5 years	MOH Department of Primary Health Care/ Division of health sector monitoring and evaluation/partners/other sectors
	External quality-assurance exercise	Conduct of facility visits for quality-assurance purposes (external technical team)	External quality-assurance reports	Biannually	Department of Primary Health Care/Department of health sector monitoring, evaluation and informatics/ partners
County	Small surveys on topical issues	Conduct of small surveys to collect data on topical community issues	Survey reports	Biannually	MOH Division of Community Health/county and subcounty community health focal persons

6.7 Major surveys, systems and reviews in Kenya used for setting 2018 baselines and measuring progress against targets

Table 37 outlines the major surveys, systems and reviews that have been used to set the baselines in the framework and that will be used to measure progress against the targets the Kenya Health Sector Strategic Plan 2018–2023, the Draft Road Map Towards Universal Health Coverage in Kenya 2018–2022 and the Kenya Primary Health Care Strategic Framework 2019–2024.

Table 37: Major surveys, systems and reviews in Kenya used for setting baselines and measuring progress targets

	Title	Timing	Key partners
Surveys and studies	Kenya Population and Housing Census	2019	KNBS, USAID, WB
	Kenya Service Availability and Readiness Assessment Mapping	2018	MOH, WHO, HDC
	Kenya Health Facility Assessment	2018	MOH, WHO, HDC
	Kenya Demographic and Health Survey	2019	MOH, KNBS, USAID
	Kenya Malaria Indicator Survey	2020	MOH, WHO, KNBS
	National AIDS Indicators Survey	2018	MOH, KNBS
	Kenya Household Health Expenditure and Utilization Survey	2018	MOH, KNBS, WB, WHO
	Multiple Indicator Cluster Survey	2019, 2022	MOH, KNBS, UNICEF
	Kenya Integrated Household Budget Survey	2015	KNBS, WB
	Kenya Population-Based HIV Impact Assessment	2018	MOH, KNBS, Global Fund, USAID
	Kenya Tuberculosis Prevalence Survey	2016	MOH, WHO, Global Fund
	Evaluation of the impact of free maternity services (Linda Mama programme)	2019	MOH, WHO, HDC
Monitoring systems	District Health Information System 2	2008–2023	MOH, DANIDA, USAID, WB, WHO, HDC
	Kenya Master Health Facility List	2006–2023	MOH, DANIDA, USAID, WB, WHO, HDC
	DSL software	2016–2023	MOH, USAID, WB, WHO, HDC
	HIV viral load and early infant diagnosis system		
	Tuberculosis Information from Basic Units programme management system	2015–2023	MOH, Global Fund, HDC
	iHRIS human resources information system	2006–2023	MOH, IntraHealth International, WHO, HDC
	Logistics Management Information System	2008–2023	MOH, GIZ, HDC
Reviews	Kenya Health Sector Strategic Plan 2018–2023 Midterm Review	2020–2021	MOH, WHO, HDC
	Kenya Health Forum	Annually (November)	MOH, WHO, HDC
Evaluations	Kenya Health Sector Strategic Plan 2018–2023 end review	2023–2024	MOH, WHO, HDC
	Monitoring and Evaluation Framework final evaluation	2023–2024	MOH, WHO, HDC

7. Data Analysis

7.1 Introduction

While the national Ministry of Health and the counties have taken the lead in the implementation and monitoring of health programmes, interventions, policies and guidelines, there is still inadequate investment in data management, analysis and use within the health-care system. Improved data analysis will enable the health sector to assess whether and how a programme has achieved both programme-level and population-level objectives. This aids evidence-based decision-making.

Data analysis ought to be done routinely (daily/monthly) and periodically (during the development of information products, performance reviews and evaluations). In addition, data is analysed when there are specific needs (such as before and after rapid result initiatives, outbreaks or resource rationalization). In the health sector, the purpose of data analysis is to:

- Establish the magnitude/extent of a health problem
- Monitor trends and take prompt action to address gaps/constraints
- Identify the causes of the problem and craft appropriate solutions
- Monitor progress in a public health programme and hence document the achievements of the programme
- Establish the basis for accountability for results

7.2 Levels and methods of data analysis

There are three levels of analysis:

- ***Univariate analysis:*** Each variable is explored in a data separate set. It is a good method for checking the quality of the data. Inconsistencies or unexpected results should be investigated using the original data as the reference point. The commonly used statistics within univariate analysis of continuous variables include the mean, median and mode, as well as the range of values.
- ***Bivariate analysis:*** This involves examining two variables simultaneously. It is a type of analysis that links any two variables/indicators, such as the number of people who have tested HIV positive and those who receive care, or differences in viral suppression between male and female HIV-positive patients on antiretroviral therapy.
- ***Multivariate analysis:*** This examines more than two variables simultaneously. It assesses the effect of several independent variables against one dependent outcome/variable. The purpose is to quantify the effect of the independent variables on the dependent variable, such as the contributing factors to stunting in children under 5. The dependent variable would be the stunting status and the possible independent variables could be gender, household income, parental education level and food intake.

The following standard methods of data analysis will be used across the health sector:

- ***Descriptive statistics:*** These are techniques that summarize and describe the characteristics of a group or make comparisons of characteristics among groups. They include frequencies, counts, averages and percentages, the median and mode, standard deviation, range and variance. Similarly, they include the use of ratios, proportions, percentages and rates.
- ***Inferential statistics:*** These are used to generalize or make inferences about a population on the basis of findings from a sample. They allow the evaluator to make inferences about the population from which the sample data has been drawn. Examples include the t-test, chi-square, correlation and analysis of variance. They are used to make predictions on the basis of data collection beyond descriptive analysis. They rely on statistical significance. Testing for statistical significance helps to ensure that differences observed in data, however small or large, are not due to chance.

The choice of type of analysis is based on the evaluation questions, the type of data collected and the audience that will receive the results.

7.3 Data visualization

When health data is presented in graphical form, it can make complicated and bulky data more understandable and usable. Visualization can take a variety of forms:

- ***Tables:*** The data presented is in form of absolute numbers or percentages. It should have a clear heading that is easy to understand. Tables are used when there are a variety of parameters and can be used to keep track of frequencies, variable associations and more.
- ***Charts:*** Data is presented using symbols such as bars, lines or pie slices. Charts are often used to ease understanding of large quantities of data and the relationships between parts of the data. They are used to represent numbers or percentages.
- ***Histogram:*** This consists of tabular frequencies, shown as adjacent rectangles, erected over discrete intervals (bins), with an area equal to the frequency of the observations in the interval. Each bar represents how data is distributed within a single category.
- ***Pie chart:*** This shows percentage values as a slice of a pie. Pie charts are used when comparing parts of a whole and they do not show changes over time. Types of pie charts include:
  - *Doughnut chart (also spelled donut):* This a variant of the pie chart, with a blank centre allowing for additional information about the data as a whole to be included.
  - *Exploded pie chart:* This has one or more sectors separated from the rest of the pie. The effect is used either to highlight a sector or to highlight segments of the chart with small proportions.
  - The other, less commonly used, charts are the *3D pie chart*, *polar area diagram*, *ring chart* and *square chart*.
- ***Line graph:*** This is a two-dimensional scatter plot of observations connected according to their order. It is essential for detecting trends over time. It can be used to compare changes over the same period of time in more than one group as it is drawn chronologically.
- ***Maps:*** This is a diagrammatic representation of data involves colours and values assigned to specific regions. Data values are displayed as markers on the map. They can be coordinates (latitude–longitude pairs) or addresses. The map is scaled so that it includes all the identified points.
- ***Dashboards:*** Thematic dashboards will be developed to address various areas of interest, including for the main strategies- KHSSP, UHC and PHC

7.4 Capacity development for data analytics

Across the health sector, there are gaps in data-management capacity in terms of generation, analysis, interpretation, presentation and use. Furthermore, there are no clearly defined frameworks or guidelines for data analysis and use at the national and county levels. Critical decisions, plans, investment and interventions are designed and implemented with little reliance on readily available data. Health staff at the national and county levels demonstrate varied competence in data analysis and use for decision-making. There are also infrastructural and other institutional barriers that affect data analysis and use, especially at the county and lower levels.

