REPUBLIC OF KENYA

MINISTRY OF HEALTH

Transforming Health:
Accelerating attainment of Universal Health Coverage

HEALTH SECTOR ANNUAL PERFORMANCE REVIEW REPORT

Financial Year 2020/2021

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FINANCIAL YEAR 2020/21

Foreword

The Annual Performance Report (APR) operationalizes the aspirations outlined in the Kenya Health Policy (KHP) 2014-2030 performance per output, which include access, demand and quality of care, and performance per investment area according to the eight-health system building blocks.

The Annual Health Sector Performance Report for Financial Year 2020/21 reports on the progress of the health sector against the annual work plans as well as the overall health sector performance against the annual targets of the KHSSP 2018-23 key performance indicators. The 2020/21 APR has been developed using a joint consultative approach that involved all the key stakeholders in the health sector while taking into account all the new actors under the devolved system of government. It includes key recommendations from the performance reviews of the previous APR and the MTR of the KHSSP and provides progress in the implementation of AWP in line with strategic plans.

This report mainly focuses on the achievements for the FY 2020/21 annual work plan as well as the overall health sector performance, against the targets set for the year. It takes into consideration the annual performance in terms of the effectiveness, responsiveness, and equity in the healthcare delivery system, how well the integrated support systems have been strengthened as well as the status of program implementation.

The priority areas and recommendations contained in this report will contribute to well-informed policies, programs and practices, which are crucial for informing the next planning cycle at both levels of the health system. I would like to appreciate all who have contributed to the compilation of this annual performance report and all partners who have provided financial and technical support during its preparation. Special gratitude to the Division of Health Sector Monitoring and Evaluation ensured that this annual report was developed.

Sen. Mutahi Kagwe, EGH
CABINET SECRETARY
MINISTRY OF HEALTH

Acknowledgement

The Annual Progress Report FY 2020/21 (APR) was consultative and inclusive at various levels of the health system. The report is an annual undertaking aimed at informing the sector and its stakeholders on the performance progress for key health indicators. This work has been possible due to the enthusiastic support of the planning, Monitoring, and Evaluation teams both at the national and County level, heads of departments and programs, Semi-Autonomous Government Agencies (SAGAs), Regulatory bodies, health facilities, and individuals who contributed to this report by providing the information.

My special appreciation goes to all the members of the technical team that coordinated and developed this report. A special mention of the editorial team that reviewed and finalized this report: Dr. Joseph Sitienei, the Acting Head- Directorate of Health Policy, Research, Monitoring and Evaluation, Dr. Helen Kiarie- Head Division of Health Sector M&E, Dr. Janette Karimi, Dr. Lilly Nyagah, Ms. Rose Muthee, Gilbert Mboro, Dr. Hannah Kagiri, Dr. Elizabeth Wangia, David Njuguna, Pepela Wanjala, Dr. Oren Ombiro, Anne Marimbet, Tecla Kogo, Tom Arunga, Faith Mukami, Anthony Komen. Dr. Beatrice Onyando (Vital Strategies), Cosmas Leonard (WHO). The Ministry would like to thank all who were consulted and contributed during the development of this report.

My sincere gratitude goes to the development partners who supported strengthening the sector's M&E System, particularly the WHO, UNICEF, World Bank-THS, and the Vital Strategies that supported performance reviews at the national and county level and workshops to finalize this report.

We look forward to having this report inform the next planning cycle and informing prioritization for the next Financial Year.

Susan N. Mochache, CBS
PRINCIPAL SECRETARY
MINISTRY OF HEALTH

Executive summary

The Ministry of Health conducts a joint annual health sector performance review in alignment with the Health Sector Planning and Monitoring Framework. This assesses the key achievements made in the past year, highlighting the factors leading to the positive performance including best practices, and challenges faced while implementing various interventions. Recommendations from the review are the basis of the health sector priorities for the next financial year. The review focuses on the progress in implementation of commitments in the Annual Work Plans and Sector Strategic Plans, by reviewing the overall performance against the targets set for the Financial Year (FY) 2020/21, and trends in performance for selected indicators over the previous FYs. The performance review process was participatory with the involvement of all the departments and programs at the national level, the 12 semi-autonomous government agencies (SAGAs), all the 47 county governments, and partners.
The Ministry of Health was identified as one of the key ministries to implement the president's Big Four Agenda, through the provision of Universal Health Coverage(UHC). During the reporting period, UHC was institutionalized in the various departments, SAGAs and devolved governments, with each of these entities playing a role in the realization of UHC.

Morbidity and Mortality Burden

Of the reported hospital deaths experienced in Kenya 2020/21, 48% were attributed to communicable diseases, 44% to NCDs and 8% were attributed to injuries. Mortality due to HIV has reduced from 7.4% to 3.0%, that of TB from 2.9% to 1.1% and that of malaria from 2.0% to 0.8%, of the facility deaths reported between 2018/19 and 2020/21. Deaths attributable to non-communicable diseases (e.g. cancer, hypertension and diabetes mellitus) have increased over time with cancers and hypertension being among the top five causes of facility deaths accounting for 5.0% and 3.5% of facility deaths respectively.
Communicable conditions continue to be a major cause of illness in Kenya with lower respiratory infections being the leading cause of facility mortality over the past three years.

Upper respiratory tract infections (URTI) diseases were the leading cause of morbidity for children below 5 years, constantly contributing to over 30% of all OPD visits over the last five years. This was followed by diarrhoea and diseases of the skin.
Among those over five years of age, URTI accounted for over 17% of all OPD cases over the past five years with COVID-19 deaths accounting for 1.3% of all hospital deaths in FY 2020/21.

Strategic objectives

The Kenya Health Sector Strategic Plan is aligned with the strategic Objectives in the Kenya Health Policy 2014-2030 which aims at attaining the highest possible standard of health. To this end, the life expectancy in Kenya has risen to 67 years in 2020 from 65 years in 2015.

Table 1: The performance indicators for each of the six strategic objectives

	Strategic Objectives	Achievement					Target	Rating *	Data source
		2016/17	2017/18	2018/19	2019/20	2020/21	2020/21		
A	**Eliminate Communicable Conditions**								
1	Children under 1 year of age fully immunized (%)	71.6	69.9	78	79.6	82.5	**80**		KHIS
2	Children under five years treated for diarrhea with ORS & Zinc (Community) (%)	82.1	85.8	89.7	88.9	91.1	**65**		KHIS

3	TB treatment success rate (%)	83	84	85	85	84	**90**		TIBU
4	Eligible HIV clients on ARVs (%)	74	75	73	72	83	**90**		KHIS
5	Total confirmed malaria cases [per 1,000 persons per year]	105.2	77.6	86.2	93.2	78.8	**47**		KHIS
B	**Halt and Reverse Increase in Non-Communicable Conditions**								
6	Women of Reproductive Age screened for cervical cancer (%)	5.0	31	35	27	31	35		KHIS
7	Proportion of adolescent girls vaccinated with HPV vaccine (%)	NS	NS	NS	64.8	55.7	**50**		KHIS
8	Number of new hypertension cases per 100,000 new OPD visits	2689	2771	3,205	2,907	3,611	**2,953**		KHIS
9	Number of new diabetes per 100,000 new OPD visits	875	965	1,010	1,056	1,404	**981**		KHIS
C	**Reduce the Burden of Violence and Injuries**								
11	New outpatient cases attributed to gender-based violence (%)	0.2	0.3	0.3	0.4	0.3	**14**		KHIS
12	Road traffic injuries in OPD as a % of all diagnoses	0.33	0.36	0.39	0.44	0.36	**1.8**		KHIS
13	% Of Patients with injury related conditions dying in the facility	4.2	3.7	3.5	3.8	3.5	**ND**		
D	**Provide Essential Health Care**								
14	% Of Women of reproductive age (WRA) receiving family planning (FP) commodities	42.3	37.2	43.6	44	42.3	**65**		KHIS
15	% Of Pregnant women attending at least 4 ANC visits	38.3	36.4	5.4	51	50,3	**55**		KHIS
16	Proportion of pregnant women getting IFAS supplements at 1st ANC	56.4	56.7	70.8	72.2	78.8	**ND**		KHIS
17	% of deliveries conducted by skilled attendants in health facilities	57,5	56.6	66.8	72.1	78.1	**70**		KHIS
18	Number of Facility Maternal deaths per 100,000 deliveries	127.3	98.7	102.1	98.4	104.2	**89**		KHIS
19	Fresh Stillbirth rate per 1,000 births in health facilities	12.4	12.5	9.8	10	9.3	**9**		KHIS
E	**Minimize exposure to health risk factors**								
20	Percentage of children 0-5 (<6 months) months who were exclusively breastfed	68.9	70.3	78.4	82.3	83.1	**67**		KHIS
F	**Strengthen Collaboration with Health-Related Sectors**								
21	Proportion of Children under 5 years attending Child Welfare Clinics who are under weight	4.4	4.3	4.3	4.1	3.8	**7**		KHIS

22	% of households using improved sanitation facilities	52*			64.9 ★		**65**		*KDHS 2014 ★Census Report 2019
23	% of households using improved safe water facilities	71*			73.3★		**78**		
25	% of women completed secondary education	27*			34.2★		**50**		

**Performance Score: 0-49%, 50%-79% and >80%*

1. Reduction of the burden of communicable disease

Significant progress has been made in the coverage of interventions that reduce the burden of communicable diseases. This includes improvement in full immunization coverage from 71.6% in 2016 to 82.5% in 2020/21; treatment of diarrheal diseases with ORS/zinc in the community from 82% to 91% and an increased proportion of eligible HIV patients on ART from 74% to 83% during the same period. The total number of malaria cases per 1,000 population reduced from 105 to 79 per 1000 population but did not meet the target of 47 per 1000 population. Full immunisation coverage at one year increased from 71.6% in 2016/17 to 82.5 in 2020/21.Since 2018, the country introduced four (4) new vaccines for continuous reduction of child and adult morbidity and mortality; Human Papilloma Virus vaccine, COVID-19 (AstraZeneca, Pfizer, J&J, Moderna and Sinopharm), yellow fever and malaria vaccines.

2. Halt and reverse the burden of non-communicable diseases

Interventions to reduce the burden of non-communicable conditions have also improved. This includes the increased number of adolescent girls receiving the HPV vaccine, and an increased number of outpatient patients presenting with diabetes and hypertension as a sign of increased access to these services. Cervical cancer screening uptake is low with only 2.5 % of the women screened against a target of 10%. However, the ministry continues to administer the human papilloma vaccine to girls above 10 years of age.

3. Reduce violence and injuries

Road traffic injuries and violence have been ranked as the 7th and 9th leading cause of disability-adjusted life years (DALYs) respectively. They account for 8% of all the deaths, with a road traffic injury fatality rate increasing from 6.9/100,000 in 2017/18 to 9.1/100,000 population in 2020/21. The proportion of road traffic injury cases in outpatient as a proportion of all OPD cases reduced from 0.32% to 0.29% in the period 2017/18-2020/21.

4. Provide essential health services

4th ANC coverage was at 50 % with a slow increase from 38% in 2016/17 mainly due to late initiation of early ANC visits. Skilled birth attendance coverage was at 78% has increased from 58% in 2016/17. Linda Mama initiative has been key in improving access to skilled birth services. Despite increasing ANC and SBA coverage. Facility Maternal mortality per 100,000 deliveries has remained fairly constant ranging from127/100,000 in 2016/17 to 105/100,000 in FY 2020/21. Haemorrhage accounted for 50% of maternal complications and obstructed labour accounted for 30%. Targeted interventions to improve the quality of care of services offered to address these top 2 causes should be prioritized. Facility stillbirth rates have reduced slightly from 12.4 to 9.3% from 2016/17 to 2020/21.

5. Reduce exposure to health risk factors

The main risk factor tracked is exclusive breastfeeding in children less than 6 months which was 83% in FY2020/21, an improvement from 69% in FY 2016/17. Breastfed children perform better on intelligence tests, are less likely to be overweight or obese and less prone to diabetes later in life. Women who breastfeed have a reduced risk of breast and ovarian cancers.

6. Enhance health sector collaborations

In the financial year 2020/21, the Ministry of energy connected 48/96 level 3&4 facilities with power and aims to connect 326 level 2 facilities in the FY 2021/22; 134 access roads to level 4 facilities were constructed; The ICT sub-sector connected 20 facilities with LAN while 72 are ongoing, Installation of National Optic Fiber Backbone (NOFBI), LAN, Internet telephony in 121 health facilities across the country.; The development of Software, Field testing and training is ongoing for the digitization of health records; The Ministry of Water connected 93 Level 2, 3 & 4 facilities in the year under review.

Service outputs

Demand: The per capita OPD utilization rate slightly decreased by 20% from 1.5 to 1.2 between 2016/17 and 20/21, partially attributed to disruption of services due to the COVID-19 pandemic and the fear of contracting the disease from health facilities.

Access: The health facility density increased from 1.9 to 2.7 per 10,000 population between 2012/13 and 2020/21 respectively, increasing the proportion of the population living within a 5km distance to 87.9%. The bed density remained constant at 15 beds per 10,000population between 2013 to 2018 but improved to 19 beds per 10,000population in 200/21.

Quality: The quality of care indicators has remained relatively the same in FY 2020/21 compared to FY 2019/20. TB treatment success rate increased from 84% to 85.2%, while fresh stillbirth rate decreased from 10.1 births in 2019/20 to 9.3/1000 births in 2020/21 and ART retention rate remained constant at 83%. There was an increase in facility maternal deaths from 93 to 106/100,000 live births.

Health investments

1. Service Delivery

During the review period, the establishment of primary care networks (PCNs) was prioritized and strengthened, to operationalize and realize the UHC agenda. This involves linking a level 4 primary hospital to identified level 2 and 3 health facilities which in turn are linked to established community units, to identify community health needs, work with community health workers to provide preventive, promotive and allowable curative services and refer to the link facility where needed.in FY 2020/21, 4 counties (Garissa, Laikipia, Makueni, and Kisumu) have established at least one PCN and are at various levels of fully operationalizing them. To increase community health services, more than 30,000 new CHVs were trained and 60,000 old CHVs sensitized on the technical packages, with the aim of improving access to health for all.

2. Health Infrastructure

To improve access to service delivery the health sector increased the number of health facilities by 43% from 4,430 in 2016/17 to 6,342 in 2020/21. The government continued to conduct routine maintenance of several equipment in the county referral hospitals. These include 54 dialysis sites, 219 new theatres, 14 ICU facilities and state-of-the-art radiology equipment in 98 hospitals under the managed equipment services capital project. The Ministry established 9 regional cancer centers in Meru, Nakuru, Mombasa, Garissa, Kisumu, Embu, Kakamega, Nyeri, and Machakos.

In response to the COVID-19 pandemic, a total of 7,411 isolation beds and 319 ICU beds were established across the 47 counties to cater for the COVID – 19 cases. The diagnostic capacity in the country has been scaled up with a total of 38 public and private laboratories in 12 counties being able to conduct the confirmatory tests for COVID-19. Two laboratories for genome-sequencing were established to enhance the capacity for COVID-19 diagnosis.

3. Health Products and Technologies in the sector

The mean availability of essential tracer medicines and medical supplies per county was at 63% in 2020/21 against a target of 100%. Only a third (35%) of all county's total HPT budget needs were met leaving a 65% gap. Only 39% of total oxygen requirement was funded, posing a gap in the management of COVID-19 during the year under review.

Blood collection services were decentralized to improve access to blood and blood products the number of blood satellite centers increased to 29 across the counties. Blood banking and processing equipment were procured and distributed to 15 satellite facilities which contributed to increasing the storage and freezing capacity from 23,000 to 35,000 units from 2018/19 to 2020/21.

4. Health Workforce in the sector

There is an increased demand for specialized healthcare workers to cater to the rapidly growing need for specialized healthcare.[1] In the year under review, the core health workforce density was 19.2 per 10,000 population against a WHO target of 23. The highest cadre of specialists was clinical officer-anesthetists-200, and obstetrician/gynecologist-152 employed. The minority of specialists in the counties were urologists-7.

5. Health Management Information Systems/ Monitoring and Evaluation

The Ministry commenced the development of a standardized Electronic Health Record system, which is an end-to-end digital health platform. During the year under review, a mid-term review of the KHSSP 2018-23 was done together with the key stakeholders in health. Several improvements were done in the Kenya Health Information System data collection and aggregation system to improve data quality analytics and visualisation of health outcomes to improve use of the platform

6. Health Leadership and Governance

To implement the UHC agenda, the Ministry continued to implement the KHSSP and the UHC roadmap. The Ministry in collaboration with stakeholders developed and launched the Health Sector Partnership and Coordination, thus providing structured sector coordination. Three quarterly intergovernmental forums were held where key issues relating to the health sector at national and county levels were discussed, including the national response to the COVID-19 pandemic. The sector developed annual work plans and MTEF budgets according to National Treasury guidelines in line with the sector priorities. The sector continued undertaking performance contracting in its endeavour to improve service delivery. The ministry also held quarterly ministerial stakeholder forums as the main forum of consultation and sharing of information between the Ministry and the non-state actors.
The Ministry developed the Public-Private Collaboration Strategy and resource guide that aimed at operationalizing the PPP Act 2013

7. Health financing

The health sector approved budget (National and Counties) increased from a low of KSh. 86.9 billion in FY 2013/14 to Ksh. 252 billion in FY 2020/21 representing an overall growth rate of approximately 200% in the post-devolution era. The approved estimates for the National Ministry of Health level were at Ksh 121.7 billion in 2020/21 which represented a 43% increase from KSh 85.1 Billion in 2018/19. Government expenditure for health as a proportion of the total government expenditure increased from 9.5% in FY 2018/19 to 11.1% in FY 2020/21 but was yet to meet the 15% Abuja declaration target. Analysis by vote indicated that the recurrent vote (allocation) had been decreasing from 62% in FY2018/19 to 56% in FY 2020/21 respectively.
Cumulatively all counties increased the proportion of their total budgets allocated to health, from 22% in FY 2014/15 to 27.8% in FY 2021/22, a slight drop from 29.3% reported for 2020/21. Overall, this indicates the continued county governments' increasing prioritization of health despite competing needs with other sectors.

8. Health research

During the period under review, the ministry developed Research for Health (R4H) Policy Framework (2018-2030) & Research for Health Priorities (2018-2023). COVID-19 research questions were prioritized, with the evidence shared through dissemination forums such as science policy cafes/dissemination symposiums.

[1] MOH Training Needs Assessment report (2015)

Challenges

Challenges hampering the achievement of Health sector goals included: Inadequate financing for the health sector due to fiscal space challenges to finance health priorities, inadequate prioritization and funding of leadership and governance at all levels, and inadequate funding for health commodities at the national and county level thus chronic stock-outs. High out-of-pocket spending at the point of use is a barrier to access.

Over-investment in infrastructure, especially the construction of health facilities without commensurate investment in human resources and equipment resulted in having higher facility density without commensurate notable improvement of the quality of healthcare offered. The COVID-19 pandemic exposed weak emergency response and referral systems, but the capacity for this was quickly scaled up in the FY 2020/21

Lack of prioritization of HIS and M&E activities at both the national and county levels

The COVID-19 pandemic affected demand for healthcare services, and limited service delivery as most facilities was only offering essential services with human and financial resources redirected to combat the pandemic. Limitations in movement and gathering also affected several activities such as training and supportive supervision, while school closures affected blood availability.

Recommendations and priorities for the next financial year

Initiatives to reduce the cost of health services to make quality healthcare available, and affordable should be put in place. These include: Increasing financing to the health sector to ensure implementation of the priorities to match economic growth, implementing Social Health insurance policy and use of evidence from health technology assessments to inform the essential benefits package to support the actualization of UHC. Additionally, encourage prepaid financing mechanisms like insurance to curb catastrophic health spending and facilitate access to health. Improving the availability of essential medicines to all health facilities, and the availability of blood and blood products to all hospitals and consideration of local manufacturing of HPTs.

Reprioritization of primary health care to gradually shift services from a largely curative focus to a preventive focus through the strengthening of the primary care networks. Use of technology to enhance service delivery, including the use of telemedicine, patient-specific records and interoperability of all the existing and upcoming systems. Capacity building in key areas such as specialized clinical care for core health workers, and data scientists. Lastly, there is need to have a holistic health systems strengthening approach to ensure quality service delivery. Given the facility density in FY2020/21 is adequate, the focus should be to maintain and equip the existing health infrastructure with adequate human resources, health products and technology, Health information systems are all managed with good governance to realise the desired health outcomes.

Dr. Patrick Amoth, EBS
AG. DIRECTOR GENERAL FOR HEALTH

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Acronyms and Abbreviations

AIDS	Acquired immunodeficiency syndrome
ALOS	Average Length of Stay
ANC	Ante- Natal Care
BCC	Behavior Change and Communication
BEmONC	Basic Emergency Obstetric and New-born Care
CEmONC	Comprehensive Emergency Obstetric and New-born Care
CHEW	Community Health Extension Worker
CHV	Community Health Volunteer
DHIS	District Health Information System
DQA	Data Quality Audit
DRTB	Drug-Resistant Tuberculosis
EMR	Electronic Medical Records
FMMR	Facility Maternal Mortality Ratio
FP	Family Planning
FY	Financial Year
HDU	High Dependency Unit
HISP	Health Insurance Subsidy Program
HIV	Human Immunodeficiency Virus
HPV	Human Papilloma Virus
HWs	Health Workers
HTS	HIV Testing Services
ICT	Information, Communication, and Technologies
ICU	Intensive Care Unit
IPTp	Intermittent Preventive Treatment in Pregnancy
KEMRI	Kenya Medical Research Institute
KEMSA	Kenya Medical Supplies Authority
KHFA	Kenya Health Facility Assessment
KHIS	Kenya Health Information System
KHP	Kenya Health Policy
KHSSP	Kenya Health Sector Strategic Plan
KMTC	Kenya Medical Training College
KNH	Kenyatta National Hospital
MCH	Maternal and Child Health
MDA	Mass Drug Administration
MES	Medical Equipment Services
MHFL	Master Health Facility List
MTP	Medium Term Plan
MTRH	Moi Teaching and Referral Hospital
NACC	National AIDS Control Council
NASCOP	National AIDS and STI's Control Programme
NCDs	Non-Communicable Diseases
NCI	National Cancer Institute
NHIF	National Hospital Insurance Fund
NTD	Neglected Tropical Diseases
OPD	Out Patient Department
OOP	Out of Pocket
ORS	Oral Rehydration Salts
PCV	Pneumococcal Conjugate Vaccine
PHC	Primary Health Care
PHF	Primary Health Care Facilities
PMTCT	Prevention of Mother to Child Transmission
PNC	Post Natal Care
PrEP	Pre-Exposure Prophylaxis
QOC	Quality of Care
SAGA	Semi-Autonomous Government Agency
TB	Tuberculosis
UHC	Universal Health Coverage
WASH	Water, Sanitation and Hygiene

1.0. CHAPTER ONE: GENERAL BACKGROUND

1.1 Introduction

The Ministry of Health has been conducting a comprehensive review of the sector performance on an annual basis as outlined in the monitoring and evaluation framework. This review follows the planning and accountability cycle as described in the Mid Term Expenditure Framework (MTEF) and focuses on performance as per the objectives outlined in the Kenya Health Policy (KHP) 2014-2030; performance per output, which include access, demand and quality of care; and performance per investment area according to the eight-health system building blocks.

Most of the data used in the compilation of this report has been from the Kenya Health Information System (KHIS), however, non-routine data such as infrastructure, human resources and leadership and governance are still a challenge given that there is no repository where such information can be updated on an annual basis. This information, therefore, remains subjective to those providing the information.

1.2 Rationale of the APR

The Vision of Kenya is to be a healthy and prosperous nation by 2030 as outlined in Vision 2030. This vision is to be attained through various pillars, one of which is the social pillar which the ministry of health falls under. Vision 2030 is operationalized through medium-term plans, of which the country is currently implementing the third medium-term plan. Development of the annual health sector performance report is an institutional requirement compiled to highlight the progress, challenges, and lessons learned and propose ways of moving the health sector forward in relation to Vision 2030, KHP, KHSSP, and the annual work plans.

The annual performance review as part of the MTEF cycle is key in assessing how the inputs of health financing, human resources for health, Health products and technology, health infrastructure, Health information systems, and research all under Health leadership and governance come together to achieve desired outputs and patient-level outcomes.

In measuring performance against desired targets, the process identified which areas are lagging behind that need greater prioritization and possibly funding in order to attain desired. This then should inform the development of annual work plans to ensure cost-effective measures to attain desired goals. This report mainly focuses on the achievements for the FY 2020/21 annual work plan as well as overall health sector performance, against the targets set for 2020/21.

1.3 Process for developing the 2020/2021 annual performance report

Steps in the development of the APR report

1. Updating the performance review guidelines for the national, county and community levels.
2. Updating the performance review templates and the AWP templates
3. Sharing of templates to the national level departments and SAGAs, and counties.
4. Mining of data from KHIS and adjusting the denominators
5. National level report writing with representation from directorates/programs
6. County-level report writing
7. SAGAs report writing
8. Consolidation of the report-county and national
9. Internal validation of the reports
10. Circulation of the report to external stakeholders

1.4 Approach and Data sources

The main sources of information for this report were the service delivery data from the Kenya Health Information System (KHIS), KHIS micro-service, Master Health Facility List (MHFL), Kenya Health Facility Assessment (KHFA 2018), Kenya Demographic Health Survey (KDHS 2014), Kenya Population HIV Impact Assessment (KENPHIA) 2018, Malaria Indicator Survey, Kenya Population and Housing Census 2019, National Health Accounts (NHA) 2015/16 - 2018/19, Mid Term Review of the strategic plan report 2020/21, program progress reports.

1.5 Basic demographics population

Kenya has an estimated population of 49 million as of 2020 with a male/female population ratio of 1:1.02. According to the 2019 population census, the population was 47 million[2], with a third of this population, being economically productive (age 25-59 years). The population comprises about 12 million households with an estimated household size of four (4) persons. Life expectancy at birth in Kenya has been on the rise, to 67 years up from 65 years in 2015[3], figure 1, and 51 years in 2004. The population growth rate is 2.2% as per the population census of 2019[3].

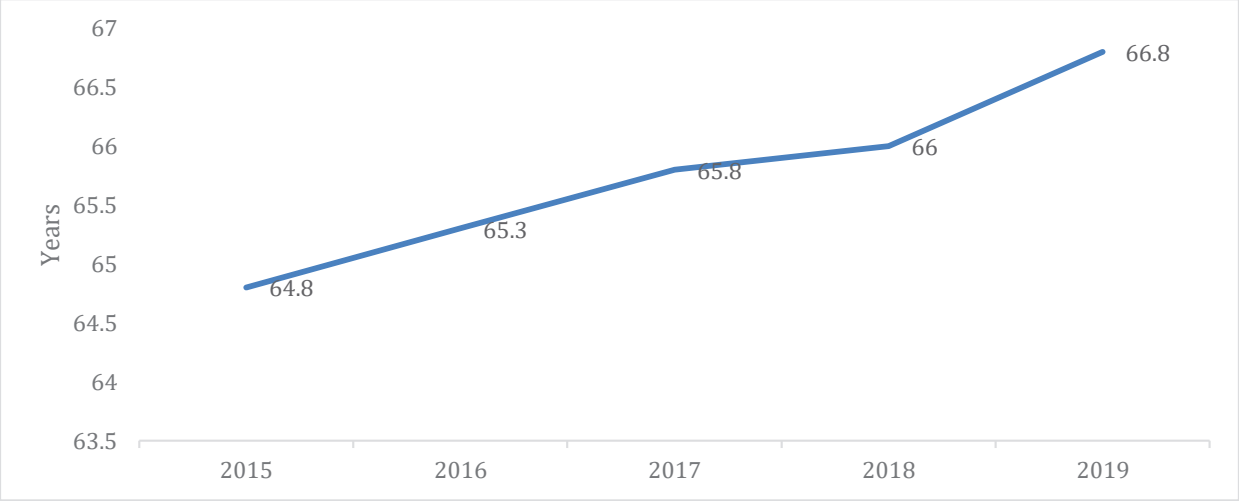


Figure 1: Trend in life expectancy at birth in Kenya from 2015 to 2019

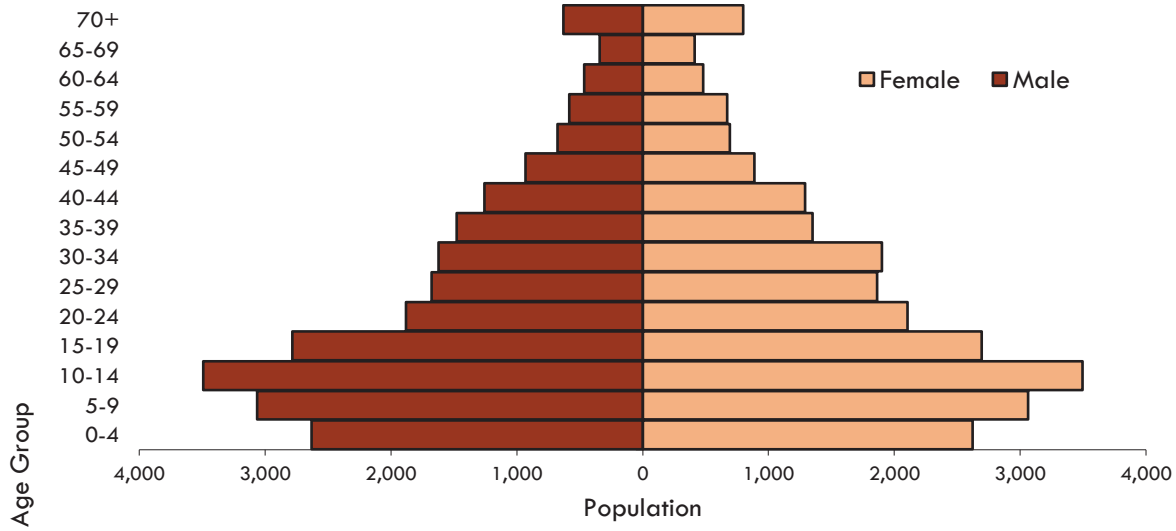


Figure 2: Kenya's Population Pyramid (Age-Sex Structure), 2019, Source: MOH Facts and Figures, 2020

[2] Kenya Household and Population Census 2019

[3] https://data.worldbank.org/indicator/SP.DYN.LE00.IN?locations=KE

1.6 Birth Registration

The Ministry of Health plays a critical role in the notification of health facility births as well as registration of home deliveries of children visiting the child health welfare clinics. Registration of births in Kenya should be done within 6 months following delivery and has gradually improved from 61% in 2017, to 86% in 2021. This is attributed to increased collaboration with the civil registration services and implementation of the MCH strategy which requires registration of births at child welfare clinics. Birth registration coverage is analysed per calendar year.

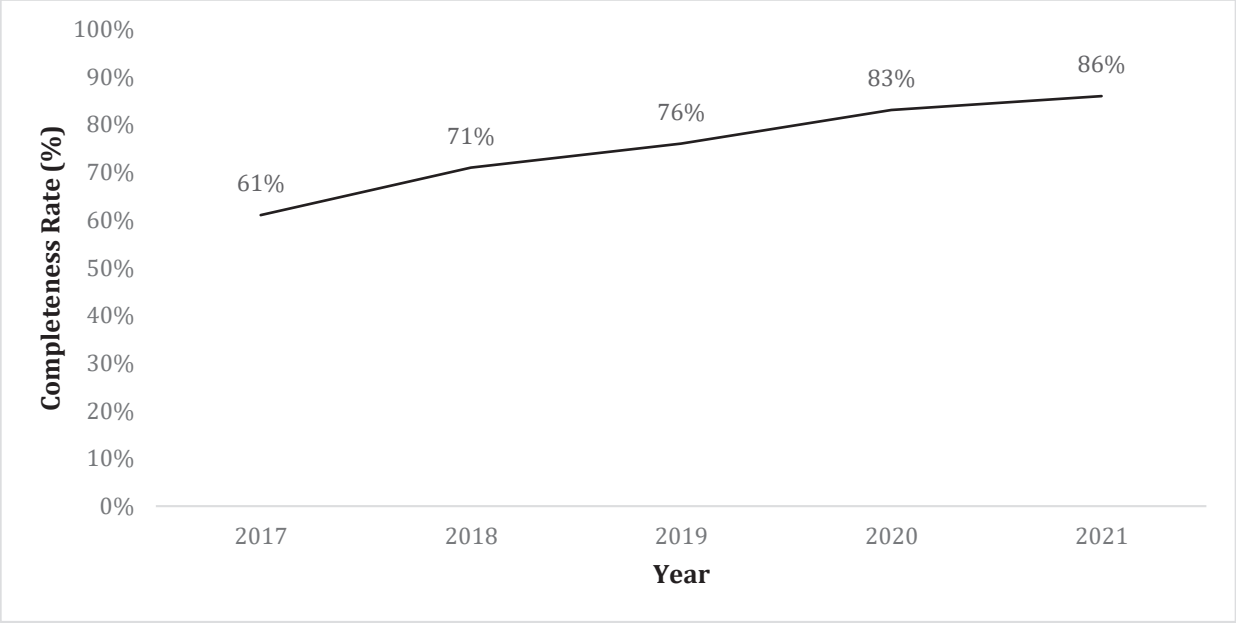


Figure 3: Birth Registration Coverage from 2017 to 2021
Source: Kenya Civil Registration and Vital Statistics Report 2021

Of the registered births, over 90% occurred in health facilities from 2017 to 2021.

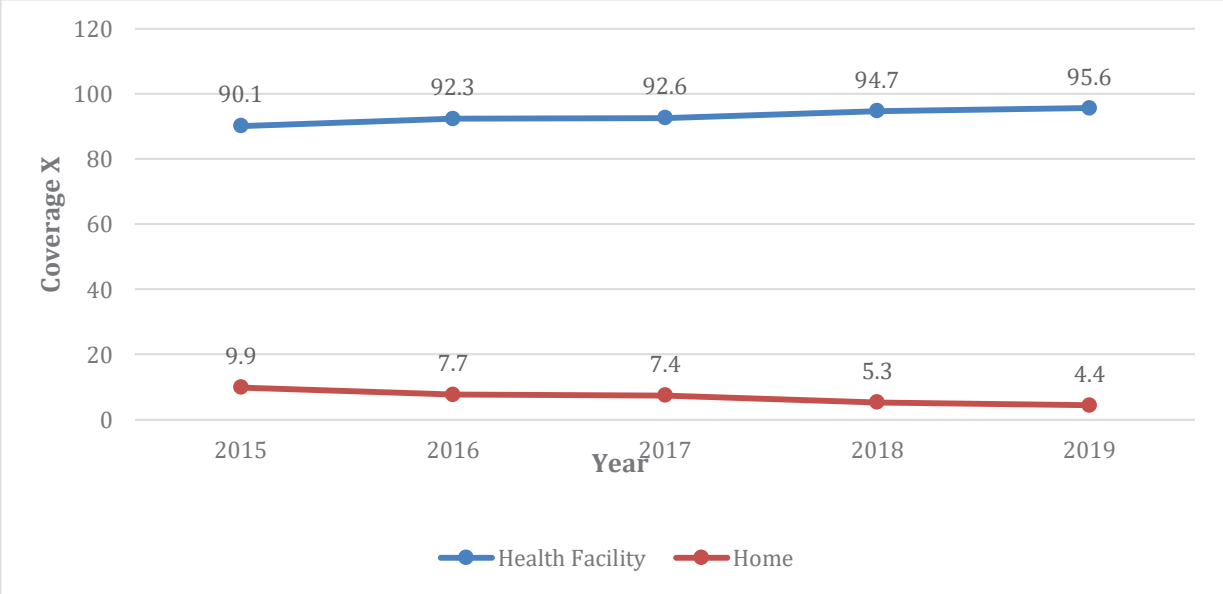


Figure 4: Percentage of registered births by place of occurrence, 2015-2019
Source: Kenya Annual Vital Statistics Report 2020

1.7 Coverage of Death registration

Overall death registration completeness increased from 37.0 percent in 2020 to 55.4 percent in 2021 as shown in figure 5. All Counties experienced an increase in death registration in 2021 except Embu, Marsabit and Isiolo. Approximately 50% of admitting facilities report deaths and causes of death on KHIS tracker. Of the deaths registered nationally, slightly more than half of the deaths were registered from health facilities (52.5 %) and the community (47.5%) (Figure 6)

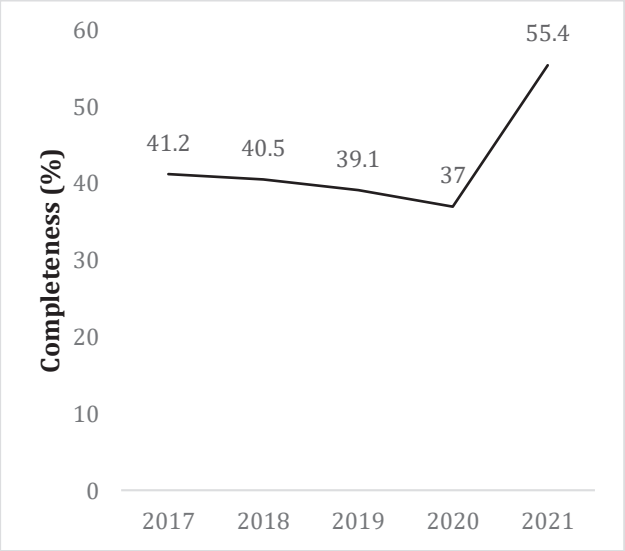


Figure 5: Death registration coverage from 2017-2021
Source: Kenya Vital Statistics Report 2021

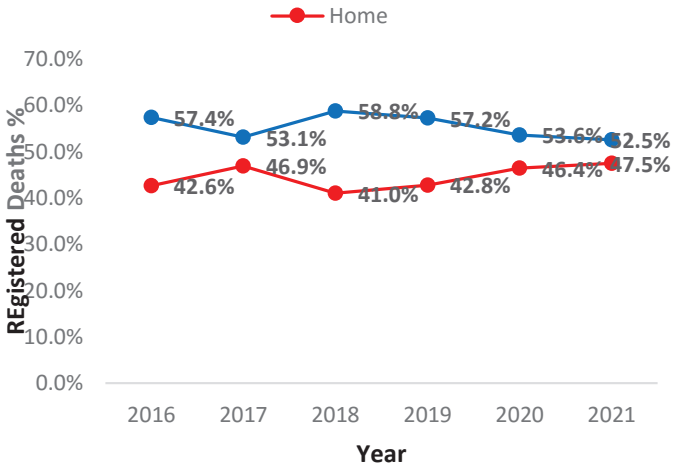


Figure 6: Trend in death registration by place of occurrence,2017-20

2.0. CHAPTER TWO: HEALTH SECTOR PLANNING FRAMEWORK

The health sector planning and monitoring frameworks are aligned to various legal, policy, and strategic documents that also form the basis of the review. They include but are not limited to:

i. Global Health Agenda (Sustainable Development Goals, Universal Declaration of Human Rights, etc)
ii. The Constitution of Kenya 2010
iii. Vision 2030,
iv. Medium-Term Plan (MTP) 2018-2023
v. Kenya Health Policy 2014-2030
vi. Health Sector Strategic plan 2018-2023 and its accompanying Monitoring and Evaluation Framework
vii. Universal Health Coverage Roadmap and Policy
viii. Post-COVID -19 Economic Recovery Strategy

2.1 Constitution of Kenya

The constitution of Kenya provides every Kenyan with the right to the highest attainable standard of health[4]. The Health Sector is therefore responsible for the provision and coordination of health policies, ensuring the quality of health services and regulation of health care. The responsibility is guided by the understanding that a healthy population is productive and contributes to overall economic development in the achievement of national poverty reduction as outlined in the Kenya Vision 2030.

2.2 Vision 2030

Vision 2030 remains the overarching national development blueprint and the aspirational development agenda for the Kenyan people. This is further elaborated through the Medium-Term Plans (MTPs)that form the basis of alignment for County Government Integrated Development Plans (CIDPs). It is therefore imperative that within a context of competing priorities, all resources are aligned towards achieving core priorities that will have broad-based benefits for all.

2.3 Medium Term Plan (MTP) III

The heath sector has been implementing seven flagship projects which are transformational, high impact and instrumental in addressing the challenges experienced in the sector

(i) **Social health protection -** They provide financial protection to the vulnerable population using a harmonized benefit package.
(ii) **Health infrastructure –**to develop a robust health infrastructure system.
(iii) **Expand access to specialized healthcare (and medical tourism)** –to market Kenya as a destination hub for specialized healthcare services–locally, regionally and internationally.
(iv) **Community High Impact Interventions** include scaling up of community health units, implementing Integrated Community Case Management (iCCM), scaling up of Nutrition Intervention at the Community level e.g. Vit A and Iron Folic Acid supplementation and delivery of High Impact Nutrition Interventions (HINI) implementation in ASAL counties

[4] Article 43 (1) (a) of the Constitution provides that every person has the right to the highest attainable standard of health, which includes the right to health care services, including reproductive health care.

(v) **Digital health/digital revolution** - Enhance the delivery of health services through digital platforms including telemedicine.
(vi) **Human resources for health** - To build the capacity of health workers to increase the skills pool in the health sector to improve health outcomes.
(vii) **Improving the quality of care/patient and health worker safety.** To improve the quality of care for patients and enhance the safety of health workers.

2.4 Kenya Health policy 2014- 2030

The Kenya Health Policy (KHP) 2014-2030 focuses on attaining critical obligations of the health sector which have a rights-based approach that ensures health contributes to the Country's development. It focuses on ensuring equity, people-centeredness, a participatory and multisectoral approach, efficiency, and social accountability in the delivery of healthcare services. The KHP considers the functional responsibilities between the two levels of government with their respective accountability, reporting, and management lines. It also proposes a comprehensive and innovative approach to harness and synergize health services delivery at all levels.

The six policy objectives are:
i. Elimination of communicable diseases.
ii. Halt and reversal of the burden of non-communicable diseases.
iii. Reduction of the burden of violence and injuries.
iv. Provision of essential healthcare.
v. Minimization of the exposure to health risk factors.
vi. Strengthening collaboration with sector providers.

The achievement of these policy objectives has been pegged on the implementation of key action areas that have been identified in the health system investment areas. The Kenya Health Policy (KHP), 2014–2030, outlines the direction that the Ministry will take to ensure significant improvement in the overall status of health in Kenya in line with the Constitution of Kenya 2010, the country's long-term development agenda, Vision 2030 and global commitments such as the Sustainable Development Goals (SDGs). The KHP demonstrates the health sector's commitment, under the government's stewardship, to ensure that there is a provision of the highest possible standards of health, in a manner responsive to the needs of the population.

2.5 Kenya health sector strategic plan 2018- 2023 and monitoring and evaluation framework

The Kenya Health Sector Strategic Plan (KHSSP) 2018-2023 was developed as the second strategic plan for the implementation of the KHP 2014-2030. The strategic plan provides the health sector with a medium-term focus, objectives and priorities to enable the country to move towards the attainment of the health goals described in the Constitution, and strategic imperatives mentioned above.
KHSSP was developed to progress the attainment of the KHP 2014-2030 goals and identified the following as priority areas of focus for the period 2018-2023
i. To reinforce and improve access to people-centered essential PHC services;
ii. To increase access to and improve the quality of health services at all levels;
iii. To institutionalize emergency preparedness and response, early recovery and resilience;
iv. To build and strengthen partnerships and sector coordination mechanisms;
v. To strengthen the health system for effective delivery of health services;
vi. To advocate and mobilize adequate financing for health at all levels.

The monitoring and evaluation framework measures the implementation of priority health actions against stated objectives and desired results. It guides the tracking of the performance of the KHSSP, UHC roadmap and PHC strategy. The evidence gathered through the implementation of the M&E framework will be used to guide decision-making in the sector by characterizing the implications of progress being made by the sector. Performance monitoring and review is one of the 3 pillars anchoring the stewardship of the M&E framework with the other two being the establishment of a common data architecture and data and statistics management.

2.6 Universal Health Coverage

The government has made a commitment to attain universal health coverage whose aim is to ensure access to affordable quality health services by all people while protecting them from the risk of financial hardship when accessing care. Achieving UHC is critical to achieving the goal of ending extreme poverty and lays the foundation for economic growth and competitiveness grounded in the principles of equity and sustainability. UHC is an integral part of the country's efforts to attain the desired status of health as elaborated in the Kenya Health Policy 2014-2030. It was envisioned that Kenya's UHC will ensure that All Kenyans can access and receive quality promotive, preventive, curative, rehabilitative and palliative health services without suffering financial hardship. The achievement of UHC will be in a progressive manner and its success will hinge upon active and workable inter-sectoral collaboration. It's expected that these will result in a 100% Cost Subsidy of the Essential Health Benefits Package and a reduction in Out-of-Pocket Expenses as a Percentage of Expenditure.

3.0. CHAPTER THREE: ANALYSIS OF HEALTH SECTOR INVESTMENTS ACHIEVEMENTS

3.1 Organization of Service Delivery

Highlights

- To improve access to service delivery the National Government in collaboration with county governments operationalized 726 (13%) new health facilities across all counties since 2018
- Four counties, namely, Garissa, Laikipia, Makueni and Kisumu initiated the establishment of primary health care networks (PCNs)
- There was a slight increase (74% to 81%) in the proportion of fully functional community units
- Facility outreaches to the community were greatly hampered by the restrictions put in place as a result of COVID
- Referrals from the community units to health facilities increased marginally (by 1%) while the clients referred from the community units reaching the facility increased by 24%
- Emergency response capacity was strengthened in response to COVID-19. The country has 18 public health emergency operations centres (PHEOCs), up from one in 2018
- 7,411 isolation beds and 319 ICU beds were acquired across the 47 counties and 38 public and private laboratories in 12 counties were s confirmatory tests for COVID-19 with 2 labs for genome-sequencing were established
- 15 counties and 6 level 5 hospitals (Garissa, Embu, Meru, Nakuru, Kakamega and Kisii) were trained and coached in Kenya Quality Model for Health and supported to strengthen their quality improvement teams in order to improve quality of services in 2020/2021

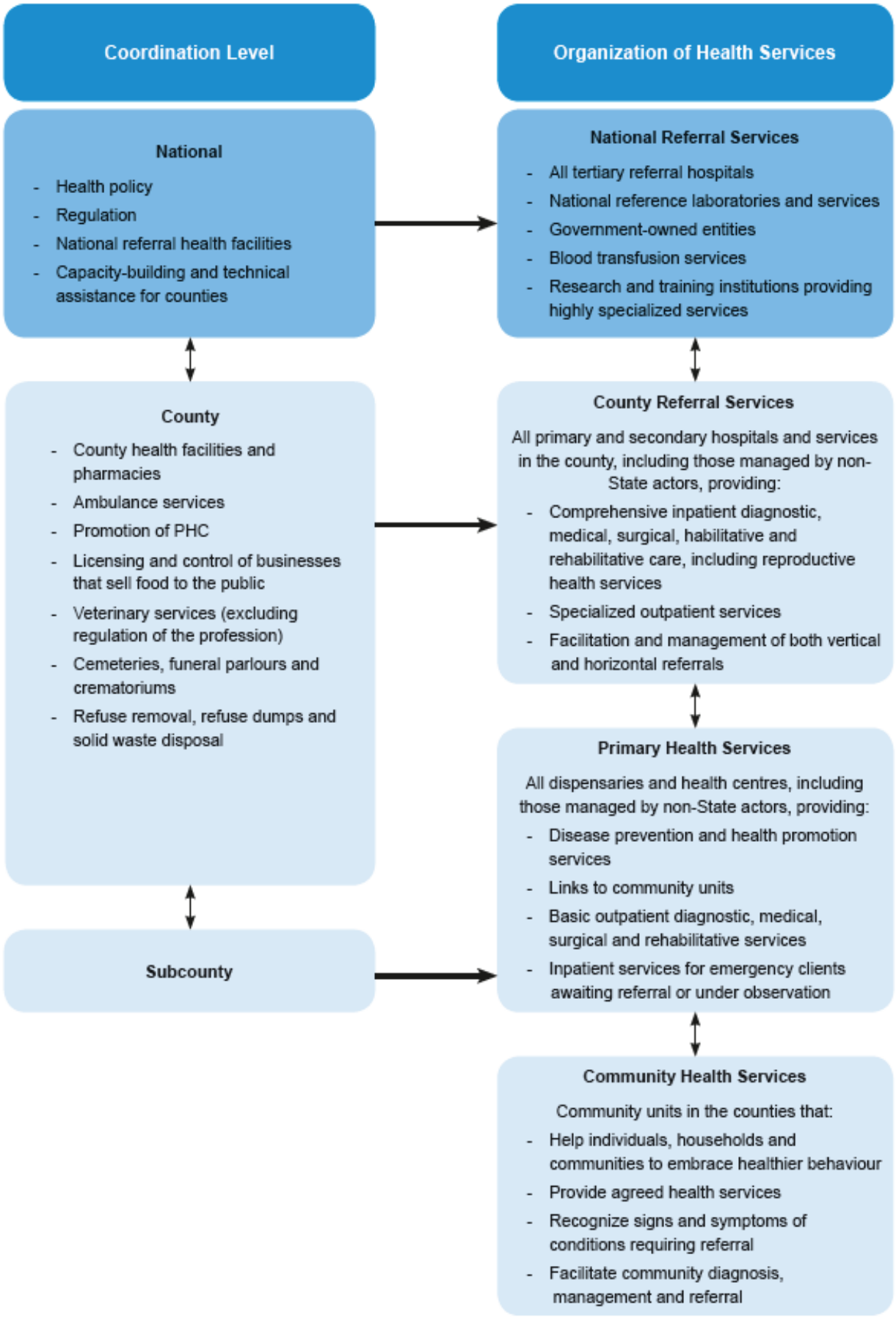
3.1.1 **Organization of Service Delivery**

Health Service Delivery is an immediate product of the inputs into the health system, such as the health workforce, procurement and supplies, and financing. It is the coming together of health inputs to provide responsive, timely health services to the patients or clients. Good service delivery comprises quality, access, safety and coverage. Ensuring availability of health services that meet a minimum quality standard and securing access to them are key functions of a health system.