To strengthen data-analysis capacities within the health sector during implementation of the KHSSP, a wide range of measures are proposed. These include:

- Establishment of a data archive for the long-term safeguarding of information
- Compilation and tabulation of microdata according to established international standards
- Regular assessment of the quality and reliability of both microdata and aggregated data in terms of coverage, completeness, accuracy, consistency and plausibility
- Transparency towards users about the limitations of data and statistical reporting
- Establishment of mechanisms for data-sharing, such as a data repository that is regularly backed up
- Development of a code of practice to ensure that confidentiality standards are maintained without impediment to data dissemination
- Improvement of data accessibility for users through the provision of analytical summaries that present data using simple charts and maps
- Introduction of ICT to improve data visualization and accessibility
- Development of skills and capacities through training for individuals in data analysis and presentation
- Use of expertise in academic and research institutions to support enhanced analysis of available data and to promote broader understanding of analytical techniques

8. Linking Data to Action: Information Dissemination and Use

8.1 Introduction

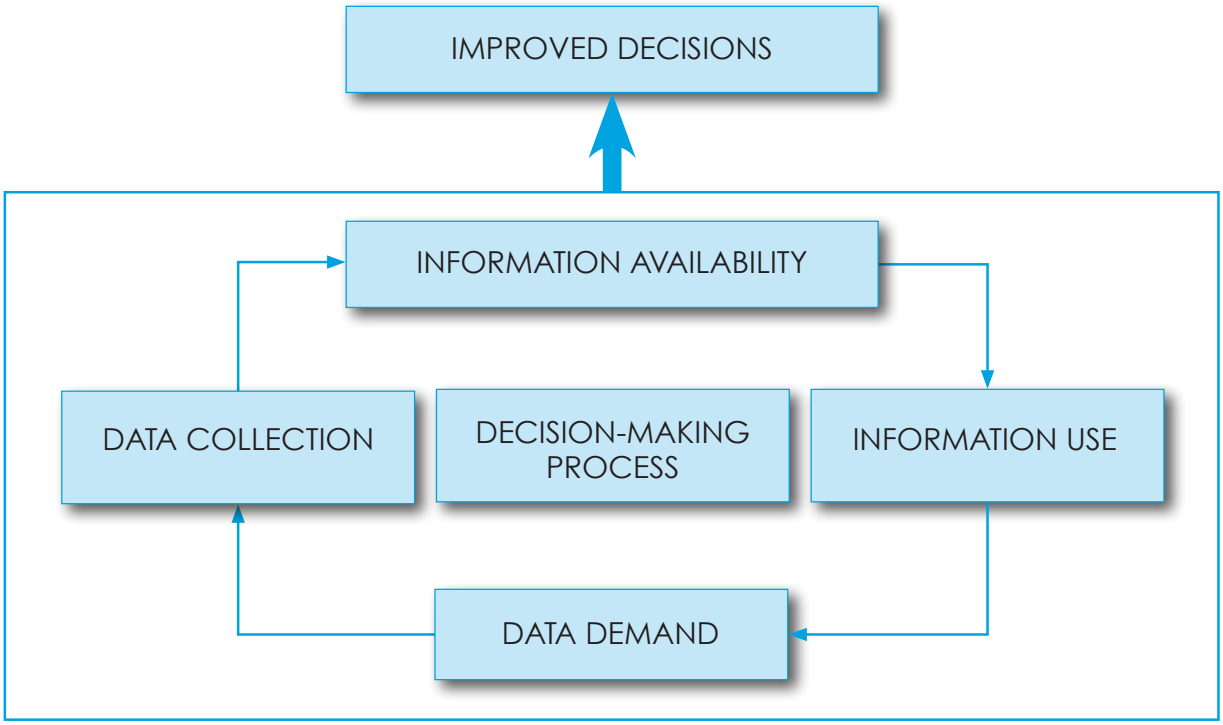
When data is analysed and then not used to inform decision-making, the investment in analysis is wasted and staff morale dampened. While the Ministry of Health and the counties have made significant efforts in terms of data-gathering, the conduct of surveys, routine service delivery and research, most of the data generated remain on the shelf and are not used to drive evidence-based decision-making. Recent investments in staff capacity development in data analytics have improved the outcomes of data analysis. When data is linked to action, programme managers and policymakers appreciate the value of good data in decision-making. Managers at different levels of the health system may use data in the following instances:

- To advocate additional resources
- To inform policies and plans
- To strengthen programmes and improve results
- To ensure accountability and reporting
- To enhance efficiency in resource utilization
- To improve the quality of the services provided

8.2 Conceptual framework for evidence-based decision-making

The conceptual framework in figure 7 demonstrates the link between improved health outcomes and a demand for health data that leads to collection and analysis of those data, their rendering in formats that can be understood by the end user and finally, facilitation of their use. The outer cycle requires technical and human

Figure 7: Conceptual framework for evidence-based decision-making



capacity to understand the demand for data and to manage, analyse and distribute those data; the coordination of the people involved in those steps at different levels and with different functions; and the promotion of collaboration among those producing the data and those using the data in order for the evidence-based decision-making process to be complete.

- ***Data demand:*** When data users actively seek specific information with the intention of using it in decision-making. This step is essential for ensuring that the appropriate, relevant data are collected and analysed.
- ***Data collection:*** Once the demand has been established, appropriate data will be collected and analysed.
- ***Information availability:*** Once analysis has been done, it is essential that the information is communicated in a format that the end user can synthesize and understand to facilitate decision-making.
- ***Information use:*** The end user considers the information provided in policymaking, programming, planning and management or service provision.

8.3 Key stages in the demand for data as evidence for the decision-making process

Decision-making in service delivery takes place at different stages of programming. Greater use of data by all planning units is critical for meaningful decision-making. Often, this requires that structured processes be put in place for the utilization of information products to inform the end users about programming, planning and resource allocation. Table 38 outlines the different stages in programming at which data are required to inform decision-making.

8.4 Enhancing data availability through the production of information products

One of the critical steps in increasing data use is enhancing its availability in a format that can be understood by the end user. In the health sector, efforts have been made to make data available in electronic or print form, as dashboards, scorecards, bulletins, profiles and

Table 38: Stages of the decision-making process

Stage	Decisions to be taken	Type of data needed	Stakeholders
1.0 Problem identification and recognition	• Priority-setting • Advocacy • Target-setting	• Situation analysis, routine/ surveillance data, population-based surveys	• Public health officials, civil society, opinion • leaders
2.0 Selection of the response	• Selection of interventions • Operational plan • Programme budgets	• Literature review, secondary analysis of existing data (including cost-effectiveness), special studies, formative and operational research, research synthesis (if new data are needed)	• Public health policy • officials, service • providers, beneficiaries
3.0 Programme implementation and monitoring	• Maintenance of operational plan and continuation of funding budget • Midcourse adjustments	• Process monitoring and evaluation, quality assessments, output monitoring	• Service providers and programme managers, civil • Society
4.0 Evaluation	• Future of programme (e.g. scaling up, discontinuation of pilot, testing of alternative interventions)	• Outcome evaluation studies, surveys, routine sources and surveillance	• Public health officials, civil society, opinion leaders

Source: MEASURE Evaluation (Data Demand and Information Use in the Health Sector: Conceptual Framework, 2006)

Table 39: Common information products in health departments within a county

Information product	Frequency of production	Planning unit concerned
County health profile	Biannually	County
Quarterly health bulletin	Quarterly	County
Malaria bulletin	Quarterly	County
HIV profile	Quarterly	County
Reproductive, maternal, newborn, child and adolescent health county scorecard	Quarterly	County/subcounty
Family planning dashboard	Quarterly	County/subcounty
County scorecard	Quarterly	County/subcounty
County fact sheet	Quarterly	County
Annual performance report and plan	Annually	County/subcounty/facility
Wall chart (performance monitoring charts)	Monthly	Facility
Chalk board	Monthly	Community
Stakeholder working group report	Annually	County
County Vital Signs Profiles (VSP)	Annual	County

chalk boards, for example. These are known as information products and they are essential components of public health programmes. They simplify, package and communicate complex information about health statistics and the local burden of disease in a practical and easy-to-understand format that can be utilized for informed decision-making. On a routine basis, planning units in a county generate different kinds of information products. Table 39 highlights the common information products in a county health setting.

In order to improve data quality and the use of data in decision-making, there is need to develop a routine information product that can be used to monitor the progress of health indicators on a periodic basis and to inform the intended audience.

The following should be considered when developing an information product:

- ***Information needs:*** To facilitate use of the data, the content of an information product should respond to the questions or issues that the end users are seeking to answer or address.
- ***Required resources:*** This relates to the technical capacity of the human resource to mine, analyse, visualize and produce an information product, including ICT requirements such as computers and software.
- ***Target audience*:** This is the people at whom the product is aimed.
- ***Editorial team:*** The editorial team for the information product should comprise a managing editor and an editorial committee. The managing editor is responsible for the overall content and policy direction of the product, while the editorial committee actively facilitates timely production and generation of the materials required.
- ***Type of information product:*** The design and presentation of the information in the product should enhance understanding of the information therein and thus ultimate use of the product.
- ***Dissemination:*** Dissemination refers both to the form in which the product is delivered to the end user, such as print, CD-ROM, website, notice boards and email, and to the timing and frequency of delivery.

8.5 Facilitating the use of data in decision-making

Interaction between individuals who design, implement and manage research and information systems (data producers) and professionals who use data in programme

development and improvement (data users) contributes to improved decision-making. Structured, data-driven dissemination and use forums are needed to enhance the use of data in programming.

- It is necessary to consider the following in preparation of a product for a specific review meeting:
- Engagement with the leadership to understand the objectives of the review and to validate the key questions
- Engagement with stakeholders to identify questions of interest and determine the data to be collected and the indicators to be used
- Completion, following data-mining, of data analysis/transformation of the data into information at least two weeks prior to the meeting
- Preparation of the meeting and delivery of the product. Data users and producers will play different roles ahead of the meeting, including:

Data users (programme officers/leadership/facility management)

- Conveying the questions and information needs of the organization in relation to the decisions to be taken
- Attending and setting the tone and atmosphere of the meeting
- Participating in interpretation of the results of the data analysis

Providing the strategic direction for and participating in the decision-making progress

Data producers (health record staff/monitoring and evaluation staff)

- Obtaining the desired information (data-mining)
- Transforming the data into clear, readable charts, tables or diagrams
- Preparation and communication of the results to all participants in the meeting
- Keeping track of the findings, issues, requests and actions called for during the meeting
- Following up requests for information and the status of actions requested during the meeting
- Communicating in advance with expected participants on the content required for a subsequent meeting (agenda development)

8.5.1 Data dissemination forums in the health sector

The dissemination of information to the proper audiences and its subsequent use in decision-making is key to improving quality of life. Data collection and analysis is not enough without the ability to use the findings to improve programme interventions, for institutional strengthening of programmes, for advocacy in relation to additional resources and to contribute to an overall understanding of what works and what does not. Information and the findings of evaluations may be disseminated to clients, stakeholders, community members, policymakers and donors through detailed reports, news releases, press conferences, seminars/workshops, dashboards on mobile devices/websites or printouts. Multiple modes of communication can be used simultaneously to increase the coverage, using the channels to which the various stakeholders/ audiences are accustomed.

Dissemination plans should be established at the planning stage and guide all other aspects of the dissemination strategy. Stakeholder analysis will provide an understanding of the various audiences' needs to facilitate the utilization of the information. An understanding of the user will also make it easier to choose the appropriate form, tone and channel of communication.

Findings should be made available through several channels and archived for future use, as users will read, process and utilize evaluation findings/information at their own convenience and not necessarily at the time of initial dissemination. Once evaluation findings have been disseminated through the appropriate channels, modalities must be put in place to improve the likelihood of the information being used, whether in a policy or a programme or in organizational change.