The Kenyan health system is organized in six levels and, as such, it is important to have a proper referral system to ensure efficient passage along and good-quality services at each stage of the continuum of care. These services need to include health promotion, disease prevention, diagnosis, treatment, disease management, rehabilitation and palliative care. The health service delivery should also be able to provide the necessary national framework for the prevention, detection and assessment of events that might constitute public health emergencies, including those of international concern, and the provision of a coordinated response.

Currently, the public health system consists of the following six levels with the national and county governments having different roles as shown in figure 7.

- Level 1: Community
- Level 2: Dispensaries
- Level 3: Health Centers
- Level 4: Primary referral facilities (Subcounty hospitals)
- Level 5 Secondary referral facilities (County Referral hospitals);
- Level 6: Tertiary Referral hospitals.



Source: Kenya Health Policy 2014–2030.

Figure 7: Organization of service delivery
Source: Kenya Health Policy 2014 – 2030

Establishment of Primary Health Care Networks (PCNs)

The Ministry targeted to strengthen primary health care (PHC) in a bid to operationalize and realize the UHC agenda. In this regard, reorganization of service delivery through the establishment of primary care networks (PCNs) was prioritized. The PCN guidelines outline the mechanisms by which PCNs should be established and envisioned that all the community Units in each sub-county are linked to the primary health care facilities (Level 2&3) and the sub-county hospital. Over the review period, only Garissa county initiated work on PCNs. Garissa faced the added advantage of funding support from UNICEF through the Joint Implementation Mechanism that has a focus on PHC improvement, social protection with the goal of improving maternal health indicators.

Community Health Units

There was a gradual increase in the coverage of community health units with more than 300 community health workers trained with the aim of improving access to health for all. Overall, the proportion of fully functional community units increased from 80% in 2019/20 to 81%. Community outreaches conducted reduced from 3580 in 2019/20 to 2908 in 2020/21 due to COVID-19 restrictions. However, there was an increase in the number of dialogue days conducted from 20,723 to 24,766 in FY 2020/21. This is still below the target of having all community units to conduct dialogue days on a quarterly basis. Referrals from the community units to health facilities increased marginally (by 1%) from 839,680 to 850,000 while clients referred from the community unit reaching the facility increased by 24% from 665,478 to 824,779. When clients are referred from the community level to a health facility, some may not reach the facility due to various barriers like geographical, sociocultural and financial barriers. Additionally, there are gaps in documentation on of this process and consequently some data may have been missed. These findings are summarised table 1:

Table 2: Service Delivery performance

	Intervention	2018/19	2019/20	Achievement 2020/21	Target 2020/21	Rating*	Data source
1.	No. of functional primary care networks (PCNs)	0	0	4	47		AWP report 2020-2021
2.	Proportion of Fully functional Community Units	4681/6321 (74%)	5206/6519 (80%)	6087/7526 (81%)	7526		KHIS
3.	No of outreaches held from facility to community	5073	3580	2908	1234		KHIS
4.	No of Community dialogue days held	22,542	20,723	24,766	32,260		KHIS
5.	No of people referred from community unit to health facility	839,680	949,687	824,779	850,000		KHIS
6.	% of clients referred from the community unit reaching the facility	665,478	745,429	645,923	824,779		KHIS
7.	Health Emergency Operations Centre (EOCs) in the country	1	1	18	48		

Performance Score:** **0-49%,** 50%-79% **and >80%

Improving Quality of Health care Services

The Kenya Professional Oversight Authority (KHPOA) inspected 1,176 health facilities for quality improvement and compliance to standards, and another 691 facilities were inspected for verification of health facilities for licensing and gazettement in the FY 2020/21. In the previous year (2019/20) KHPOA had carried out a rapid response initiative for health facility inspections in 11,486 facilities hence covering 98.5% of all facilities. Of those 1,269 facilities (11%) were closed for not having met the minimum quality standards, 288 were upgraded and 993 were downgraded. This resulted in the reduced health facility to population ration seen in FY 2020/21.

The proportion of hospitals with a functional facility quality improvement team (QIT) is not yet determined. The MOH is in the process of rolling out the eKQMH tool to all facilities which collects this data. The Counties have been trained on the use of the tool but the rollout to each aand every facility is still ongoing. 15 counties and 6 level 5 hospitals (Garissa, Embu, Meru, Nakuru, Kakamega and Kisii) were trained and coached in eKQMH in 2020/2021 and strengthened or established QIT in the facilities as per the extract from the AWP report of 2020/2021 below.

Achievements

1. Finalized and launched the Kenya Primary Health care strategic framework
2. Dissemination of the Kenya Primary Health care strategic framework

Challenges

Very slow uptake of the counties in setting up the Primary Health care networks
Inadequate funds to disseminate PCN guidelines and support counties to set up PCNs

Lack of training for community health committees
Inadequate provision of CHV kits and tools for reporting

Priorities 2022/23

1. Dissemination of the PCN guidelines and the PHC Advocacy Communication and Community Engagement strategy
2. Provide technical support to counties in the formation and monitoring of PCNs
3. Support peer learning networks across several counties focused on PCNs
4. Resource mobilization to train CHCs and procure of CHVs kits
5. Avail resources to facilitate all community units to conduct dialogue days on a quarterly basis
6. Scale up of the electronic community health information system (eCHIS) to improve data quality.

3.2 Health Financing

Health financing refers to the “function of a health system concerned with the mobilization, accumulation and allocation of financial resources to cover the health needs of the people, individually and collectively, in the health system. According to the World Health Organization (WHO), the purpose of health financing is to make funding available, as well as to set the right financial incentives to providers, to ensure that all individuals have access to effective public health and personal health care” (WHO 2000).

A good health system raises adequate revenue for health service delivery, enhances the efficiencies of management of health resources and provides financial protection to the poor against catastrophic situations. By understanding how the health systems and services are financed, programs and resources can be better directed to strategically compliment the health financing already in place, advocate for the financing of needed health priorities, and aid populations to access available health services.

The World Health Report 2000, identifies health financing as one of the four functions of the health system. The health financing system consists of specific sub-functions and policies:

revenue collection, pooling of funds, purchasing of services, and policy on benefit entitlements and patient cost-sharing obligations.
There are three (3) main components and four (4) sources of Health Financing including the following;

i) ***Revenue collection/Raising (sources of funds):*** refers to how health systems raise money from four main sources: Public, Households, Private/businesses, and external/Donor- NGOs sources. The public sector raises finances for health services through budgetary allocation to health programs and insurance schemes. Households raise financing for health services through out-of-pocket payments or private health insurance premiums prepayments. The private sector raises healthcare financing through budgetary allocation for private sector health insurance premiums prepayments. Donors finance healthcare through programs and budget grants.

ii) ***Revenue Pooling/Risk Sharing (the accumulation of prepaid funds on behalf of some or all of the population):*** deals with the accumulation and management of revenues from many healthcare services users (public sector, private sector, households, donors) so that these users (pool members) share collective health risks, thereby protecting individual pool members from large, unpredictable health expenditures. Pooled Prepayment allows pool members to pay for average expected costs in advance, relieves them of uncertainty, and ensures compensation should a loss occur. Pooling coupled with prepayment enables the establishment of health insurance and the redistribution of health spending between high- and low-risk individuals and high- and low-income individuals.

iii) Revenue Allocation and Purchasing of Services (the payment or allocation of resources to health service providers): refers to the mechanisms used to purchase services from public and private healthcare services providers.

National and County Health Budget allocations

The health sector approved budget increased from a low of KSh. 86.9 billion in FY 2013/14 to a high of KSh. 260.1 billion in FY 2021/22 representing an overall growth rate of 200% in the post-devolution era. Within the period under review, the health sector allocation increased from KSh. 224.9 billion FY 2018/19 to KSh. 260.1 billion in FY 2021/22, representing a 16% increase in allocation. This increase could be attributable to revising the County Allocation of Revenue Act (CARA), a COVID -19 pandemic. Figure 8 shows the trends in Health sector budget allocations for the national and county level in the post-devolution era.

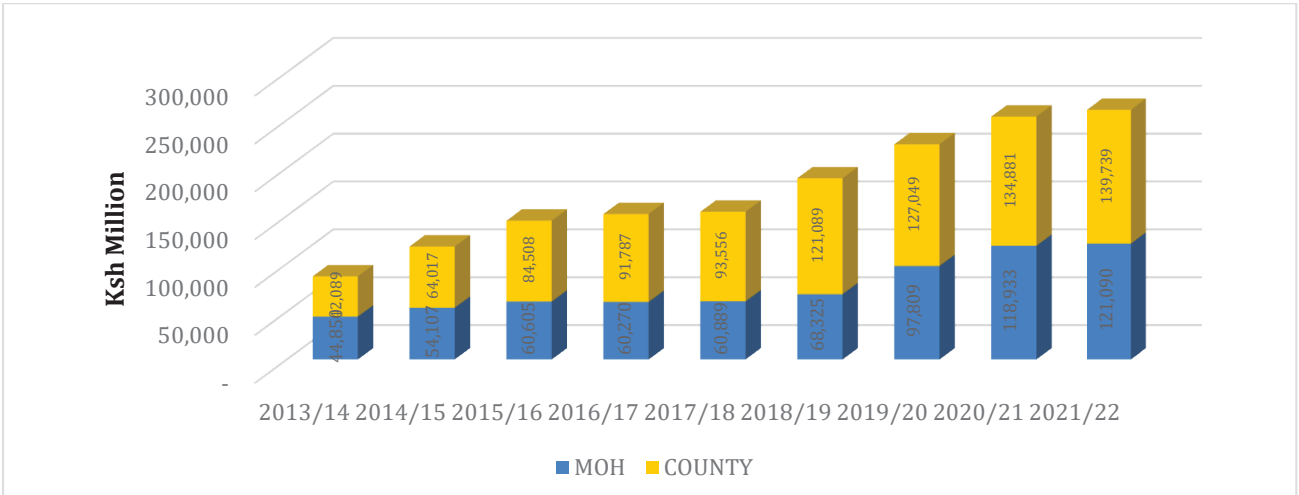


Figure 8: MOH Budget Allocations National and County level, 2013/14 – 2021/22 (Post Devolution
Source: National and County Budget Analysis.

The Health Sector approved budget increased from KSh. 207 billion in FY 2018/19 to KSh. 247 billion in FY 2020/21 representing an overall growth rate of 16% increase in allocation. The Total Government Health Allocation to Health as a percentage of the overall Total Government Expenditure increased from 9.5% in FY2018/19 to 11.1% in FY 2020/2. The proportion remains lower than the recommended 15% in the Abuja Declaration

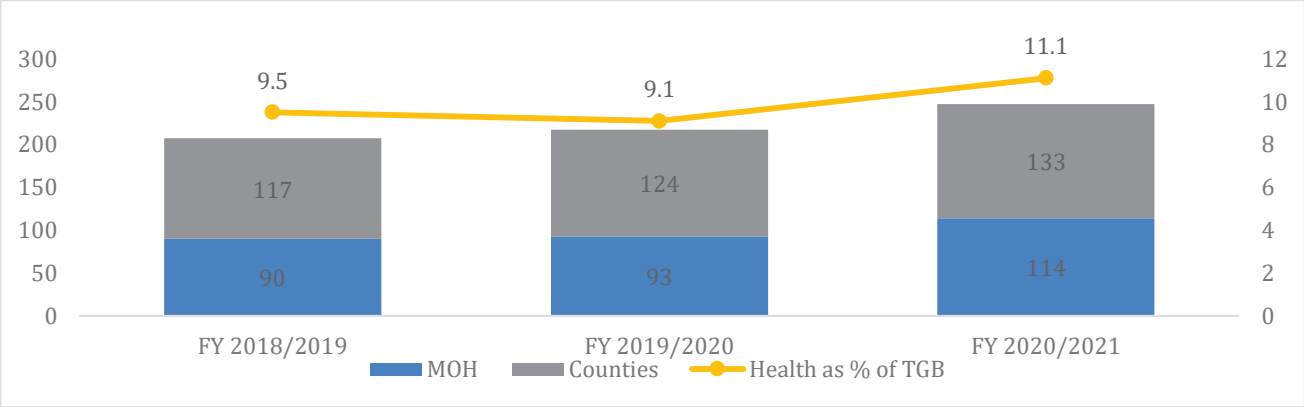


Figure 9: Sources of Health Financing, Kenya
Source: National and County Budget Analysis

a) National health Budget allocations

The approved estimates for national Ministry of Health was at KSh 121.7 Billion in 2020/21 which represented a 43 percent increase from KSh 85.1 Billion in 2018/19. Analysis by vote indicate that the recurrent vote had been allocated 62 percent, 64 percent and 56 percent of the sector resources in FY 2018/19, FY 2019/20 and FY 2020/21 respectively. The actual expenditures were at KSh 74.5 billion, KSh 108.5 billion and KSh 107.9 billion respectively for the year's FY 2018/19, FY 2019/20 and FY 2020/21 respectively. Transfers to government agencies and other levels of government (conditional grants) consumed the largest share of funds in FY 2020/21 at 76.8 percent; followed by compensation to employees at 12.3 percent during the period. Overall, budget execution levels for the ministry of health was at 88 percent, 91 percent, and 89 percent respectively for the FY 2018/19, FY 2019/20 and FY 2020/21 respectively.

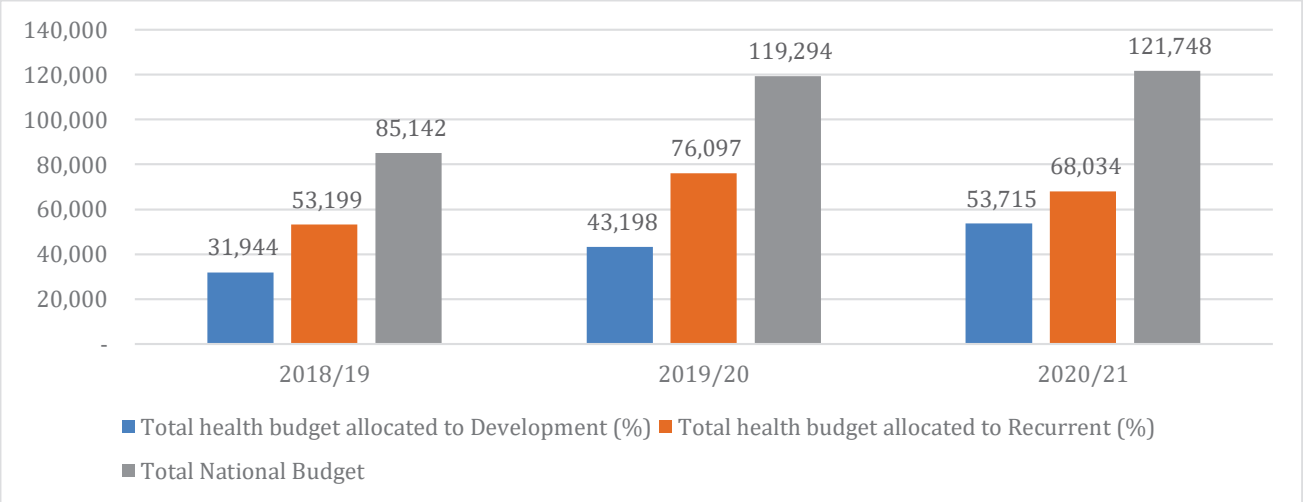


Figure 10: National Health budget, 2018/19 – 2020/21

b) County health Budget allocations

The CARA sets out conditional allocation and equitable share of revenue to county governments, pursuant to Articles 202(2) and 218(1)(b) of the Constitution. It provides the statutory basis for the transfer allocations from the Consolidated Fund to the respective County Revenue Funds.

Figure 11 shows the breakdown of allocation at the county level. It further provides an overall picture of the allocation for counties and county health departments. Cumulatively all counties increased the proportion of their total budgets allocated to health, from 22 percent in FY 2014/15 to 27.8 percent in FY 2021/22, a slight drop from 29.3% reported for 2020/21. Overall, this indicates the continued county governments' increasing prioritization of health despite competing needs with other sectors.

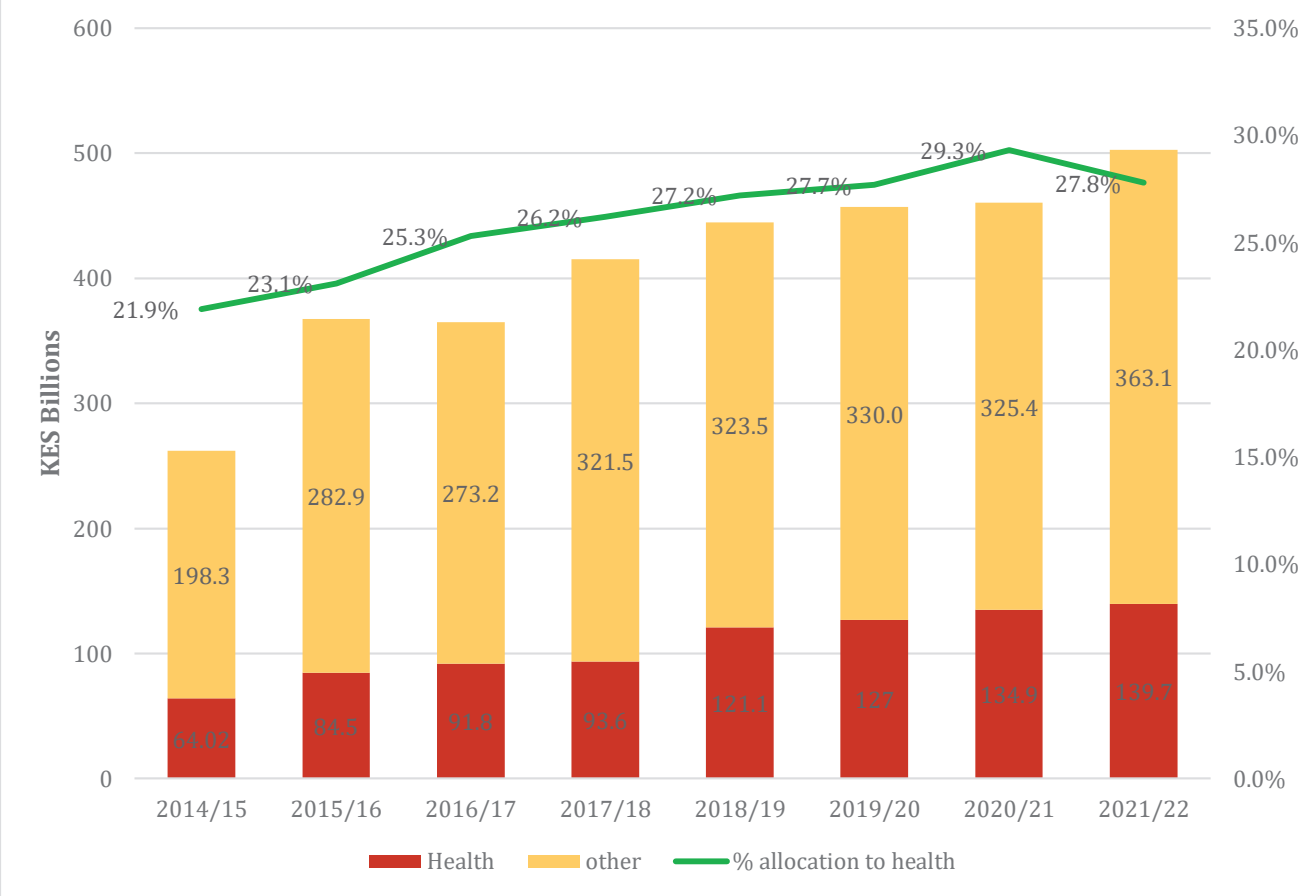


Figure 11: Breakdown of County Health Allocations, 2014/15 – 2020/2

Source: National and county budget implementation and review reports.

3.3 Health Infrastructure

Key Highlights

- The Ministry of Health, the National government supported NMS to set up 24 Health facilities in informal settlements to increase access to quality health services to serve 4.2 million people and collaborated with the County governments to identify the construction/rehabilitation of 50 health facilities under the Presidential COVID-19 Stimulus
- The largest increase in the number of facilities has been the increase in Level 2 facilities(dispensaries) and level 3(health centres) which have increased in number yearly from 2016 to 2020. In the year 2021, the dispensaries form 82.41% of health facilities with health centres being 10.45%, level 4 hospitals at 6.93%, level 5 at 0.16% and level 6 hospitals being 6 (0.05%)
- The bed density trends for Kenya remained low at 15 from 2013 to 2018 but this improved in 2019 to 2021 to an average of 19 beds per 10,000population with many disparities in counties.
- The Ministry collaborated with 9 County Governments of Meru, Nakuru, Mombasa, Garissa, Kisumu, Embu, Kakamega, Nyeri, and Machakos to establish 9 Regional Cancer centres to lessen the cancer burden by decentralizing chemotherapy services since 2019. In FY 2020/21, 75,501 patient visits were recorded across all the public cancer centres in the country with 12,632 new patients and 62,869 revisits.
- The Government's innovative approach of equipping Level 4 and 5 hospitals with modern diagnostic and specialized treatment equipment under the Managed Equipment Service (MES)project has led to a reduction in waiting time for surgery and diagnostic services, reduced referrals out, reduced patient waiting time improved clinical outcomes; increased efficiency due to reduced downtime of equipment

Health infrastructure is the foundation for planning, delivering, evaluating, and improving public health. In Kenya there have been massive investments in the health infrastructural system that supports the sustainable functionality of health care services by the national and county governments. These are related to all the physical aspects (construction, renovations), inpatient beds, equipment, transport, and information communication technology (ICT) required for effective delivery of services at all levels.

1. Health facilities

a) Health Facilities Ratio

The number of health facilities per 10,000 population has increased steadily over the last 10 years from 1.9 facilities per 10000 population to 2.7 in FY 2020/21 which is above the WHO recommendation of 2.5/10,000 population.

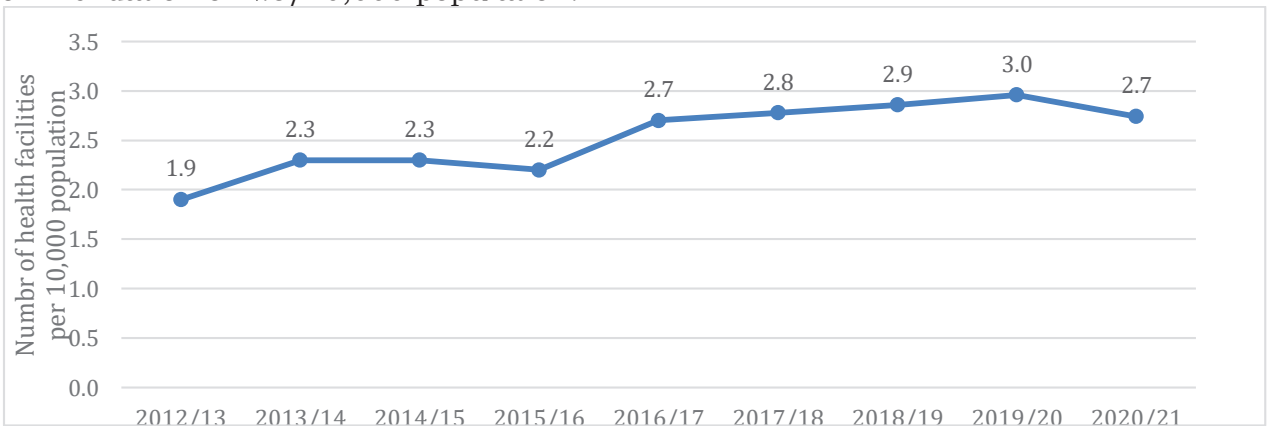
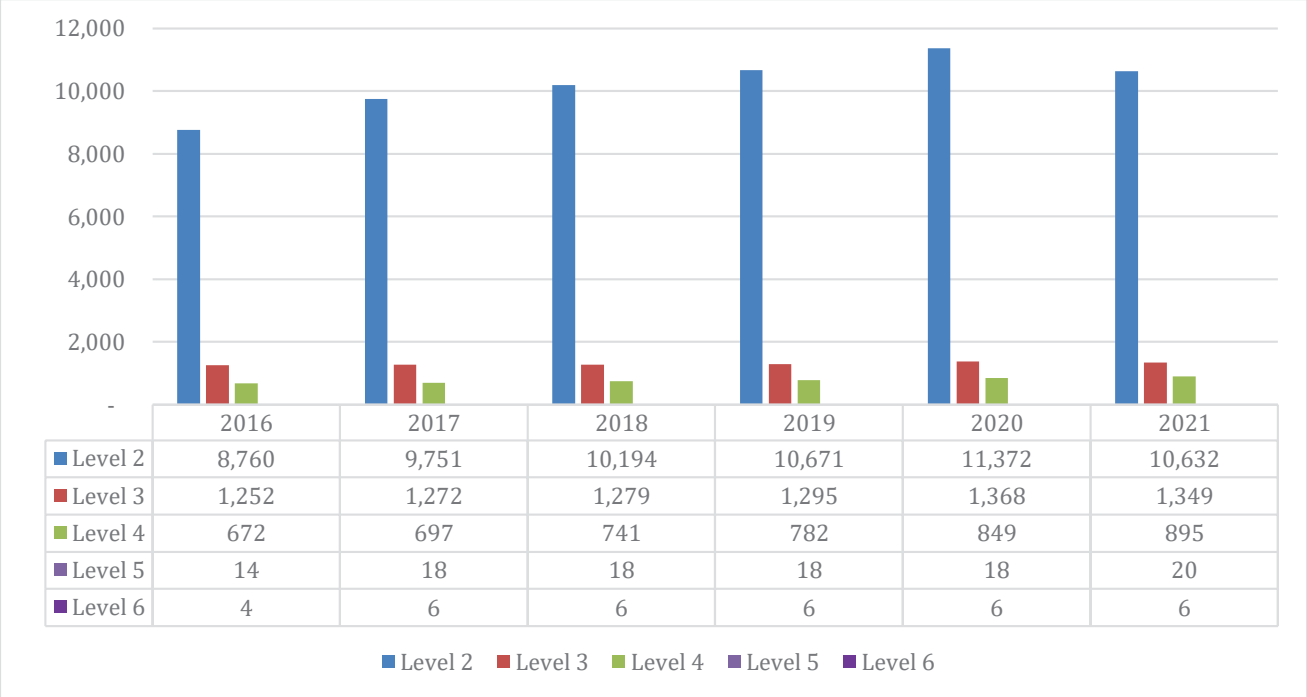


Figure 12: Health facility density per 10,000 population 2012/13- 2020/21

In the FY 2020/21, MOH collaborated with the County governments to identify construction/rehabilitation of 50 health facilities under the Presidential COVID-19 Stimulus Project as seen in **annex 1**. Through oversight and supervision of the Ministry of Health, the National government supported NMS to set up 24 Health facilities in informal settlements to increase access to quality health services. The facilities are shown in annex 1 will serve 4.2 million people living in informal settlements increasing access to health services with ease. The largest increase in number of facilities has been the increase in Level 2 facilities(dispensaries) and level 3 (health facilities) which have increased in number yearly from 2016 to 2020. There was a drop in 2021 attributed to closure of some facilities which did not meet the quality standards of inspection by the Kenya Health Professional Oversight Authority. Level 4 to 6 facilities have also increased between 2016 and 2021. In the year 2021, the dispensaries form 82.41% of health facilities with health centres being 10.45%, level 4 hospitals 6.93%, level 5 0.16% and level 6 hospitals being 6(0.05%). The detailed breakdown of the number of facilities by KEPH level and ownership are found in annex 2.

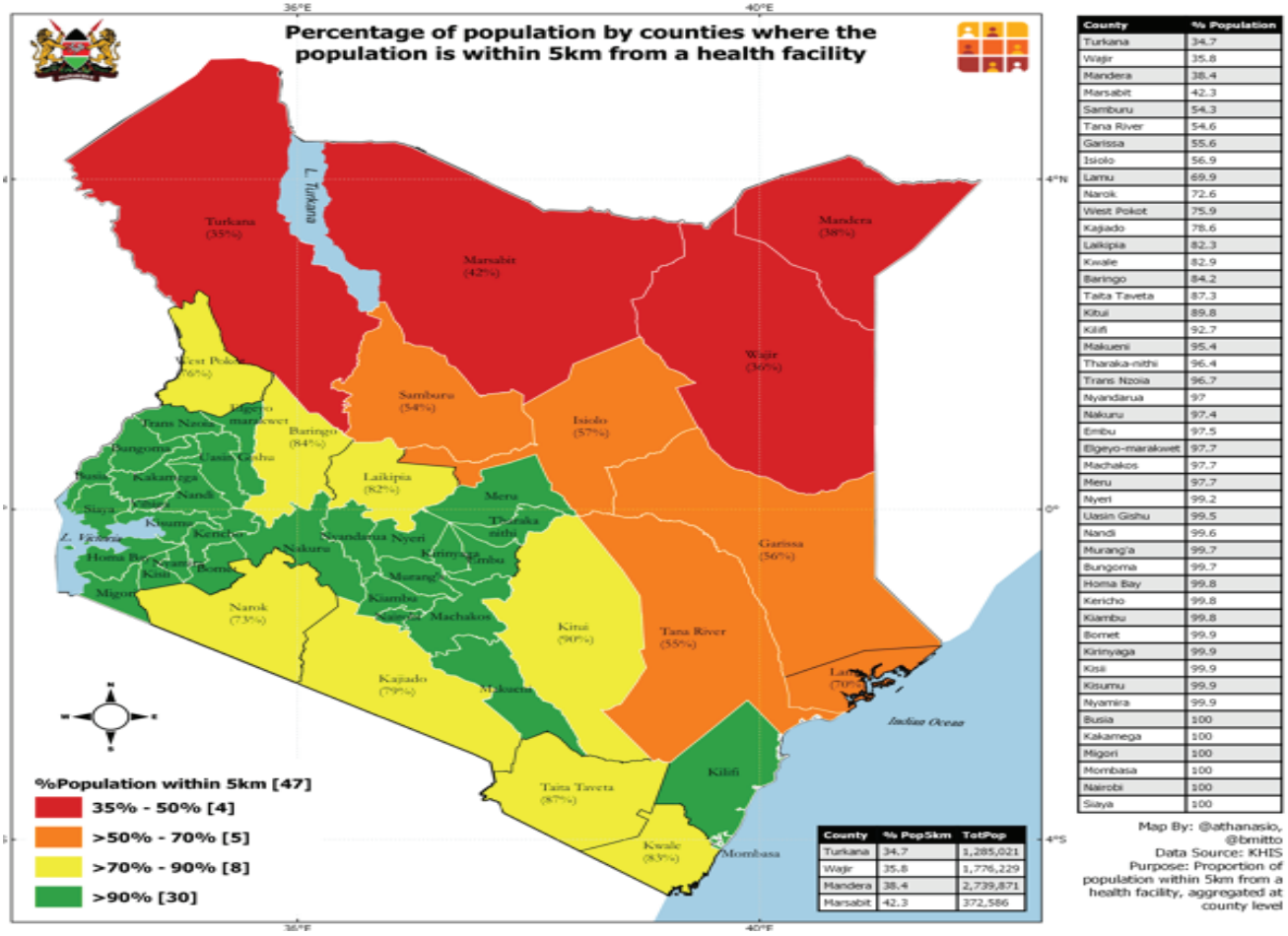


	2016	2017	2018	2019	2020	2021
Level 2	8,760	9,751	10,194	10,671	11,372	10,632
Level 3	1,252	1,272	1,279	1,295	1,368	1,349
Level 4	672	697	741	782	849	895
Level 5	14	18	18	18	18	20
Level 6	4	6	6	6	6	6

Figure 13: Number of Health Facilities per Level 2016- 2021

b) Population within 5km distance to health facility

As a result of expanded and improved physical health infrastructure in the country, 87.9% of the population is living within a 5km distance of a health facility (total *number* of *health facilities* per 10 000 *population).* About three-quarters (75%) of the Counties have over 80% of their population within the 5 KM radius with Mombasa, Nairobi, Kakamega, Busia, Siaya, and Vihiga counties being at 100%. A quarter (25%) of the counties have a below 80 population with the 5 KM radius thus Turkana county (34.7%), Wajir,(36%), Mandera (38%), Marsabit (42%), Samburu (54%), Tana River (55%), Garissa(56%), and Isiolo (57%) of the population living within the 5km distance to health care facility while the other remaining counties in Kenya were as indicated in Figure 14.



County	% Population
Turkana	34.7
Wajir	35.8
Mandera	38.4
Marsabit	42.3
Samburu	54.3
Tana River	54.6
Garissa	55.6
Isiolo	56.9
Lamu	69.9
Narok	72.6
West Pokot	75.9
Kajiado	78.6
Laikipia	82.3
Kwale	82.9
Baringo	84.2
Taita Taveta	87.3
Kitui	89.8
Kilifi	92.7
Makueni	95.4
Tharaka-nithi	96.4
Trans Nzoia	96.7
Nyandarua	97
Nakuru	97.4
Embu	97.5
Elgeyo-marakwet	97.7
Machakos	97.7
Meru	97.7
Nyeri	99.2
Uasin Gishu	99.5
Nandi	99.6
Murang'a	99.7
Bungoma	99.7
Homa Bay	99.8
Kericho	99.8
Kiambu	99.8
Bomet	99.9
Kirinyaga	99.9
Kisii	99.9
Kisumu	99.9
Nyamira	99.9
Busia	100
Kakamega	100
Migori	100
Mombasa	100
Nairobi	100
Siaya	100

County	% PopSkm	TotPop
Turkana	34.7	1,285,021
Wajir	35.8	1,776,229
Mandera	38.4	2,739,871
Marsabit	42.3	372,586

Figure 14: Proportion of the population within 5 km distance to a health facility

c) Health facility Bed population Ratio

There is no global norm for the density of inpatient beds in relation to the total population. The World Health Organization (WHO) puts it at a minimum of 18 Beds per 10,000 population. The global average for inpatient bed density is 27 per 10,000 and the average in the African region is 10 beds per 10,000 population. The bed density trends for Kenya remained low at 15 from 2013 to 2018 but this improved from 2019 to 2021 to an average of 19 beds per 10,000population with many disparities in counties. In 2021 alone, the total number of beds moved up by 19% from 82,091 beds to 97,714 in 2020 and 2021. The bed densities are as shown in figure 15 and Annex 3.

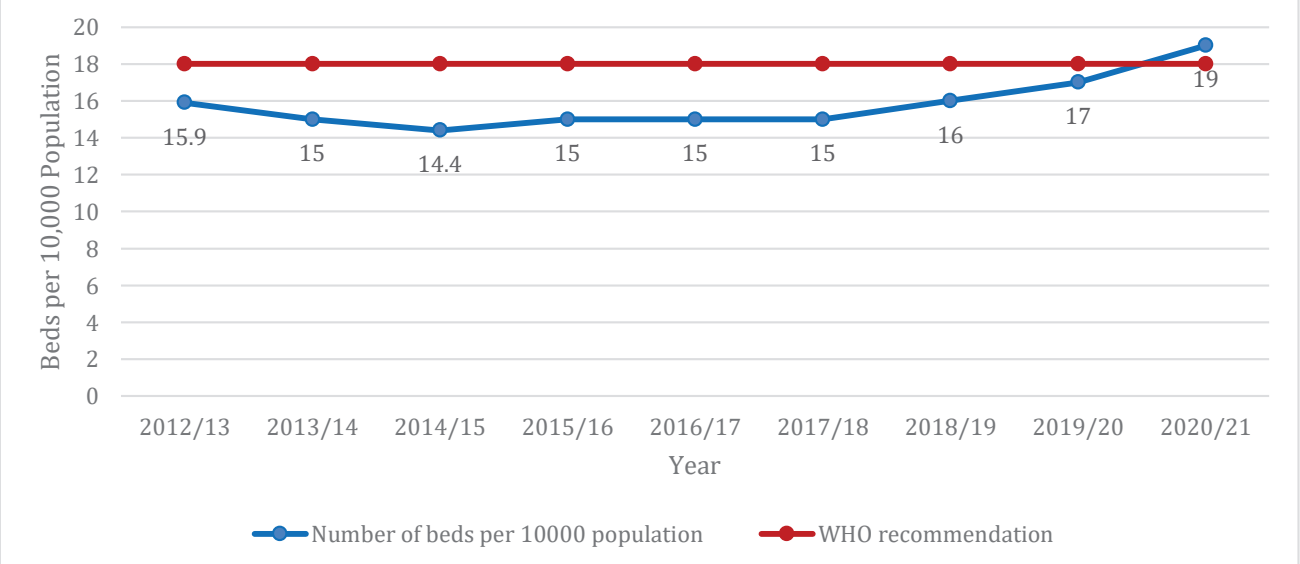


Figure 15: Bed density trends 2012 -2021

Figure 16 denotes the average number of beds per 10,000 population for the counties for the last 10 years. The number of beds per 10,000 population increased in 2021 in more than half of the counties (53%) but only one-quarter of the counties have the WHO minimum number of beds, 18 beds per 10,000 to provide adequate accommodation to patients. The top five counties with more than 18 beds per 10,000 population are Kirinyaga (39), Embu (32), Isiolo (32), Nyeri (31), and Migori (30) while the bottom five counties are Kwale (7), Kilifi (9), West Pokot (9), Garissa (10), Bomet (11), Nandi (12) and Narok (12).

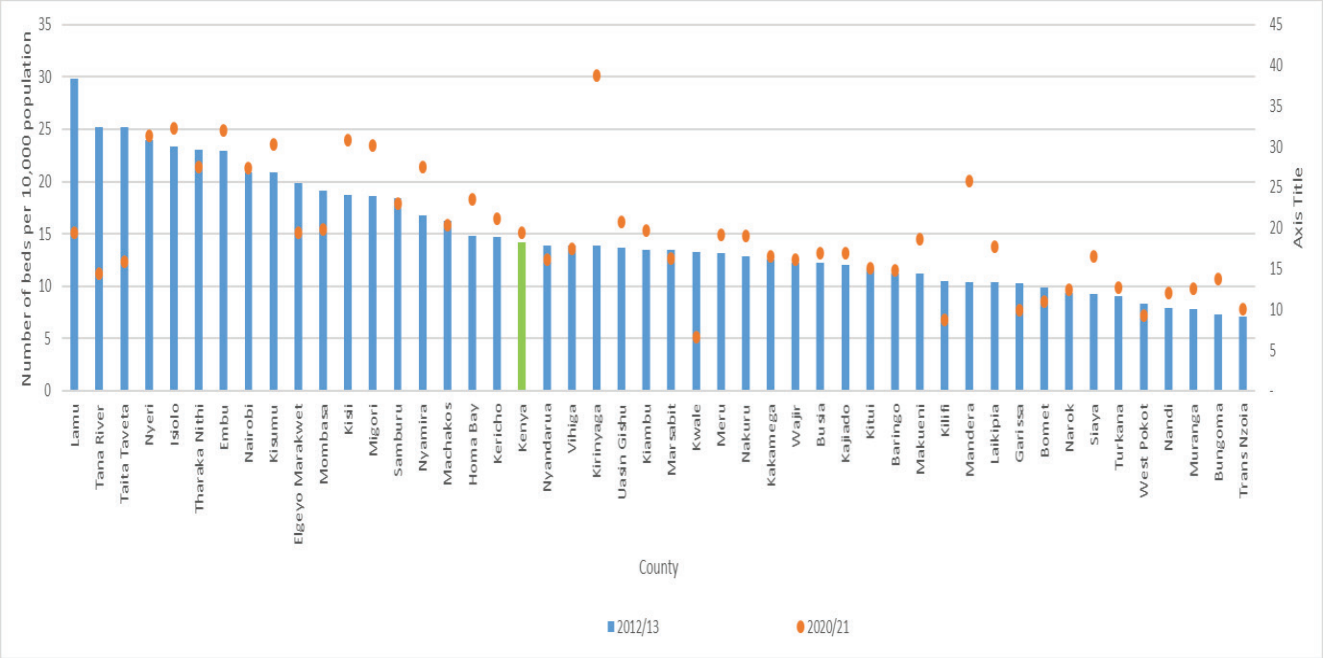


Figure 16: Bed density per county 2012/13 - 2020/21

2. Establishment of Cancer Treatment Centers

Kenya recorded significant progress in improving access to cancer management both nationally and sub-nationally. In the year under review: -

a) The Ministry has collaborated with 9 County Governments of Meru, Nakuru, Mombasa, Garissa, Kisumu, Embu, Kakamega, Nyeri, and Machakos to establish 9 Regional Cancer centres to lessen the cancer burden by decentralizing chemotherapy services since 2019. The buildings for the chemotherapy centers were renovated, equipped with biosafety cabinets and chemotherapy chairs, and provided with supplies of essential chemotherapy medicines @ KSH 106M per year (cumulative 226 M FY 2018/19-2021/22) catering only for 23 essential chemotherapy drugs through a conditional grant from GOK. In FY 2020/2021, a total of 75,501 patient visits were recorded across all the public cancer centers in the country with 12,632 new patients and 62,869 revisits. The regional cancer centers accounted for 29,321 (38.8%) of all the total patient visits as shown in figure 17.

b) Additionally, three comprehensive regional cancer centers (with radiotherapy services) have been established through GOK funding in Nakuru, Garissa, and Mombasa, and each is equipped with a state-of-the-art linear accelerator, CT simulator, and brachytherapy machines at a cost of 1.55B. The Kisumu regional cancer center is under construction by the County Government of Kisumu with civil works currently at a 68% completion rate and planned equipping through MOH support under a recently signed Tripartite Agreement (KUTRRH, Kisumu, and MOH).

c) Moi Teaching and Referral Hospital has been equipped with a Linear Accelerator and Brachytherapy Machines that are now operational. The second phase of the radiotherapy expansion project at MTRH is ongoing with a bunker 90% complete for a second linear accelerator machine already secured through GOK funding.

d) Kenyatta National Hospital Cancer Center of Excellence is under construction with Phase 1 of the project builder's works at 96% completion and procurement of a second LINAC to replace the old Cobalt 60 machine underway through GOK funding.

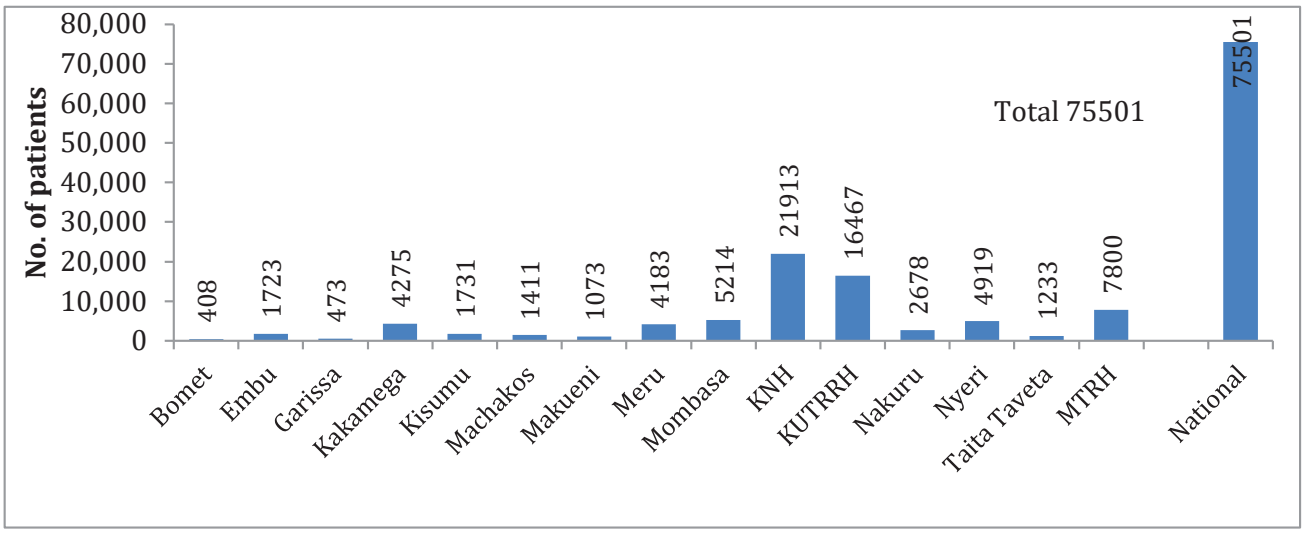


Figure 17: Number of patient visits seen at the public cancer centers, FY 2020/21

3. Laboratories

Diagnostic capacity in the Country has been scaled up. A total of 38 public and private laboratories in 12 counties (Nairobi, Kisumu, Mombasa, Kilifi, Wajir, Kericho, Uasin Gishu, Machakos, Busia, Nakuru, Kajiado and Trans Nzoia) were able to conduct confirmatory tests for COVID-19 in 2021. Two laboratories for genome-sequencing were established to enhance the capacity for COVID-19 diagnosis.

4. Medical equipment

The national and county governments during the review period were able to acquire major equipment that facilitated service delivery. The total number of ICUs/HDUs beds was 12 times what was in 2013 (108 – 1278), translating to a 1083 % increase while the number of MRI equipment is 3 times (26 – 76) what was in 2013 and 2021 with a percentage change of 192% as shown in Annex 4. This has enhanced equity in access to healthcare services and improved the waiting time for patients from receiving treatment and service quality due to timely diagnosis and investigations. The availability of medical equipment including ventilators, beds, oxygen tanks, and equipment was prioritised during the COVID-19 pandemic leading to enhanced treatment, care, and support for critical patients not only for COVID-19 but also due to other disease conditions and injuries.

a) Equipment Utilization supplied under the Managed Equipment Service (MES)

In 2013, the Government started implementing an innovative approach of equipping Level 4 and 5 hospitals with modern diagnostic and specialized treatment equipment under the Managed Equipment Service (MES) seven-year project. The project targeted 98 hospitals, 2 in 47 Counties (94), and 4 National hospitals. The equipment thematic areas supported were theatre, renal equipment, ICU equipment, and radiological equipment. These efforts have led to a reduction in waiting time for surgery and diagnostic services, reduced referrals, reduced patient waiting time improved clinical outcomes; increased efficiency due to reduced downtime of equipment. All equipment meets the minimum contractual uptime guarantee of more than 95%, hence, service is not interrupted.

Slightly over 100,000 surgeries have been conducted in the Managed Equipment scheme Theatres in 2020/21. An average of 86,000 dialysis sessions were carried out using the renal equipment, 3,300 patients benefited from ICU services and 1.2 million radiological investigations were conducted in 2020/21as shown in Table 3.

Table 3: Utilization of MES equipment as of 2020/2021

Infrastructure	Key Performance Indicators	Actual Achievement 2020/21
Managed Equipment Services equipment utilized	Number of surgeries	107,696
	Number of dialysis sessions	85,712
	Number of patients utilizing	3,365
	Number of radiological tests	1,196,578

b) Medical Oxygen, gases piping works, and related accessories

The Ministry of Health in collaboration with County governments and stakeholders during the period under review assessed to determine the availability and functionality of PSA oxygen plants, oxygen cylinders, concentrators, and ventilators.

Table 4: Status of oxygen plants, Oxygen Accessories & Ventilators in Kenya - July 2021

Indicator	Number
Number of PSA oxygen plants	62
Number of functional PSA oxygen plants	48
Number of non-functional PSA oxygen plants	14
Number of cylinders available	3027
Number of concentrators	614
Number of beds connected to oxygen	3762
Number of ventilators	640
Number of ventilators in use	442
Number of ventilators not in use	183

Source C.O.G Report- 1st July 2021

The MoH with the support from development partners embarked on the expansion of the health facilities' capacity to deliver oxygen and enhanced the availability of oxygen in COVID-19 treatment facilities since FY 2019/2020. The itemized supplies of medical oxygen and the construction of Medical oxygen tank capacity are displayed in table 5.

Table 5: COVID19 Response Medical Oxygen ongoing supplies

S/No.	Facilities - Liters of Oxygen Supplied	2020/2021
1	Coast general	45,712 L
2	Jaramogi Oginga Odinga Hospital	78,855 L
3	Tigoni Level 4 hospital	12,762 L
4	Kiambu Level 5 County Referral Hospital	22,149 L
5	Thika Level 5 hospital hospital	16,233 L
	Total	**175,711 litres**

Source: COVID-19 Emergency response reports

Table 6: construction works of for Oxygen plant

	Facilities construction oxygen Plants	Tank Capacity litres (L)
1	KNH-Othaya	3,000 L
2	KNH	20,000 L
3	MTRH	2,000L
4	Nakuru Referral Hospital	10,000L
5	KUTTRH	20000L
	Total	**6,000L Liters**

Source: MOH COVID Oxygen Committee reports 2021

In addition, the Ministry of Health in collaboration with Public works and Counties undertook expansion, installation, and Medical gas piping works in health facilities across various counties namely; Garissa, Busia, Taita Taveta, Mandera, Machakos, Kisumu, Kajiado, Migori and Nairobi.

d) **Waste Management Equipment**

The MOH with support from the Belgium Government procured and installed Medical Waste Microwave equipment in eleven (11) sites (Kisii, Kisumu, Nakuru, MTRH, Embu, Machakos, Kakamega, Machakos, Mombasa, Nyeri, KNH) and signed a contract for phase 2 that involved 15 additional counties.

5. Rapid Emergency Response Transport Vehicles

The county and national governments have had mechanisms for addressing transport services for an emergency by leasing of Ambulances and procuring some for specific health facilities or put in a pool to be accessed by other health facilities. In addition, seventeen (17) Double cabin utility vehicles were procured and allocated to facilities and centers to support COVID-19 response activities including contact tracing. The assessment team confirmed and observed 16 vehicles.

6. East Africa Centers of Excellence for Skills & Tertiary Education (EAKI)

The East Africa Center of Excellence for Skills and Tertiary Education (EAKI) was conceived for the East African Community and financed by the African Development Bank. The **East Africa Kidney Institute,** is a proposed centre of excellence in renal care, training and research to be set up in Kenya as part of the East African Community's objective of developing of relevant and highly skilled workforce in biomedical sciences to meet the EAC immediate labour market needs and support EAC's free labour market protocols. It is envisioned that EAKI will attract medical tourism from the region and beyond. EAKI is part of the EAC COEs focusing on nephrology and Urology.

It is envisioned as a service delivery complex for teaching, research and service delivery (with 4 operating theatres, 18 ICU beds, 160 ward beds, a laboratory, 45 dialysis units, lecture theatres, and administration offices). A major component is the establishment of a Regional Center of Excellence in Urology and Nephrology and the deliverables under this component include:

a) Construction of the EAKI Infrastructure (Centers of Excellence) Complex
b) Batch 1: Modernize the existing KNH renal unit
c) Batch 2: Equip the new EAKI service complex

During the review period, the building was at 42% but plans were underway to fast-track this for completion by 2021/22.

Health Infrastructural Challenges

- Some Counties offered incomplete buildings for infrastructural improvements for facility renovations, expansion and equipping by the different infrastructure and equipment projects
- There was reluctance by some counties to sign the Intergovernmental MoU infrastructural improvements, including court cases before project commencement
- Challenges in utilizing MES equipment due to inadequate and in some cases, lack of electricity in some health facilities. Non-availability of clean, reliable water in some health facilities for theatre and renal services
- **I**nadequately trained personnel to operate the equipment in some counties, especially for ICU, renal, and radiology Services.
- Delays due to Environmental Impact Assessments (ESIAs) Clearance by National Environment Management Authority is required prior to construction, installation or expansion of some health facilities.

Recommendations

- Adhere to the Health infrastructure Norms and standards
- Train adequate human resources to operationalize the installed machines/ medical equipment as part of the MES project
- Collaborate with other health-related sectors, reduce delays in starting up projects
- Enhance the Monitoring and Evaluation of the health infrastructure
- Maintain a master register of inventories in the KMHFL of all major equipment and machines.

3.4 Health Workforce in the sector

Key Highlights

- There was a general increase in the number and densities of registered health professionals in all cadres during the period
- Total health workforce in the Counties increased by 61% since 2016/2017
- Registered Core Health Worker density (Nurses, Doctors, RCOs) stands at 19 per 10,000 Population
- There was a general increase in the number of registered health professionals in all cadres during the period
- Majority of specialists in the counties were anaesthetist clinical officers and **Obstetrician**/Gynaecologist
- MoH in collaboration with county governments recruited 8,229 HCWs to support primary level facilities towards attainment of UHC
- 937 HCWs were contracted and deployed to support COVIS-19 mitigation measures
- National Health Workforce Accounts (NHWA) TWG and secretariat was formed; progressive data collection on HRH was initiated and data was reported in the WHO NHWA platform
- Labour Market Analysis, Workload Indicators of Staffing Need and Multi-Dimensional Productivity Index were initiated and training done to national and counties
- Some counties are not linked or do not update on iHRIS leading to inaccurate and incomplete HRH data
- Difficulties in getting inventory on HCWs from private health facilities hinders proper policy making and/or poor planning

In the health sector, human resources are an essential component of the health system especially in the provision of basic health services and are identified as one of the six core building blocks of a health system. Health care workers (HCWs) is one of the investment areas as envisioned in the Kenya Health Policy 2014-2030. SDG3 particularly target *3b* seeks to "*increase health financing and support health workforce in developing countries" and* this calls to a substantial increase in the recruitment, capacity building, training and retention of the health workforce.

During the period under review, the Ministry of Health in collaboration with county governments recruited eight thousand two hundred and twenty-nine (8,229) health care workers to support primary level facilities towards the attainment of UHC. Further, four thousand eight hundred and ninety-nine (4899) interns of various cadres were also recruited and deployed to internship centers of which 2,177 were under UHC support.

The COVID -19 pandemic also contributed to the increase in human resources for health with six hundred and eight (608) HCWs recruited to support mitigation measures. In addition, 329 health workers (Laboratory technologists, Public health officers, Psychologists, Nutritionists and Logistic officers) were contracted and deployed for case management under COVID-19 Health Emergency Response Project (CHERP).

The Kenya Health Professional Oversight Authority and the Advisory Council (KHPOA) in a bid to ensure patients' safety and provision of quality health services conducted a mapping of all health professional cadres whereby42 cadres were identified but only 11 had a regulatory mechanism.

According to this report, the majority of specialists in the counties were anesthetist clinical officers (200) followed by Obstetrician/Gynecologist (152) who were employed at the Counties in either permanent and pensionable contracts or other terms. The minority of the specialists in the Counties were urologists (7) and Public Health Specialists (16) as indicated in figure 18. below.

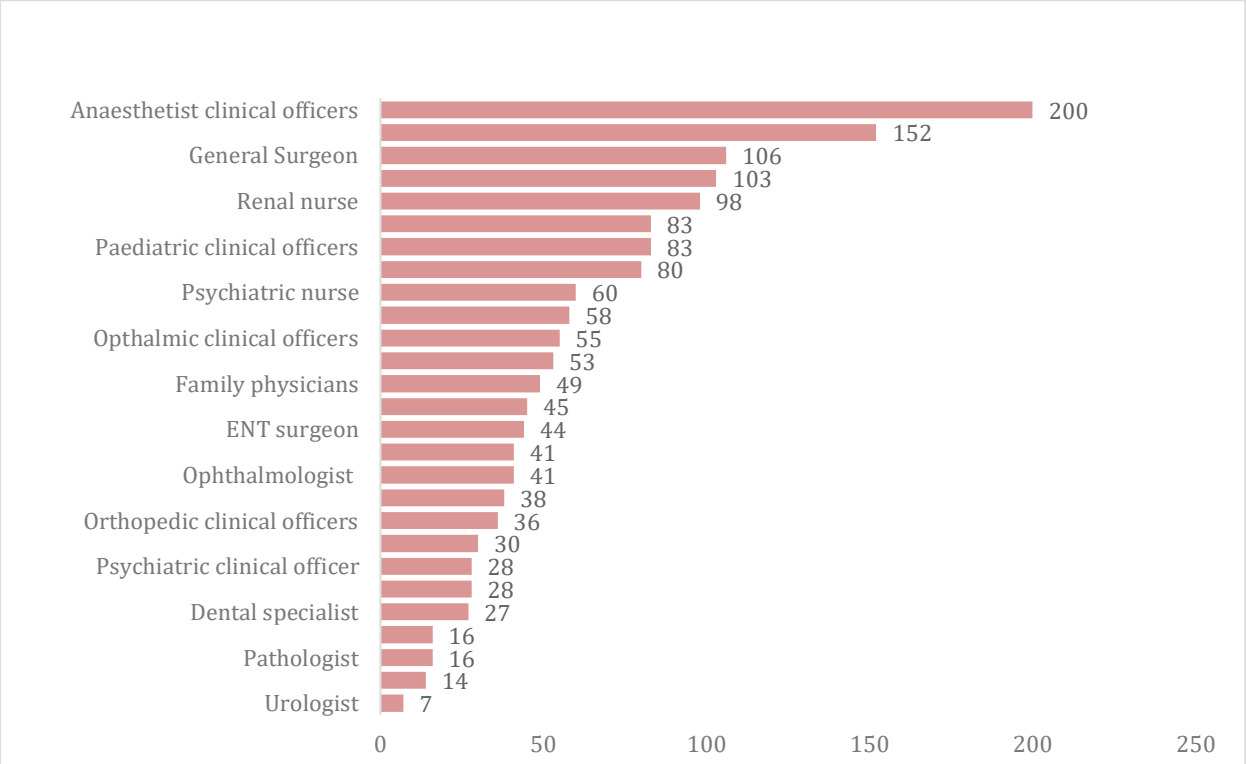


Figure 18: Specialists in the Counties per cadre
Source: The Kenya Health Professional Oversight and the Advisory Council (KHPOA) report 2021

Health Workforce Indicators Performance

Table 7 below shows the indicators and targets for the health workforce. There has been an increase in density of the registered core health workers (doctors, clinical officers, and nurses) and even community health volunteers in the country.

Table 7: Health workforce Indicators and Targets

Indicator	2018/19	2019/20	Achievement 2020/21	Target 2020/21	Rating*	Data source
Registered Core Health Worker density per 10,000 Population (Nurses, Doctors, RCOs)	15.4	16.6	19.2	20		Regulatory bodies
Active Core Health Worker density per 10,000 Population (Nurses, Doctors, RCOs)	7.22	8.08	8.86	20		County APR, MOH
Number of ever registered doctors per population ratio (per 10,000 population)	1.5	1.7	2.6	3		KMPDC
Number of active doctors per population ratio (per 10,000 population)	0.72	0.73	0.76	3		County APR, MOH
Number of ever registered Nurses per population ratio (per 10,000 population)	11.3	12.1	22	13		Nursing Council Kenya

Indicator	2018/19	2019/20	Achievement 2020/21	Target 2020/21	Rating*	Data source
Number of active Nurses per population ratio (per 10,000 population)	5.78	5.85	6.46	13		County APR, MOH
Density of community health volunteers (per 5 000 population)	7.8	8.2	8.9	8.4		KMHFL, MOH
Number of CHVs in the country	72,021	85,266	90778	71842		KMHFL, MOH
Number of Health workers trained on Health Management system	35	40	586	45		County APR

Performance Score:** **0-49%,** 50%-79% **and >80%

Registered health professional trends

Table 8 below shows the densities per 10,000 population of registered health professionals by cadre from 2015 to 2020. There was a general increase in the densities of registered health professionals in most cadres during the period compared to 2015. The density of registered nurses was highest at 13.4 in 2020, followed by enrolled nurses and clinical officers who were 8.0 and 4.8 respectively. However, the observed increases in the density of registered health professionals are still below the WHO recommended thresholds required for the realization of UHC in countries.

Table 8: Density of Key Registered Health Personnel in Kenya per 10,000 population

Health Personnel	2015	2016	2017	2018	2019	2020
Medical Officers	2.1	2.2	2.3	2.4	2.5	2.7
Dentists	0.2	0.2	0.3	0.3	0.3	0.3
Pharmacists	0.7	0.7	0.7	0.7	0.8	0.9
Pharmaceutical Technologists	1.7	1.9	2	2.1	2.3	2.4
Graduate Nurses	0.6	0.9	1	1	1.5	1.7
Registered Nurses	9	10.2	10.8	10.7	12.2	13.4
Enrolled Nurses	4.9	4.9	4.9	4.7	6.1	8
Graduate Clinical Officers	3.4	0	0.1	0.1	0.1	0.2
Clinical officers	-	3.6	3.9	4.1	4.4	4.8
Public Health Officers	2.2	2.7	2.9	3	0.9	1.2
Public Health Technicians	1.3	1.4	1.5	1.5	0.3	0.3
Laboratory Technologies	0.9	1.4	2.2	2.4	2.8	3
Laboratory Technicians	0.3	0.4	0.6	0.7	0.8	0.8
Nutrition and Dieticians	0.4	0.4	0.4	0.6	0.8	0.8
Nutrition &Dietetic Technologies	0.5	0.4	0.7	0.9	1.1	1.2
Nutrition & Dietetic Technicians	0.1	0.1	0.1	0.2	0.2	0.2

Source: Economic Survey, 2021

The figure 19 below shows the total health workforce in the Counties from FY2016/17. According to the findings below, the total health workforce has increased by 61% since 2016/2017. However, in the last three financial years, there has been slow growth as the National Treasury continued to freeze hiring following the 2017 government moratorium on recruitment to curb the further ballooning of the wage bill in the country. Annex 5 show the Health works force distribution in the counties per cadre.

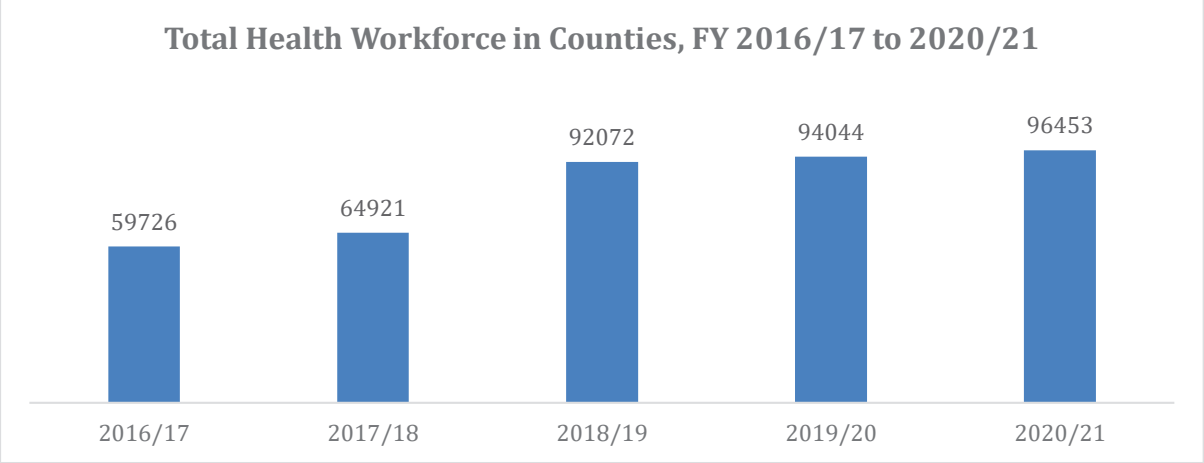


Figure 19: Total health workforce in Counties
Source: County Annual Performance Review Report

Figure 20 below shows the total number of the active core health workforce in the public sector from FY2016/2017 to FY2020/2021. There was a general increase in the number of health professionals in three cadres during the period under review. The proportion of clinical officers increased by 59% while that of nursing and medical officers increased by 26% and 19% respectively.

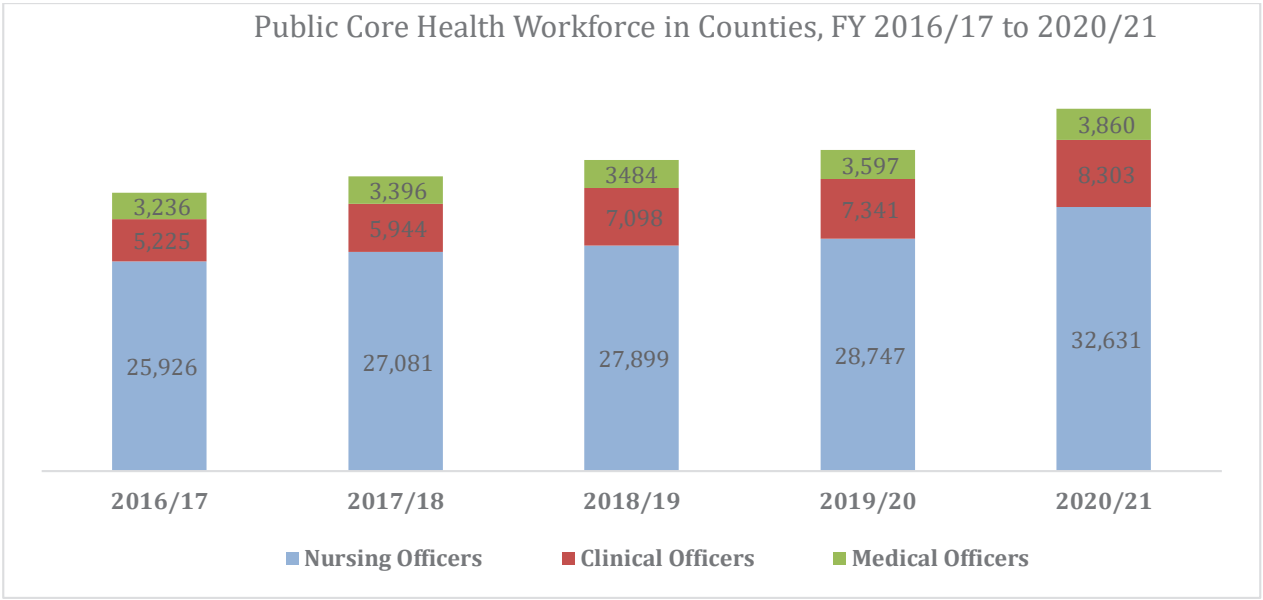


Figure 20: Public Core Health Workforce in Counties
Source: County Annual Performance Review Report

Achievements

i) Policy

- Kenya Human Resources for Health Strategic Plan 2019-2023 was finalized.
- The Workload Indicators for Service Needs (WISN) training and technical assistance to National and Counties were undertaken. The rationale of this mechanism is for ensuring rationalization of health worker skill mix and to meet the needs of counties that have different disease burdens.
- National Health Workforce Accounts (NHWA) Technical working group and the secretariat was formed; progressive data collection on Human Resource for Health (HRH) was initiated, and data were reported in the WHO NHWA platform for some modules in compliance with the requirement of the WHA resolution 63.19.
- Labour Market Analysis (LMA) and Multi-Dimensional Productivity Index (MPI) exercise was initiated. This will inform inter-sectoral policy making, strategic investments, and effective health workforce planning at national and County levels.

ii) HRH protocols for the COVID-19 pandemic were developed by adopting WHO tools on COVID-19. *Recruitment*

As a response and in support of the COVID-19 pandemic service provision, the Government through the COVID-19 Health Emergency Project (CHERP) recruited 329 health workers on contract terms for case management comprising laboratory technologists; public health officers; nurses; clinical officers; medical officers; psychologists; physiotherapists and nutritionist.

During the UHC Phase 3, there was continued support towards HRH including training of 30,000 new CHVs. The Ministry of Health received approval to hire and place 4,899 interns for 1 year of whom 2,177 were under UHC support. The Ministry continued to manage 8,229 health care workers which included Clinical officers, Nurses, Public health officers, Nutritionists and other cadres to support primary level facilities towards the attainment of Universal Health Coverage.

iii) Capacity building

During the UHC phase 2 rollout that took place during the reporting period, an internship policy was developed that allowed healthcare practitioners to be exposed to 602,720 clinical practice hours, during their period of internship for at least 3 months, at the primary levels 2 and 3 health facilities. A total of Ksh. 42 Million was transferred to KMTC to train community health assistants (CHAs), while 26,280 Community Health Volunteers (CHVs) were trained to strengthen the Community Health Units. KMTC also trained and graduated a total of two thousand six hundred and sixty-seven (2,667) specialized and sub-specialized health professionals.

KNH trained 1,617 staff across various specializations to provide enough skilled personnel for new services introduced in preparedness for emerging and re-emerging disease patterns. The Ministry of Health supported the health workforce in different trainings related to case management for the COVID-19 pandemic; Infection Prevention and Controls; Personal Protective Equipment, mental awareness and COVID-19 vaccination administration. Over 60,000 Community Health Workers (CHVs) under UHC were also trained on COVID-19 home-based management. Ninety (90) Field epidemiologists were trained in Field Epidemiology and Laboratory Training Program (FELTP) program at the Master's degree level and over 593 county and sub-county health workers were trained in basic epidemiology.

Challenges

- Lack of a Health worker's recruitment model that is cost-efficient, especially for specialists.
- Some counties were not linked to or do not update on iHRIS leading to inaccurate and incomplete HRH data and a lack of data to guide recruitment processes.
- County health workforce not established according to norms and standards.
- Lack of proper placement or rational skill mix across all levels.
- High numbers of staff retiring: -Counties, therefore, need to undertake a succession management plan for all the employees in the health department to bridge the gap.
- Unprecedented increase in COVID-19 patient numbers requiring emergency and critical care thus overrunning the available human resources.
- Lack of human resources for health (HRH) policy on inter-county governments transfer and between County and the National government and lack of standard/ guideline for sharing or managing specialists.
- Lack of HRH attraction and retention strategies especially in the counties of the northern frontier and north rift.
- Frequent health care workers industrial unrest.
- Work overload to the health workforce during the COVID-19 pandemic led to psycho-social and burnout following the pandemic.

Recommendations

- The National and County governments to develop guidelines and protocols for HRH transfers/movements.
- National and County governments need to collaborate to manage the training and distribution of specialists.
- The government should define a package to attract and retain specialist healthcare workers, especially in the counties of the Northern Frontier and North Rift should be developed.
- Use Workload Indicators of Staffing Need (WISN) to inform rationalization, recruitment and training of adequate technical staff (numbers and capacity) to address the shortages of HRH. In addition, leverage technology and innovation i.e. telehealth to address shortages; imbalances and training.
- Review and update the HR norms and standards.
- Development and maintenance of a master registry that is interoperable with the Integrated Human Resource Information System (iHRIS) to get real-time health workforce data from public and private sectors.

3.5 Health Products and Technologies in the sector

Key Highlights

- Various strategies were reviewed and/or developed to facilitate increase of access to quality health commodities; Key among these was the Health Products and Technologies Supply Chain Strategy (2020-2025)
- Institutional structures to manage HPTs were strengthened through establishing strategic committees and revitalization of HPT coordination structures
- Only a third (35%) of HPT needs had budgets allocated to them leaving a gap of 65% unfunded
- Slightly over a third (39%) of total oxygen requirement was funded posing a gap in management of COVID during the year under review

Ensuring that safe, effective, and affordable health products and technologies are available and rationally used is pivotal to a functioning health care system that supports Universal Health Coverage. As such, the policies, regulations, systems and practices regarding health products and technologies have a direct bearing on access to quality and safe healthcare services delivered to citizens in need. An increased scope of commodities is also necessary to support the updated Kenya essential package for Health (KEPH) and the benefits package, both of which now focus on responsiveness to population health needs, incorporates expanded primary care services, commodities for laboratory screening as well as coverage for more non-communicable diseases. In addition, price reduction strategies, prudent commodity management and rational use are playing an increasingly greater role in ensuring access to health commodities. Distribution of health products and technologies is done mainly through KEMSA in the public sector while the provision of blood and blood products is the mandate of the Kenya National Blood Transfusion Service (KNBTS). Reporting on tracer items has been a challenge in the sector as there has not been an integrated mechanism to report these within the DHIS2. To monitor progress in the achievement of equitable access to health commodities, the lists of tracer medicines, medical supplies, laboratory and radiology commodities were developed and/or reviewed and incorporated into the DHIS within the reporting period. Counties are now reporting on the *Facility Tracer Health Products and Technologies Data Report Form* (MOH 647) since November 2020 with the information facilitating decision-making and designing supply chain interventions.

Table 9: Health Products and Technologies

	HPT Performance Indicator	2018/19	2019/20	Achievement 2020/21	Target 2020/2021	Rating*	Data source
	To expand access to health care commodities through increased availability						
1	Average Order fill rate for 22 tracer medicines by quantity (%)	73	62	67	100		Health Facility County Reports
2	Average Order fill rate for 23 tracer medical supplies by quantity (%)	61.0	79	63	100		Health Facility/County Reports
3	Average Order fill rate of the 14-tracer laboratory diagnostic supplies by quantity (%)	N/A	N/A	54	100		Health Facility/County Reports

	HPT Performance Indicator	2018/19	2019/20	Achievement 2020/21	Target 2020/2021	Rating*	Data source
4	Average Order fill rate of the 2-tracer radiology supplies by quantity (%)	N/A	N/A	55	100		Health Facility/County Reports
5	Mean availability of essential tracer medicines per county *	64	56	63	100		County Records
6	Mean availability of essential tracer medical supplies per county *	64	70	63			County Records
	To expand access to health commodities through increased domestic funding						
7	Amount of funds allocated to KEMSA for essential medicines and commodities (Millions)	4.7	12.0	6.1	6.1		MOH
	To assure the quality of all health commodities through improved governance systems						
8	Proportion of functional Medicines and Therapeutic Committees at County Level	2.1	4.3	4.3	15		Activity reports
	Prudent management of health commodities						
9	No. of counties sensitized on essential medicines list	N/A	N/A	47	47		Activity reports
10	Proportion of Counties with functional commodity security TWGs (This indicator will be replaced by monitoring functionality of HPTUs)	100	100	100	100		Counties (self-reporting)
	Enhanced support supervision for health commodities						
11	No. of joint (National and County) supportive supervision for supply chain			0	4		Activity reports
	Adequate safe and equitable supply of blood and blood products (KNBTS)						
12	The number of blood units collected	136,305 (27%)	-	178,249 (36%)	500,000		KNBTS reports
13	Number of blood units collected converted to components	59,236 (59%)	81,783 (60%)	133,686 (75%)	178,248		

Performance Score:** **0-49%,** 50%-79% **and >80%

Achievements

- The Health Products and Technologies Supply Chain Strategy (2020-2025), was developed to provide strategic direction for a sustainable and resilient supply chain system that provides quality, affordable and accessible essential HPTs for all Kenyans. This strategy provided new indicators whose data was not collected during the year under review. These indicators will be incorporated into the report in the next cycle.
- Order fill rate from KEMSA and MEDS for **tracer medicines** was an average of 67% and 63% for **tracer medical supplies** as reported by Counties which was inadequate; Counties however also sourced commodities from other sources including local suppliers to bridge supply gaps.
- Only half of the required laboratory diagnostic and radiology supplies were fulfilled over the reporting period posing a gap in the availability of these commodities.
- Through the UHC program, 6.1 million was allocated to KEMSA for essential medicines and commodities, this being a reduction by half of the amount allocated during the previous reporting period. This budget was however not availed due to budget cuts due to COVID-19.

- The Kenya Essential Medicines List (2019) was disseminated to County CHMTs in all 47 Counties. Other guidelines disseminated include Guidelines on Management of Health Products and Technologies in Kenya, Handbook on Quantification of Health Products and Technologies, Supportive Supervision Manual for HPTs, and Guidelines on Establishment and Operationalization of Medicines and Therapeutics Committees.
- Institutional structures to manage HPTs efficiently were strengthened through

i. Formation of the Medicines Affordability and Pricing Advisory Committee (MAPAC)
ii. Sensitizing all Counties on the establishment of County Medical Therapeutic Committees (MTCs) and
iii. Revitalization of the Health Products and Technologies Interagency Coordinating Committee (HPT-ICC).

- Commenced development of the first Kenya National Medicines Formulary
- Quantification of HPTs was done nationally, in all Counties including all 6 national referral hospitals. All health products, including commodities for the national strategic programs (HIV, TB, Malaria, Family Planning and immunization) were included.
- Blood supply was enhanced during the review period with availability increasing to 36% of the target compared to 27% in the previous year 2019/20.
- Several reforms were initiated within the Kenya National Blood Transfusion Service as outlined below;

i. Strategic shift towards technical assistance for strengthened County Blood Management Systems, thus decentralizing blood collection services to improve access to blood and blood products hence increasing satellite centres from 28 in 2019/20 to 30 in FY2020/21 across counties
ii. Expanded mandate for Tissue and Human Organ Transplant services
iii. Storage and freezing capacity has been expanded from 23,000 to 55,000 units spread across Counties.
iv. Blood grouping and transfusion transmissible Infections Screening Equipment was installed in Nakuru and Embu Regional centers
v. A new regional satellite blood centre was established in Kajiado County.
vi. Cold rooms were renovated (70%) and all incinerator renovations were completed
vii. Blood transfusion equipment procured including

- Blood banking and processing equipment and distribution to 15 Specialized blood component preparation equipment were placed in satellites across 9 counties.
- 4 Apheretic machines were installed at Nairobi, Nakuru, Eldoret and Kisumu RBTCS (100%).
- 3 cold rooms, installed and in use in Nairobi RBTC, Kisii and Machakos satellite (100%)
- 8 blood bank freezers distributed to Machakos, Nyeri, Malindi, Voi, Kisii, Bungoma, Mombasa, Nairobi, and Bomet (100%)
- 8 refrigerated centrifuges and distributed to Meru, Homa bay, Thika, Voi, Naivasha, Nyeri, Nairobi and Embu (100%)
- 8 blood bank refrigerators were distributed to Malindi, Migori, Nakuru, Bomet, Naivasha, Mombasa and the National Testing Laboratory (100%)
- 10 vehicles delivered to Eldoret, Embu, Nairobi, Machakos, Nakuru, Kericho, Thika, Nyeri, Kisii and head office (83.3%)
- Generators supplied to Garissa, Machakos, Wajir, Kitui, Makueni, Kajiado, Malindi, Voi, Migori, Siaya, Vihiga, Busia, Narok, Bomet, Kericho, Naivasha, Bungoma, Nandi, West Pokot and Kitale (80%) awaiting installation

This enabled the country to reach a record 178,249 units of blood in 2021 (36% of the target), up from a low of 100,108 units in 2020.

Budget allocation: Health Products and Technologies

Table 10 below shows that the total allocation for HPTs by Counties during the year under review was KES 13.6 billion of which 48% (6.5 billion) was for pharmaceuticals, 24% (3.3 billion) for non-pharmaceutical supplies, and 14% (1.9 billion) being for other supplies such as for laboratory commodities. However, the total allocations amounted to only 35% of the total requirement for commodities leaving a non-funded gap of KES 25 billion (65%). Analysis of the data shows that 40% of the requirements for pharmaceutical supplies and 33% of non-

pharmaceutical supplies were allocated funds. Of the total allocations, only 3% went towards Oxygen which was only 39% of the total requirement. This was despite the increased demand for Oxygen occasioned by COVID-19.

Table 10: Health Products and Technologies

S/No.	HPT category	County governments' allocations*		Actual requirements (KES)	Proportion of allocation compared to actual requirements	Gap/surplus (KES)
		Amount (KES)	%			
1	Pharmaceutical supplies	6,494,105,795	48%	16,346,209,865	40%	-9,852,104,070
2	Non-pharmaceutical supplies	3,266,503,943	24%	9,942,963,923	33%	-6,676,459,980
3	Medical equipment & technologies	1,883,761,512	14%	6,466,653,473	29%	-4,582,891,961
4	Environmental/ public health supplies	481,566,773	4%	919,308,960	52%	-437,742,187
5	Other medical supplies (Oxygen etc.)	343,697,910	3%	882,000,042	39%	-538,302,132
6	Radiology supplies	314,847,793	2%	794,629,754	40%	-479,781,961
7	Laboratory/diagnostic supplies	855,083,862	6%	3,505,073,632	24%	-2,649,989,770
	TOTAL (KES)	**13,639,567,588**	**100%**	**38,856,839,649**	**35%**	**-25,217,272,061**

**** NB: No data from Bomet and Laikipia Counties***

Challenges

- Inadequate funding for some essential commodities both at the National and County levels
- Late payment of funds owed to KEMSA by Counties which in turn affected supplies
- Inadequate/erratic supply of essential HPTs at Counties
- Inadequate end-to-end visibility of HPT due to insufficient documentation for HPTs and poor data quality
- Inadequate skills in commodity management (including forecasting and quantification) among HPT managers in Counties
- Weak commodity supply chain management leading to expiries of HPTs in facilities
- Weak governance structures for HPTs at all levels particularly inadequate supportive supervision for commodities.
- Inadequate infrastructure for proper HPT management such as well equipped storage facilities with proper ventilation.
- Blood donation from schools ceased taking place during the first two terms as external activities in schools were stopped by Government directives to contain COVID-19 during the period. This reduced amount of blood collected during that period

Recommendations

- Align future supply chain indicators with the HPT Strategy (2020-2025) and AWP for better monitoring
- Given that KEMSA is not the sole supplier of HPTs, there is a need to strengthen pharmacovigilance to ensure the quality of commodities.
- Continuously lobby for increased allocation of resources for HPTs and supply chain activities
- Enhance the capacity of HPT managers at the County level to carry out accurate forecasting, quantification and costing, to improve HPT management practices
- Ensure functionality of Health Products and Technologies Units (HPTUs) in all Counties to strengthen governance for HPTs
- Institutionalize the LMIS system at all levels to ensure efficient management of HPTs.
- Develop a strategy to address the erratic and inadequate availability of blood.
- Allocate adequate resources to support blood and blood product availability.

Priorities for FY 2021/22

- Revision of the National Pharmaceutical Policy (2012) to guide the use of health products in the sector and develop follow-up guidelines
- Building capacity, through training and mentorship, of HPT managers in Counties to effectively manage health products and support the operationalization of Health products and Technologies Units (HPTUs) in all Counties
- Conducting regular monitoring activities including joint supportive supervision and reviews to strengthen HPT supply chain functions
- Review and update training materials and curricula for HPT management
- National HPT quantification for Counties and national referral hospitals
- Finalization of the Kenya National Medicines Formulary
- Disseminate key HPTs management guidelines and tools: essential HPT lists, MTC guidelines, specifications for HPTs, the National Formulary
- Strengthen governance systems including prudent management, and enhanced supportive supervision to ensure the quality of all health commodities
- Strengthen structures at KNBTS National and County levels to ensure an adequate, safe, and equitable supply of blood and blood products.

3.6 Health Management Information Systems/ Monitoring and Evaluation

Reliable health information is the foundation of decision-making across all health system building blocks and is essential for health system policy development and implementation, governance and regulation, health research, human resources development, health education and training, service delivery, and financing. The health information system provides the fundamentals for decision-making in data generation, compilation, analysis/synthesis, and communication and use. A robust health information system is consequently essential for tracking progress towards the attainment of the Sustainable Development Goals, the goals of the Kenya Vision 2030, and the aspirations of the Kenya Health Policy 2014–2030.

Major progress has been made in the development of health sector indicators, standard integrated data collection and reporting tools, and monitoring and evaluation institutionalization guidelines. The Health Sector M&E Plan 2018-2023 enables all actors to work in a convergent effort to monitor the achievement of the targets set within the Kenya Health Sector Strategic Plan 2018-2023. Health Information Policy 2014-2030, The health sector data quality assurance protocol, Kenya National E-health policy, mHealth standards, and interoperability standards all guide the development, use, and management of the Kenya Health Information System providing a uniform platform for generating aggregate information. The national and county M&E units or equivalent are responsible for overall oversight of M&E activities at the respective levels.

The Kenya Ministry of Health has been working towards scaling up digital health services as articulated in the eHealth Policy 2016-2030 and the Kenya National Digital Health strategy.

The ministry has prioritized digital health as one of the key enablers of achieving UHC. The Digital Health Platform (DHP) is an end-to-end facility-wide solution that captures patient-level data and enables longitudinal management and referral of patients across facilities. It will enable digital record keeping of all health events across all health service points hence ensuring improved quality of care, continuity of care, improved health outcomes and timely availability of data for decision making. It will additionally improve accountability, monitor commodity usage at facilities and provide a platform for telemedicine and telehealth.
The performance of health information indicators for the year 2020/21 is as shown in Table 11:

Table 11: Health Management Information Systems/ Monitoring and Evaluation

	Performance Indicator	2018/19	2019/20	Achievement 2020/21	Target 2020/2021	Rating*	Data Source
1	Percentage of health facilities submitting complete information (completeness of reports	85	94	98	87		KHIS
2	Percentage of community units submitting complete information (completeness of reports)	73	78.3	83.6	80		KHIS
3	Percentage of health facilities submitting timely information (timeliness of reports)	78	93	95	87		KHIS
4	Percentage of community units submitting timely information (timeliness of reports)	65	71.5	77.3	75		KHIS
5	Percentage of hospitals reporting on inpatient morbidity and mortality (Level 4,5 and 6 hospitals)	40	44	70	60		KHIS Tracker
6	No of all deaths (Health facility and Community) reported	65,840	69,457	138,609	-		KHIS

Performance Score:** **0-49%,** 50%-79% **and >80%

Achievements

There have been notable achievements made in health information monitoring and evaluation in the period under review (FY 2020/2021) as follows:

i. Developed the e-Health Bill in line with the Health Act 2017 which aims to strengthen the regulatory framework for health information systems
ii. Developed the National E-health Policy with sensitization of 62 county health officials
iii. Development of the Digital Health Platform

- Development of the end-to-end digital health platform began with 22 modules having been done (21 Outpatient and 1 Vaccination Module finalized (Chanjo System for monitoring of the COVID-19 vaccination)).
- 2 out of 58 E-health hubs were established at KNH and Machakos County Referral Hospitals. Through telemedicine, medical practitioners at Machakos hospital are now able to manage difficult cases through the remote assistance of specialists based at KNH.
- Piloted the Electronic Health Records modules in Machakos, Garissa, Kilifi, Bungoma, Baringo, Uasin Gishu, and Turkana.
- Progress was made towards the integration of different health information management systems into one reporting system (such as the Integrated Disease Surveillance and Response - IDSR, and Tuberculosis Information from Basic Units -TIBU)

iv. Developed the National Community Digitization Strategy 2020-2025 which provides a digitization blueprint that will support a comprehensive approach to community health service delivery, enhancing quality community health service delivery through a digital solution

v. Enhanced the Kenya Health Information Systems (KHIS) and the Kenya Master Health Facility List (KMHFL) to enable interoperability, automated indicator reporting, data analytics, and visualization

vi. Implemented a DHIS2-based Medical Certification of Causes of Death (MCCOD) application within the Kenya Health Information System (KHIS RMS Tracker) for coding and reporting causes of death based on ICD 11 with increased hospital inpatient reporting of morbidity and mortality from 44% in FY 2019/20 to 70% in 2020/21

vii. Conducted capacity strengthening of the National MOH and CRS technical teams on the sustainable implementation of ICD-compliant Medical Certification of the cause of death and Verbal Autopsy to increase the availability of high-quality mortality statistics.

viii. Implemented Rapid Mortality Surveillance (RMS) in six counties of Kenya (Nairobi, Siaya, Busia, Machakos, Kajiado, and Mombasa) to inform on the trend of all-cause mortality and excess mortality during the COVID-19 Pandemic.

ix. Conducted the Mid-term Review of the KHSSP 2018-2023 was conducted to know the progress toward the stated objectives. Below are the reports which were developed;
   a) KHSSP Midterm Review Statistical Report[5]
   b) KHSSP Midterm Review Contextual Report
   c) KHSSP Midterm Review Financial Report
   d) KHSSP Midterm Review Synthesis Report - Detailed
   e) KHSSP Midterm Review Synthesis Report - Popular Version
   f) SDG Report

x. Mentored Twenty-two (22) counties on M&E institutionalization and on strategies to establish and /or strengthen their M&E units

xi. Conducted 3 rounds of COVID-19 readiness assessments to inform COVID-19 response and mitigation

xii. Contributed to the planning and implementation of the Kenya Health Demographic Survey

[5] The link to the MTR reports: https://www.health.go.ke/resources/reports/

Challenges

i. Inadequate Government financial allocation to health information monitoring and evaluation activities leads to over-reliance on donor support at both the national and county levels
ii. Under-prioritization of HISM&E activities at both the national and county levels
iii. Missing data on impact level indicators that are needed for national and global monitoring results in difficulties in generating health indices due to delayed surveys (KDHS) and data incompleteness (health products and technology, NCD and Cancer Registry indicators as a result of the revision of the KHIS data collection tools and new tools being scaled up respectively)
iv. Irregular data review meetings due to inadequate funding
v. Inadequate data-collection and reporting tools at the service delivery points

Priorities for FY 2022/2023

i. Sustained technical assistance on planning budgeting and M&E in line with the aspirations of one plan, one budget one M&E out outlined in the partnership framework.
ii. Strengthen the data analytic capacity of the health workforce at both levels of the government.
iii. Improving capacity for systematic and transparent translation of evidence to inform policy and national decision-making.
iv. Continuous mentorship to counties in strengthening the M&E system
v. Scale up of the Digital Health Platform
vi. Strengthening of CRVS systems
vii. Implement data quality assurance at all levels

3.8 Health Leadership and Governance

Highlights

- Key sector coordination documents were developed and launched during the review period; the Partnership and Coordination Framework and the Public Partnership Collaboration Strategy. These documents are key in guiding structured sector coordination
- Coordination meetings were held that brought together key stakeholders in the sector including the health sector intergovernmental forum and Ministerial Stakeholder among others
- The Ministry provided stewardship in the response to COVID 19 pandemic through the provision of strategic advice and documents to guide both control and treatment of COVID, including the COVID vaccine rollout
- Management through proper planning in the sector continued to be enhanced through the development of the MTEF budget as well as review and development of the annual work plan and performance contracts at the National and County level
- The main challenge in leadership and governance was the suboptimal implementation of training in management and support supervision both at National and County levels

The concepts of leadership and governance include the provision of strategic direction, and developing appropriate plans and policies with effective oversight, regulation, motivation, and essential partnerships that integrate all health systems' building blocks to achieve the desired results.
Leadership and governance have been grouped into domains that include stewardship, governance arrangements, health partnerships, planning, and M&E as well as advocacy. Without effective leadership and good governance at all levels in private, public, and civil organizations, it is impossible to achieve and sustain effective administration, and achieve goals. The following are some of the leadership and governance achievements in the year 2020/21.

Health Sector Partnership and Coordination Framework
The partnership framework was finalized and launched during the FY 2020/21. This partnership framework sets out the partnership structures, roles, responsibilities and expectations for the different actors at different levels in the sector. Among the important structures outlined in the framework includes;

i. Health Sector Intergovernmental Consultative Forum was created by the intergovernmental relations Act of 2012. It is a meeting forum between CS and CECs with non-state actors and observers to discuss technical and administrative challenges, and develop agreement and consensus to address issues in the health sector which are presented from the thematic technical committees(TTCs) technical arm of this forum and identify priority areas in the different thematic areas as relate to or require intergovernmental action; 3 out of 4 expected HSICFs were held in the FY 2020/21 with all 5 TTCs meeting before the HSICF meetings.
ii. Health Sector Interagency Steering Committee (HSISC) was created by the partnership framework. It receives reports from ICC and makes the higher-level policy and administrative directions
iii. Interagency Coordinating Committees (ICCs) are also created by the Partnership Framework. The ICCs are formed around the health investment pillars and are structured to bring together health stakeholders around these pillars to have structured discussions through quarterly meetings. Stakeholders include; MOH COG, KHF, development partners, NGOs represented by HENNET, and FBOs. There are thematic 5 ICCs, i.e. Service delivery, HRH, HPTs, Health Financing, Leadership, and

Governance, These ICCS held their quarterly meetings whose actions and outputs were in turn discussed within the Health Sector Interagency Steering Committees (HSISC). Several Intergovernmental Consultative Health forums were held which deliberated on: UHC, COVID 19 response and vaccine deployment, and progress reports from the Thematic Technical Committees.

Health policies and regulations

In line with the Ministry's core mandates, key policies and guidelines were developed during the review period. Among these includes the following;

1. The UHC Policy 2020-2030
2. Kenya Health Financing Strategy 2020-2030
3. The Kenya Primary Health Care Strategic Framework 2019-2024
4. Community Health Strategy 2020-2025

Many other area-specific policies and strategies were developed to guide the achievement of the Kenya Health Policy strategic objectives. The list of Policies and strategies developed in 2020/21 are detailed in annex 6.

Development of *A*nnual Workplans (AWPs) and budget; The sector develops annual work plans and budgets according to the National Treasury MTEF guidelines on a regular and timely basis. During the period under review, the planning and finance department provided coordination and technical assistance to the MoH departments, SAGAs, and Counties in developing annual work plans. In regards to the MTEF budgeting process, the Ministry provided leadership in the process of developing a budget in line with the sector priorities.

Medium Term Review (MTR)

A mid-term review of the sector Strategic plan 2018-2023 was also undertaken within the period in review and the following products were derived from the review process as outlined in the Monitoring and Evaluation section of this report.

Ministerial Performance Contracting:

The Government has been using Performance Contracting as a key accountability tool since 2003 to improve service delivery in the Public Service. During the review period, performance contracts were developed in the Ministry at all prescribed levels of management (Cabinet secretary, Principal Secretary, Director General Directorates and SAGAs). A review of the previous PC's was done for all entities. In 2020/21, agencies within the Ministry of health were the best performing of all Government agencies.

Public Private Collaboration (PPC)

The Ministry developed the Public-Private Collaboration Strategy and resource guide. This strategy is aimed at operationalizing the PPP Act 2013 on health matters taking into account evidence from emerging Public-Private collaboration structures. The Ministry conducted two regional sensitization meetings on the PPC in operationalizing the PPC

Challenges

1. Leadership and governance are not adequately prioritized at all levels. There was generally inadequate funding to support most planned activities in leadership and governance, for instance, capacity building on managerial skills, and supervisory activities are usually not allocated adequate funds.
2. Slow operationalization of the health sector governance structures, particularly those outlined in the partnership framework.
3. Poor succession management
4. Weak knowledge management
5. Frequent changes of management at the county level hampering discharge of mandate of management.
6. Unconducive working environment including inadequate tools at national and county levels.
7. Process of planning, budgeting and monitoring especially at the County level is not well aligned.

Priorities

Areas that need prioritization going forward include;

1. Develop the next strategy (KHSSP), aligned to (MTP IV) priorities.
2. Hold a Health Sector Stakeholders forum and share outstanding best practices implemented in the sector over this period.
3. Adherence to the planning cycle at all levels to ensure that plans are informed by results and budgets are aligned to identified priorities. These activities (APR, AWP and performance contracting need to be prioritized and budgeted within the government budget to work within the MTEF cycle timelines
4. Harmonization of donor support through joint planning to avoid duplication.
5. Initiate Quarterly Director General and County Directors of Health technical Meetings should be Initiated as outlined in the Health Act 2017.
6. Introduce a reliable process to archive institutional information
7. Dissemination and implementation of Kenya Health Sector Partnership and Coordination Framework by convening regular partnership coordination forums and providing technical assistance to Counties to establish partnership coordination structures

3.9 Health Research and Development

High-quality research is an essential ingredient in meaningful socioeconomic development. The Constitution of Kenya, 2010, recognizes health as a human right. Knowledge and innovations that emanate from sound research are central to enabling Kenyan citizens to realize this right. To enable the attainment of Kenya's Vision 2030 and the United Nations' Sustainable Development Goals, Systems and coordination of research for health in the country are crucial. The Health Act provides an overarching legal framework for health knowledge generation and uses in the country. Research and development are one of the eight policy orientations outlined by the Kenya Health Policy (2014–2030). The 2014-2018 KHSSP observed that research for Health (scientific, biomedical and systems) in the country is not well coordinated or regulated to ensure it generates the evidence needed to inform health policy development and decision making. To be responsive to the UN SDGs, Kenya Health Act 2017, vision 2030, the sector planned to carry out innovative approaches to implement and steer the research for the health agenda in the country.

Achievements

- R4HPolicy Framework (2018-2030) & Research for Health Priorities (2018-2023) was developed.
- Research for Health Technical Working Group (TWG) was formed following the requirements of the MOH Partnership Framework.
- Capacity strengthening on Evidence Informed Policy Making (EIPM) was conducted.
- Conducted Rapid Research Synthesis and development of evidence and policy briefs.

Challenges

i. Limited funding from the government leading to reliance on partners
ii. Inadequate staff with the correct skills and equipment in the Division
iii. Office equipment(functional desk tops and print, office chairs and , lockable drawers)

Priorities

i. Finalize and launch the Health Technology Assessment Strategy
ii. Finalize the Knowledge Management Survey at the Ministry of Health
iii. Develop the EIDM Toolkit and Revise the Guidelines for Evidence Informed Policy Making.
iv. Develop the Knowledge Management Strategic Plan.