Table 40: Data-dissemination forums

Planning unit concerned	Forum	Frequency	Likely participants
Community health units	Community dialogue days	Quarterly	Community health volunteers Community health extension workers Community health committee members Community members
	Community action days	Monthly	Community health volunteers Community health extension workers Community health committee members Community members
Health facilities	Data review meeting	Monthly	Facility management Facility staff Subcounty health management team (appointed member) Facility committee members Community health extension workers
	Facility management committee meetings	Quarterly	Facility committee members Subcounty health management team (appointed member)
	Quality improvement team meetings	Quarterly	Facility quality improvement team members
	Annual work planning meetings	Annually	Facility staff
Subcounty	Facility management meetings	Monthly	Facility management Subcounty health management team members
	Stakeholder meetings	Quarterly	Facility management Subcounty health management team members Hospital management committee members Facility management committee members Community health committee members Subcounty administrator Religious leaders Youth representatives Women leaders Partners Members of the County Assembly Other ministries, e.g. the Ministry of Education
	Data quality improvement team meetings	Quarterly	Data-quality improvement team members
	Data review meetings	Quarterly	Subcounty health management team members Facility management Partners County health management team (appointed member)
	World Health Day	Annually	Community members Health workers Subcounty health management team County health management team Community leaders Subcounty administrator Partners
	Technical working group meetings	Quarterly	Technical working group members (multidisciplinary team)
	Subcounty health management team meetings	Monthly	Subcounty health management team members
	Annual performance review	Annually	Subcounty health management team members Partners County health management team representative
	Annual work planning meetings	Annually	Subcounty health management team members Partners

Planning unit concerned	Forum	Frequency	Likely participants
County	Biannual stakeholder meetings	Biannually	County and subcounty health management teams Facility management Hospital management committee members Facility management committee members Community health committee members Subcounty administrator Religious leaders Youth representatives Women leaders Partners Members of the County Assembly Other ministries, e.g. the Ministry of Education
	County health management team meetings	Monthly	County health management team members
	Technical working group meetings	Quarterly	Technical working group members
	County Assembly health meetings	Quarterly	Members of the County Assembly County executive committee member for health Director of health
	County health advisory meetings	Quarterly	County health management tea County executive committee member for health

For policymakers and many other groups, information should be packaged in a simple manner, with minimal jargon to prevent it from being discarded. Findings should be tailored to the user without being fundamentally altered. The provision of evidence-based recommendations and feedback and stakeholder discussions will improve the chance of the information being used and used well.

Table 40 outlines some of the common data-dissemination and data-use forums in the health sector. It may be modified during the period of implementation of the KHSSP on the basis of the evolving needs of the sector.

8.5.2 Data use at the different levels of the health system

Community health unit: As highlighted above, among the information products generated at the level of the community health unit is the MOH 516 chalk board. The chalk board is used during the monthly community dialogue days for decision-making relating to health indicators.

Health facility: One of information products generated at the health-facility level is the wall/monitor chart that documents some of the key indicators of interest monitored by the facility, such as facility deliveries, immunization services or clients on antiretroviral therapy. These wall/monitor charts are disseminated during monthly data-review meetings and should be utilized to inform decision-making and interventions. Some of the decisions made at the facility level could relate to the conduct of patient defaulter tracing, the procurement or redistribution of commodities, enhanced health talks and the conduct of continuing medical education. These are decisions that ultimately improve health outcomes.

Subcounty: At the subcounty level, quarterly data-review meetings are held, bringing together management from the relevant facilities. They are driven by data from KHIS, where for each programme progress is reviewed in relation to the specified targets. The achievements are reviewed to identify the gaps/challenges, best practices, opportunities relating to service delivery and possible solutions. The meetings also provide an opportunity for the implementing partners and the subcounty health management team to respond to some of the identified issues requiring higher-level interventions and additional resources.

County: At the county level, quarterly performance-review meetings are held, bringing together the subcounty health management teams, the county health management team,

the county health leadership and partners. The purpose of the meetings is to review the performance of the health indicators in relation to the targets set in the annual work plan in order to identify gaps and priorities and inform a related response. The key information products disseminated are the county health bulletin and county performance report. Some of the decisions made during these meetings relate to resource allocation, commodity redistribution and procurement, prioritization, forecasting, supportive supervision and staff rationalization.

Table 41 outlines the various users of health data, their purpose and the type of products on which the users draw.