4.0. CHAPTER FOUR: ANALYSIS OF HEALTH OUTPUTS: ACCESS, DEMAND, AND UTILIZATION

4.1 Access and demand to KEPH services

Sustainable Development Goal 3; target 3.8 spells out the need to achieve Universal Health Coverage including access to quality essential health services. As envisaged in the Kenya Health Policy 2014-2030, all persons in Kenya will have access to essential services by 2022. The Kenya Essential Package for Health (KEPH) is a comprehensive package of health services and interventions to be provided in the various service provision levels under six Policy Objectives, as stipulated in Kenya Health Policy 2014-2030. The Kenya Essential Package for Health (KEPH) is tailored to achieve Universal Health Coverage and preservation of the right to health. It comprises but is not limited to the following: health promotion, disease prevention, diagnosis, treatment, disease management, rehabilitation, and palliative care services.

Health services delivery, hence, should be targeted to ensure the following outputs:

a) **Access:** The ability of a person/community to receive available services. This leads to high utilization of health services as it brings services closer to the people as well as making them less costly. Barriers to accessing health care include geographic, physical, financial, and social-cultural barriers.

a. **Equity in access**: All persons in all locations can access quality health services as and where needed

b. **Improved Quality of care**: Safe, effective, timely, and responsive care that comprehensively addresses needs and is of the highest possible standards.

- Facility density per 10,000 population rose to 3 compared to 2.5 the previous year.
- Caesarean section rate slightly increased from 15.4% the previous year to 16.4% which was above the WHO recommended range of 10-15%. Caesarean rate of more than 15% has been associated with wastage.
- Health facilities providing basic obstetric emergency care (BEmONC) were at 12% while those offering Comprehensive emergency obstetric care (CEmONC) (facilities additionally offering caesarean and blood transfusion services) was 25 % according to the Kenya Health Facility assessment 2018. There has been no follow-up survey to assess performance since then.

Table 12: Access Indicator Performance

Indicators	Baseline 2019/2020	Achievement 2020/2021	Target 2020/2021	Rating *	Source
Facility density (number per 10,000 population)	2.5	2.7	2.5		KMHFL/ KHIS 2019/ APR
% Population living within a 5 km radius of a health facility	91	91	100		KMHFL/KHIS 2019
Caesarean section rate (%) (Not a KHSSP indicator	15.4	16.4	15		(KHIS 2019/2020)
HF % providing BEmOnC	12	12	40		(HFA 2018)
% HF(Hospitals) providing CEmOnC	25	25	40		(HFA 2018)

Performance Score:** **0-49%,** 50%-79% **and >80%

4.2 Increase demand for health services

The Kenya Health Policy 2014–2030, envisions service delivery that not only increases access to care that is equitable in terms of quality and availability of services at all levels but also creates and sustains demand for improved preventive and promotive healthcare services.
Increasing demand for services focuses on 2 main areas:

a. Improving the awareness of individuals, households and communities on the health problems they are facing and the available services to solve them.
b. Improving health-seeking behaviors so that individuals, households and communities undertake action to protect their health and make the best use of available health promotive, preventive and curative health services.

Performance during the period in this area was as shown in table 13. Per capita, the OPD utilization rate slightly decreased from 1.5 to 1.2 which is still below the target. This may be partly attributed to the COVID-19 pandemic disruption of services and also the fear by the population of acquiring the disease from facilities hence avoiding seeking services. The Readiness of Health Facilities to Respond to COVID-19, Rapid Assessment Report, August 2020 showed a sharp drop in outpatient visits from the month between March and April 2020 when COVID19 was first reported in Kenya.
The percentage of hospitals with service charters remained the same at 84% as the preceding year.

Table 13: Demand for Health Services Performance Indicators for the period under review

Indicators	**Baseline** 1029/2020	**Target**	**Achievement 2019/2020**	**Rating ***	**Source**
Per Capita OPD utilization rate	1.5	5	1.2		KHFA
% Hospitals service charters	84	90	84		KHFA

Performance Score:** **0-49%,** 50%-79% **and >80%

4.3 Improving quality of care for KEPH services

The Constitution of Kenya in chapter four Article 43 on the Bill of rights states the right of Kenyans to the highest attainable standards of health which is also emphasized in the social pillar for Vision 2030; improvement of the overall livelihoods of Kenyans, through the provision of efficient and high-quality healthcare systems with the best standards. Quality of care is influenced by the capacity to use available inputs to deliver desired outcomes. A focus on the quality of care ensures the sector can respond to the legitimate needs of the clients receiving services. Key interest is focused on providing acceptable, responsive, people-centric, wholistic, integrated and comprehensive health services, ensuring continuity of care. The sector views improving the quality of KEPH services in three dimensions:

a. **Better client experiences**: a focus on the clients' perception of service provision to ensure that the services will be aligned to clients' perception of good health care.
b. **Assuring patient safety**: a focus on doing no harm / having no negative consequences to clients because of seeking care.
c. **Ensuring the effectiveness of care**: the interventions/services provided need to be the most effective and feasible for the best possible client outcomes.

Key indicators which measure the quality of health service provision are summarised in table 14. Generally, the performance of the quality indicators showed minimal improvement in 2020/21 compared to the previous year for TB treatment success rate and maternal deaths audited. The target to reduce facility maternal and neonatal mortality was not met.

- TB treatment success rate observed a slight increase from 84% to 85.2%.
- Fresh stillbirths decreased slightly form 10.1/1000 births in 2019/2020 to 9.3/1000 births in 2020/2021.
- Facility maternal deaths increased from 93/100,000 to 106/100,000.
- Road traffic accidents increased threefold from 8000 deaths per 100,000 population in 2019/2020 to 25,582/100,000 in 2020/2021.
- ART retention rate has remained constant at 83%.

Table 14: Summary of the performance of select indicators with regards to improving quality of health care services

Indicators	Baseline 2019/2020	Achievement 2020/2021	Target 2020/2021	Rating*	Source
TB Treatment Success rate %	84	85.2	90		TIBU
Fresh Stillbirth rate per 1,000 births in institutions	10.1	9.3	8		KHIS
Facility maternal deaths per 100,000 deliveries	98.3	106	87		KHIS
% Facility maternal deaths audited	82	87	80		KHIS
Average length of stay (ALOS)	6.8	6.1	5		KHIS
ART Retention Rate	83	83	85		NDW

Performance Score:** **0-49%,** 50%-79% **and >80%

Challenges

- Weak referral systems and low utilization of technology to optimize specialized services access.
- Inadequate resources to support emergency and referral services
- Funds allocated to Health at the County level from National as well as County Governments are not ring-fenced resulting in funds not reaching health facilities in time thus hampering the implementation of key interventions

Priorities for Access to Services FY 2022/23

- Sensitization of HCWs on the overuse of Caesarean sections
- Continuity of essential health services should be prioritized even amid a pandemic. Continuous monitoring of how essential services are affected by the pandemic should be conducted to guide service delivery improvement
- Promote information, education and social behavior change communication approaches for preventive and promotive services.
- Increase access to primary health care services in levels 2&3 in line with KEPH.
- Create a policy enabling environment for the health needs of persons with disabilities.
- Screening and early detection of communicable and non-communicable diseases, conditions, and related risk factors for all ages.

Priorities for improving Quality of health services FY 2022/23

- Improving services' relevance and acceptability by use of regular service charters by all service delivery points, conducting regular client satisfaction surveys to continually ensure clients' expectations are informing intervention provision and ensuring patient safety is ensured in provision of services
- Improving continuity of care through the strengthening of referral services and improving patient experiences in the utilization of services
- Integration of services by linking provision of similar interventions together, through the KEPH-defined service groupings
- Categorization of health facilities across the country to standardize the quality of health service delivery
- Roll out of facility inspections using the Joint Health Inspections Checklist through Training of county health inspectors (MOH in collaboration with the regulatory boards and councils)
- Strengthen maternal and perinatal death audits and reporting to address gaps in quality of care.
- Strengthen the joint health inspection of facilities to ensure attainment of the minimum quality standards of healthcare.
- Establishment of an independent quality assurance/regulatory body to fast-track the implementation of the Kenya Quality Model Health Framework.
- Institutionalization of continuous quality initiatives

5.0. CHAPTER FIVE: ANALYSIS OF HEALTH SERVICE OUTCOME INDICATORS PERFORMANCE AGAINST TARGETS

This chapter provides a critical look at the Health Sector performance outcome indicators against set targets over the five years implemented and reviewed annually through subsequent APRs in line with the six-health sector strategic objectives as well as linkages to achieving Universal Health Coverage (UHC). It covers the general health status in terms of causes of ill health both morbidity and mortality, performance as per each Strategic Objective set of indicators of the Country as well as highlighting specific key findings/achievements as per program area, identified challenges as well recommendations on priorities for inclusion in the next FY.

5.1 General health status

5.1.1 Morbidity patterns of disease burden

Table 15: Summary of the top ten causes of morbidity for under 5years in the Country as from FY 2016/2017 to FY 2020/2021)

No.	2016 - 2017		2017 - 2018		2018 - 2019		2019 - 2020		2020 –2021	
	Disease	%	Disease	%	Disease	%	Disease	%	Disease	%
1	URTI	30.8	URTI	31.2	URTI	29.4	URTI	30.3	URTI	34
2	Other Dis. of Respiratory System	9.2	Diarrhoea	7.9	Diarrhoea	7.7	Diarrhoea	7.5	Diarrhoea	8.4
3	Confirmed Malaria	8.4	Other Dis. of Respiratory System	7.5	Other Dis. of Respiratory System	6.1	Disease of the skin	6.7	Disease of the skin	7.6
4	Diarrhoea	8.3	Confirmed Malaria	6.6	Disease of the skin	5.5	Confirmed Malaria	6.1	Confirmed Malaria	6.8
5	Disease of the skin	5.8	Disease of the skin	5.9	Confirmed Malaria	5.5	Other Dis. of Respiratory System	5.9	Other Dis. of Respiratory System	6.7
6	Pneumonia	3.1	Pneumonia	3.3	Pneumonia	3.2	Pneumonia	3.5	Pneumonia	6.4
7	Eye Infections	2.1	Tonsillitis	2.2	Tonsillitis	2.3	Tonsillitis	2.5	Tonsillitis	3.9
8	Tonsillitis	1.7	Ear Infections	1.6	Ear Infections	1.7	Ear Infections	1.9	Eye Infections	3.8
9	Ear Infections	1.6	Eye Infections	1.6	Eye Infections	1.5	Eye Infections	1.6	Intestinal worms	2.1
10	Intestinal worms	1.6	Intestinal worms	1.6	Intestinal worms	1.4	Intestinal worms	1.5	Ear Infections	1.8

Upper respiratory tract infections (URTI) disease has been the leading cause of morbidity for children below 5 years for the last five years accounting for 30.8% in the FY 2016/2017 to 34% in the FY 2020/2021. There has been a steady rise over the last 5 years in URTI disease. Diarrhea and diseases of the skin have increased with time while other diseases of respiratory systems and malaria proportion contributions have decreased over time. Pneumonia has been constantly the 6th leading cause of morbidity for under-fives over the last 5 years.

Table 16: Summary of the top ten causes of morbidity for over 5 years in the Country from FY 2016/2017 to FY 2020/2021

No.	2016 – 2017		2017 – 2018		2018 - 2019		2019 - 2020		2020 –2021	
	Disease	%	Disease	%	Disease	%	Disease	%	Disease	%
1	URTI	19.1	URTI	20.7	URTI	19.2	URTI	17.8	URTI	20.7
2	Confirmed Malaria	8	Disease of the skin	6.2	Disease of the skin	5.6	Confirmed Malaria	5.5	Confirmed Malaria	6.5
3	Disease of the skin	6.7	Confirmed Malaria	6.1	Confirmed Malaria	5.3	Disease of the skin	5.5	Disease of the skin	6.4
4	Other Dis. of Respiratory System	6.4	Other Dis. of Respiratory System	5.6	Other Dis. of Respiratory System	4.5	Other Dis. of Respiratory System	3.9	Urinary Tract Infection	4.6
5	Urinary Tract Infection	3.6	Urinary Tract Infection	3.9	Urinary Tract Infection	4	Urinary Tract Infection	3.9	Arthritis, Joint pains etc.	4.5
6	Arthritis, Joint pains etc.	3.4	Arthritis, Joint pains etc.	3.4	Arthritis, Joint pains etc.	3.7	Arthritis, Joint pains etc.	3.2	Other Dis. of Respiratory System	3.8
7	Diarrhoea	3.2	Diarrhoea	3.1	Diarrhoea	3	Diarrhoea	2.6	Hypertension	3.1
8	Hypertension	2.2	Hypertension	2.6	Hypertension	2.6	Hypertension	2.5	Other injuries	3.0
9	Pneumonia	2	Pneumonia	2.1	Pneumonia	2	Pneumonia	2	Diarrhoea	2.9
10	Intestinal worms	1.5	Intestinal worms		Intestinal worms	1.6	Intestinal worms	1.5	Pneumonia	2.8

Source: *KHIS 2021*

Upper respiratory tract infection is the most incident disease for over five years in the past five years accounting for 19.1% in FY 2016/17 to 20.7% in FY 2020/21. There was a steady rise with the same proportion 17.8% realized in FY 2017/18 and FY 2019/20. Malaria, diseases of the skin, and other diseases of the respiratory system followed with slight variations over the years.

5.1.2 Underlying causes of death

Diseases are classified through a WHO standard diagnostic tool for epidemiology, health management and medical purposes through the International Statistical Classification of Diseases and Health related problems (ICD). The classification allows systematic recording, analysis and interpretation of morbidity & mortality conditions and standard comparison of data across regions. Causes of mortality are coded, classified and sequentially recorded from underlying causes, antecedent causes to immediate causes.

Communicable diseases are the leading causes of hospital deaths as reported through KHIS. They have been the major cause of death for the last five financial years, though the data suggests a decline over time from 60% in FY 2016/2017 to 48% in FY 2020/2021. Deaths due to non-communicable diseases (NCDs) have gradually increased over time from 36% to 44% and death due to injuries increased from 4% to 8% respectively, based on a reporting rate of 42% in FY 2016/2017 and 73.3% in FY 2020/2021 of in-patient data as shown in figure 21.

Summary trend on three major categories of causes of death FY 2016/2017 to FY 2020/2022.

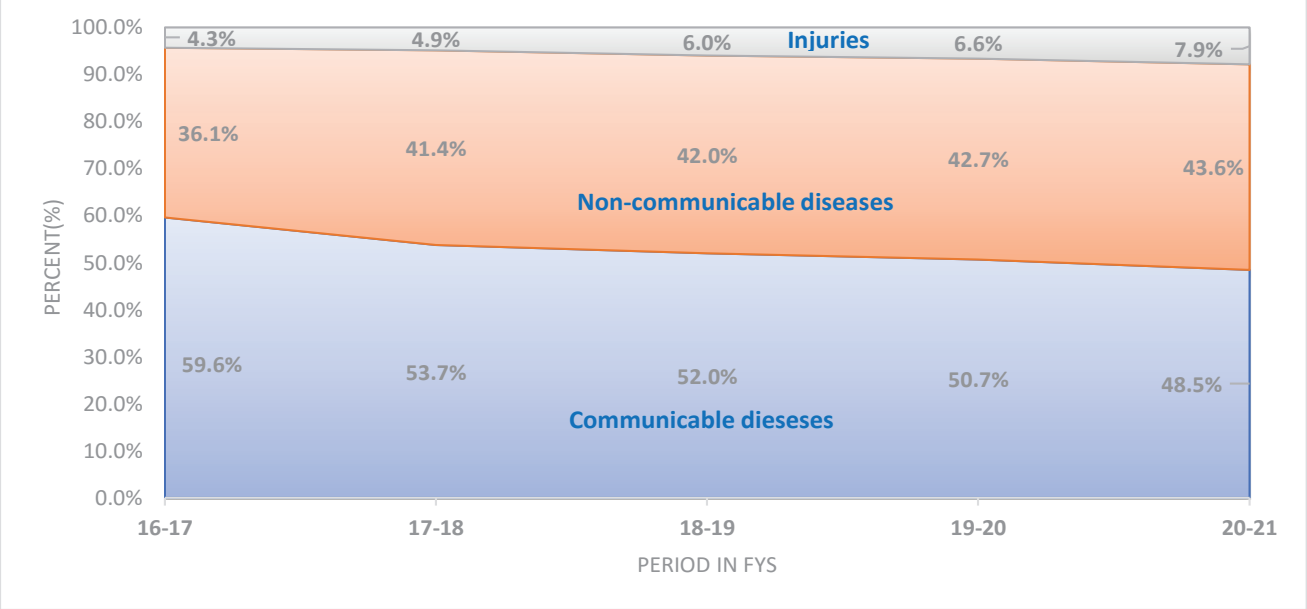


Figure 21: Causes of mortality
Source: KHIS Tracker 2021

Summary comparison of causes of facility deaths as of FY 2018/2019 and FY 2020/2021

Lower respiratory infections (pneumonia and bronchitis) have been the major cause of mortality in the country. There has been a reduction in deaths attributed to communicable diseases for instance HIV, TB, and malaria over time as indicated in figure 22. Deaths attributable to non-communicable diseases (e.g. cancer, hypertension, and diabetes mellitus) have increased over time. In the FY 2020/2021, deaths due to COVID-19 emerged to be among the top causes of mortality in the country.

SNo.	2018-19	%
1	Lower respiratory infections	7.7%
2	HIV	7.4%
3	Cancer	6.6%
4	Hypertensive diseases	5.4%
5	Anaemias	4.3%
6	Birth asphyxia and birth trauma	4.0%
7	Tuberculosis	2.9%
8	Diabetes mellitus	2.8%
9	Road traffic accident	2.7%
10	Meningitis	2.1%
11	Malaria	2.0%
12	Cerebrovascular diseases	2.0%
13	Diseases of the liver	1.9%
14	Diarrhoeal diseases	1.8%
15	Malnutrition	1.2%

2020-21	%	SNo.
Lower respiratory infections	6.0%	1
Cancer	5.0%	2
Hypertensive diseases	3.5%	3
HIV	3.0%	4
Birth asphyxia and birth trauma	2.6%	5
Anaemias	2.5%	6
Diabetes mellitus	2.4%	7
Road traffic accident	2.3%	8
Cerebrovascular diseases	1.3%	9
COVID-19	1.3%	10
Diseases of the liver	1.1%	11
Tuberculosis	1.1%	12
Assault	0.9%	13
Meningitis	0.8%	14
Malaria	0.8%	15

Figure 22: Leading cause of death in facilities
Source: KHIS Tracker 2021

Figure 22 above is an illustration of the common shift in ranks among the top leading causes of death compared between two FYs 2018/2019 and 2020/2021. It further outlines a declining trend/pattern in proportions of deaths per specific cause in the Country. Deaths as a result of diarrheal-related causes significantly dropped off the list in the FY 2020/2021 signifying accelerated focus on hand washing and use of sanitizers based on COVID-19 containment measures which changed the landscape in disease patterns/ trends.

A significant drop in leading causes of death was noted among the following diseases TB, Malnutrition, and Malaria whereas an increase in assault cases was recorded in FY 2020/2021 compared to FY 2018/2019.

Challenges

1. Low proportion of facilities reporting patient morbidity and mortality statistics (73.3%)
2. Inadequate capacity in medical Certification of causes of death by clinicians
3. Inaccurate data to support the decision for action
4. Low staffing levels at facilities for data capture, processing and transmission of information to other user levels

Priorities

1. There is a need to shift focus from current curative support systems to preventive systems to facilitate response in the containment of communicable and non-communicable diseases.
2. Improve the PCNs and strengthen the Community Health strategy for early case detection, prompt referral, and linkage to care.
3. Digitization and use of technology in data capture, processing and transmission to enable monitor morbidity and mortality patterns and the quality of care offered in health facilities.

5.2 Elimination of communicable conditions

5.2.1 Human Immunodeficiency Virus (HIV)

Key highlights

- Kenya is on course to provide comprehensive HIV prevention, treatment, care and support towards Universal Health Coverage for all people within its borders. The country is on track in her HIV response with a reduction in HIV prevalence from 9.1% in 2000 to 4.3% in 2021 and incidence rate reduction from 0.62% in 2000 to 0.009% in 2021. 83% of those living with HIV have been identified and know their status, 83% of those who are HIV +ve are of ART treatment and of those, 78% of them have achieved viral suppression
- Mother to child prevention is a key prevention intervention to prevent transmission of HIV to the children born by mothers living with HIV, amongst the country's achievement is the reduction of the MTCT rate from 35% in 2000 to 9.7 in 2021. The country has also reduced mortality due to HIV by 82% comparing 2000(110,000 deaths) to 2021(19,486 deaths) respectively
- Although performance on the HIV cascades has been improving, performance for the children and adolescent indicators are sub optimal with identification being at 79% and 77% respectively
- In the HIV cascade Viral suppression is the least performing indicator, being worse among the children (71%) and adolescents (70%)
- Strategies to identify the few remaining PLHIVs should be innovative and informed by evidence
- HIV epidemic control response should be tailored to regions and sub populations as the variation continues to show that "one size doesn't fit all"

INTRODUCTION

Kenya Health Policy 2014 – 2030 envisages ending HIV and AIDS by adopting the Joint United Nations Programme on HIV and AIDS (UNAIDS) 95-95-95 targets. The aim was to diagnose 95% of all HIV-positive individuals, provide antiretroviral therapy (ART) for 95% of those diagnosed and achieve viral suppression for 95% of those treated by 2030. The strategy also aims at reducing the annual number of new HIV infections among adults to 200,000 and achieving zero discrimination. These targets will be met through the various strategies that the national HIV program has put in place:

- pre-exposure prophylaxis (PrEP) services
- Prevention of mother-to-child transmission of HIV(PMTCT)
- HIV Testing and Counselling (HTS) and behavior change communication and mass media campaigns.
- anti-retroviral therapy and treatment for sexually transmitted infections.

Other programmes are peer education and youth-to-youth initiatives; prevention of transmission in medical settings, including safe blood transfusion and proper infection control as well as condom education, promotion, and distribution mainly for key populations. The most important entry point into this continuum of care is HIV testing and knowing one's HIV status.

Also, the HIV program conducts targeted testing with specific groups including youth of all ages; students and their teachers; workers in both formal and informal sectors; faith-based groups; high-risk occupations such as long-distance drivers, fishermen and commercial sex workers; women; married couples; members of the uniformed services and refugees.

Table 17: Performance of Tracked HIV Indicators in 2020/2021, Kenya

Indicators	Achievement 2016/17	Achievement 2017/18	Achievement 2018/19	Achievement 2019/20	Achievement 2020/21	Target 2020/21	Rating*
Proportion of HIV+ identified (%)	74	75	73	79	83	90	
% Of eligible HIV clients on ARVs	74	75	73	79	83	90	
Proportion of HIV clients on ARVs who are virally suppressed (%)	55	63	66	74	78	90	
Proportion of Clients tested for HIV among 1st ANC attendees (%)	91			84	82	80	
Proportion of HIV+ pregnant mothers receiving preventive ARV's to reduce risk of mother to child transmission (PMTCT)	95	97	94	94	95	98	

Performance Score:** **0-49%,** 50%-79% **and >80%

Identification of HIV-positive clients in the year 2020/2021 was below the target of 90% at 82%. HIV testing among the 1st ANC attendees was at 82%.
HIV-positive pregnant mothers on PMTCT were high at 95%

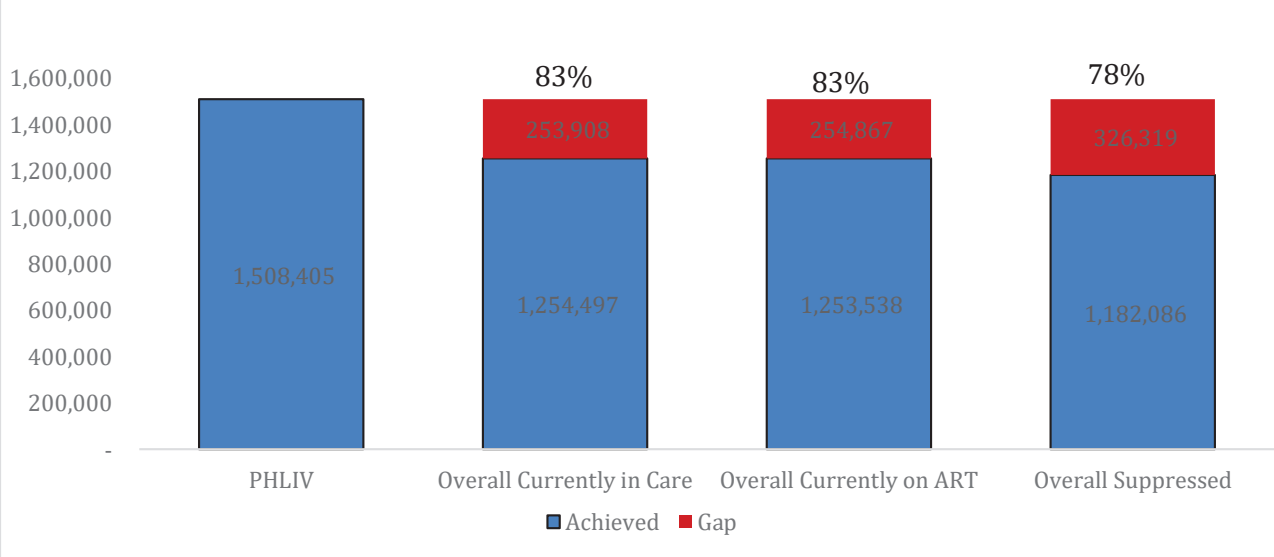


Figure 23: Cascade, Kenya (June 2021)

Performance for the overall cascade combined for adults and children was at 83 83 78. This means that 83% of all PLHIVs have been identified with 83% being on ART. The viral suppression rate is at a low of 78% .

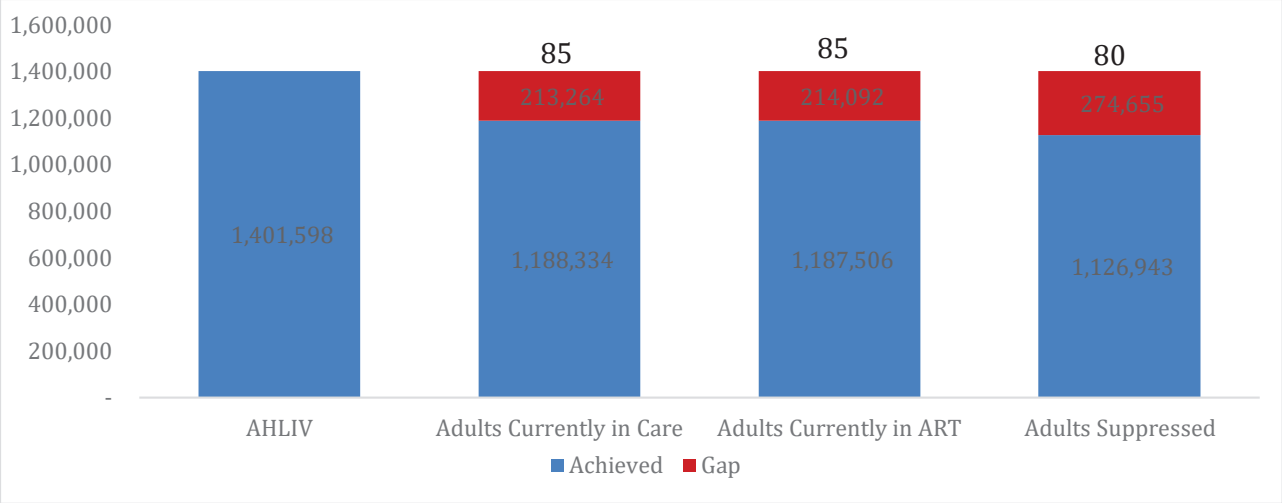


Figure 24: 95-95-95 Cascade June 2021 – Adults, Kenya

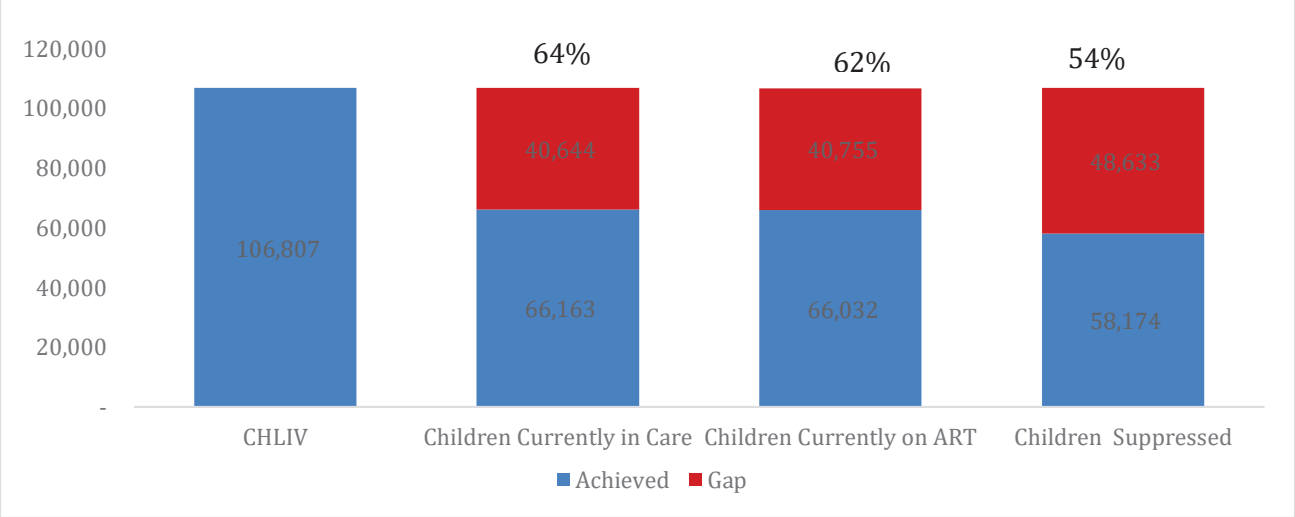


Figure 25: 95-95-95 Cascade in the June 2021 - Children, Kenya

Performance for identification, ART initiation, and viral suppression among children has remained suboptimal across the whole cascade at 62:62:54 while adults were at 85:85:80

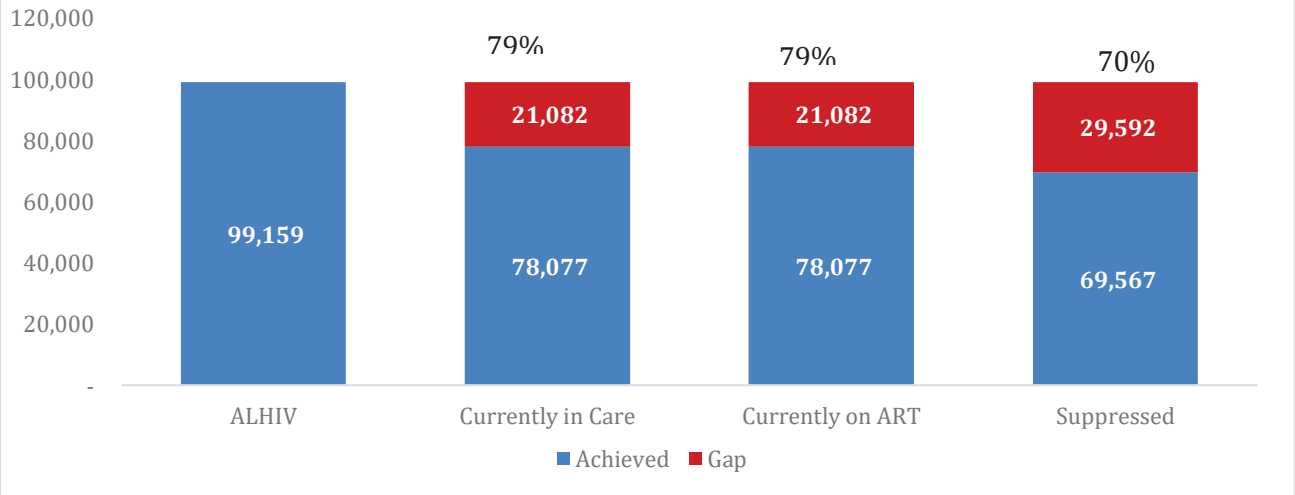


Figure 26: 95:95:95 Cascade, June 2021- Adolescents, Kenya

The adolescent cascade shows suboptimal identification, treatment and viral suppression compared to the adults.

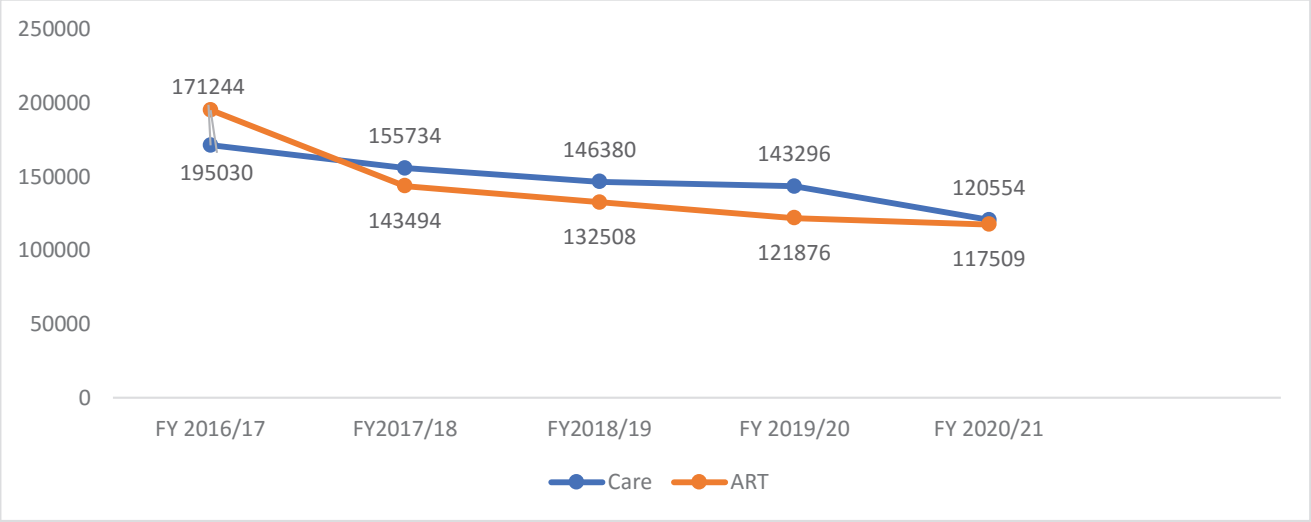


Figure 27: Trends of PLHIV enrolment to care and Initiated on ART

Enrolment in care has been on a downward trend over the last 5 years. This is expected as the country is moving close to identifying all PLHIVs it becomes harder to identify HIV-positive people from the total tested ie. and yield reduces over time. Initiation to ART follows similar trends with enrolment to care exhibiting a downward trend similar to clients identified with HIV.

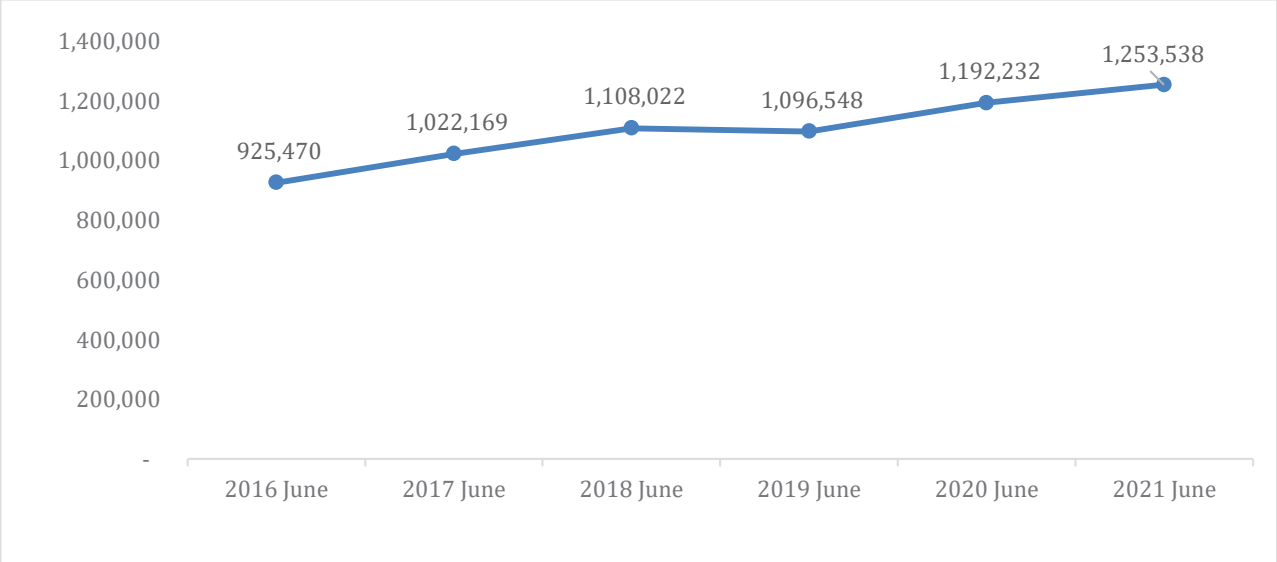


Figure 28: Trend of PLHIV Currently on ART for past 5 Years, 2017-2021, Kenya

Although the numbers for ART initiation have been declining due to a decline in HIV clients identified, there was a steady increase in cumulative numbers of people on ART in the country. There has been an increase in the total number of PLHIV receiving ART over the past 5 years. As of June 2021, a total of 1.2 M PLHIVs were on ART in the country translating to 83% ART coverage.

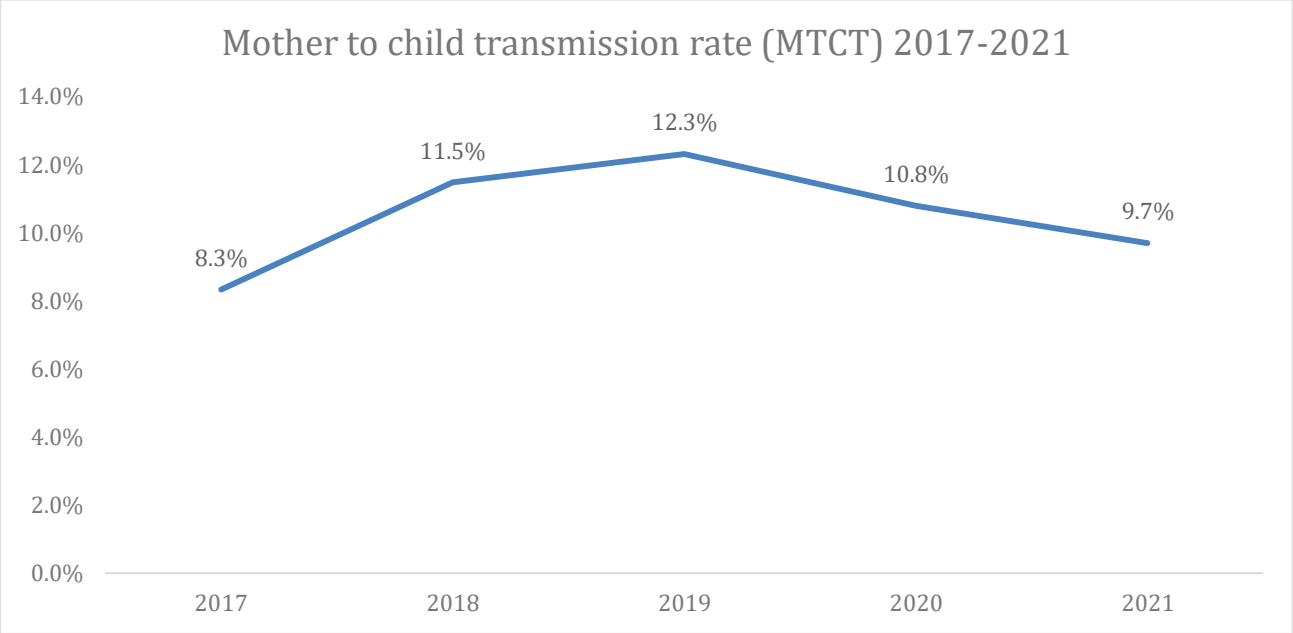


Figure 29: Mother to Child transmission Rate (MTCT) 2017-2021

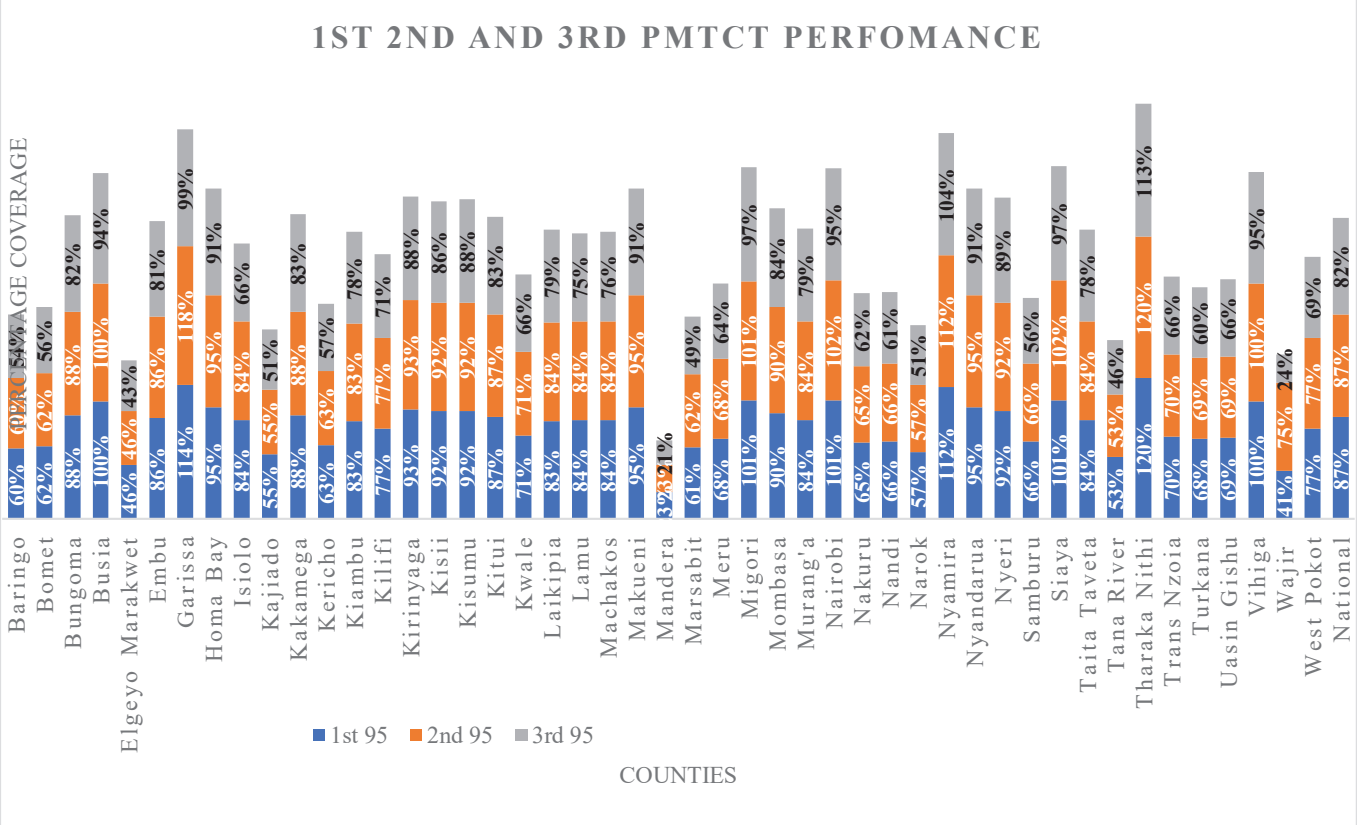


Figure 30: Maternal HIV identification, ART coverage and Viral Load Suppression

The program aims at eliminating mother-to-child transmission among HIV pregnant women in Kenya to below 5%. While the MTCT rate has been on a downward trend since 2019, it remains above the national target of elimination of MTCT rates of below 5%.

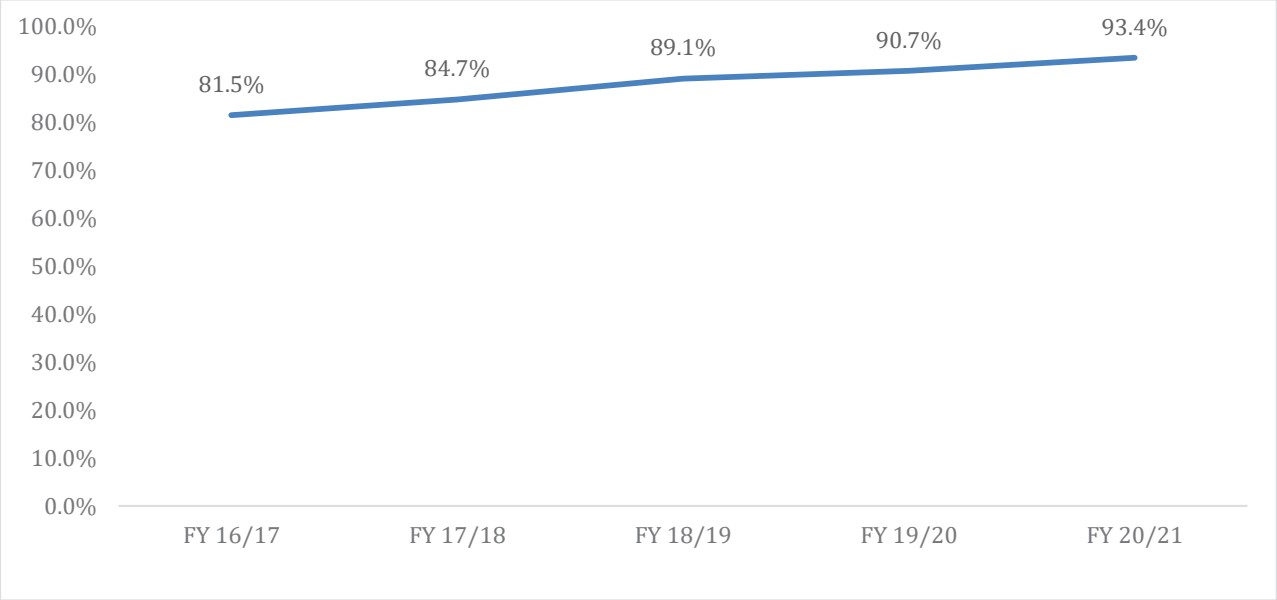


Figure 31: Trends in Viral load suppression among the PLHIV on ART

Viral suppression rates among PLHIV on treatment have been increasing over time and have been sustained above the 90% target since 2019/20

Major achievements in 2020

- Increase in the number of HIV+ patients enrolled to care and initiated on ART over the past 5 years
- The proportion of HIV+ pregnant mothers receiving preventive ARVs to reduce the risk of mother-to-child transmission (PMTCT) has increased over the past five years
- Roll out of HIV Recency surveillance in selected counties
- Reduction of HIV prevalence and incidence

Challenges

- Inadequate and stock out of data collecting tools (MOH 363, MOH 364, MOH 365)
- VMMC service delivery is currently supported financially in 5 of the 12 priority counties hence requiring immediate scale up
- Stock out of drugs and other commodities especially in the year 2021 due to delay in port clearance threatening adherence and health outcomes of the PLHIVs and thereby eroding gains made over time
- Lack of a community sensitization package and a weak link between health, police, children's department, and judiciary in management and documentation of SGBV cases

PRIORITY AREAS FOR FY 2022/23

- Strengthen the supply of HTS commodities to ensure timely importation, delivery, and distribution of commodities to reduce stock out in the facilities.
- Roll out the revised HTS guidelines to align with WHO guidance and recommendation
- Scale up of HIV Recency Surveillance in all counties to provide information on transmission clusters and priorities clients for partner testing
- Generate HTS county-based targets that are guided by ART coverage and Incidence
- Full transition of CALHIV to optimized ART: Roll out of Paediatric DTG 10mg for children <20kgs to all Counties
- Adopt and expand decentralized drug distribution (through innovative channels like community pharmacy
- Scale SMS-based appointment and adherence systems e.g. USHAURI
- Scale multi-month dispensing (MMD) including 3 to 6 MMD - address commodity supply chain to support 6-MMD
- Strengthening the implementation of the KHQIF/ KQMH across all facilities

5.2.2 Tuberculosis

Highlights

- TB prevalence in Kenya remains high at 426/100,000 population, (among the highest globally)
- TB case notification is low at 55% of estimated annual TB cases due to inadequate capacity to make diagnosis and the poor health seeking behaviour among the priority groups especially men
- Knowledge of HIV status among TB patients, ART initiation among HIV/TB co infected and start of IPT among exposed under 5 has remained high above 98
- Active case finding and management through innovative approaches such as screening everyone who attends a health facility, screening in high traffic public places using automated machines are the approaches that the program has put in place to bridge the identification gap
- Poor nutrition status, lack of nutrition commodities and lost follow up are the key factors affecting health outcomes and leading to TB mortality

Tuberculosis remains a global epidemic of public health concern being one of the leading causes of death. Kenya's TB prevalence (TB prevalence survey 2017) is 426 per 100,000 placing the country among the highest globally. The estimated annual TB cases are about 140,000 people. The drug-resistant strain of tuberculosis poses a major public health challenge and an economic burden to the country especially the household affected by the disease due to the high intervention cost. During the financial year 2020/2021, the country identified 73,485 people with drug-susceptible tuberculosis and started them on treatment. There were 915 people reported with drug-resistant tuberculosis accounting for 1.3% of the total identified cases and all of them were enrolled in second-line treatment.

Achievements

The country achieved the 2020 end TB milestones where incidence was reduced by 20% and mortality by 35% compared to 2015 baselines.

The expected number of TB cases per year is 140,000 and a target to notify 80% was set for the FY 2020/21. However, only 66% of the FY 2020/21 target (55% of the annual estimated cases) were notified. Knowledge of HIV status among the TB cases, ART treatment among TTB/HIV patients and IPT initiation among the exposed under 5 years remained high above 97. TB case fatality ratio has remained at 7% in the period under as seen in table 18

Table 18: TB performance Indicators

Indicator	Achievement 2016/2017	Achievement 2017/2018	Achievement 2018/2019	Achievement 2019/2020	Achievement 202021	Targets 2020/21	Rating*
Number of TB cases notified	79,244	91,614	90,299	79,704	73485(55%)	111062(80%)	
Number MDR/ RR TB notified	491	663	639	847	915	800	
TB treatment success rate	83%	84%	85%	85%	76%	90%	

Percentage of TB cases with known HIV status	97%	98%	98%	99%	98%	95%	
Percentage of TB/HIV positive cases on ART	97%	97%	97%	98%	97%	95%	
Number of children under 5 started on IPT	8969	9644	7044	8,135	6,658	6696	
DST coverage among new and relapse TB cases	48%	51%	62%	66%	72%	>75%	
TB case fatality ratio	6%	6%	7%	7%	7%	<5%	

Performance Score:** **0-49%,** 50%-79% **and >80%

The annual incidence of TB cases is estimated at 140,000, the TB program targeted to identify at least 80% of those cases. The identification gap is widening over time due to a reduction in the number of notified cases per year as the program had identified 66% of its targets which was 55% of the estimated TB cases for the year.

This could be attributed to the poor health-seeking behavior among the men, who form the bulk of the TB cases (TB prevalence survey). Further, there are gaps in capacity at the health facilities to make TB diagnoses and a lack of data capture in patients who are diagnosed in private facilities/pharmacies which do not refer or notify cases.

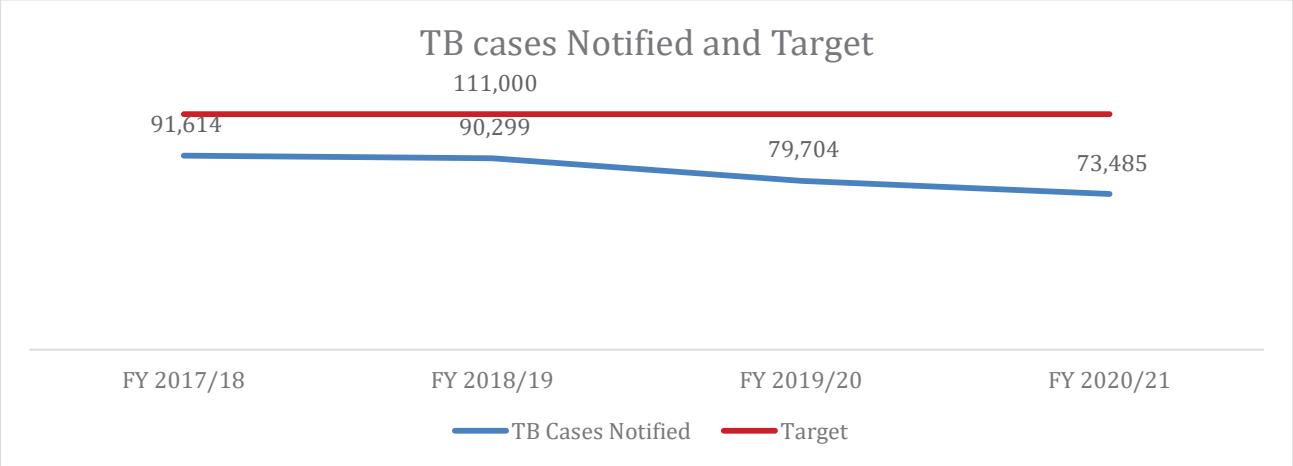


Figure 32: Drug susceptible cases notified against targets by Financial Year

TB treatment success rates have remained the same at 85% over the last 5 years. This is below the target treatment success rate of 90% as recommended by WHO. The program also records a lost to follow up rate of 10%. TB mortality rates have also remained high at 7% over the same period. Mortality rate is higher among people living with HIV at 12%. This is attributed to the low nutrition status of the TB patients at the time of diagnosis, coupled with sub-optimal nutrition interventions due to acute stock out of nutrition commodities leading to poor treatment outcomes. Also, the TB HIV co-infected patients may have poor outcomes if the patients are at an advanced staging of disease at diagnosis.

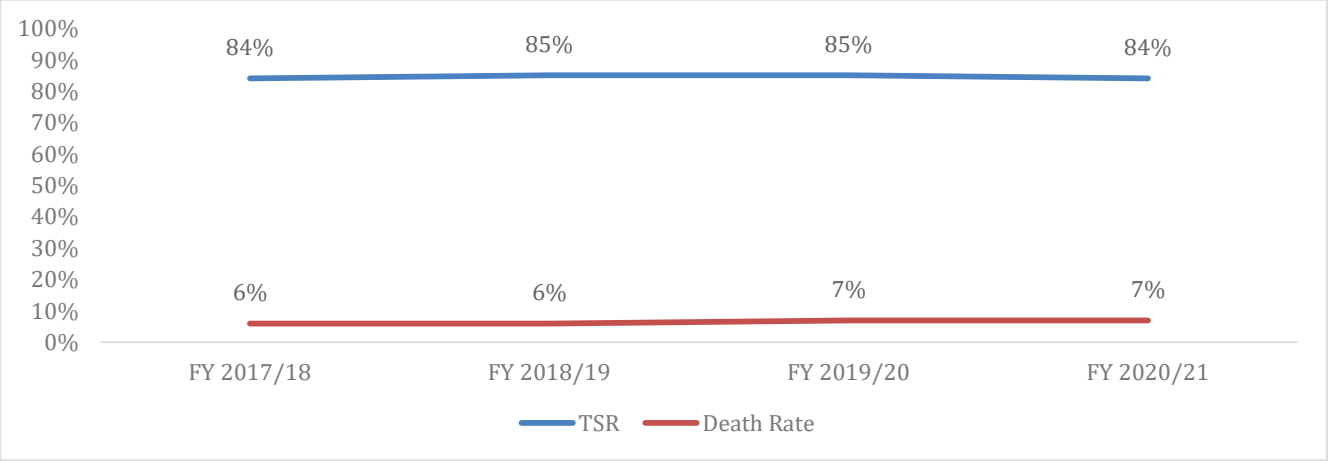


Figure 33: TB treatment success rates and death rates by financial year

Achievements

- Most TB indicators maintained the good performance of above 90% except notifications of TB cases (55%)
- Developed of public-private mix action plan to be implemented in the next 5 years that provides a framework for engaging all stakeholders in health, especially the unengaged to support efforts in finding missing people with tuberculosis
- Developed a multi-sectoral accountability framework which is awaiting finalization and launch as part of the commitments made by the country during UNHLM on TB in 2018
- Developed TB financing policy brief as part of advocacy material awaiting publication
- Conducted an epidemiological review in preparation for program end-term review

Challenges

- During the period under review, COVID-19 posed the biggest challenge in TB control. This contributed to a reduction in case findings, reduction of TB resources, and poor treatment outcomes as most patients were lost to follow-up as well as lower service utilization during the period.
- Notifications of TB cases remained low at 55% in the period
- Stock out of lab commodities especially at the national reference lab hampered efforts on DR TB surveillance
- Diagnosis of TB in children remains suboptimal with less than 10% of notified cases being children against the ideal between 10% to 15%
- Inadequate capacity in lower level facilities to provide TB diagnosis
- Inadequate and irregular supply of nutritional supplements to TB patients

Priorities

- Improve case notification from the current 55% to 90% by finding all people with tuberculosis and putting them on treatment
- Enhance prevention of Tuberculosis among priority populations including PLHIV, CHWS and other vulnerable groups
- Improvement of lab referral system to enhance access to diagnosis at all levels
- Active case finding which includes
  - ✓ screening everyone who comes to a health facility
  - ✓ Private Public mix
  - ✓ Innovative methods – Kenya innovative challenge – targeted screening for school, targeting long distance truckers, IDUs, automatic screening machines at public places

5.2.3 Malaria

Key findings

- The prevalence of malaria has reduced from 8% in 2015 to 6% in 2020 attributable to consistent deployment of malaria interventions.
- Confirmed malaria cases (Malaria incidence) reduced from 86 per 1000 population in 2018/2019 to 79 per 1000 in 2020/2021. Malaria incidence was highest among the under 5 population.
- Turkana and Busia recorded an increase in Malaria incidence possibly due to climate change and the irrigation schemes
- Malaria incidence was highest in children under the age of 5 years compared to the other age groups.
- Testing for malaria has been enhanced every year save for 2020/21 which reduced due to the effects of COVID pandemic on health seeking behaviour among clients.
- 87% of targeted women and 80% of targeted children received Long Lasting Insecticide Treated Nets (LLINs)

The National malaria prevalence has reduced from 8% (KMIS 2015) to 6% (KMIS 2020). A gradual decrease was also observed in the 5 epidemiologic zones: Lake Endemic 19%, Coast endemic at 5%, seasonal at 2%, and highland and low-risk transmission zones at 1% each. Confirmed malaria cases reduced from 86 per 1000 population in 2018/2019 to 79 per 1000 in 2020/2021. However, malaria incidence in some areas in the country like Turkana and Busia increased, experienced upsurges in malaria cases attributed to environment, climate, and population change. Turkana county government has heavily invested in irrigation in one of the sub-counties hence leading to a suitable environment for anopheles vector breeding. The inpatient malaria deaths reduced from 5.6% per 100,000 in 2017/2018 compared to 2.2 in 2020/2021.

Annual Entomological Inoculation Rate (AEIR) reduced from 2.9 in 2018/2019 to 1.5 in 2020/2021. This reduction is attributed to malaria vector control interventions which include nationwide distribution of long-lasting insecticides nets, indoor residual spraying in some selected counties in the lake endemic zones.

Table 19: Malaria Performance indicators and targets

Indicator	Achievement 2016/17	Achievement 2017/18	Achievement 2018/19	Achievement 2019/20	Achievement 2020/21	2020/21 Target	Rating*
Malaria prevalence rate	8% (2015)	NA	NA	NA	6% (2020)	6%	
Total confirmed malaria cases (per 1,000 population) (Incidence)	105.2	77.6	86.2	93.5	78.8	84.8	
The proportion of suspected malaria cases presenting facilities tested with RDT OR Microscopy (%) (Malaria testing rate)	66%	59%	70%	62%	75%	100%	
Proportion of targeted pregnant women provided with long-lasting insecticide-treated nets (%)					87	92	

Indicator	Achievement 2016/17	Achievement 2017/18	Achievement 2018/19	Achievement 2019/20	Achievement 2020/21	2020/21 Target	Rating*
Proportion of infants in malaria endemic areas who sleep under long-lasting insecticide-treated nets (%)	68	78	73	NA	54	66	
Proportion of women in malaria endemic areas who sleep under long-lasting insecticide-treated nets (%)	74	NA	NA	NA	55	66	

Performance Score:** **0-49%,** 50%-79% **and >80%

Prevalence of malaria

There has been a gradual reduction in the prevalence of malaria from 8% in 201711% in 2010 to 6% in 2020, according to the Kenya Malaria Indicator Survey. The decrease in malaria is attributable to consistency in the implementation of malaria interventions over the years. The interventions include Indoor residual spraying (IRS), Long Lasting Insecticide Treated Nets (LLINs), case management, Larva Source Management (LSM), etc. Long lasting insecticide treated nets coverage among pregnant women was at 87% while only 42% of infants and 40% of women slept under an LLIN

During the FY 2020/21, there was a delay in the shipment of pyrethroid nets overseas which resulted in low stocks at the health facility. Low use of Nets emanated from reduced access to LLINs. The net distribution campaign was delayed because of the COVID pandemic. The households had not been provided with nets for more than 3 years at the time when the Malaria indicator survey was done.

Confirmed malaria cases per 1,000 (Malaria Incidence)

Malaria incidence was highest in children under the age of 5 years compared to the other age groups. Children under the age of 5 years are a vulnerable population due to low immunity. The program ensures protection of children under the age of 5 through distribution of ITNs at CWC to children under the age of 1 and pregnant women at MCH. It is expected that the ITNs would offer protection for up to 3 years. Additional ITNs are distributed through mass net campaigns targeting 23 counties with universal targets of ITNs. More interventions such as Indoor Residual Spraying (IRS), Larva Source Management (LSM) are required to further reduce the burden.

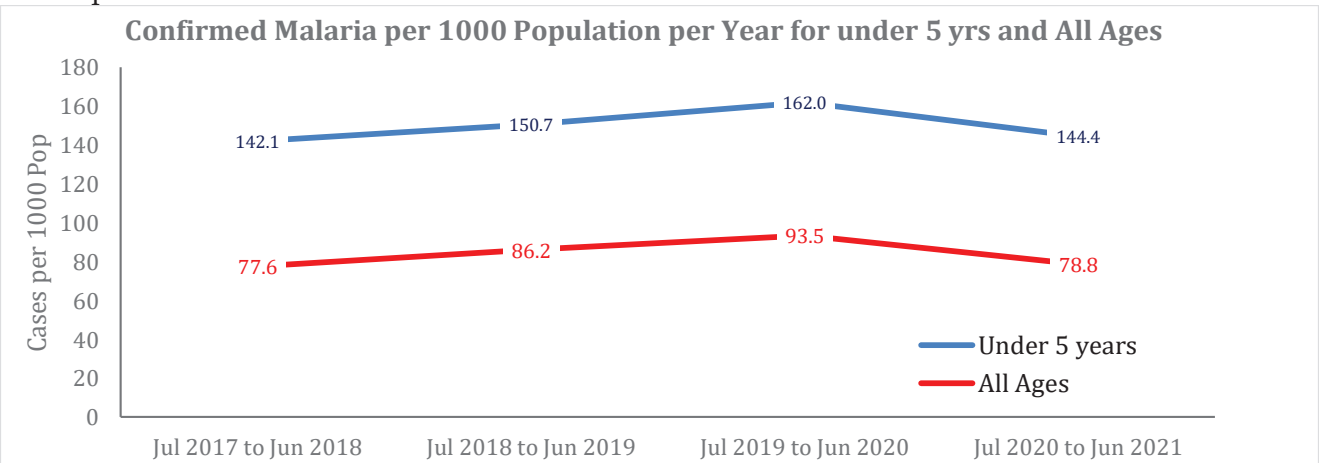


Figure 34: Confirmed Malaria cases per 1000 population by FY

The map below depicts the high burden of Malaria counties and the change from 2016 to 2021 showing a reduction in a number of counties and sub-counties with high malaria incidence.

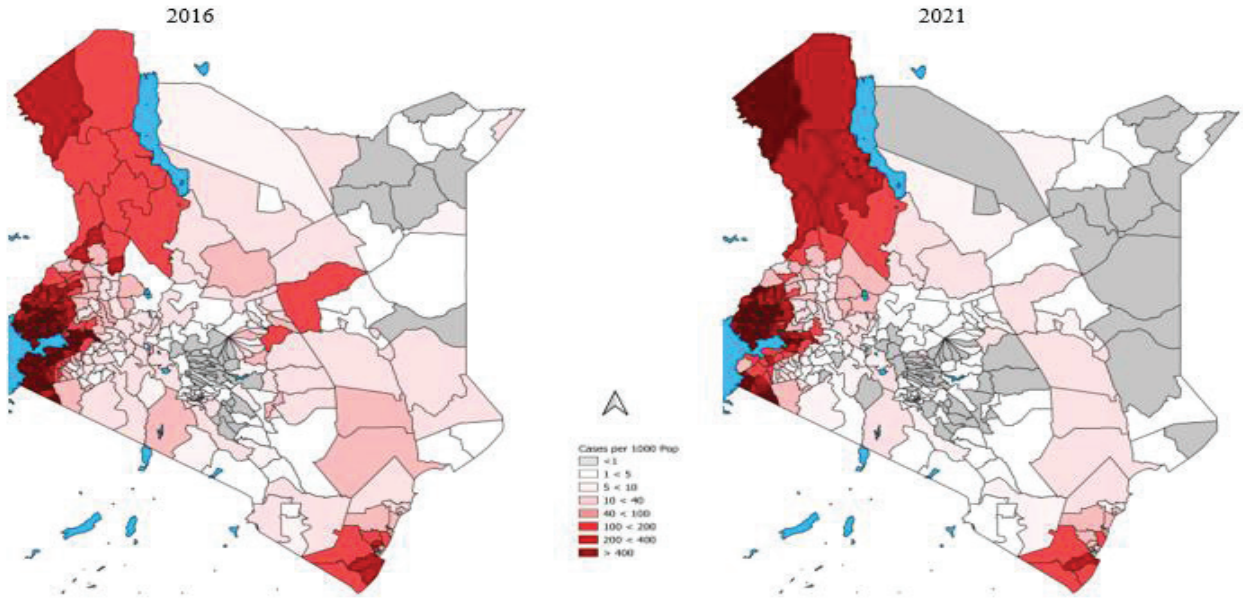


Figure 35: Confirmed malaria per 1000 population map by subcounty, 2016 and 2021

Malaria Testing

The Proportion of suspected malaria cases data collection begun with revised malaria reporting tools in October 2020. This proportion increased from 64% in October 2021 to 80% in July 2021. Testing all suspected malaria cases ensures correct diagnosis and management of disease for better health outcomes.

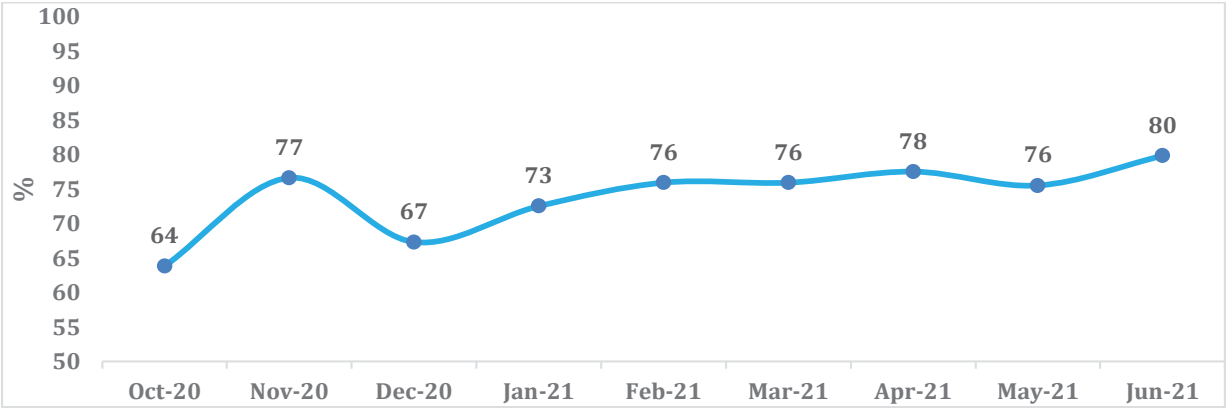


Figure 36: Proportion of Suspected Malaria Cases Tested

The absolute number of tests done in the last 4 years is illustrated below. Ten to twelve million patients are tested for malaria every year. Testing for malaria has been enhanced every year save for the last financial year which was affected by the effects of the COVID pandemic on health-seeking behavior among clients.

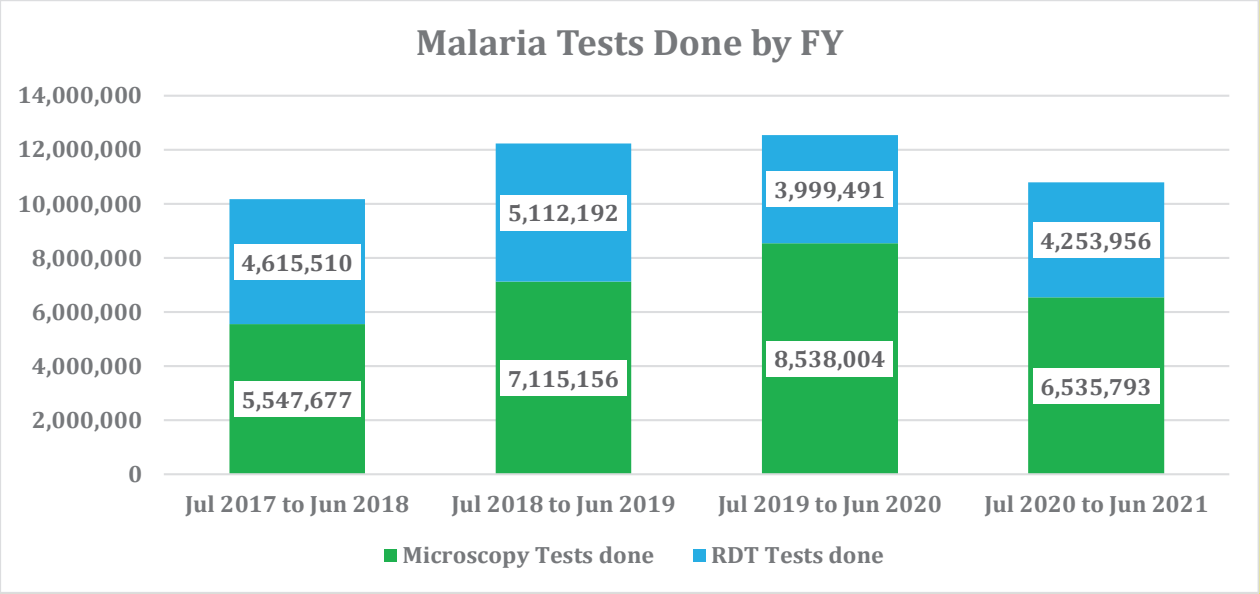


Figure 37: Malaria Tests done by Microscopy and RDT

Routine Distribution of Long-Lasting Insecticide Nets (LLINs) at ANC and CWC. 16 million LLINs were distributed to communities residing in malaria-risk areas mainly targeting 24 counties in 2020/21. The map below shows the Net Per Capita across all the counties. WHO recommends a rate of 0.56 to achieve universal coverage of nets.

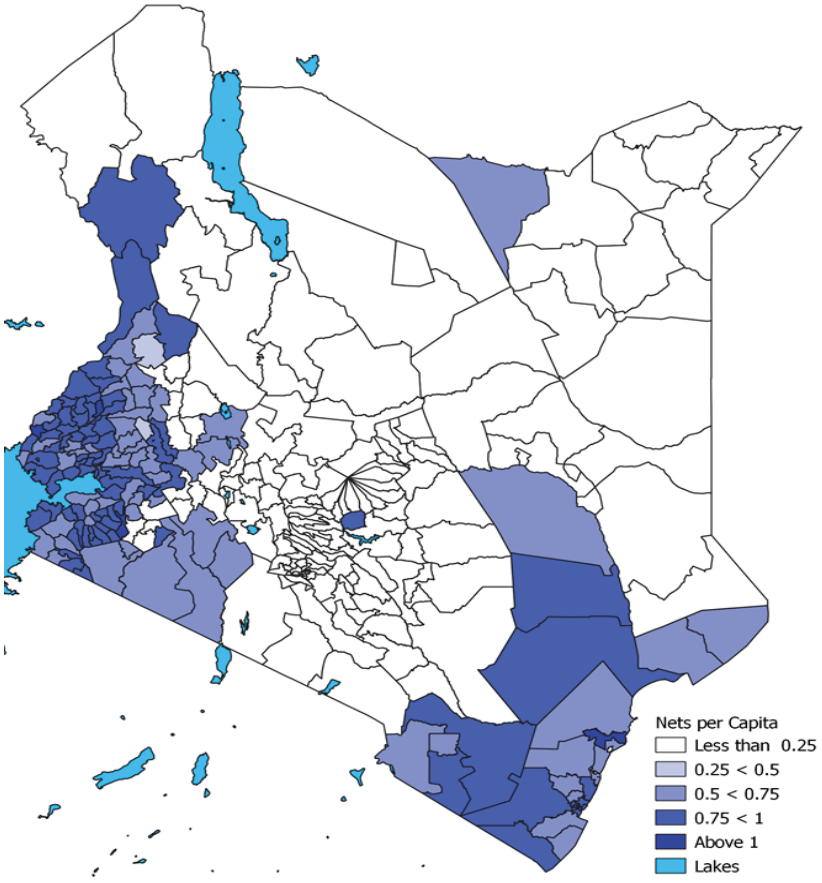


Figure 38: Nets Per Capita

Performance in the mass distribution of nets in the priority 24 counties achieved coverages of under 1 and pregnant women sleeping under LLINs as below.

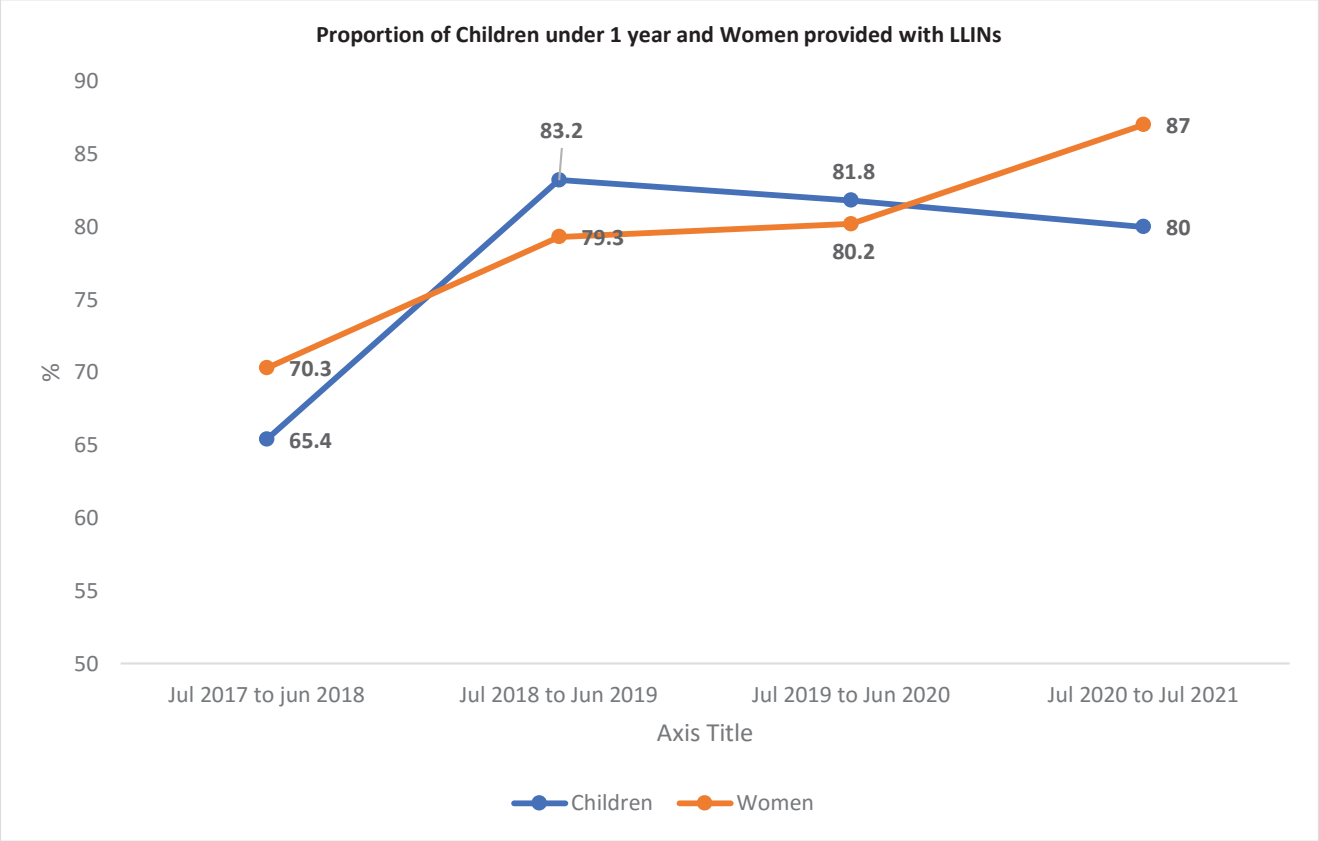


Figure 39: Proportion of children under 1 year provided with LLINs and women at ANC in targeted areas

Achievements

- The health sector in collaboration with stakeholders in the malaria field has implemented various interventions geared to reduce and significantly reduce the malaria prevalence and incidence for instance,
- Malaria elimination structures at the National and county level were established i.e. Task Force and COE with finalized Terms of Reference.
- The national treatment and diagnosis guidelines, parasitological diagnosis guidelines and training curricula, Malaria Quality assurance implementation plan, and biosafety guidelines were developed
- Larva source management was initiated
- Indoor residual spraying (IRS) campaigns were conducted in Homa Bay and Migori.
- 60 ToTs and 2932 healthcare workers trained in lake endemic counties on malaria case management
- Eight counties were supported to review their malaria communication plans in 2019 and twenty-five participants were trained on SBC 101 SBC including 8 County representatives.
- With support from partners, 2506 radio spots and 625 TV spots were aired and. 80,000 posters were printed and distributed to the counties.
- Kenya Malaria Indicator Survey 2020 was conducted and final report was launched and disseminated at the National and county level.
- The malaria epidemic monitoring dashboard was automated in KHIS, and the inpatient malaria module was developed
- Challenges hindering achievement of targets/Gaps
- Delayed procurement processes e.g. LLINs leading to stock outs of commodities and delayed implementation of interventions
- Gaps in data management i.e. severe malaria, mortality data and inpatient data. The inpatient DHIS2 tracker has limited data quality control and data analytic capacity; most county data managers are unable to navigate the inpatient DHIS2 tracker beyond the data entry module.

- Limited capacity in ICD coding and certifying among health workers was noted thus affecting in-patient data and accurate reporting of severe malaria and case fatality rate (including a secondary cause of death).
- Climate changes and human behaviour hindering the effectiveness of intervention measures

Recommendations and priorities for the upcoming financial year (2022/2023)

- Review the number of counties targeted for mass and routine LLINs based on epidemiological, entomological, climatic and anthropogenic factors, consider continuous LLIN distribution through additional channels and harmonization of methods used in generating data on LLIN indicators (access, use and coverage) and automation of mass net registration data
- Strengthen HMIS and malaria surveillance assessments to capture data for key case management indicators specifically indicators on the routine quality of care and data collection on malaria case fatality rates.
- Work with the HMIS team to facilitate in-built data quality modules and user-friendly basic analytics of inpatient malaria data in the DHIS2 tracker. Finalize the malaria module in DHIS2 to improve availability, analysis, visualization, and use of routine malaria data.
- Training on the most recent ICD (ICD11), data management including reporting for severe malaria cases and deaths in all admitting health facilities in addition to regular data reviews and quality improvement
- Conduct malaria elimination baseline assessment in malaria elimination target counties.
- Provision of user-friendly communication materials such as job aids for use by different cadres (health providers at facility and community levels) to be able to effectively disseminate essential information on malaria
- Public advocacy on prevention strategies and working closely with level operatives

5.2.4. National Vaccines and Immunization

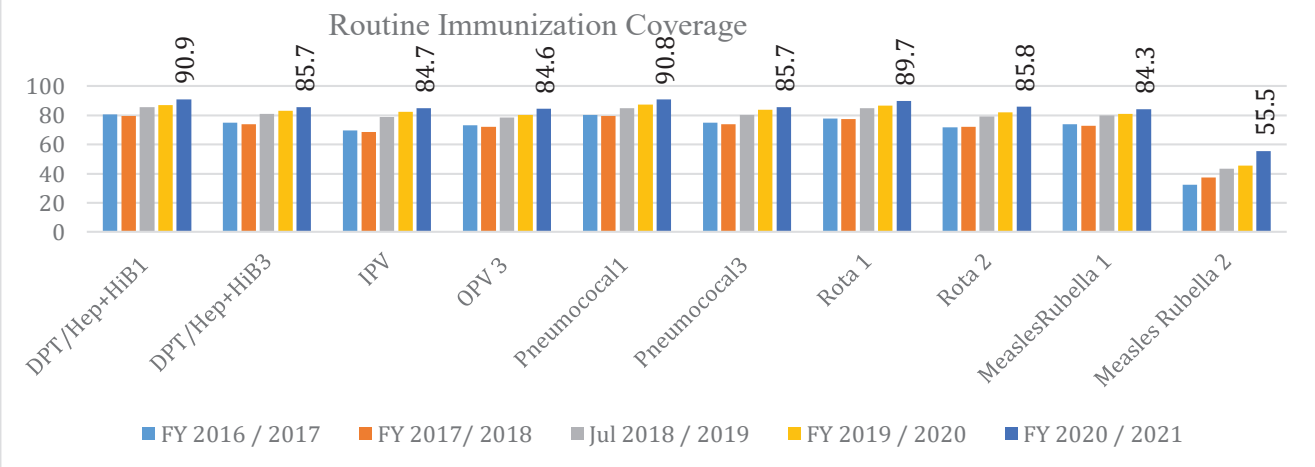
Key Highlights

- The country achieved 90.9% Penta 1 coverage, 85.7 % Penta 3 coverage and 80.4% full immunisation coverage at 1 year
- Measles 2vaccine coverage remains low at 55% against antigen coverage of 90% for each antigen
- 21 counties had a coverage of 90% and above for Penta 1 up from only 8 counties achieving this in 2016/17. However, only 12 achieved coverage of above 90% for DPT3 indicating dropout.
- The counties with DPT3 coverage below 80% in FY 2020/21 were Marsabit, Kwale, Kilifi, Baringo, Homa Bay, Kitui, Tana River, Vihiga and Wajir
- The proportion of facilities offering immunization services increased from 60% to >90% in FY 2020/21. This was attributed to the installation of specialized vaccine storage equipment in over 3,500 health facilities and 290 sub-county vaccine depots.
- Collaboration between national, counties and development partners resulted in the elimination of maternal and neonatal tetanus disease as well as eradication of wild poliovirus.
- COVID -19 Vaccine was introduced in March 2021 and1,378,585 Vaccinations had been administered, an uptake of uptake 36.7% of the target for June 2021, which represented 1.42% of all adults being fully vaccinated.
- 10,100,993 doses were administered by July 31st 2021
- Other newer vaccines introduced since 2018 were scaled up to the target recipients in FY 2021 including Yellow Fever, Malaria and HPV vaccine

Monitoring EPI indicators

For immunization to be effective in reducing cases of vaccine-preventable diseases and deaths, every child should be fully immunized by the age of one year. A fully immunized child (FIC) has received all doses of all EPI vaccines, including a second dose of measles-rubella vaccine and vitamin A. Penta1 coverage measures the availability of, access to, and initial use of immunization services by parents or caregivers Penta 3 and measles Rubella coverage shows the utilization and continuity of use of health services by parents.

The WHO target is to vaccinate all eligible children with the required vaccines. Here in Kenya, the target is to reach at least 90% of the eligible child, both at the National and county levels. The graph below shows that the national targets of 90% have not been



achieved for the selected antigens from the year 2016/2017 to the year 2020/2021. The

least performing indicator for the last 5 years is the second dose of the Measles Rubella Vaccine.

Figure 40: Routine Immunization Coverage FY 2016/17 to 2020/21

The immunization trend graph below shows there is a remarkable improvement in the three (3) antigens across the years and a slight drop in 2019/2010. The country achieved 90.9% DPT/Hep/HIB1(Penta 1) Coverage, 85.7 % Penta 3 and 80.4% Full immunisation coverage at 1 year

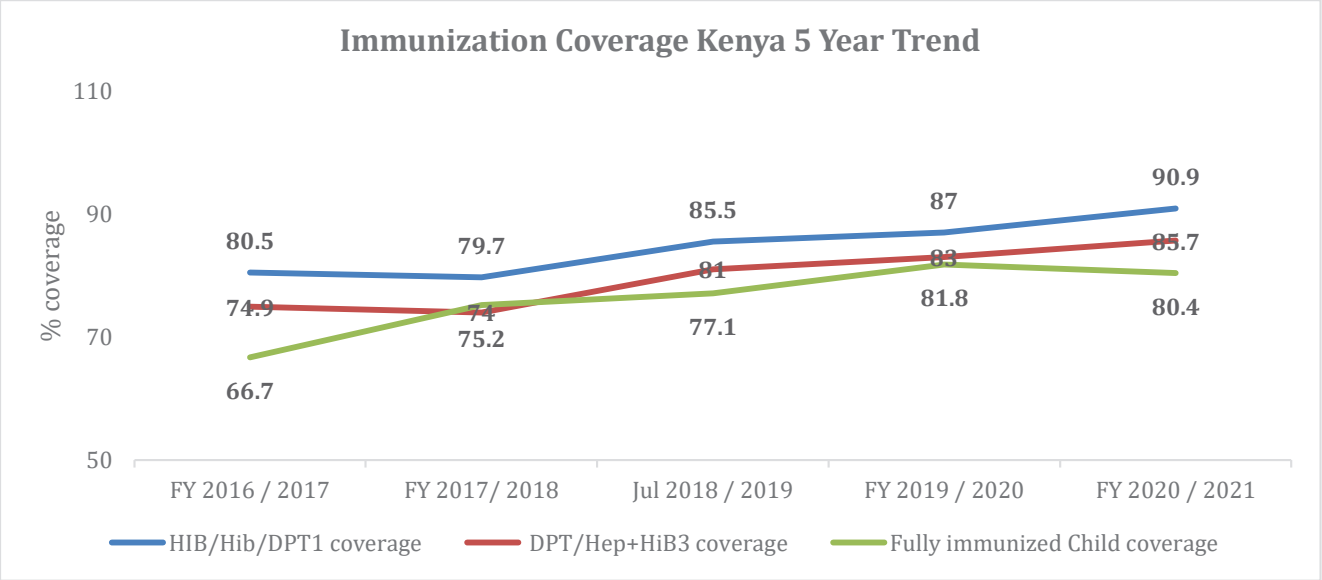


Figure 41:Immunization Coverage in Kenya from FY 2016/17 to 2020/21

The Penta 3 drop-out rate has remained below 7% in the last 5 years with the lowest drop out (4.6%) being in FY2020/21 (fig 42) The drop out increased in FY 2020/21 likely due to access barriers to health facilities and reduced community outreaches due to the COVID-19 Pandemic.

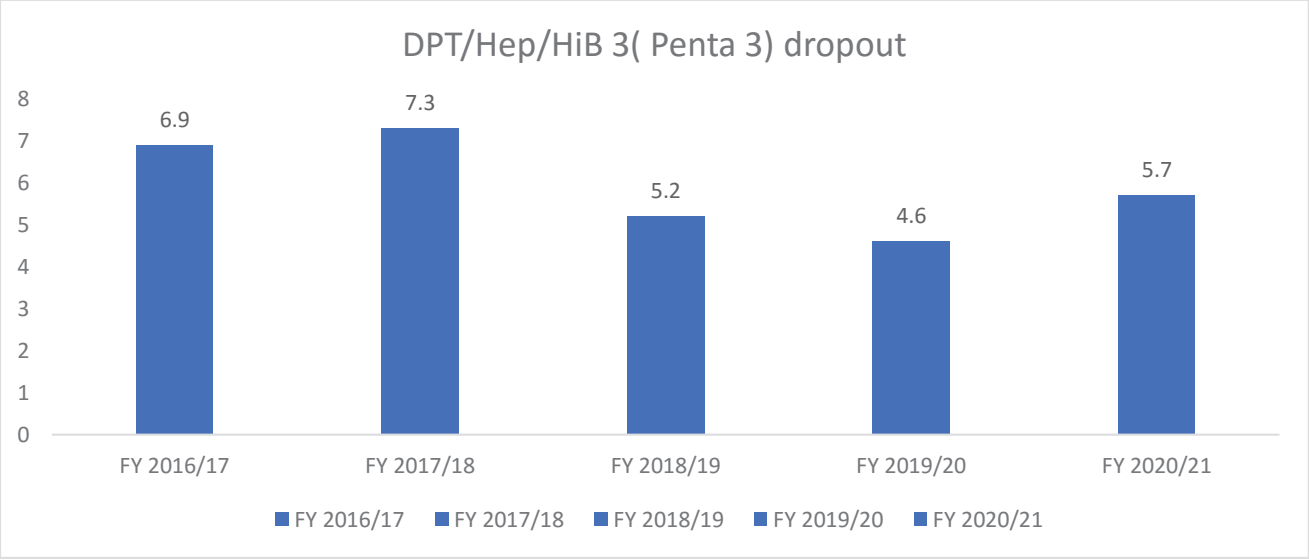


Figure 42: DPT/Hep+hiB3 dropout rate from FY 2016/17 to 2020/21

Figure 43 represents (DPT/Hep+HiB1) Pentavalent 1 and Pentavalent3 (DPT/Hep+HiB3) coverage in the counties in 2020/2021.Twenty two counties had a coverage of 90% and above for Penta 1.

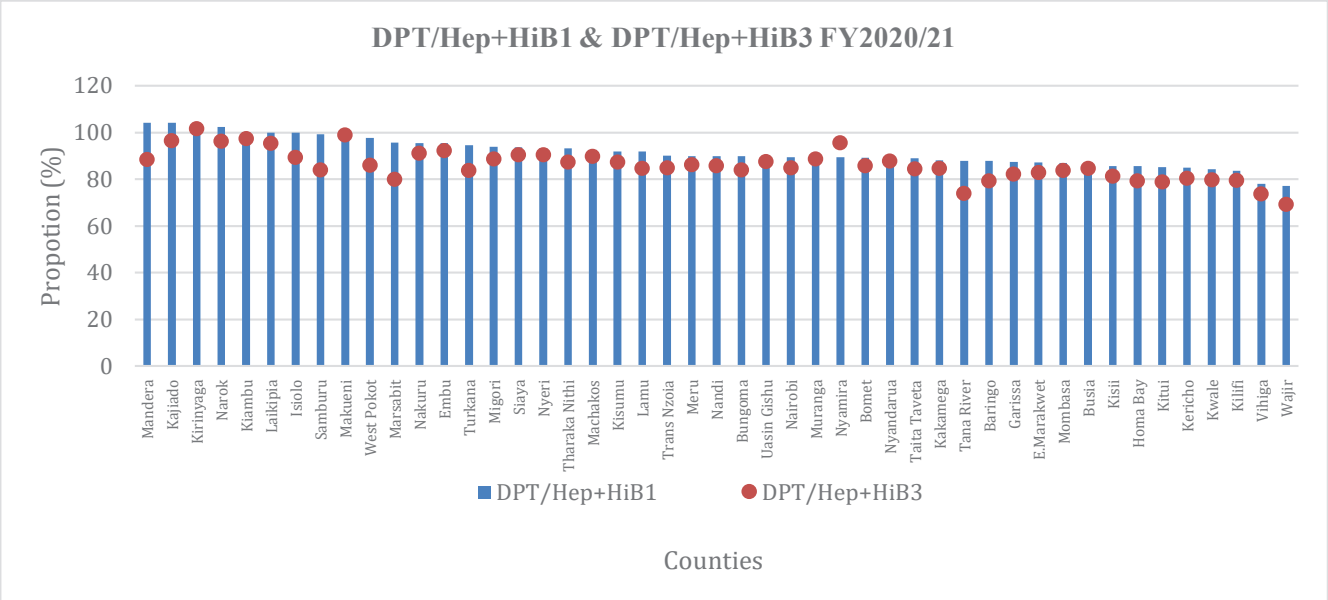


Figure 43: Coverage for (DPT/Hep+HiB1) Pentavalent 1 and Pentavalent3 (DPT/Hep+HiB3)

Table 20 shows the county coverage for pentavalent 1 in the last 5 financial years. In 2016/2017, 8 counties achieved a target of 90% coverage, reducing to 2 counties in 2017/2018. In 2018/2019 the number of counties reaching the target increased to 12, 17 counties in 2019/2020 and 22 counties in 2020/2021. Nationally the country surpassed its target of 90% in 2020/2021.

Table 20: DPT/Hep+HiBi and DPT/Hep+HiB3 County Immunization Coverage FY 2020/2021

Year	**FY 2016/2017**	**FY 2017/2018**	**FY 2018/2019**	**FY 2019/2020**	**FY 2020/2021**
HIB/Hib/DPT 1 coverage	No. of Counties	No. of Counties	No. of Counties	No. of Counties	No. of Counties
90+	8	2	12	17	22
70-89	30	27	31	30	25
0-69	9	18	4	0	0
Kenya	80.5	83.8	85.1	83.3	91.4

Achievements

- The proportion of facilities offering immunization services increased from 60% to >90% during the review period. This was attributed to the installation of specialized vaccine storage equipment in over 3,500 health facilities and 290 sub-county vaccine depots.
- Collaboration between national, counties and development partners resulted in the elimination of maternal and neonatal tetanus disease as well as the eradication of wild poliovirus.
- National Vaccines and Immunization Strategic Plan developed & disseminated
- Effective Vaccine Management Assessment Conducted (EVMA) in 2020
- Construction of a borehole to provide water for the central vaccine store done
- National communication guidelines incl. risk communication developed and disseminated
- Post Introduction Evaluation for Malaria, HPV and Yellow Fever conducted
- Procurement of external temperature monitoring devices
- Online immunization repository to improve access to Immunization Resources developed
- Application for vaccine management on an android application phones/tablet (Cold Chain Module - Chanjo) developed

Challenges

- The COVID-19 pandemic, which was first reported in March 2020, continues to pose a significant risk to the global and the Country's economy. The continued emergence of new variants and different waves creates uncertainties concerning economic recovery in the near term.
- Competing priorities both at county and National making impossible to complete scheduled activities.
- Underfunding and low prioritization of immunization services thus Contribute to weak coordination of the program, delayed procurement (injection devices and documentation tools) weak or no supervision, suboptimal training of health workers and poorly implemented service delivery strategies, (e.g. outreaches and mobile clinics) especially in hard to reach populations.
- Not all health facilities optimally offering immunization services- Several Health facilities (6.6%) are not offering services, while a significant number schedule immunization
- Though there is an increase in HPV vaccine seen, there is low uptake compared to the target population

Priorities FY 2022/23

- Develop an online immunization repository to improve access to Immunization Resources, Materials and Strengthen Supply chain Management through the Setting up of a LMIS
- Increase and sustain high coverage and equitable utilization of vaccines and reduce the number of zero-dose children
- Ensure uninterrupted last mile availability of high-quality, safe and effective vaccines
- Effectively engage communities in immunization service delivery
- Create a robust data culture by improving data quality, reporting and utilization of data
- Achieve and sustain Polio Eradication, in the country
- Attain control and elimination status of targeted and emerging VPDs & monitor the impact of vaccines

5.3 Halt and reverse the rising burden of Non-Communicable conditions

Highlights

- NCDs are increasingly imposing a major public health and economic burden in the country, accounting for 43.5% of hospital deaths in 2020/21, compared to 35.4% in 2017. This group of diseases is estimated to reduce household incomes by an average of 28.6% due to reduced productivity, premature mortality, and direct health-related expenditure.
- There has been a 30% and 45% increase in the incidence of outpatient visits attributed to hypertension and diabetes respectively between 2017/18 and 2020/21.
- The proportion of women screened for cervical cancer remained low at 31% in 2020/21 against a target of 30%. Further, only three counties (Nyamira, Lamu, and Siaya) attained this target.
- The number of mental disorders diagnosed/100,000 new OPD visits more than doubled between 2017/18 to 2020/21, rising from 229/100,000 new OPD visits to 467/100,000 OPD visits annually in the period under review. A steep rise of 62% was observed between 2019/20 and 2020/21, coinciding with the COVID 19 pandemic. Tharaka Nithi, Nairobi, Muranga, Lamu and Nyeri reported the highest rates in 2020/21 while counties in the ASAL region (Isiolo, West Pokot, Marsabit, Mandera and Wajir) reported the lowest numbers.
- The development of evidence-based coherent policies and guidelines, strategic partnerships and creation of county focal points for NCDs have contributed to the achievement of major milestones in NCD service delivery.
- Inadequate data tools, limited health worker capacity on NCDs and suboptimal funding remain major barriers to NCD programming

Summary of achievements of NCD Indicators against Targets for the year 2020/21

Table 21 below highlights the achievement of NCD indicators against the set targets in the Kenya Health Sector Strategic Plan (KHSSP) 2018-2030.