Table 41: Data use within the health sector

Indicator/required information	Use	Stakeholder	Mechanism	Format	Subsequent stage
Overall health of the population Status of initiatives to address conditions representing a heavy burden of disease Information on services available to the population	To increase awareness of the purpose of programmes, whether they are meeting their objectives and whether progress can be improved To promote the work of the Ministry of Health To ensure social support	Public	Media Community engagement Meetings	Print (press releases) Audiovisual materials Social media Community meetings Fact sheets	Formulation of evidence-based recommendations Facilitation of conversations among stakeholders Increased resource allocation to health Prioritization of health in the national agenda Use of evidence for planning, budgeting and decision-making
Overall health of the population Status of initiatives to address conditions representing a heavy burden of disease Financial status Gaps requiring legislative attention	To advocate the prioritization of health To shape the opinions of politicians	Politicians	Retreats	Policy briefs Oral presentations Press releases	
Overall health of the population Status of initiatives to address conditions representing a heavy burden of disease Financial status Gaps requiring legislative attention Role of stakeholders in achievement of overall health sector goals	To engage in advocacy To shape opinions for the prioritization of health issues To increase awareness of the purpose of programmes, whether they are meeting their objectives and whether progress can be improved To ensure social, financial and political support To identify weaknesses in implementation To determine demand for service modification or expansion To assess the quality of care	Top county and national health leadership	Workshops Retreats	Policy briefs Slide presentations Oral presentations Fact sheets	

Indicator/required information	Use	Stakeholder	Mechanism	Format	Subsequent stage
Overall health of the population Status of initiatives to address conditions representing a heavy burden of disease Status of investments Policy gaps Role of stakeholders/partners in the achievement of overall health sector goals	To shape the opinions of health policymakers To increase awareness of the purpose of programmes, whether they are meeting their objectives and whether progress can be improved To ensure social, financial and political support To ensure that results have a role in improving and strengthening programmes. To highlight programme strengths and accomplishments To improve programme planning and management To identify weaknesses in programme implementation To determine demand for service modification or expansion To assess the quality of care To identify future research needs	Policymakers	Meetings Workshops Retreats	Policy briefs Status of health reports Slide presentations Oral presentations Fact sheets Tables, charts, graphs, photos, maps	

Indicator/required information	Use	Stakeholder	Mechanism	Format	Subsequent stage
Overall health of the population Status of initiatives to address conditions representing a heavy burden of disease and public health events Gaps requiring legislative attention	To make programme adjustments To improve programme planning and management To identify weaknesses in programme implementation To determine demand for service modification or expansion To assess the quality of care	Technical officers	Meetings Workshops Retreats	Status of health reports Slide presentations Oral presentations Fact sheets Tables, charts, graphs, photos, maps	
Gaps in availability and reliability of data Gaps in utilization of data	To enable programme evaluation	Data analysts	Meetings	Tables, charts, graphs, photos, maps	
Overall health of the population Initiatives to address conditions representing a heavy burden of disease and public health events Information on available services Role of stakeholders in the achievement of overall health sector goals	To engage in advocacy To enable information-sharing	Media	Meetings Hand delivery	Press releases Fact sheets Tables, charts, graphs, photos, maps	
Overall health of the population Status of initiatives to address conditions representing a heavy burden of disease and public health events Gap requiring legislative attention Role of stakeholders in the achievement of overall health sector goals	To increase awareness of the purpose of programme, whether they are meeting their objectives and whether progress can be improved To ensure social, financial and political support To ensure that outcome/ impact indicators have a role in improving and strengthening programmes.	Partners/donors	Workshops Retreats Hand delivery Mail	Policy briefs Status reports Slide presentations Oral presentations Fact sheets Tables, charts, graphs, photos, maps	

Indicator/required information	Use	Stakeholder	Mechanism	Format	Subsequent stage
Overall health of the population Status of initiatives to address conditions representing a heavy burden of disease and public health events Gap requiring legislative attention Role of stakeholders in the achievement of overall health sector goals	To increase awareness of the purpose programme, whether they are meeting their objectives and whether progress can be improved To ensure social, financial and political support	Civil society	Workshops Retreats Hand delivery Mail	Slide presentations Oral presentations Press releases Fact sheets Tables, charts, graphs, photos, maps	
Overall health of the population Status of initiatives to address conditions representing a heavy burden of disease and public health events Gap requiring legislative attention	To share experience with others, thus contributing to global understanding of issues and programme implementation and building a body of lessons learned and best practices	Global health community	Publications Conferences Media	Abstracts Journal publications Policy briefs Social media Audiovisual materials	
Status of program implementation	To assess how programmes are implemented and whether they are working To build a body of lessons learned and best practices	Researchers	Publications Conferences	Journals Abstracts Slide presentations Oral presentations	

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