Table 21: NCD Performance Indicators

Indicators	Achievement 2016/2017	Achievement (2017/18)	Achievement 2018/19	Achievement 2019/20	Performance 2020/21	Target 2020/21	Rating *	Source
Diabetes incidence rate (per 100,000 OPD cases)	875	965	1010	1056	1404	981		KHIS
Hypertension incidence rate (per 100,000 OPD cases)	2689	2771	3205	2907	3611	2,953		KHIS
Cervical cancer annual screening target coverage (%)	5.0	31	35	27	31	35		KHIS

***Performance Score:** 0-49%, 50%-79% and >80%*

5.3.1 Diabetes and Hypertension

There is generally good progress towards achieving the targets on diabetes and hypertension incidence rates as outlined in the KHSSP 2018-2023.

The number of new diabetes cases reported per 100,000 new OPD visits increased by 45% from 965 in 2017/18 to 1,404 in 2020/21, surpassing the set target of 981. Similarly, the number of hypertension cases reported per 100,000 new OPD visits increased from 2,771 to 3,611 over the same period, achieving 122% of the set target of 2,953/100,00 OPD visits. The target is set to be increasing to intensify screening and identification of persons living

with diabetes and hypertension who don't know their status to enable enrolment into care and prevent complications and premature mortality. This increase can be attributed to heightened community awareness and screening coupled with appropriate linkage to health facilities. The Ministry of Health together with partners has trained community health volunteers (CHVs) on NCD health education and screening for both diseases hence increasing the number of people referred to the health facilities for diagnosis. It is estimated that only 43% and 16% of those living with diabetes and hypertension respectively are aware of their status (STEPS Survey 2015). Increasing the number of newly diagnosed patients during the period covered by the KHSSP will enable the country to bridge this identification gap.

National Hypertension and Diabetes Outpatient Visit Trends

As shown in figure 44 below, the number of new diabetes cases/100,000 new OPD visits has shown a consistent increase from 965 in 2017/18 to 1,404 in 2020/21. New hypertension cases/100,000 new OPD visits have also seen an increase of 30.3% from 2,771 to 3,611 during the same reporting period.

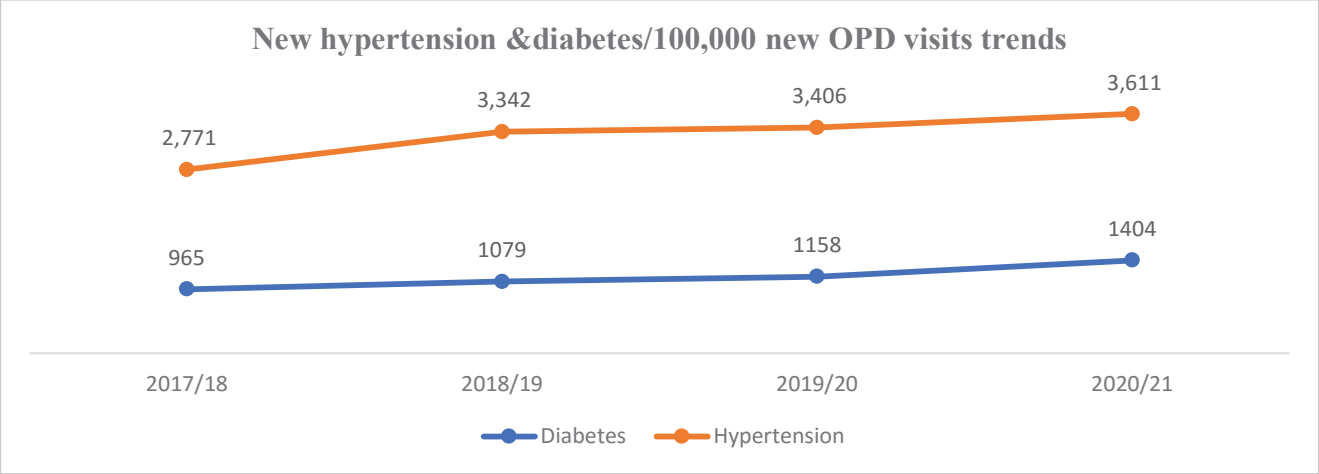


Figure 44: New hypertension and diabetes cases per 100,000 new OPD visits trends-2017/18 – 2020/21

Hypertension and diabetes performance by county

Despite the good national outlook on achieving the diabetes diagnosis indicator, disparities were noted across counties, with only 57% (27 counties) achieving the set target. Nairobi county recorded the highest number of new diabetes cases per 100,000 new outpatient visits for the year 2020/21 at 3,145, followed by Laikipia at 2,590 and Makueni at 2,554 (Figure 45). The least number of cases were recorded by West Pokot at 202/100,000 and Embu at 246/100,00.

Figure 45: New diabetes/100,000 new OPD visits by county; 2020-21 (MoH 705 A and B)

The highest new hypertension rate per 100,000 new outpatient cases in the 2020-2021 fiscal year was recorded by Makueni County with 8,162 followed by Tharaka Nithi with 7,096, Laikipia at 6,479, and Nairobi at 6,369. The lowest rate was seen in West Pokot County at 534, Embu at 536, Turkana at 640, Samburu at 692, and Wajir at 973 as shown in Figure 46 below. Similar to diabetes, only about half (24 counties; 51%) of counties achieved the set target for this indicator.

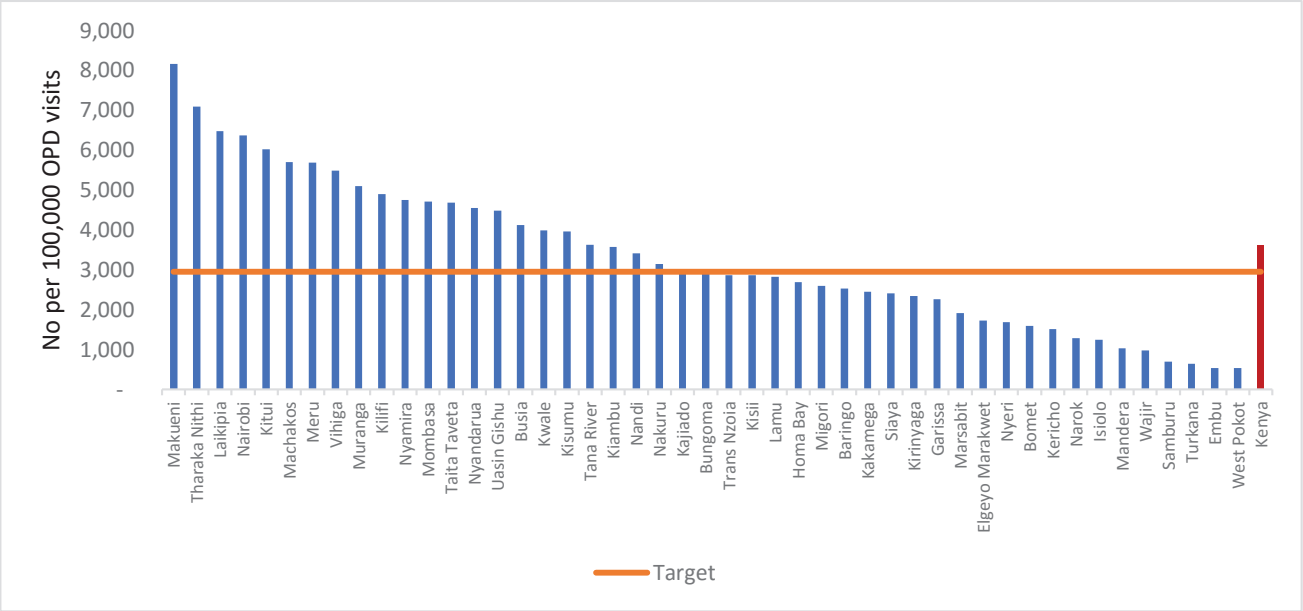


Figure 46: New hypertension/ 100,000 new OPD visits by county – 2020/21 (MoH 705B)

The performance in the counties with the highest achievements may be explained by the metropolitan nature and high facility density (e.g., Nairobi), and ongoing intensive training, screening, and reporting activities, including active use of digital health platforms (Makueni, Nairobi). An overall trend of low numbers in ASAL counties was observed; there is a need to conduct more in-depth studies to determine whether this is a reflection of a truly low burden or it is as a result of health system factors such as data management, screening intensity, diagnostic capacity or health-seeking behaviour.

5.3.2 Cancer

Cancer is the third leading cause of death in Kenya, contributing to 7% of overall mortality. Estimates show that there were 42,116 new cases and 27,092 deaths in 2020 due to cancer. The National Cancer Control Strategy 2017-2022 guides the implementation of cancer control interventions across the country. The National Cancer Screening Guidelines are being implemented and a total of 375,371 women were screened in FY 2020/2021, up from 254,627 in 2017/18.

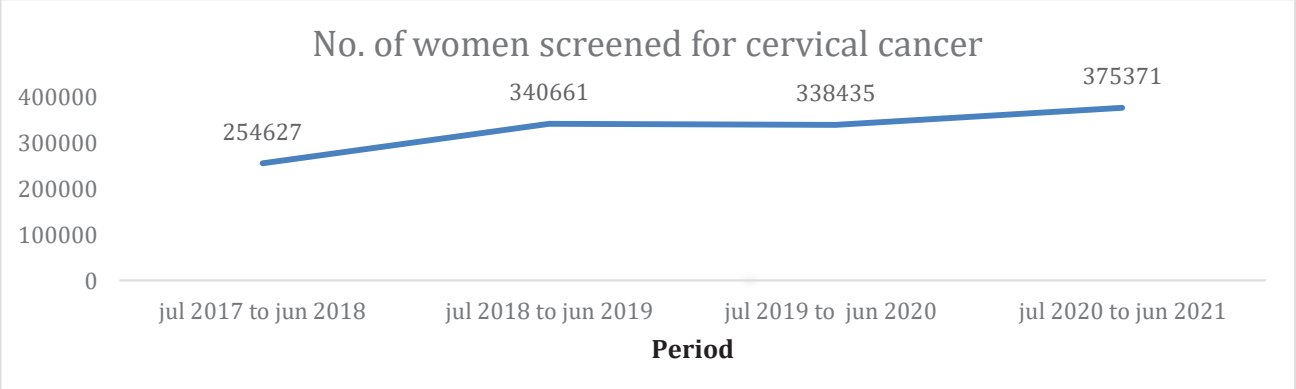


Figure 47: Trend of number of women screened from FY 2017/18 to FY 2020/21, source KHIS

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County Cervical Cancer Screening Performance

There were great disparities in county performance against their targets in cervical cancer screening, with Nyamira, Lamu, and Siaya surpassing the standard of 85%, and the ASAL counties of Mandera, Wajir, West Pokot, and Baringo having the lowest screening coverage.

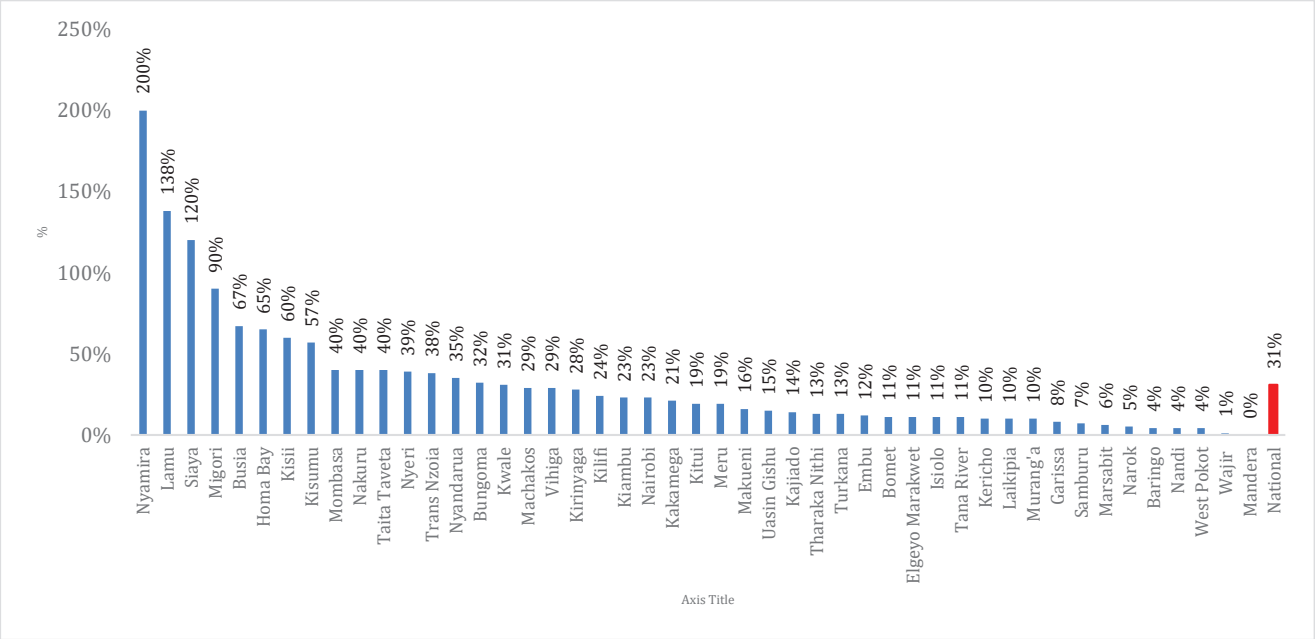

Figure 48: County cervical cancer screening target attainment, 2021.

Note: *the targets are the minimum number to be screened for the country to achieve the 2030 goals; therefore, counties are advised to exceed 100% where possible.*

Cancer treatment centers utilization

In addition to the three national comprehensive cancer centers (KNH, KUTRRH, and MTRH), the country has established 12 regional chemotherapy cancer centers, three of which have been upgraded to regional radiotherapy centers (Nakuru, Mombasa, and Garissa) to improve access to these services. The Mombasa radiotherapy center was officially launched in February 2022, with the other two awaiting official opening soon. Figure 49 below shows the number of patients served by the cancer centers in the financial year 2020/21.

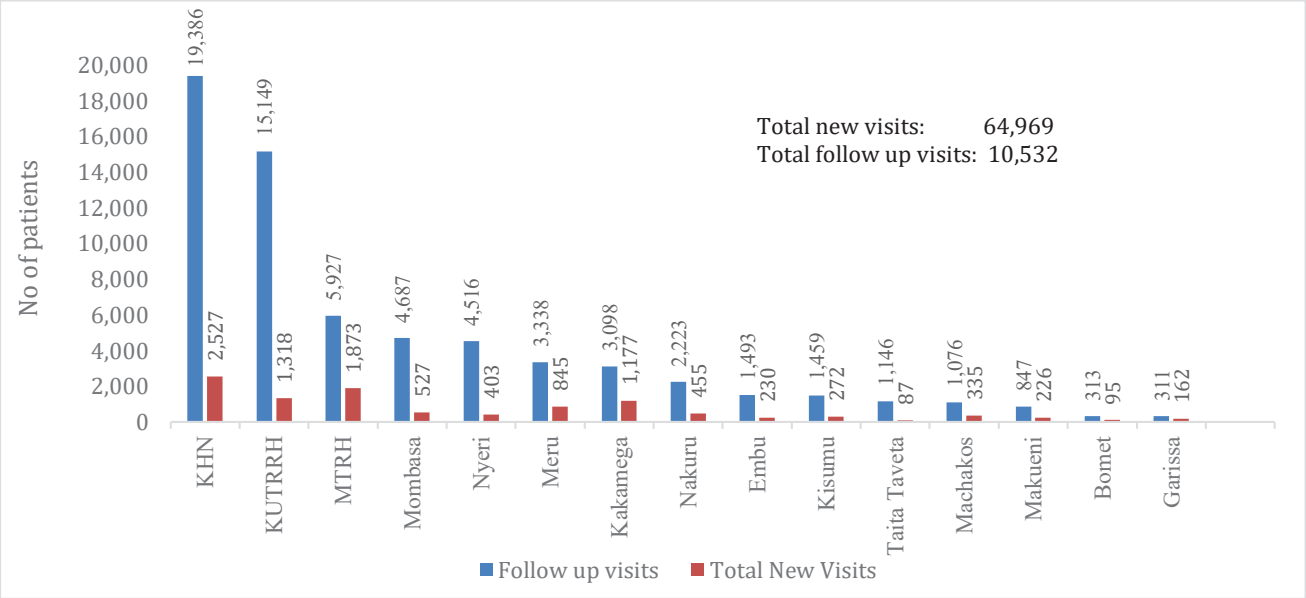

Figure 49: Number of patient visits seen at public cancer centres, FY 2020/21

5.3.3 Mental Health

It is estimated that the burden of mental illness in Kenya is 25% among outpatient cases and 40% among inpatient cases, with an estimated prevalence of psychosis of 1% in the general population. As shown in figure 50 below, the number of mental disorders/100,000 new OPD visits more than doubled between 2017/18 to 2020/21, with a steep rise being observed between 2019/20 and 2020/21, coinciding with the COVID 19 pandemic.

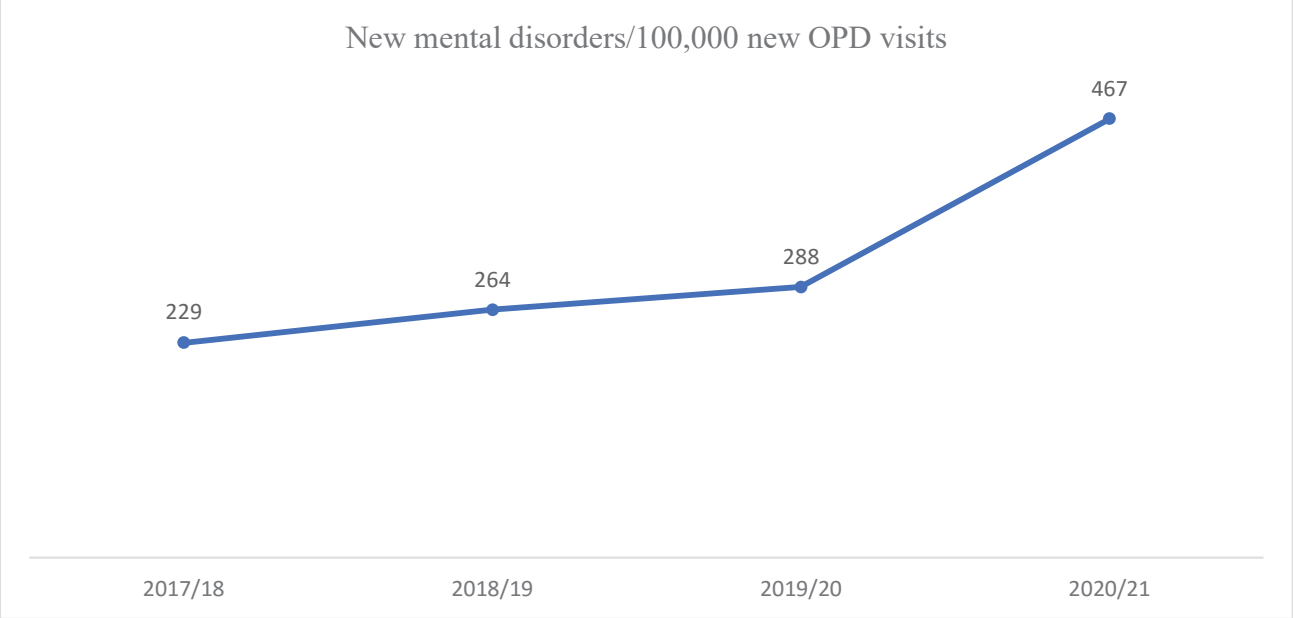

Figure 50: New Mental Disorders/ 100,000 new OPD visits FY 2017/2018 to 2020/2021. Source KHIS (MoH 705 A and B)

Variabilities in county reporting of mental disorders were noted, with Tharaka Nithi, Nairobi, Muranga, Lamu and Nyeri reporting the highest rates per 100,000 new OPD visits in 2020/21 while counties in the ASAL region (Isiolo, West Pokot, Marsabit, Mandera and Wajir) reported the lowest rates.

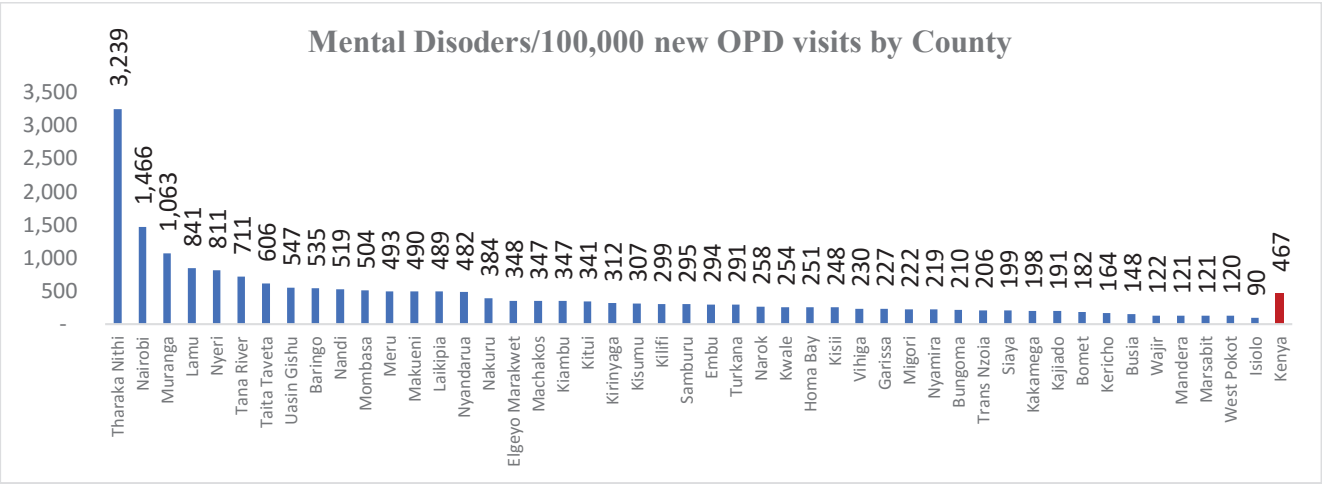

Figure 51: Mental Disorders reported/ 100,000 new OPD visits by County, FY 2020/2021 (MoH 705)

5.4 Reduce the burden of violence and injuries

Highlights

- Road traffic injuries and violence have been ranked as the 7th and 9th leading cause of disability adjusted life years (DALYs) respectively and they account for 8% of all the deaths.
- While road traffic injuries in outpatient as a proportion of all OPD diagnoses reduced from 0.32% to 0.29% in the period 2017/18-2020/21, the target of 0.23% was not achieved.
- The road traffic fatality rate on the other hand increased rather than reducing as planned. There was an increase of 32% from 6.9/100,000 in 2017/18 to 9.1/100,000 population in 2020/21, against a target of 4.4/100,000 population. Only 11 (23%) of counties were within the target of 4.4/100,000 population, with Kirinyaga, Nyeri and Taita Taveta having the highest mortality rates at 19.6, 17.8 and 17.4 respectively.
- Nakuru and Kisii were the leading counties in road traffic injuries per 100,000 new OPD visits in 2020/21, while Elgeyo Marakwet and Uasin Gishu were the leading counties in the other injury categories.
- Meaningful multisectoral collaboration and efficient policy frameworks have facilitated the progress in prevention and control of injuries.
- Low prioritisation of violence and injuries prevention and control at county
- levels, inadequate staff and inadequate funding are some of the challenges encountered in reducing the burden of violence and injuries.

5.4.1 Road Traffic Injuries

Road traffic accidents accounted for 0.29% of cases presented to the OPD and accounted for 9.1 fatalities per 100,000 population.

Table 22: Summary of performance against targets, 2020/21

Indicator	Baseline (2017/18)	Target 2020/21	Performance	Rating *	Source
Road traffic injuries in OPD as a percentage of all diagnoses	0.32	0.23	0.29		KHIS
Road traffic fatalities per 100,000 population	6.9	4.4	9.1		NTSA

Performance Score:** **0-49%,** 50%-79% **and >80%

Figure 52 highlights the increasing trend in the number of road traffic injuries seen in the outpatient department/100,000 new OPD visits between 2017/18 and 2020/21. There has been a gradual increase between the year 2017/2018 to 2019/20 with a sharp rise between 2019/20 and 2020/21. This increase can be attributed to the general increase in motorcycle-related crashes in the country. The high number of motorcycles coupled with weak enforcement of the Traffic Act within this sector is responsible for the increased crashes.

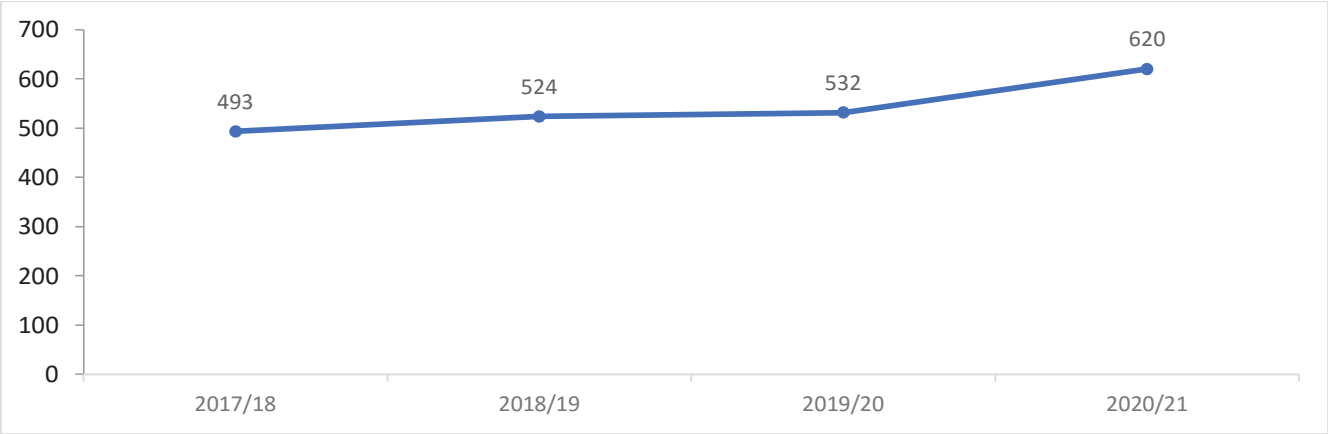

Figure 52: Trends of road traffic injuries/ 100,000 new OPD visits, 2017/ 18-2020/ 21. Source - MoH 705 A and B

Nakuru county reported the highest road traffic injuries/100,000 new OPD visits at 1,414, followed by Kisii at 1,042, Busia at 932 and Uasin Gishu at 855 in 2020/21. Garissa, Nyandarua and Wajir reported the lowest rates at 210, 214 and 224 respectively. The disparities in road traffic injury rate can be attributed to vehicle and human populations, the difference in the road network and usage, and access to health care.

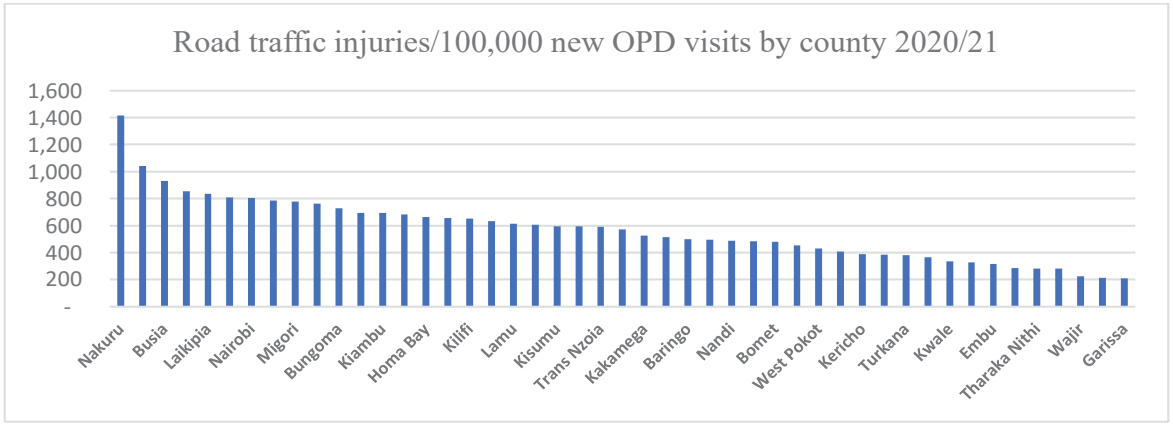

Figure 53: Road Traffic Injuries/ 100,000 new OPD visits by county, 2020/ 21. Source - MoH 705 A and B

A total of 4,465 road traffic deaths were reported in 2020/21, translating to a mortality rate of 9.1/100,000 population; which is more than double the target of 4.4 and an increase of 32% from 6.9/100,000 in 2017/18. Only 11 (23%) of counties were within the target of 4.4/100,000 population, with Kirinyaga, Nyeri, and Taita Taveta having the highest mortality rates at 19.6, 17.8, and 17.4 respectively.

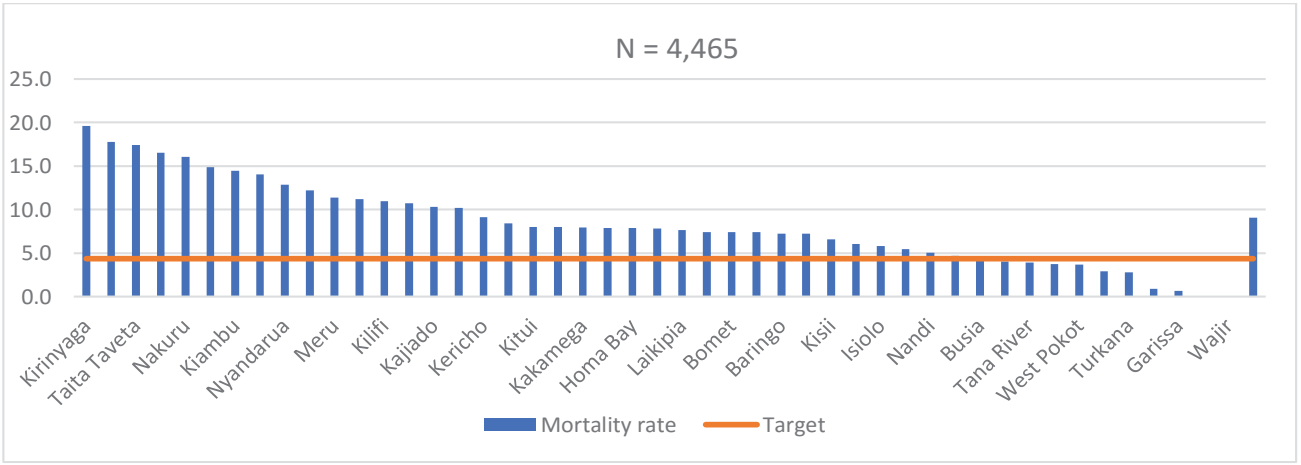

Figure 54: Road traffic mortality rates/ 100,000 population, 2020/ 21. Source- NTSA

5.4.2 Other Injuries

The trend of other injuries excluding road traffic injuries such as falls, burns, and assault is shown in figure 55. There has been a gradual increase in other injuries and violence-related injuries over the years. An overall increase in other injuries can be attributed to increased reporting as a result of sensitization of both heath workers and the community. The increase in violence-related injuries between 2019/20 and 2020/21 is due to the COVID-19 pandemic that saw a rise in violence due to multiple factors including economic disruptions and lockdowns. Cases of burns have been on the rise but declined from the year 2019/20 due to awareness creation on prevention measures in the community.

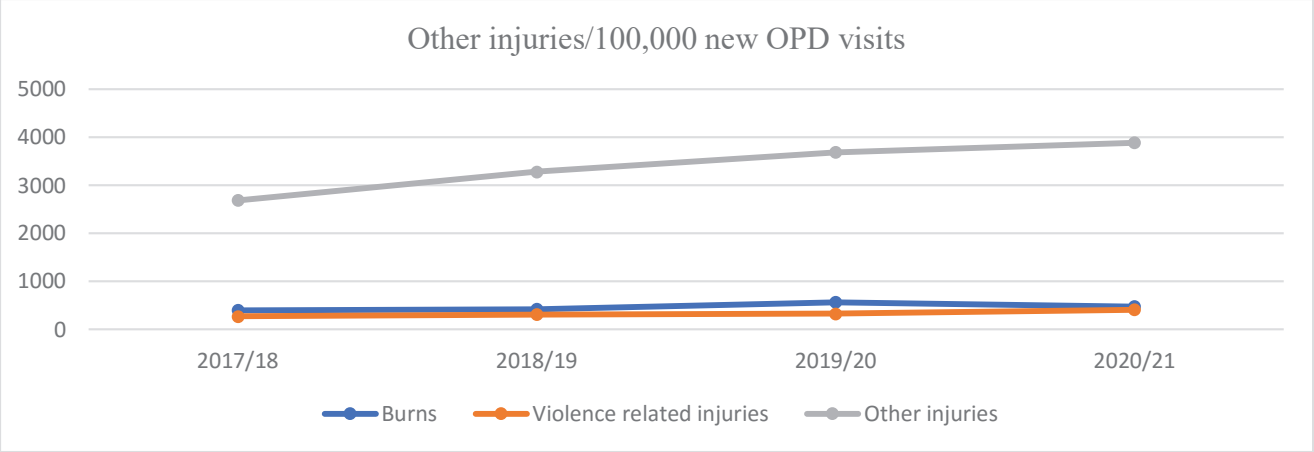

Figure 55: Trend of injuries excluding road traffic crashes/ 100,000 new OPD visits 2017/ 18-2020/21.
Source - MoH 705 A and B

The cases of other injuries/100,000 OPD visits by county are depicted in figure 56, Elgeyo Marakwet had the highest rate of other injuries/100,000 new OPD visits at 9716 followed by Uasin Gishu and Nandi at 8102 and 7584 respectively. Wajir, Tana River, and Mandera reported the lowest rates at 2130, 2349, and 2798 respectively.

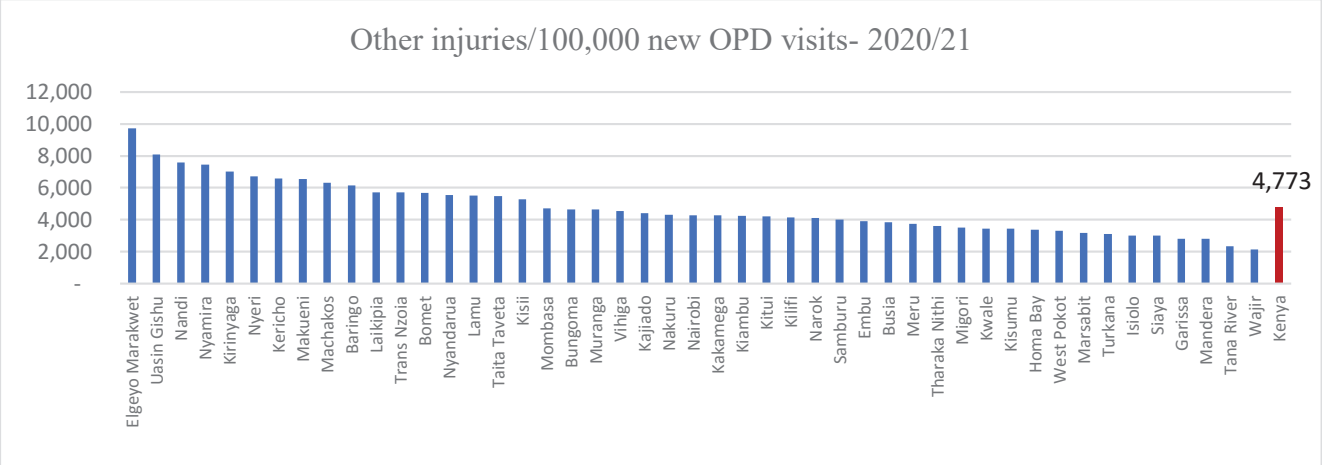

Figure 56: Other Injuries excluding road traffic crashes per county, 2020-21.
Source - MoH 705 A and B

Achievements

- Launch and dissemination of strategic documents and clinical guidelines, including the NCD strategy, tobacco control strategic plan, breast cancer action plan, palliative care policy, cervical cancer advocacy guide, mental health taskforce report, trauma management framework, sickle cell guidelines, haemophilia guidelines, and training

curricular for diabetes for health workers, curriculum on cancer for CHVs, and tobacco control for schools.
- Development of a digital tool for mapping NCD stakeholders and website for the NCD Inter agency website, as well as an electronic NCD Medicines Forecasting Tool.
- Institutionalization of household and community-based screening and referral for diabetes and hypertension leveraging on digital health tools, and initiation of Medical Outpatient Clinics (MOPCs) at the health center level to improve access to care.
- Development and distribution of cancer screening and treatment as well as diabetes and hypertension-specific data management tools to capture more data across the whole continuum of care
- National scale-up of the cervical cancer screening program with close to 6,000 primary health care workers trained in 25 focus counties on screening and treatment of precancerous lesions.
- Signing of MoUs with strategic partners to improve access to services and essential HPTs, such as with Max Foundation for decentralization of the GLIVEC Program to four regional cancer centers and with Novartis towards health systems strengthening for Sickle Cell Disease.
- Establishment of Mathari call center and suicide toll lifeline
- Ratification of the protocol to eliminate illicit trade in Tobacco
- Facilitation of tobacco farmers to diversify to safer and profitable alternatives including beans, sweet potatoes, fruits

Major Challenges
- Weak NCD surveillance and data management systems, with delayed surveys e.g. the Stepwise Survey.
- Inadequate financing at both national and county levels to undertake recurrent activities, as well as limited human resource capacity (both numbers and skill sets) on NCD programming.
- Disruption of activities by the COVID-19 pandemic.
- Low NCD and mental health literacy at a community level
- High cost of NCD medicines.
- Suboptimal engagement of sectors beyond health in NCD prevention and control.
- Inadequate policies and actions to control advertising and marketing of unhealthy products and practices, food labelling and nutrition profiling.

Priorities and Recommendations
- Strengthen data management systems through the dissemination of the NCD-specific tools, finalization of the trauma registry, scale up electronic health records, and institutionalization of NCD data quality audits.
- Conduct the second STEPs survey to have more current population-level data for decision-making.
- Strengthen coordination and collaboration mechanisms with other sectors including mainstreaming NCDs prevention and response into other Ministries, Departments, Counties and agencies to improve awareness and sustain the screening rates
- To increase financing for NCD prevention and control, leverage the Tobacco Control Fund to support NCD interventions and establish a conditional grant for first-line diabetes and hypertension medications at the primary care level.
- Awareness creation on NCDs using various channels including mass media, as well as scaling up of community health volunteer-led NCD health education, screening and referral services.
- Establish wellness clinics in health facilities for early detection of NCDs
- Increased infrastructure and development of resources for specialized care for NCDs (oncology, CVDs, renal health, etc.)
- Implement the trauma framework to ensure improved access to timely care for injuries.
- Formulate policies that promote the adoption/consumption of healthy diets.

5.5 Provide essential health services

5.5.1 Reproductive and Maternal Health Services

Key Messages

- 4th ANC coverage was at 50 % with a slow increase from 38% in 2016/17 mainly due to late initiation of early ANC visits
- Skilled birth attendance coverage was at 78% in FY2020/21 has increased from 58% in 2016/17.
- Post-Natal Care coverage within 48 hours has increased from 26% in 2016/17 to 52% in 2020/21
- Facility still birth rates have reduced from 12.4 to 9.3% from 2016/17 to 2020/21
- Despite increasing ANC and SBA coverage, FMMR has remained fairly constant at 127/100,000 in 2016/17 to 105/100,000 in FY 2020/21
- Haemorrhage accounted for 50% of maternal complications and obstructed labour accounted for 30%. Targeted interventions to improve the quality of care of services offered to address these top 2 causes should be prioritized
- Across all RMNCAH indicators, the lowest performance on FP uptake, 4 ANC coverage, and Skilled birth attendance was lowest in the arid and semi-arid lands(ASAL) counties (Wajir, Narok, Mandera, Turkana, Samburu, Garissa,) with subsequent high FMMR. FGM was also highest in these same ASAL counties. RMNCAH performance in Tana river, Kwale. West-Pokot and Elgeyo-Marakwet is also generally low.
- Special focus should be given to supporting low-performing counties including the ASAL counties implementing strategies to improve RMNCAH performance based on their specific challenges to leave no one behind, reduce inequalities and improve the overall national performance
- Cases of Sexual and Gender-based violence increased 3fold in FY 2020/21 due to the COVID-19 pandemic

5.5.2 Family Planning

The family Planning program is mandated to provide technical assistance to the country to facilitate individuals and couples to attain their desired family size by spacing pregnancies and infertility management. These will be realized by promoting universal access to quality management of fertility to include, prevention of unplanned pregnancies, universal access to informed quality contraception, management of RH commodities, prevention of stockouts and expansion of method mix, promoting universal access to quality comprehensive contraception counseling.

To help achieve the above, critical indicators monitored are:

- Women of reproductive age receiving family planning coverage
- Couple of Year Protection
- Post-partum family planning uptake

WRA receiving FP Commodities

Figure 57 highlights the uptake of family planning services over the years from 2016/17 to 2020/21. Proportion of WRA receiving FP commodities was 42.3% in FY 2020/21, a small decline compared to 44% in FY 2019/20.

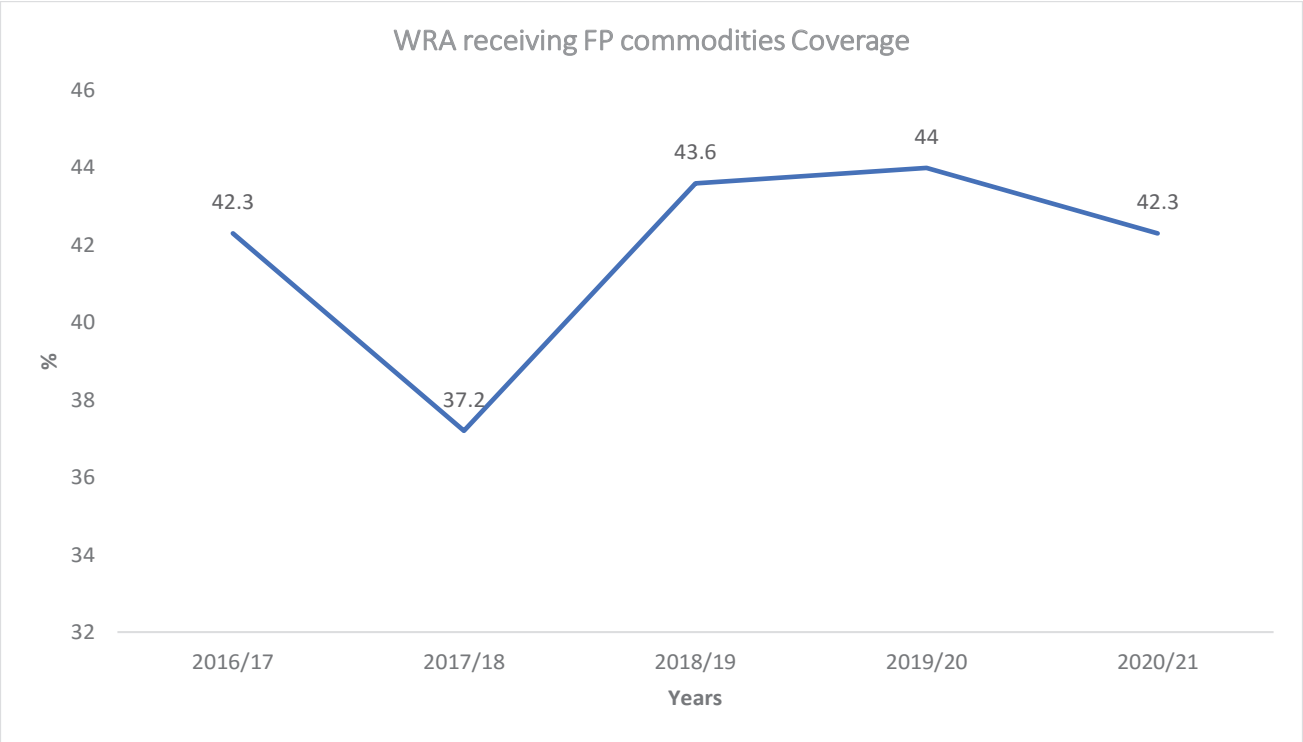

Figure 57: WRA receiving FP Commodities Coverage

Couple Year Protection

The estimated protection provided by family planning (FP) methods during one year, is based on the volume of all contraceptives sold or distributed free of charge to clients. This increased to 3.7 million in FYI 2020/21 from 3.0 million in FY 2016/17. Long-acting methods (Implants and IUDs) provided more protection in 2020/2021 compared to short-acting methods both at the national and county level. Although the volume of condoms and ECPs distributed was high, they confer a low CYP because they are very short-acting and hence have a low conversion factor to CYP. [6]

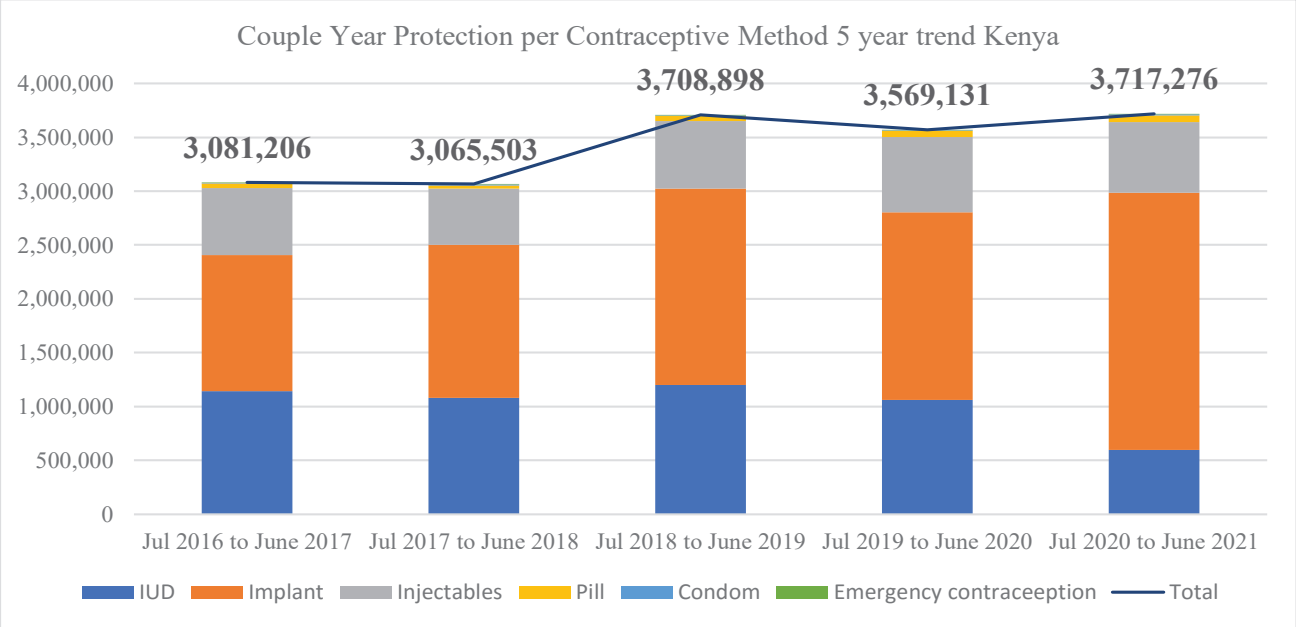

Figure 58: Country couple-year protection per contraception method population trend from June 2016 to June 2021

[6] https://www.usaid.gov/global-health/health-areas/family-planning/couple-years-protection-cyp

5.5.3 Maternal Health Services

The Ministry of Health guides the delivery of reproductive maternal health services through the maternal newborn program. The program's mandate lies in promoting the health of women during pregnancy, childbirth and the post-partum period, and the health of newborns, this is to prevent maternal and newborn morbidity and mortality.

To monitor the progress and achievement of MNH activities, the following critical areas are monitored.

- Antenatal Care
- Skilled Deliveries
- Post Natal Care
- Newborn care and outcomes

The key performance indicators in maternal and child health 2020/21 are summarized in table 23.

Table 23: Maternal and New-born health Performance

	Achievement 2016/17	Achievement 2017/18	Achievement 2018/19	Achievement 2019/20	Achievement 2020/21	Target 2021/22	Rating*
1st Antenatal Care Coverage (%)	75.8	77.5	83	90.8	95.7	100	
4th Antenatal Care (ANC) Coverage (%)	38.3	36.8	51.4	51	50.3	55	
Deliveries conducted by Skilled Birth Attendants (%)	57.5	56.6	66.8	72.1	78.1	70	
Caesarean section rate (%)	13.5	14.4	14.5	15.4	16.3	15	
PNC Attendance 1st Visit (%)	36	34	45	53	55	100	
Facility Maternal Mortality Ratio per 100,000	127.3	98.7	102.1	98.4	106.7	89	
Number of Maternal Deaths reported in health facilities	1,239	951	1,171	1,150	1,259	-	
Fresh Still Birth Rate (per 1000 births)	12.4	12.5	9.8	10	9.3	8	

Source: KHIS

a) Antenatal Care

Ninety-six percent of all pregnant women attend at least one ANC clinic. However, only 52% attended at least 4 ANC visits in the FY 2020/21 against a target of 57%. Although this is an increase over the years, the gap in achieving 4 ANC visits is attributed to women starting ANC clinic late, in the 2nd and 3rd trimesters. The community health systems are being used to encourage mothers to seek ANC services within the 1st trimester as per WHO recommendations.

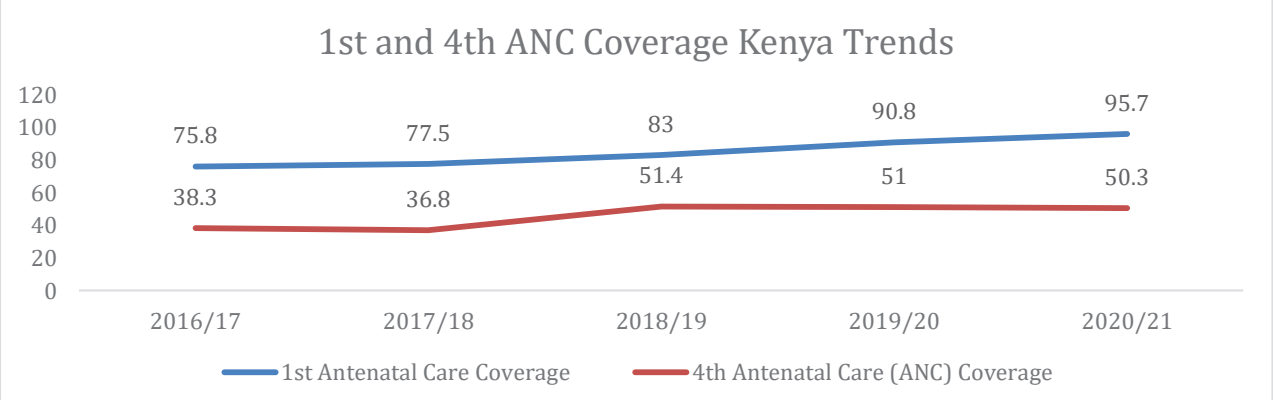

Figure 59: Trends in Antenatal Care Attendance

Nyamira (71%), Makueni (68%), Siaya (63%), Laikipia (62%), and Nairobi (62%) had the highest proportion of pregnant women completing at least 4 ANC visits while Isiolo(22%), West Pokot(29%), Elgeyo Marakwet(31%), Wajir(35%) and Narok(36%) had the lowest. The counties with the lowest performance are mostly from the ASAL counties with the communities being nomadic.

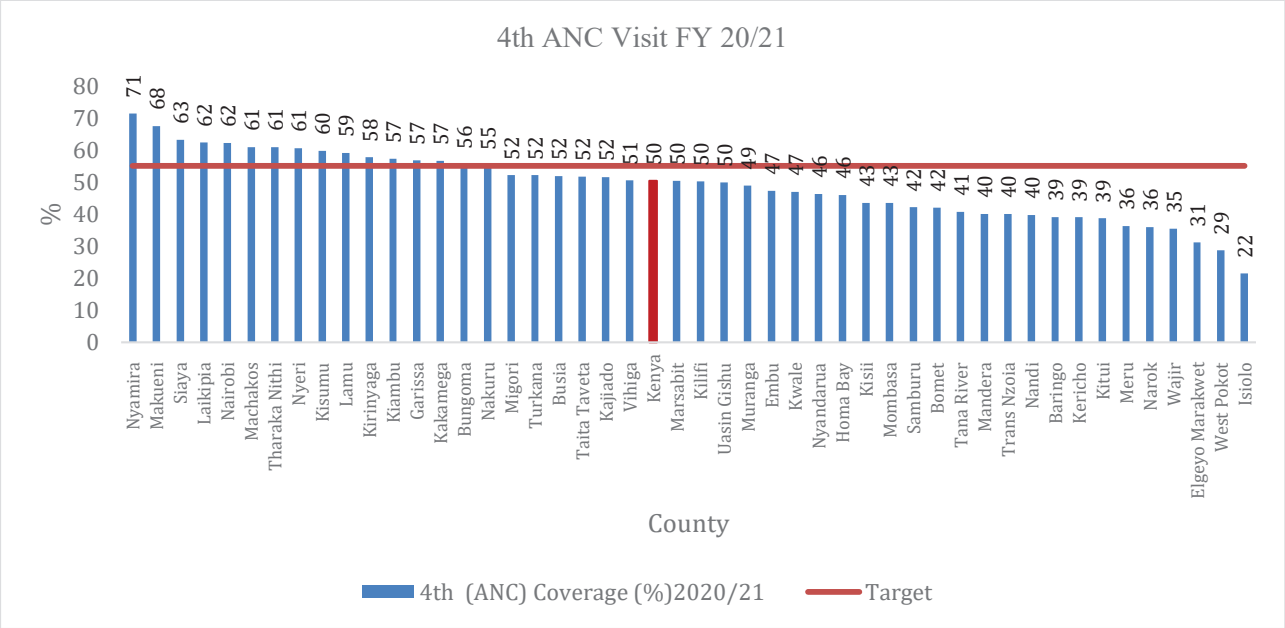

Figure 60: Antenatal Care Attendance in the Counties

b) Skilled Birth Attendance

Skilled birth attendance has been increasing steadily over the last 5 years from 57% in 2016/17 to 78% on 2020/21, exceeding the national target of 70%. This has been attributed to the free maternity services under the Linda Mama initiative.

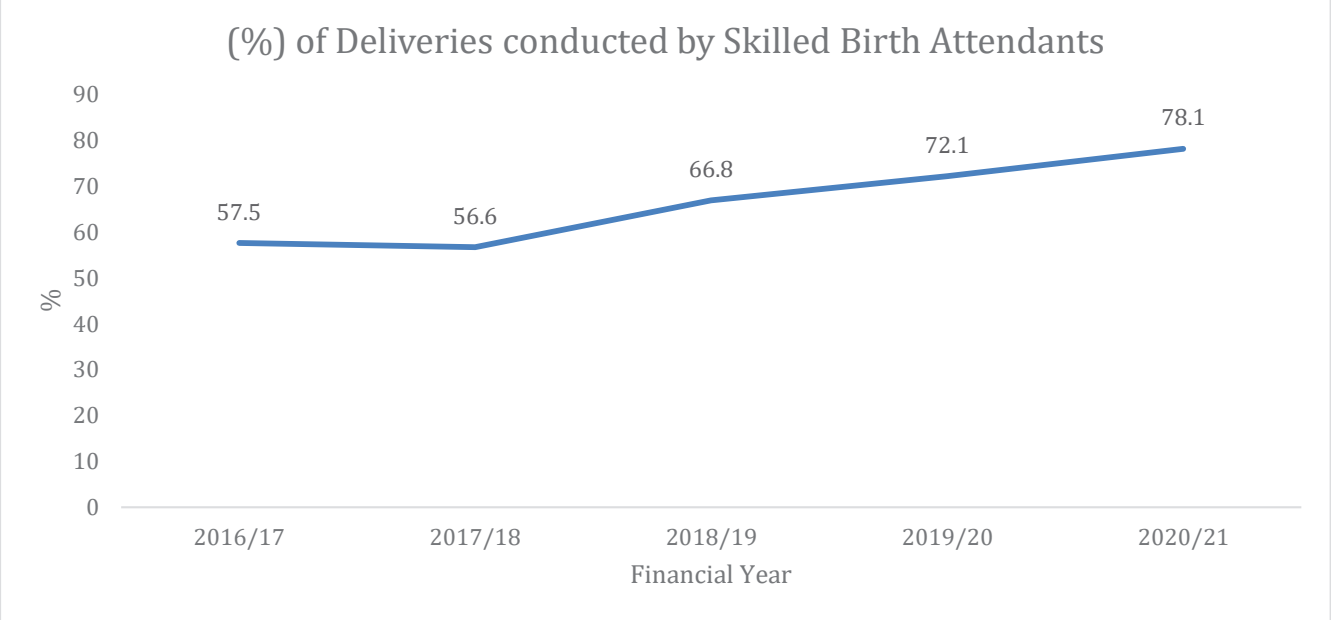

Figure 61: Trends in deliveries conducted by skilled birth attendants

In the FY 2020/21, Kiambu, Kirinyaga, and Laikipia surpassed their expected SBA coverage which may be due to these counties providing delivery services for mothers from neighboring counties. Skilled deliveries were however low in the North eastern parts of the country which are arid and semiarid lands. These include Wajir, Tana River, Samburu, Narok, Garissa and Turkana counties with SBA coverage of less than 60%.

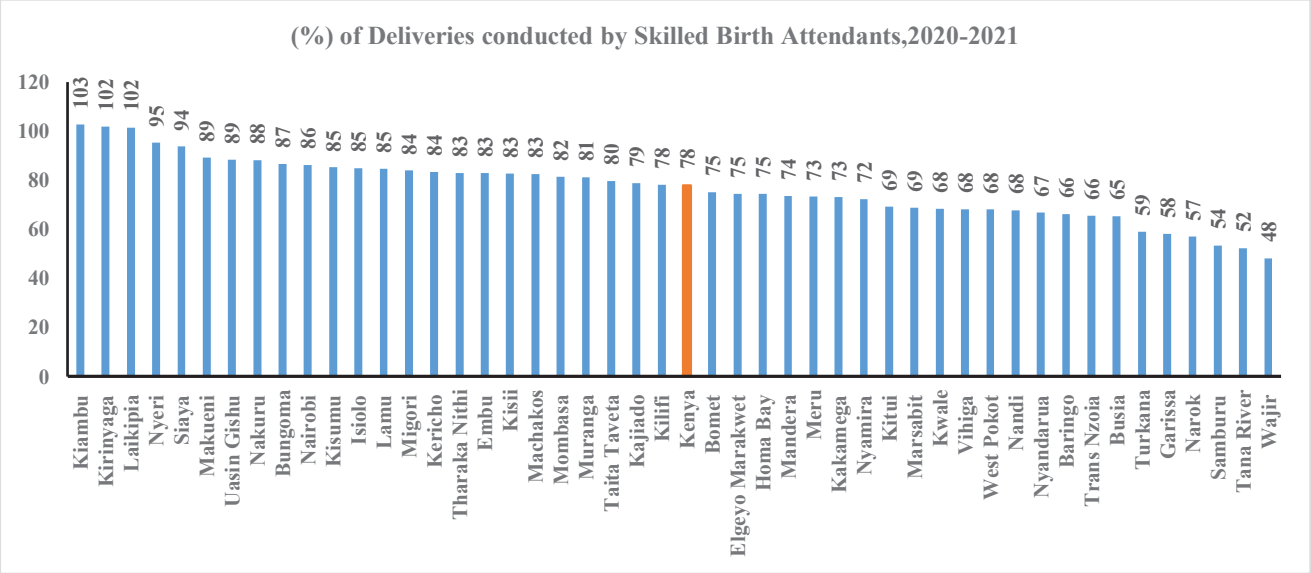

Figure 62: Deliveries conducted by skilled Birth attendants by County

Delivery Complications

The leading causes of maternal complications have remained the same over the years. In FY 20/21, the most common complications in pregnancy remain post-partum hemorrhage (36%) followed by obstructed labour (30%). Antepartum hemorrhage accounted for 14% of complications, bringing hemorrhage to account for 50% of all labour and delivery complications. Eclampsia and sepsis caused 13.8% and 4.1 % of the complications respectively.

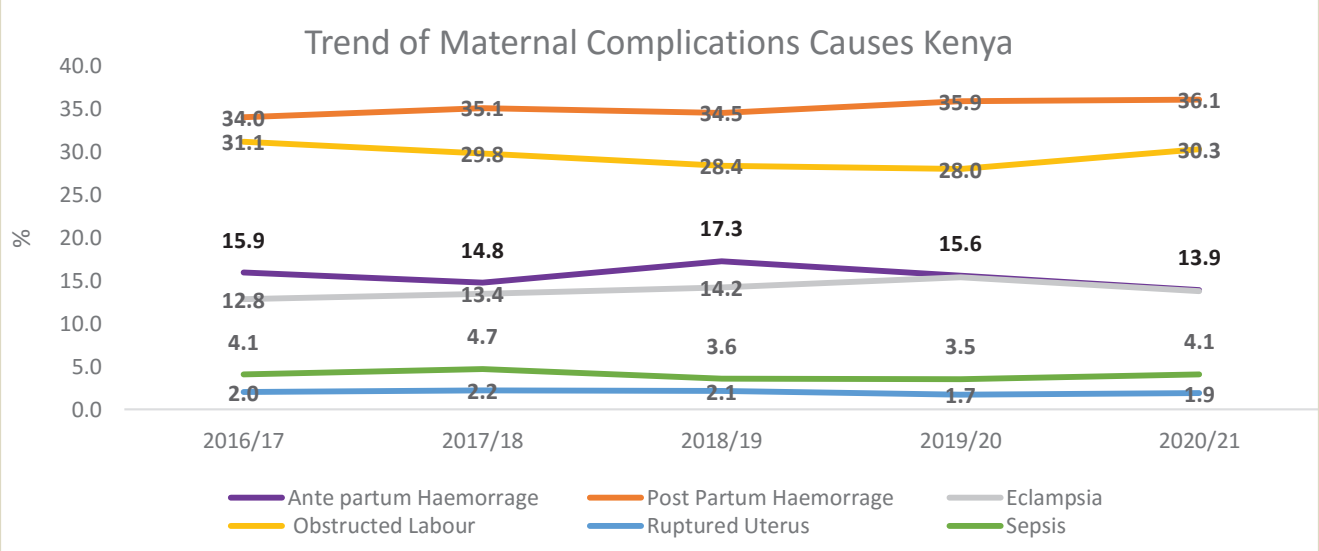

Figure 63: Maternity Complications

Cesarean Sections

The gradual increase in Caesarean section rate over the years has seen it reach a high of 16%. The WHO recommendation for CS rate is 10-15%, with rates below 10 possibly indicating inadequate access and utilization of these services. Levels above 15% could indicate overuse of CS, not only for emergency cases or complications but for elective reasons by the patient or provider.

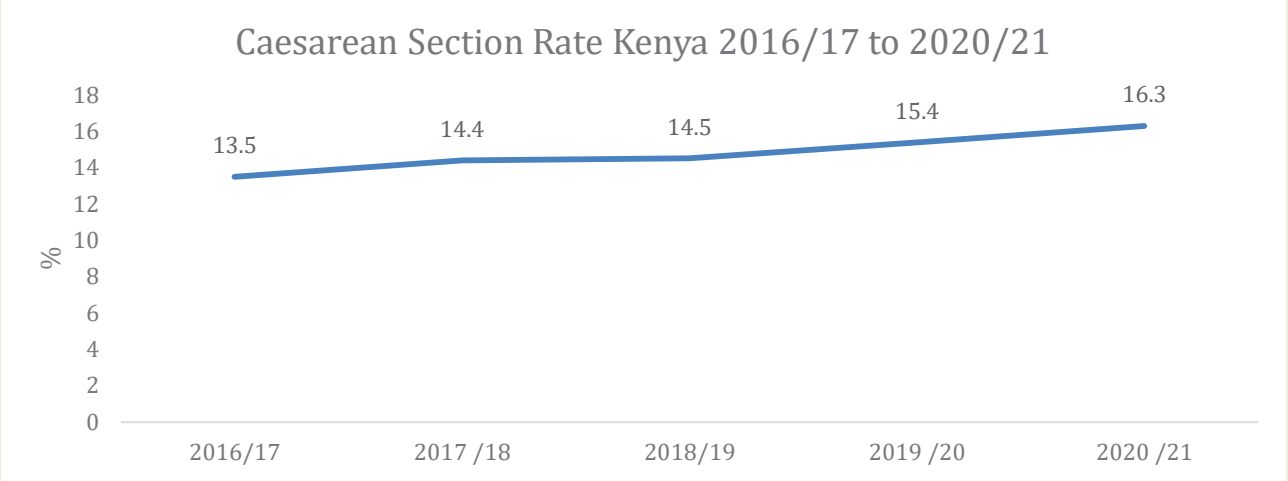

Figure 64: Yearly Trends in Caesarean Section

The National Average for the caesarean section Rate is 16% with 20 counties having a higher caesarean section rate than this. Kirinyaga, Kiambu, Nairobi, Embu, Tharaka Nithi, Nyeri and Meru counties have the highest Cesarean Section rates. However, CS section rates are low in the ASAL and Western regions of the country with CS section rates below 5% in Mandera, Wajir and Tana River. All hospitals- Level 4 -6 facilities should offer comprehensive emergency obstetric care services in addition to the basic ones. According to the KHFA 2018 report, availability and access to caesarean sections and blood transfusion as per the Kenya Health Facility Assessment 2018 findings showed the proportion of hospitals offering caesarian sections was 68%, with 69% offering blood transfusion services against the expected100% availability of these in Hospitals. Only 12% of all health facilities offering delivery services offered all the 7 BMONC functions. This points to a large gap as 78% of women delivering in health facilities may not be accessing a lifesaving BMONC of CMONC services in the facility which could avert a maternal death.

Caesarean section rates signify access to the lifesaving procedure. Rates above 15% have not been associated with improved mortality outcomes and might signify overuse of CS. Rates less than 10% indicate a lack of availability of the service and access. An evaluation to assess the Caesarean section rates should be conducted per county to assess the driver of the rates. CS rates could be high in counties with high referral facilities or could be driven by a preference for elective CS or provider behaviour based on insurance reimbursement rates. Counties with low CS rates and align interventions to those causes.

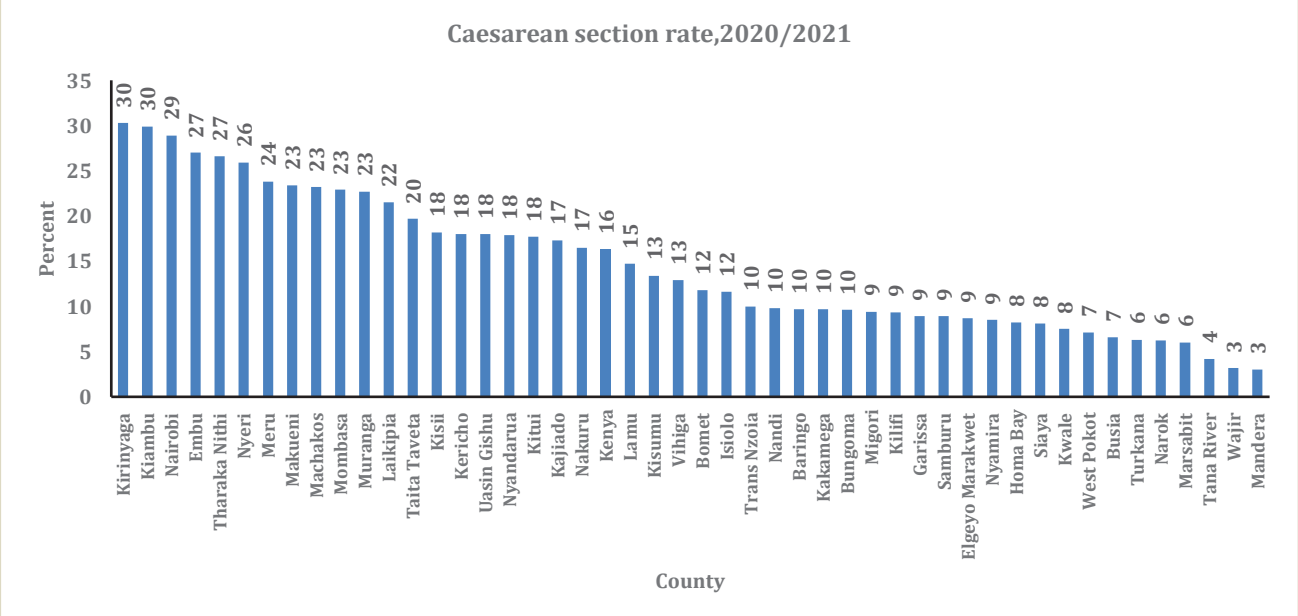

Figure 65: Caesarean Section Rate per County 2020/21

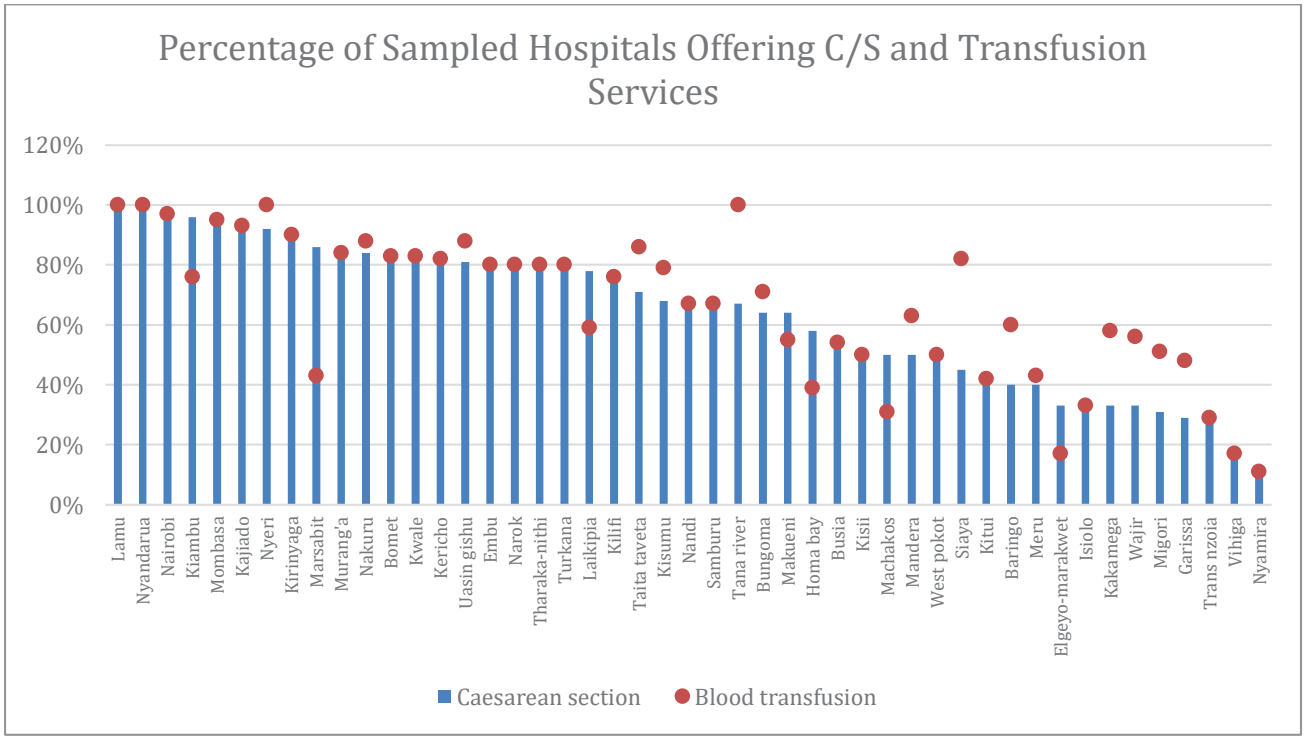

Figure 66: Hospitals offering C/S and blood transfusion services

c) Post Natal Care

Post-natal care within 48 hours (1st PNC visit) in FY 20/21 was 52% from 26% in 2016/17. This progressive increase is mainly attributed to improved reporting on post-natal care. Most women receive postnatal care after delivery or within 48 hours, which is before the discharge of the woman from the hospital. It is therefore expected that there would be a high proportion of women benefiting from postnatal care immediately post-delivery, but it has been noted that this service is assumed to be routine and thus, is not documented hence the seemingly low PNC coverage.

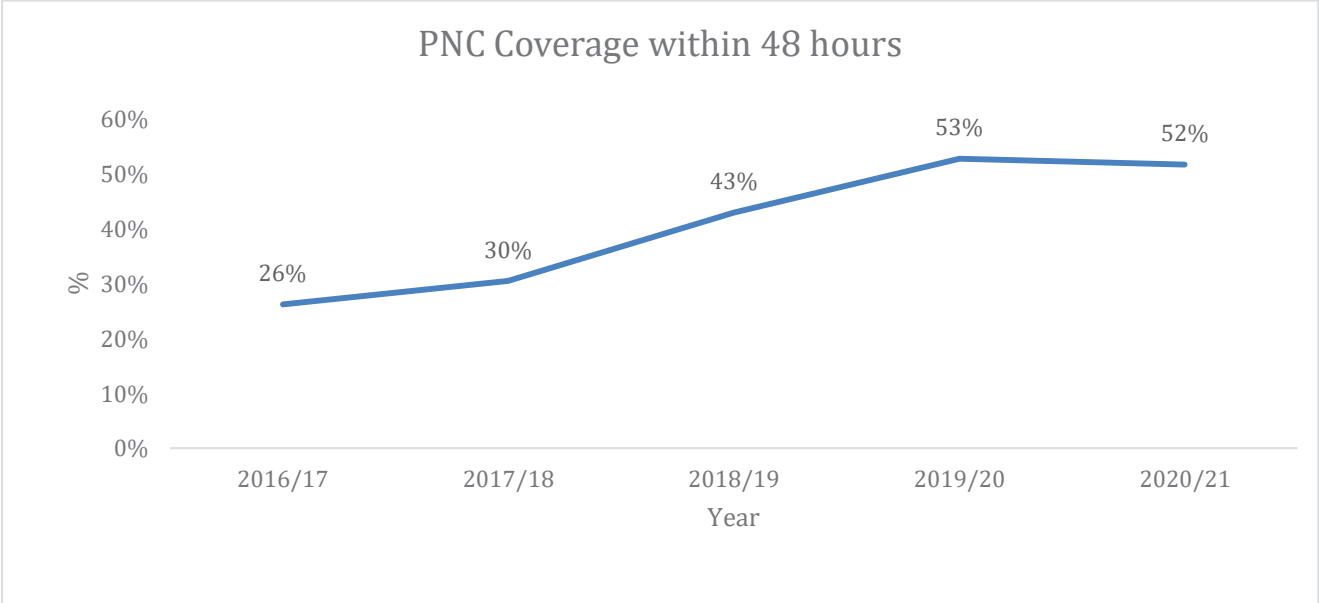

Figure 66: Yearly trends in Postnatal Care attendance, 2016-2021

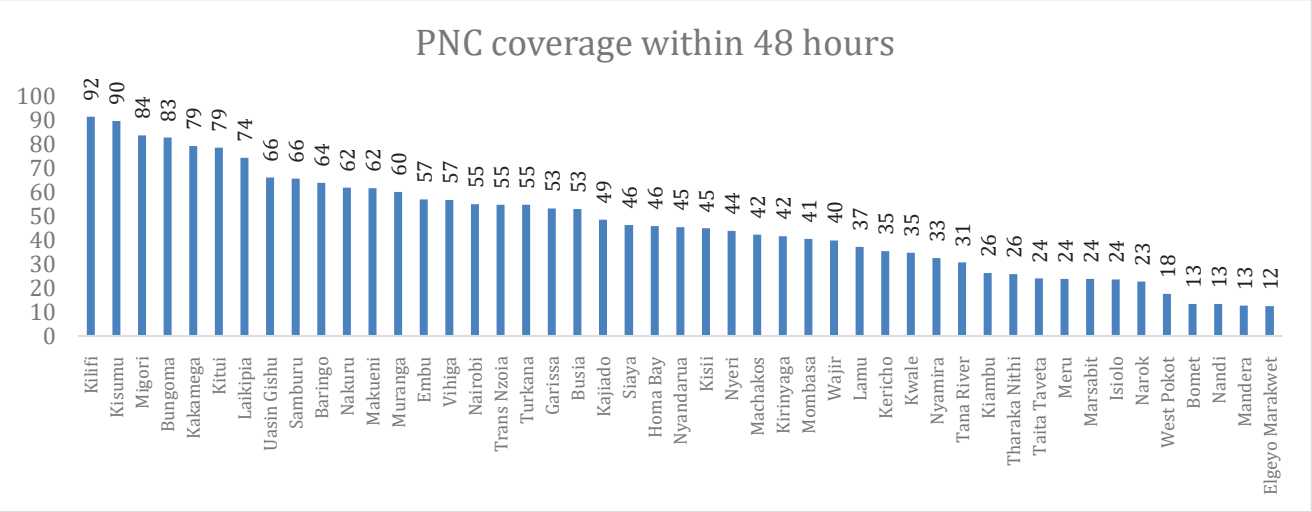

Figure 67: PNC Coverage within 48 hours per county

d) Facility Maternal Mortality

The facility maternal mortality rate (FMMR) has remained fairly constant in the last 5 years with a slight increase to 104 /100,000 deliveries reported in FY 2020/21 compared to 98/100,000 in FY 2019/20.

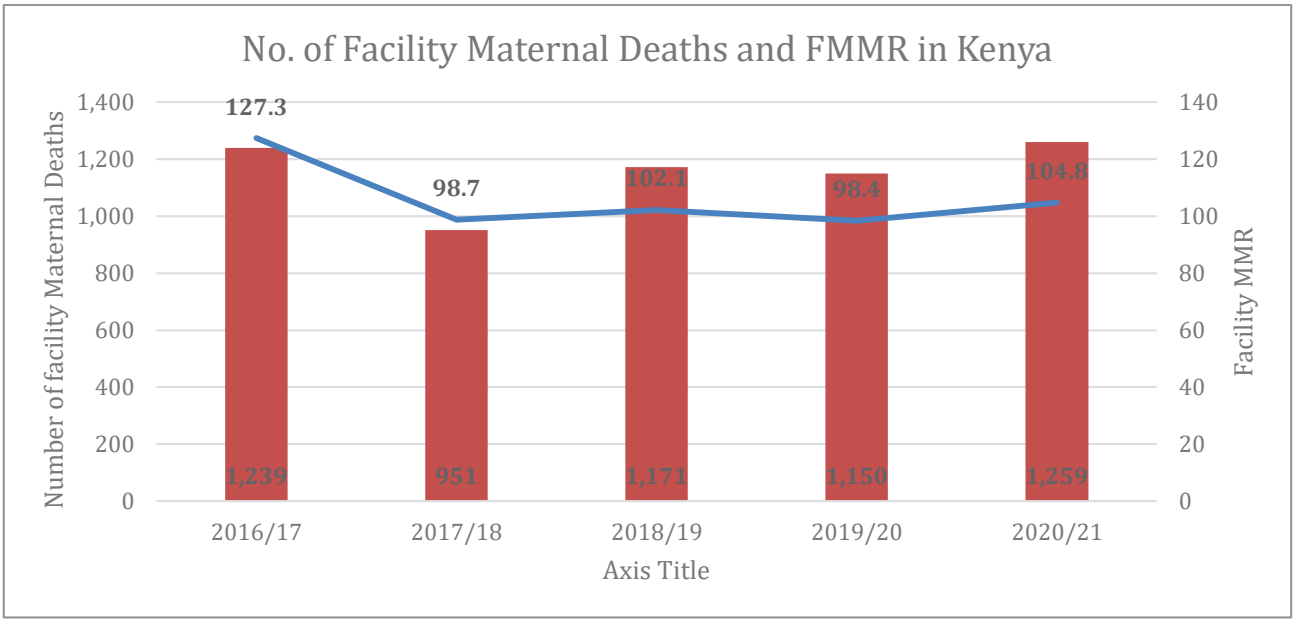

Figure 67: Trends in absolute number of Facility Maternal Mortality and the Facility Maternal Mortality Rate

The county-specific maternal mortality rates are illustrated in figure 68. Nairobi county had the highest number of maternal deaths with 138 out of 213 deaths taking place in Kenyatta National Hospital. These were mostly referral cases from other hospitals within and outside Nairobi. The FMMR however may not be accurate in depicting which counties had the highest maternal deaths as more deaths may take place in the community for counties with low skilled birth coverage. Facility reporting of maternal deaths might also be suboptimal in some facilities leading to an apparent low FMMR in counties with poor reporting.

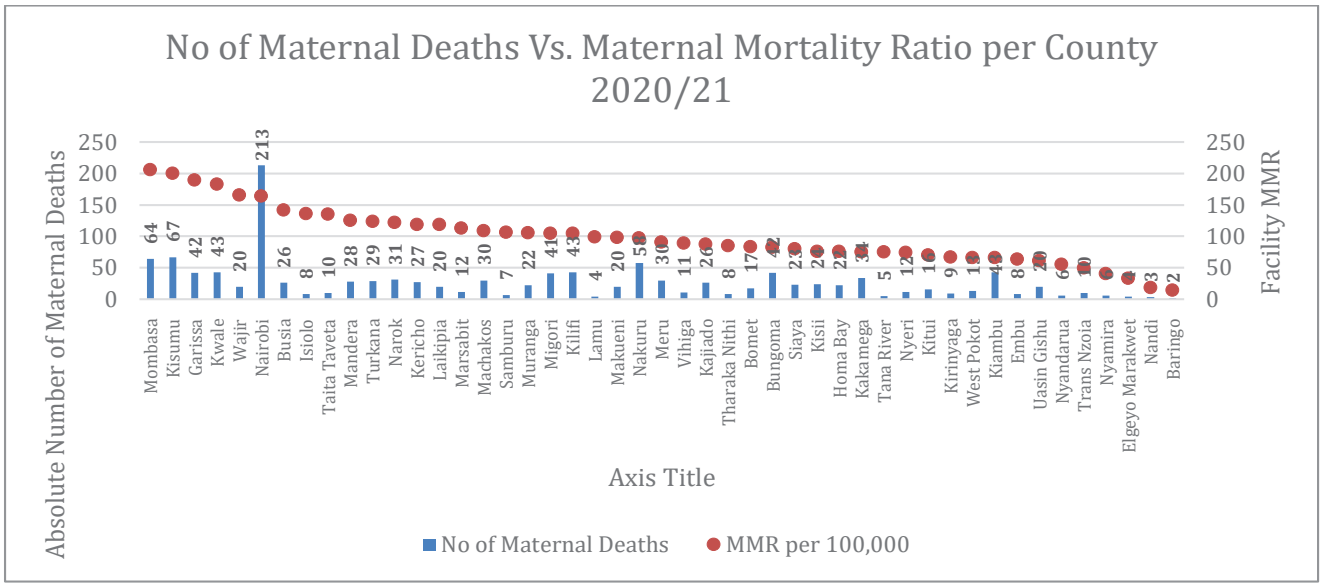

Figure 68: Facility Maternal Mortality Rate per 100,000 deliveries and absolute number of maternal deaths per County

Facility Maternal Deaths Audited

There is a continued improvement in maternal audits carried out over the years from 2016/16 to 2018/19 but this dropped in 2019/20 and 2020/21. The expectation is that all maternal deaths should be audited and action points identified and implemented to prevent future maternal deaths. Efforts to strengthen this reporting through MPDSR committees continued to be supported across the counties and health facilities.

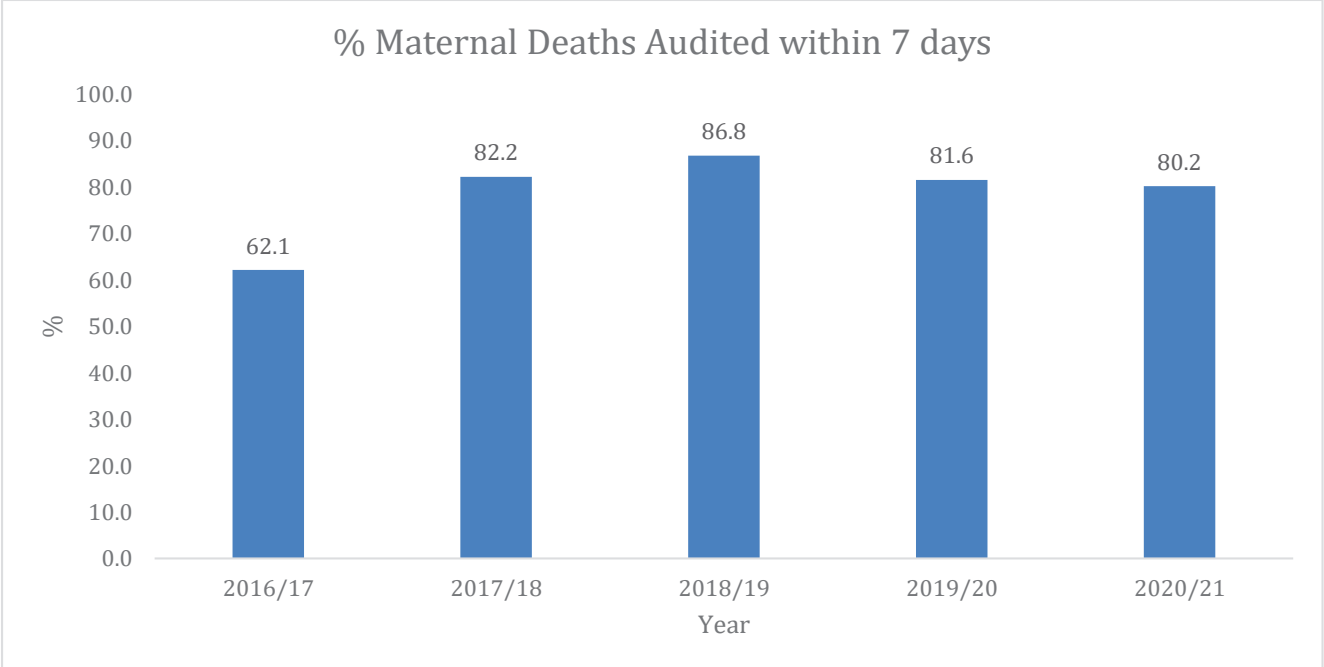

Figure 69: Yearly trends in maternal deaths and audits

e) Still Births

The overall rate of stillbirths decreased slightly over the last 5 years. Fresh stillbirth occur during the labour process and indicates a gap in care during childbirth. Macerated still births occur in utero before labour begins and points to inadequate care during pregnancy or antenatal care. Focus on interventions towards improving the care during childbirth, where trainings on skills and knowledge to enable the provision of obstetric and newborn emergencies is key in reducing fresh stillbirth and focused antenatal care and health education are key strategies to reduce macerated still births. The revised guideline on

obstetric and perinatal care, The Maternal and Newborn Standards of Care, and the EmONC Mentorship Package were developed for use in the clinical setting to build the capacity of health care providers on emergency maternal obstetric and newborn emergencies, therefore decreasing the number of still births.

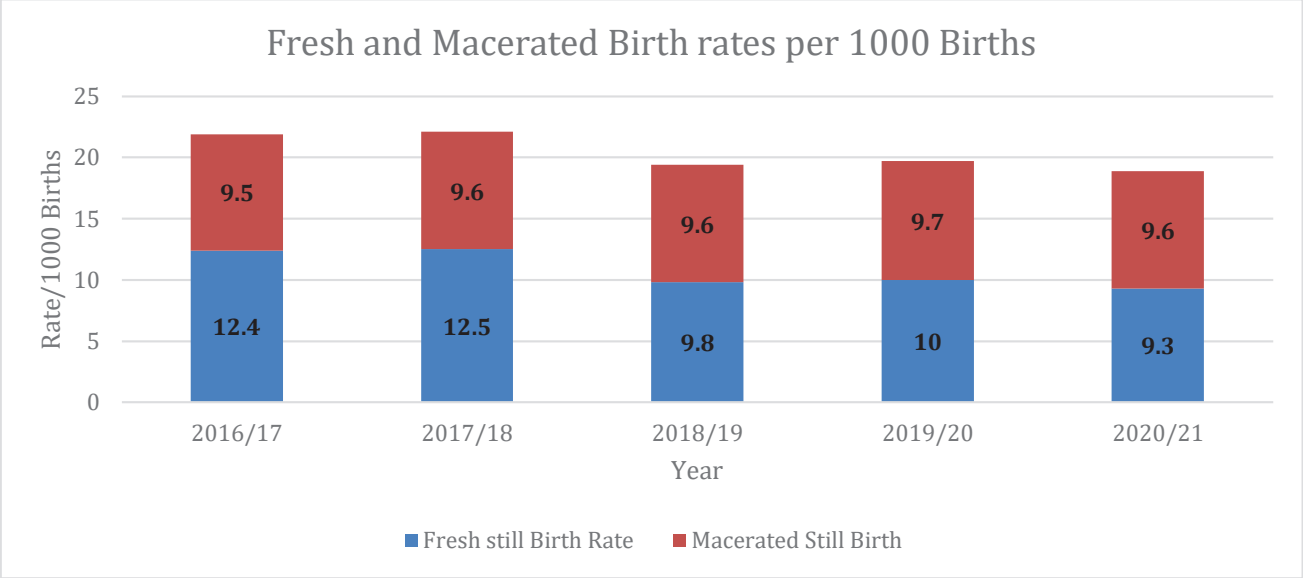

Figure 70: Yearly Trends in Fresh Still birth and macerated still birth, 2017-2021

Tana River (27.8), West Pokot (27.3), Samburu (27.1), Garissa (25.4) and Lamu (24.8) had the highest proportion of still births per 1000 deliveries. West Pokot, Samburu, Tana River and Garissa also have the highest fresh still birth rate which indicates need to improve quality of care offered during labour and delivery.

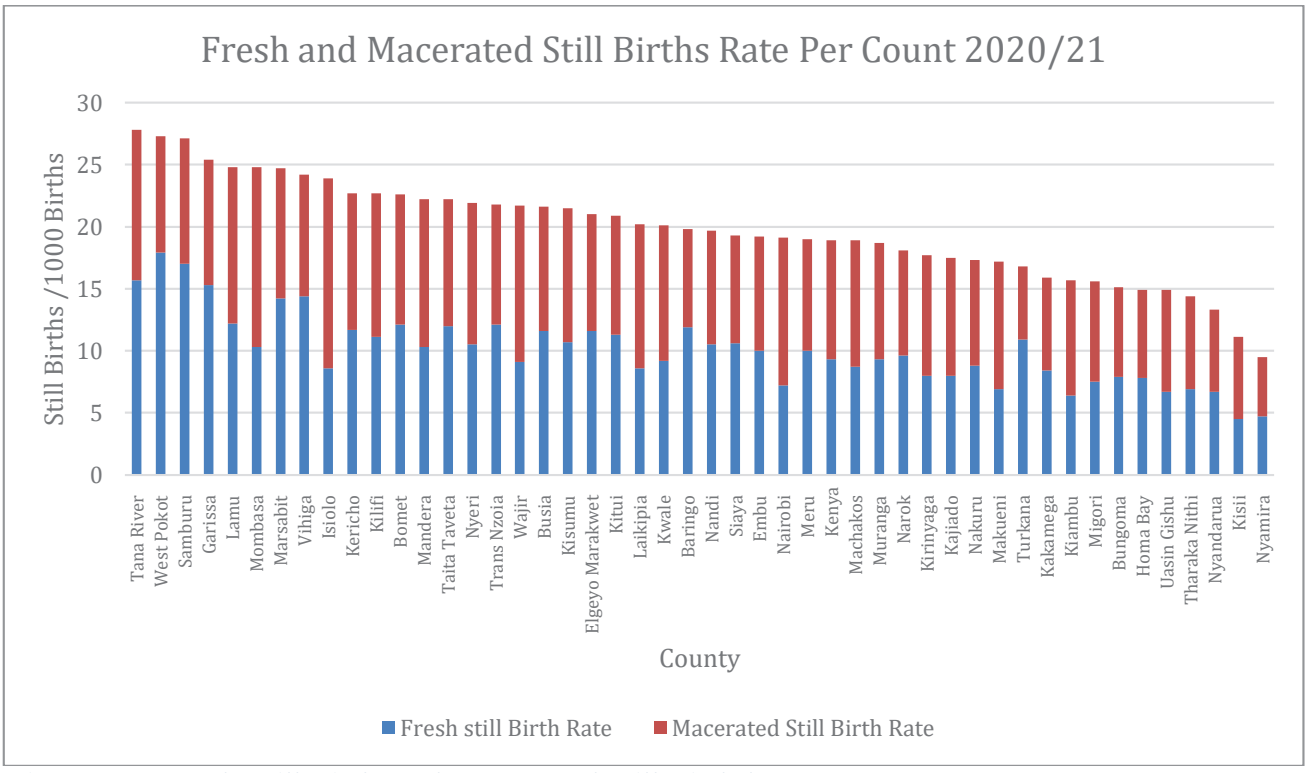

Figure 71: Fresh Still Birth and macerated still Birth by County

5.5.4 Reproductive Health

Sexual and Gender-Based Violence (SGBV)

Sexual Gender-based Violence (SGBV) is a serious global health, human rights, and development issue. In Kenya, there is a noted increase in SGBV cases against women and girls including Intimate Partner Violence (IPV), rape, sexual exploitation and psychological abuse. There was a sharp increase in the number of reported SGBV cases in the FY 2020/21; and was likely related to the restriction in movement, curfew which limited psycho-social activities and increased economic stressors due to the COVID-19 pandemic.

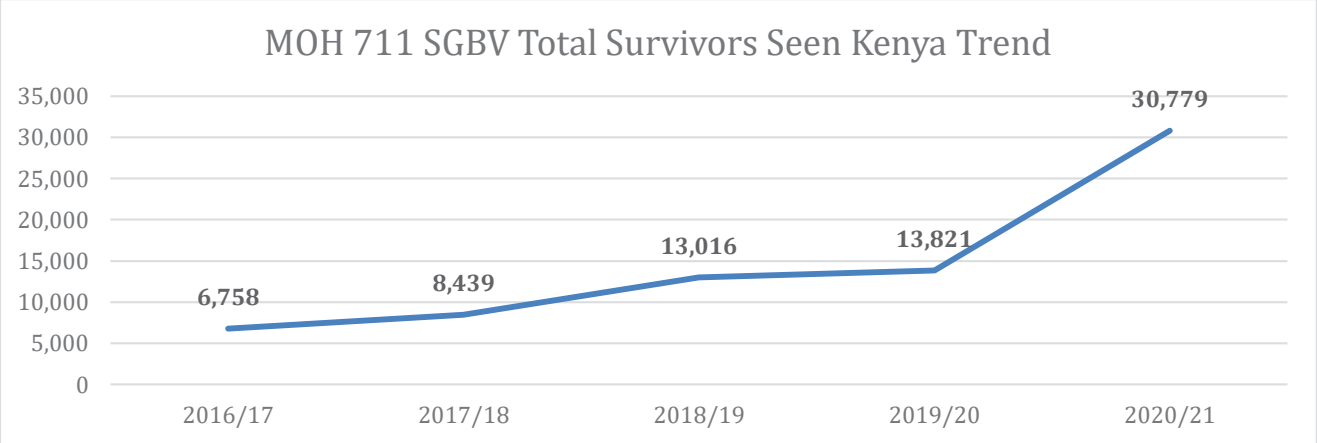

Figure 72: Trend of SGBV Survivors seen in Kenya

In 2020/21, 30,779 SGBV cases were seen with only 64% (19,741) presenting within 72 hours. Of the total cases seen,88% of those eligible to receive ECP (5,967) received ECP. In addition, 45% of the cases received PEP however only 41% of them completed the PEP dose. This is likely due to the clients not coming back for the scheduled follow-up visits.

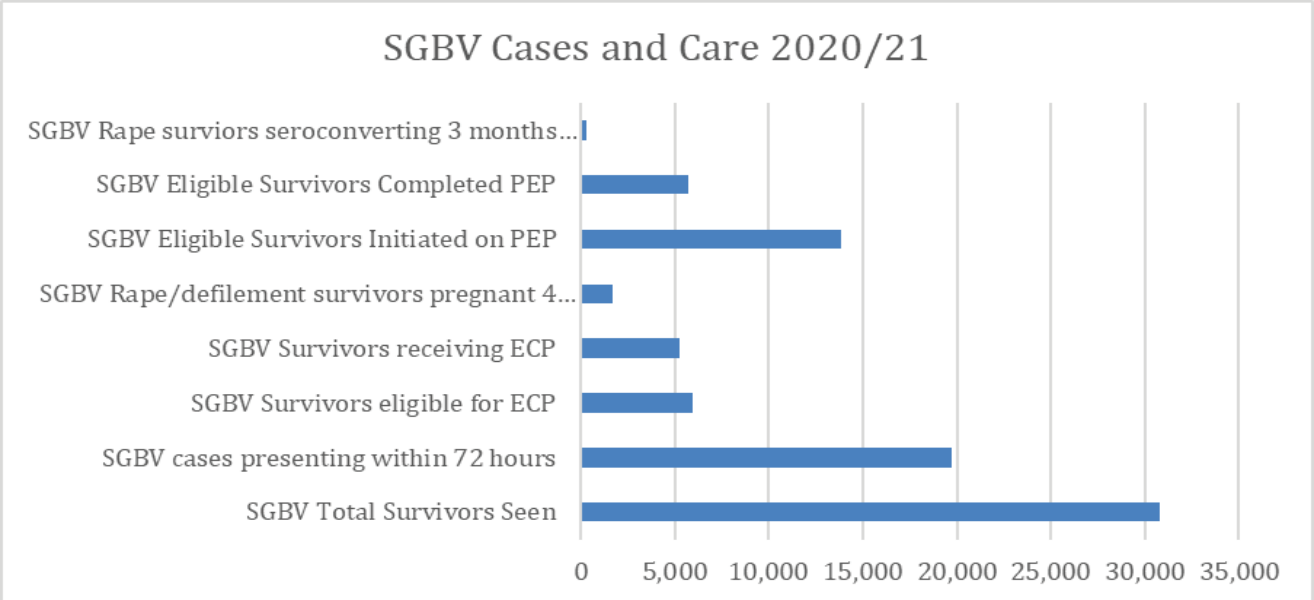

Figure 73: SGBV Situation in Kenya 2020/2021

The highest number of SGBV cases were reported in Nairobi, Kisumu, Uasin Gishu, Bungoma and Siaya.

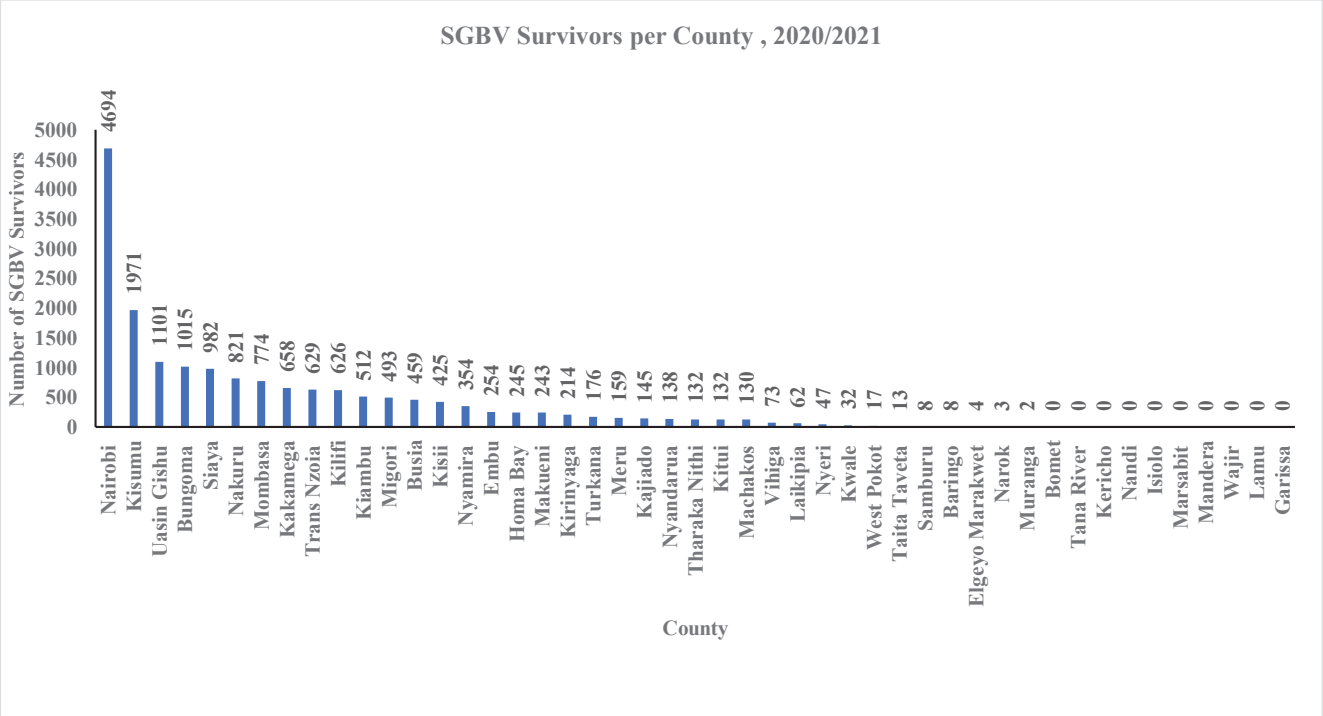

Figure 74: SGBV survivor analysis July-June 2020/2021

Female Genital Mutilation

The national prevalence of FGM as per KDHS 2014 was 21%, compared to 27% in 2008/2009 and 32% in 2003. Despite a national commitment to put an end to female genital mutilation (FGM) by the year 2022, there are still reported complications of FGM in health facilities as shown in figure 75. Nairobi, Mandera, Samburu, Garissa, Marsabit & Trans Nzoia counties had the largest number of women presenting to ANC having undergone FGM. These are mostly ASAL counties with communities that practice FGM. Nairobi is the exception but the numbers are attributed to the presence of a large Somali community that still practices FGM.

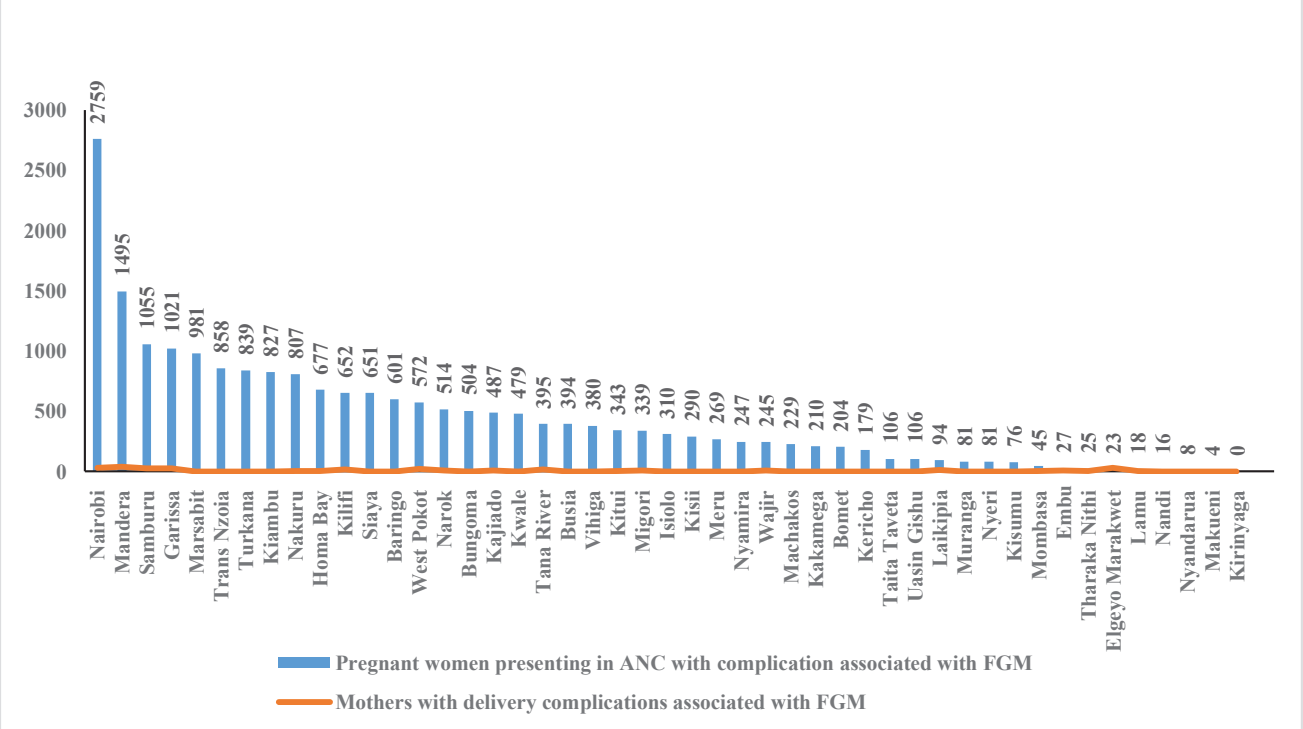

Figure 75: Cases seen in ANC and maternity with FGM associated complications July to June 2020/2021

Achievements

- Increased skill birth attendance (SBA) to 78% owing to the free maternity services.
- Development of the Kenya COVID-19 RMNH guideline, April 2020 which was used to create awareness of the need to continue offering RMNCAH services during the pandemic. This resulted in low disruption of skilled birth attendance coverage
- Coordination with other programs like HIV, Mental Health, Nutrition, Child Health-Hand Book, Community MNH, and Malaria program to integrate maternal health services and improve the quality of maternal care in their spaces.
- Moving from classroom-based workshops to facility-based mentorship in Emergency Obstetric and Newborn Care (EmONC)
- Digitized and disseminated the FCDRR to improve reporting on family planning commodity consumption
- Increased mCPR (married women) to 59% in 2020/21 from 58 in 2019/2020 and WRA demand satisfied with modern method has increased to 74% in 2020/21 from 72.8% in 2019/2020

Challenges

- ASAL counties reported low performance across all RMNCAH indicators, including FP uptake, 4 ANC coverage and skilled birth attendance with subsequent high FMMR. FGM was also highest in these same counties.
- Inadequate availability of blood and blood products limited adequate response to hemorrhage-related maternal complications which account for 50% of delivery complications
- Obstructed labour accounted for 30% of maternal complications
- Despite improvement in access to maternity and newborn care, a gap remains in the quality of care of services offered as the number of maternal deaths have not decreased as expected. Late reimbursements of Linda mama funds to the facilities with inadequate financing for commodities, staff etc. affects the QOC.
- COVID-19 pandemic led to a decrease in utilization of health services with a drop in ANC4 Coverage (-13.5%) from April 2020. Likely mothers are kept away from facilities due to fear of contracting COVID-19. Skilled Birth Attendance (SBA) was resilient but a modeled shortfall of -4% was seen compared to expected estimates.
- Inadequate funding for family planning KES 1.2 billion allocated for procurement of FP and RH commodities (Budget 2021-22) $1,035,822 against a target of USD 30 million by 2026

Recommendations

- Improve availability of blood in
- Together with other departments and divisions, guide integration of services at the facility level to reduce workload and time taken by clients in seeking different services.
- Mapping and alignment of partners working in the RH related issues and strengthening RH research and innovation activities at all levels

Priorities for 2022/23

The division developed and launched several documents in 2022 that are key in giving guidance and informing service delivery. Dissemination of these documents and technical support to the counties for their implementation are key to guide the provision of quality health services. Other priorities include;

MNH

- Improve availability of blood and blood products in all hospitals
- Advocate for availability and use of MNH essential products
- Address quality of care challenges through the dissemination of MNH Guidelines, Standards and MPDSR Reports, carrying out QOC assessments, conducting county teams in Point of care Ultrasound training, EmONC mentorship training and provision of technical support to MPDSR committees

- Prioritise Respectful Maternity Care (RMC) through training package review and conducting maternity open days for client awareness and accountability
- Continuously monitor RH indicators and direct interventions as guided by indicator performance and conduct data quality assessment bi-annually and direct interventions in the improvement of data quality and encourage data use at implementation level.

Family Planning

- Coordination and resource mobilization for FP commodities and subsequent procurement, warehousing and distribution
- Dissemination and implementation of the following documents
  - ✓ FP Costed implementation plan 2021- 2024
  - ✓ FP standards 2021
  - ✓ Total Market Approach Strategy for FP
  - ✓ Reproductive Health and FP Commodity Security Strategy
- Establishment of RMCAH Products and Technologies innovations steering Committee
- Finalize the Family Planning policy
- Development and rollout of FP early warning and alert system
- Development of a harmonized national reproductive health/family planning supply chain management training package for health service providers.

Adolescent and Youth Sexual and Reproductive Health (AYSRH)

- Review AYSRH Policy/Implementation guidelines and training materials with follow-up capacity building to health care providers in AYSRH.
- Avail ASYRH data collection tools
- Strengthen youth-friendly services

5.5.5 Neonatal & Child Health

Highlights

- During the reporting period (FY 2020/2021) diarrhea was the leading cause (11%) of child morbidity and mortality. Though it slightly improved from 88% in 2019/2020 to 91% in 2020/2021 as a result of the use of CHVs to manage diarrhea at the community level and the availability of the life-saving ORS and Zinc tablets.
- Narok, Samburu, Mandera, Marsabit, Isiolo, Bungoma Kajaido, Garissa Tana River, West Pokot & Wajir Counties had the highest prevalence of childhood pneumonia
- With occasioned unprecedented closure of schools due to the COVID19 pandemic and stock-outs of de worming medicines due to delayed procurement, in the review period, 23.6% of school-age children were de wormed against a target of 50%. This was.
- Development of Newborn and Child Health Strategic Plan 2021 to 2025 Strengthening high-impact interventions

The Country has made progress in improving Neonatal and Child Health outcomes during the last decade. According to the Kenya Demographic Health Survey (KDHS) 2014, the under-five mortality rate decreased from 74 to 52 deaths per 1,000 live births and the infant mortality rate decreased from 52 to 39 deaths per 1,000 live births. However, the neonatal mortality rate - which contributes to 45% of deaths under five years old has been slow, standing at 22/1000 live births. The 2019 census report shows that the infant mortality rate has further decreased to 36 per 1,000 live births. The SDG targets aim to reduce under-five mortality to 25/1000 and neonatal mortality rate to 12/1000 by 2030

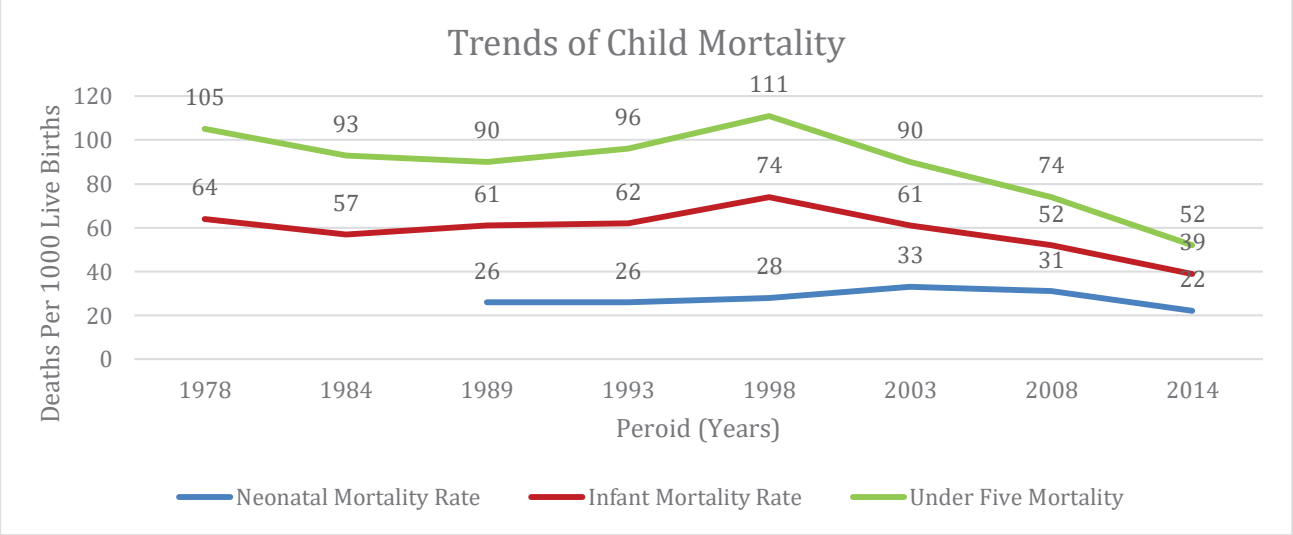

Figure 76: Trend of child mortality per 1000 live births from 1978 to 2014

Newborn causes (45%) contribute the most (45%) to under 5 deaths in Kenya. The Ministry of Health has developed policies and guidelines that promote intervention of low-cost high-impact interventions that have been proven to reduce newborn mortality and morbidity. Scale-up of early essential newborn care, kangaroo mother care; and use of Chlorhexidine digluconate 7.1% (CHX) gel to aid in the reduction of neonatal mortality from the three leading causes of mortality respectively have been implemented. Currently, 7 counties have been trained in early essential newborn care, and 40 counties are fully or partially implementing Kangaroo Mother Care for premature babies. The use of CHX gel is at an average of 75% for all newborn babies. These interventions require support for scale-up. During the period of review, the major program indicators monitored were as below.

Table 24: Performance indicators

Indicators	2018/19	2019/20	Achievement 2020/21	Target 2020/2021	Rating*
% Of children under five years treated for Diarrhea with ORS & Zinc	**90%**	**89%**	**91%**	**85%**	
% Of school age Children de-wormed	**36.6%**	**22.9%**	**23.6%**	**50%**	
Proportion low birth weight in health facilities	**5.1**	**5.1**	**5.4**	**3**	
Proportion of children under five treated for Pneumonia	**6%**	**3.6%**	**4.6%**	**No target**	

Performance Score:** **0-49%,** 50%-79% **and >80%

Diarrhoea Management for under-five children (ORS & Zinc)

During the reporting period (FY 2020/2021) diarrhea was the leading cause (11%) of child morbidity and mortality. The country had adopted the use of the combined ORS & Zinc as a high-impact intervention for diarrhoea treatment for under-five children. In the year under review, children identified with diarrhea in the community treated with ORS and Zinc slightly improved from 88% in 2019/2020 to 91% in 2020/2021. The marginal increase is attributed to the use of CHVs to manage diarrhea at the community level and the availability of life-saving ORS and Zinc tablets.

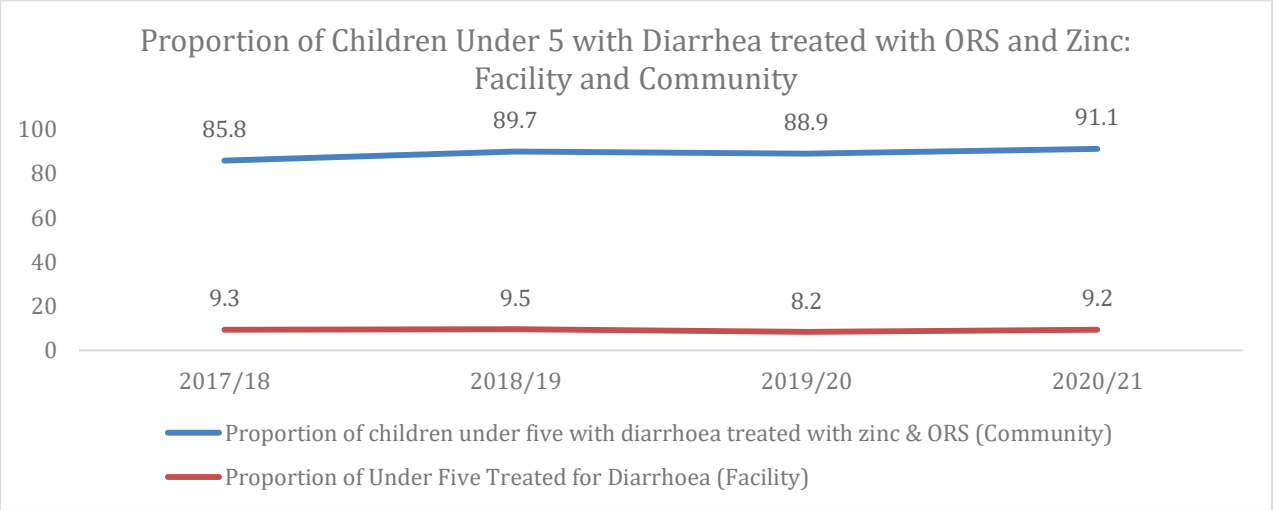

Figure 77: Proportion of Children under 5 with diarrhoea treated with ORS and Zinc at Facility and Community Level

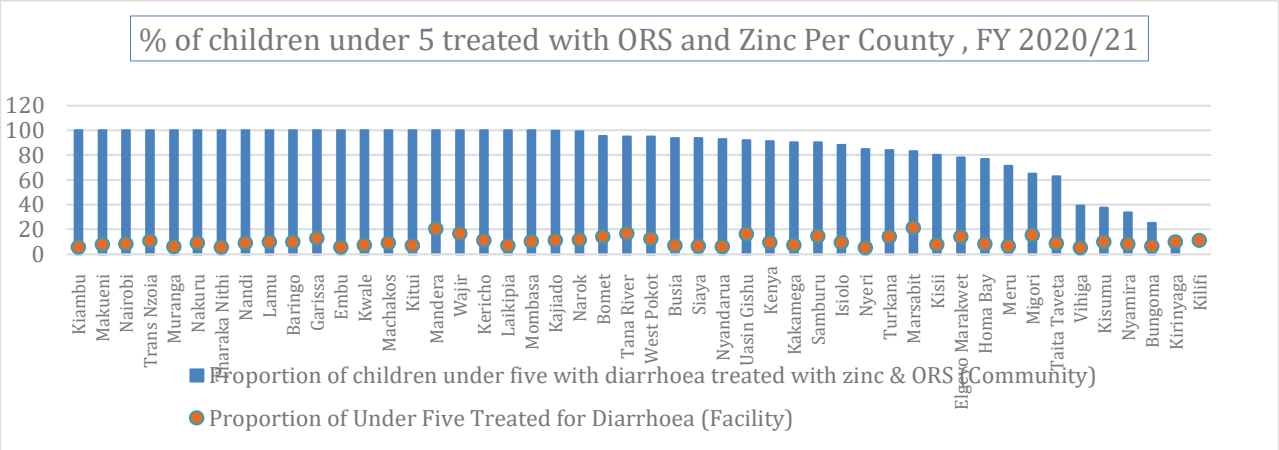

Figure 78: County coverage of children under 5 with Diarrhoea treated with ORS and Zinc at the Facility and Community level

Most counties are managing children under five with diarhoea with the recommended ORS and Zinc at the community level. Kirinyaga County had the lowest proportion of children under five with diarhoea at the community level getting the recommended treatment with ORS and Zinc.

Pneumonia

Pneumonia is a leading cause of death in children under five years in Kenya. The Kenya Demographic and Health Survey 2014 showed the leading direct causes of child mortality as Pneumonia (16%), diarrhoea (11%), malaria (4%), HIV (4%), and other non-communicable diseases (26%).

There was decline in the proportion of children under 5 treated for pneumonia at OPD in 2019/2020. This is during the COVID-19 pandemic period, which saw a major shift in service delivery. However, this increased in 2020/21 as shown in figure 79. This reduction could be attributed to the community choosing to seek health care away from facilities, but also there was associated decrease in reported cases of pneumonia due to the wearing of masks and school closure which limited not only spread of COVID-19 but also pneumonia and other respiratory illnesses.

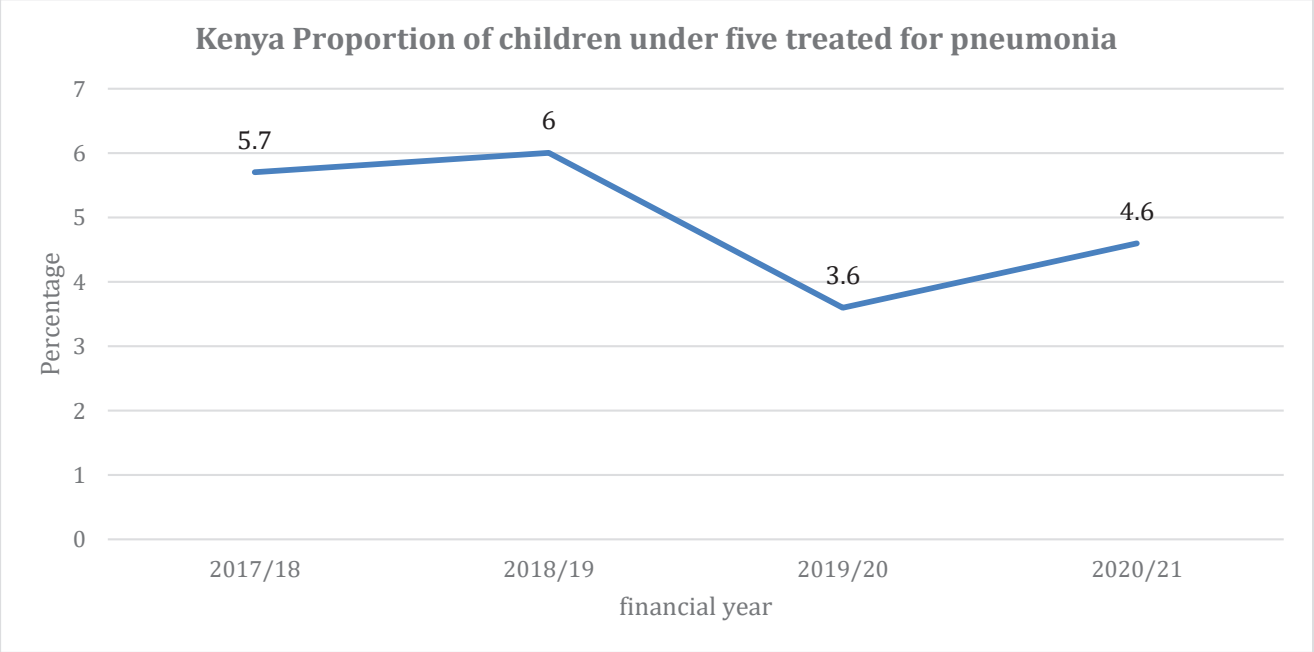

Figure 79: Country Proportion of children under 5 treated for pneumonia

Counties with a high prevalence of childhood pneumonia include Narok, Samburu, Mandera, Marsabit, Isiolo, Bungoma, Kajiado, Garissa Tana River, West Pokot & Wajir.

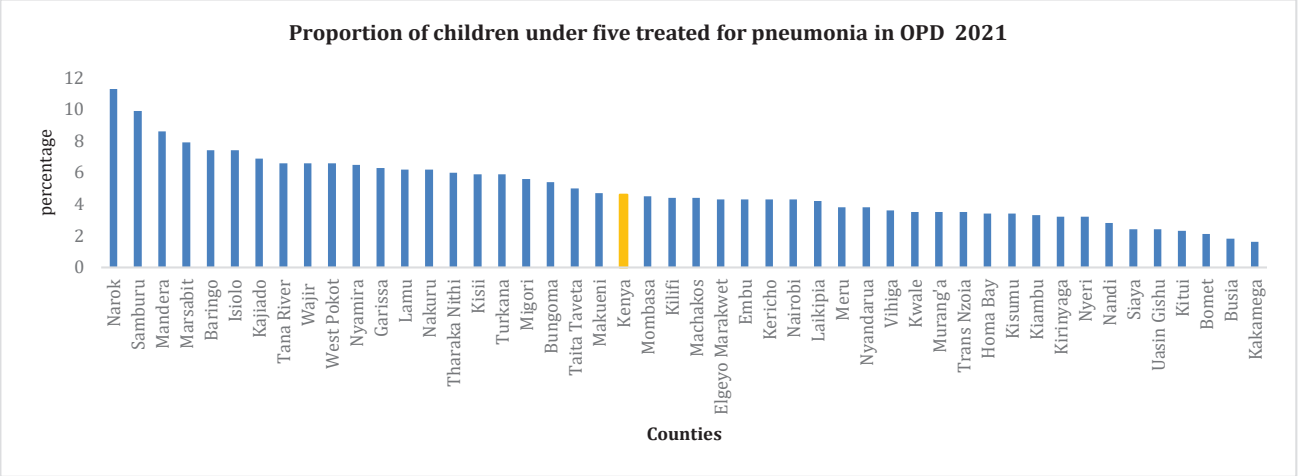

Figure 80: Counties Proportion of children under 5 treated for pneumonia

Interventions that have significantly contributed to the decrease in the prevalence of pneumonia are the use of amoxicillin dispersible tablets for the management of pneumonia in children under 5 years. The proportion of children under five years with pneumonia treated with Amoxicillin DT improved from 32% to 48.5% in 2021. A major milestone is that Kenya adopted and domesticated the Global Action Plan for the Prevention of Pneumonia and Diarrhoea (GAPPD) and as a result developed the Kenya Action Plan for prevention and control of Pneumonia and Diarrhoea (KAPPD, 2011-2015).

School-Based Deworming Program

Deworming is one of the most feasible and cost-effective public health approaches to control worm infections among infants and young children. Intestinal worms cause multiple health issues in young children including; malnutrition and anaemia as well as affecting a child's physical fitness and cognitive abilities. School-Based Deworming is jointly implemented by the Ministry of Health and Ministry of Education.

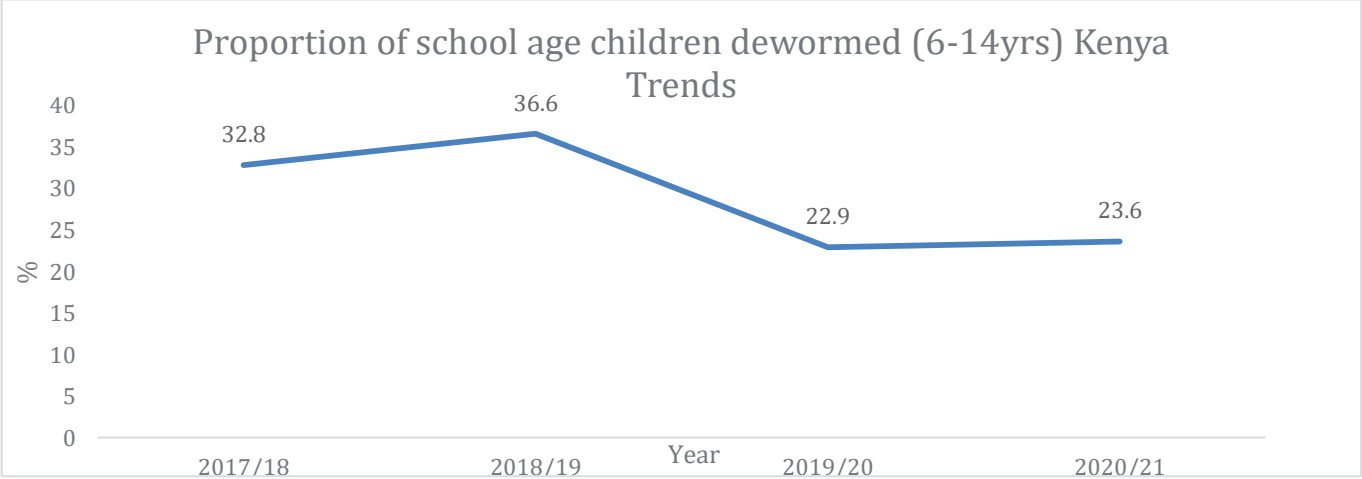

Figure 81: Country proportion of school-age children dewormed (6-14yrs) trend from FY 2017/18 to 2020/21

During the Financial year 2020/2021, 23.6% of school-age children were de wormed against a target of 50%. This was occasioned by the unprecedented closure of schools due to the COVID19 pandemic and stock-outs of de worming medicines due to delayed procurement.

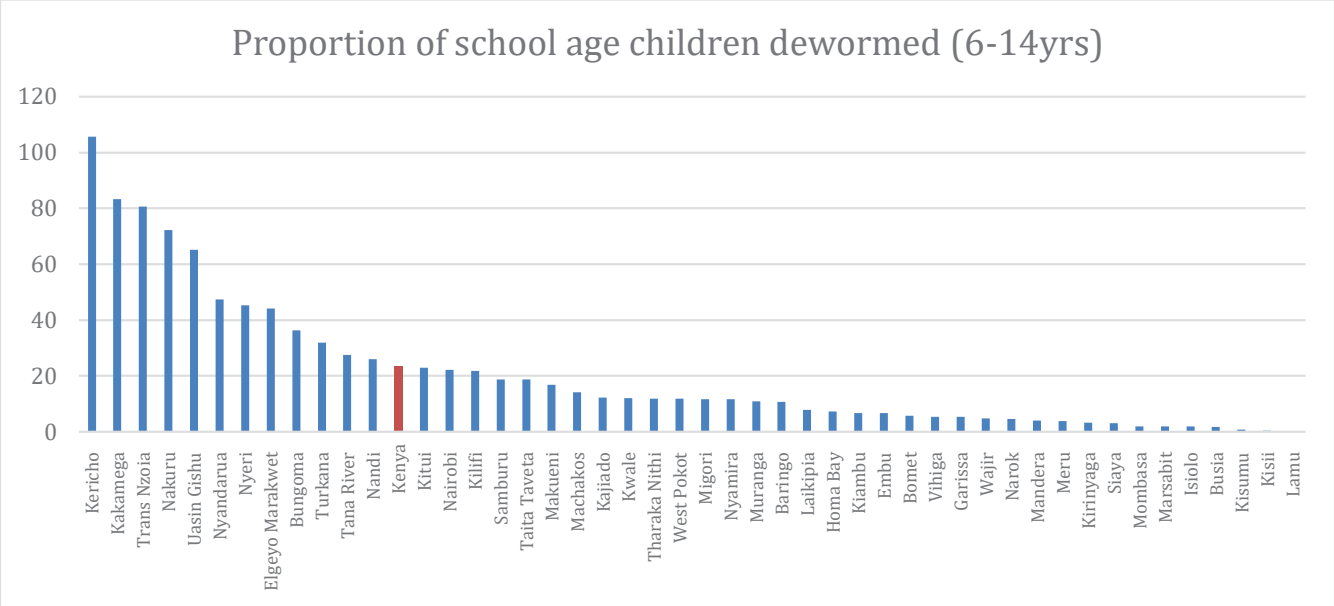

Figure 82: Counties proportion of school-age children dewormed (6-14yrs) FY 2020/21

During the period of review, Kericho, Kakamega, and Trans Nzoia counties had the highest proportion of school-age children dewormed. Kisii, Kisumu, and Busia counties had the lowest proportion of school-age children de wormed.

Major Achievements in 2020/2021

- Development of Newborn and Child Health Strategic Plan 2021 to 2025
- Strengthening the high-impact interventions including
  - ✓ Integrated Management of Newborn and Childhood Illnesses (IMNCI),
  - ✓ Emergency Triage Assessment and Treatment (ETAT+)
  - ✓ Integrated Community Case Management of Childhood illness (iCCM)
  - ✓ Routine Immunization
  - ✓ Amoxicillin Dispersible Tablets (DT) for treatment of childhood pneumonia
  - ✓ promotion of exclusive & continued breastfeeding, complementary feeding counseling & support & management of moderate & severe acute malnutrition
  - ✓ Child care and development
  - ✓ Kangaroo Mother Care,
  - ✓ Chlorhexidine (CHX) for umbilical cord care
- Mother Child Health Handbook (MOH 216) in the financial year 2021/2022 promotes an integrated service delivery along the continuum of care from pregnancy till the child is five years of age, contributing to the reduction in morbidity and mortality. This book is a powerful health promotion tool for Maternal, Neonatal and Child Health indicators and high-impact interventions.
- Newborn units equipped with a bundle of equipment
- National programs such as Malezi Bora contribute to achievements in child health outcomes
- Access to appropriate treatment for common childhood illnesses including antibiotic treatment for pneumonia; combined uptake of ORS & Zinc for the management of diarrhea, and immunization against vaccine-preventable diseases including pneumonia and measles.
- Finalization of the Kenya Scale up plan for the use of Chlorhexidine Digluconate 7.1% for umbilical cord care

Challenges

- Weak or no dissemination of neonatal and child health policies and Guidelines.
- Inadequate budget allocation for child health at national and county levels. There is no line budget for the division to implement the high-impact interventions to address the deworming and diarrhea activities
- Stock out of essential commodities-ORS/zinic, amoxil DT and Chlorhexidine (CHX)
- Coordination of partners. Partners direct technical and financial support to counties and do not sharing reports
- Inadequate coordination at the national and county levels, affecting the quality and monitoring of the interventions, delays in implementing and disseminating new policies and guidelines.
- Insufficient capacity building and mentor ship of health workers on the high impact interventions and high staff turnover.

Priorities for FY 2022/23

- Finalization and dissemination of Neonatal Child health policies and strategies (NCH, strategy, pneumonia and diarrhea plan (KAPPD), ICCM Framework, and nurturing care IECD policy)
- Finalization of Neonatal Child health guidelines documents including; MCH handbook (MOH216), chlorhexidine guidelines, Basic Pediatrics Protocol, quality of care standards guidelines
- Capacity development on child health high-impact interventions (Early essential newborn care, KMC, IMNCI, iCCM, ETAT+ & Nurturing care)
- Performance monitoring and Service Quality Assessment for child health interventions
- Printing and distribution of 2.2m MCH handbook (MOH216)
- Malezi Bora coordination and strengthening implementation in the country
- Review of CHX policy guideline

5.5.6 Nutrition & Dietetics

- The National underweight prevalence among under-five children attending Child Welfare Clinic (CWC) ranged between 4 -5 percent during the 2018/19 ,2019/2020 and 2020/2021 financial years indicating an almost constant trend.
- However, only 33% of children under 5 attend CWC for growth monitoring so the 4.5% may not be reflective of the population underweight prevalence.
- **Iron Folate Supplementation (IFAs)** among pregnant women attending ANC coverage increased to 79 percent in FY 2020/2021 from 71 in 2018/2019

Nutrition has a direct relationship with child survival, physical and mental growth, learning capacity, adult productivity and overall social and economic development. Unacceptably high levels of malnutrition remain a public health concern and a hindrance to achieving the country's developmental agenda, with an emerging triple burden of malnutrition, where under-nutrition (underweight, stunting and wasting), overweight and obesity and micronutrient deficiencies are on the increase in addition to the burden of non-communicable diseases (NCDs) (Kenya Demographic and Health Survey (KDHS, 2014).
Some of the indicators captured through the routine health information system are; growth monitoring and promotion (CHANIS), Integrated Management of Acute Malnutrition, Vitamin A supplementation among children aged 6-59 months and Iron Folate supplementation for pregnant women.

Underweight prevalence among children under 5 years

The National underweight prevalence among under-five children attending Child Welfare Clinic (CWC) ranged between 4 -5 percent during the 2018/19 ,2019/2020 and 2020/2021 financial years indicating an almost constant trend. The prevalence of underweight, however, should be interpreted with caution as not all under-five children attend the CWC.

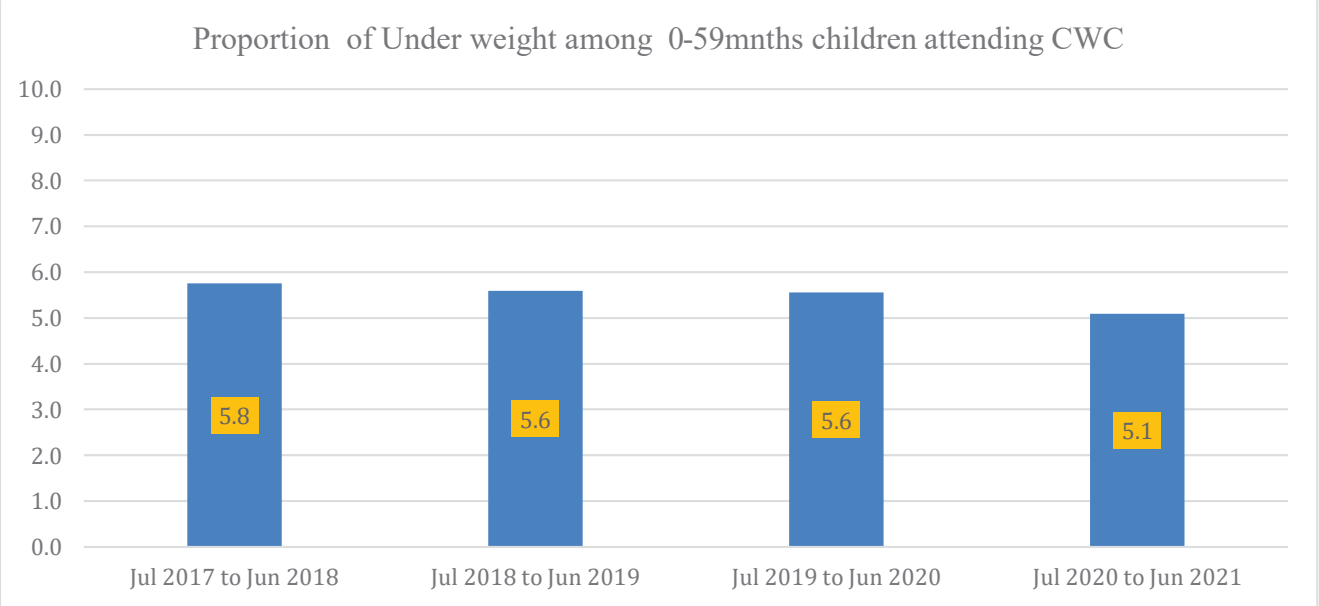

Figure 83: Country proportion of children under 5yrs attending Child welfare clinic from FY 2017/18 to 2020/21

County disparities, however, is noted with Arid and Semi-Arid Lands (ASAL) reporting a high prevalence of underweight children compared to Non-ASAL counties.

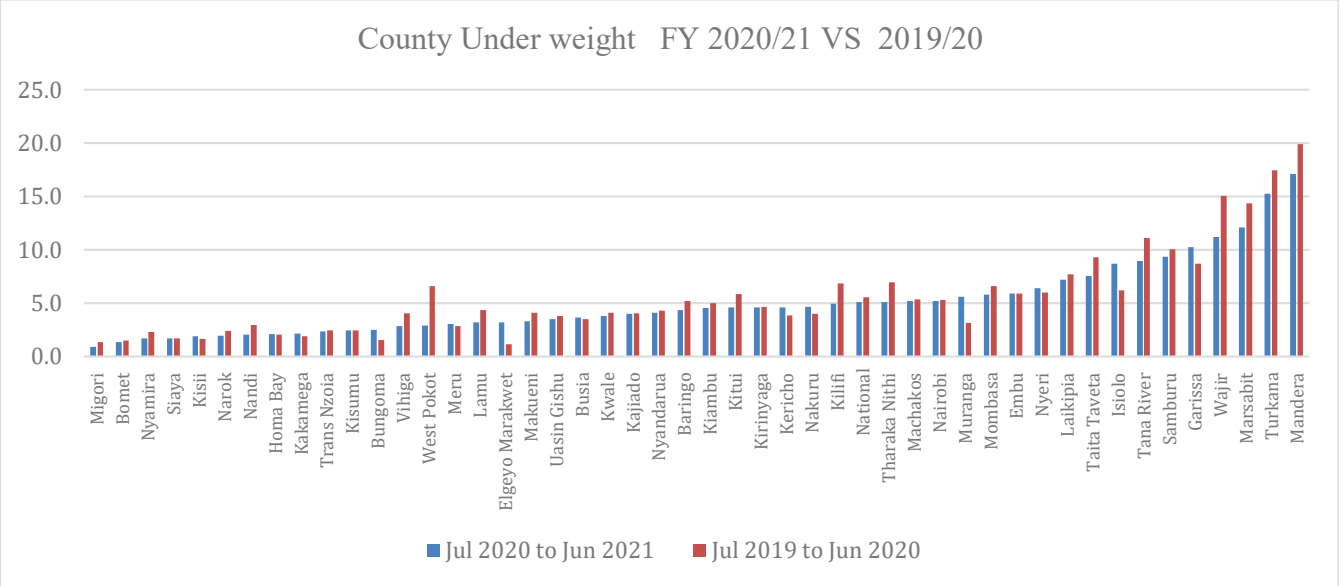

Figure 84: Underweight per county FY 2020/21 and 2019/20

New visits among children under five years attending Child Welfare Clinic (CWC)

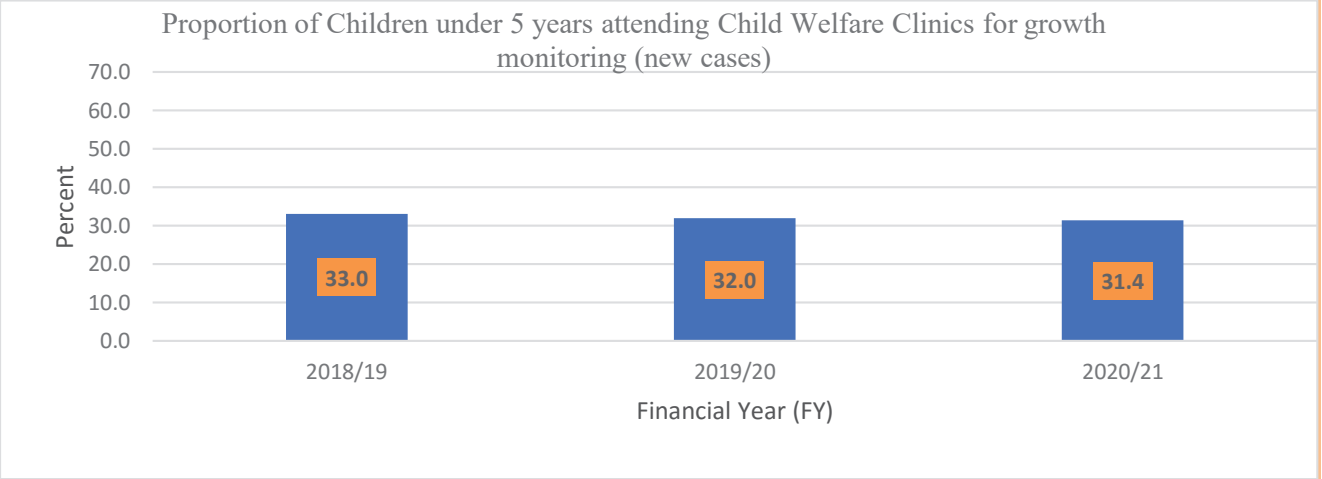

Figure 85: Proportion of new visits among children under 5 yrs. attending CWC from FY 2018/19 to 2020/21

During the period under review, only one out of three children under 5 years attended CWC for growth monitoring and promotion. This is a concern and there is, therefore, a need to explore alternative ways to ensure children's growth is monitored for up to five years. One way could be through leveraging the community health strategy.

Micronutrient Program: This program is implemented in efforts to curb the micronutrient deficiency in the country It is implemented through supplementation to the vulnerable groups that is Vitamin A supplement to children aged 6-59months, Multiple Micronutrient supplement to children aged 6-23months, Iron and Folate (IFAs) to pregnant women in our health facilities. Other forms of addressing the deficiency is through dietary diversification and food fortification i.e. wheat, maize flours, Vegetable oils as well as salt iodization.
Vitamin A Supplementation (VAS) among children aged 6-59months 2021 This is the proportion of children who have been supplemented with two doses of Age appropriate vitamin A in a calendar year. Therefore its categorized in two semesters (1st Jan- June and 2nd July – Dec. Annual coverage is taken as the lower coverage among the two semesters. Over the years VAS has continued to improve with the current coverage standing at 86 .3 percent as depicted in the graph below. This can be attributed to Malezi Bora weeks that are done twice a year and fitting in either semester of VAS.

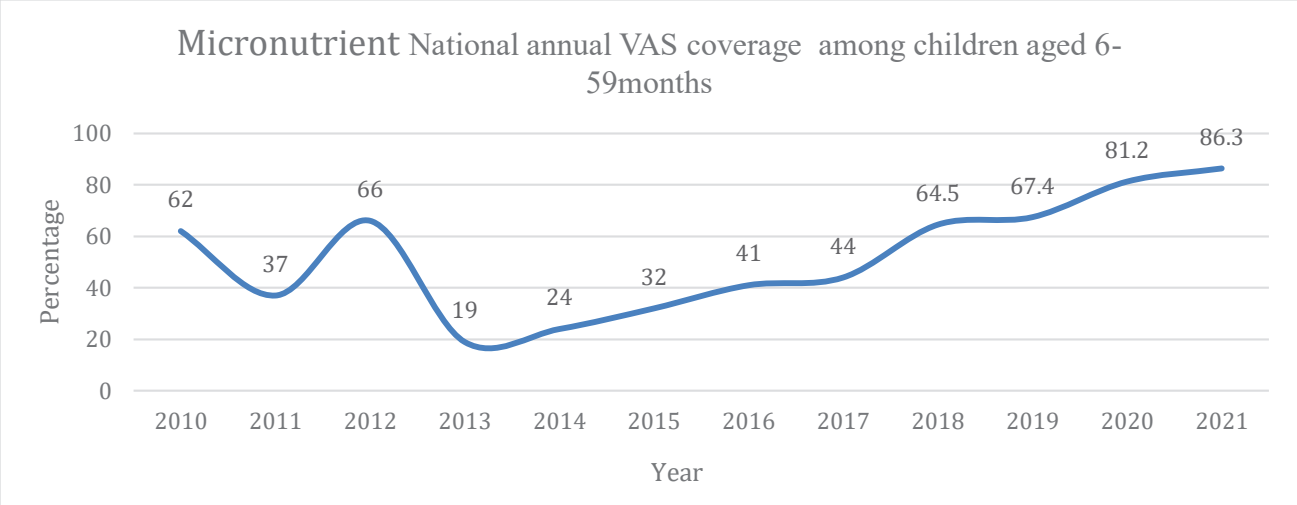

Figure 86: Micronutrient National annual and coverage among children aged 6-59 Months

The county VAS coverage depicts mixed performance as shown in the graph below, with Mandera, Kajiado, Kisii and Nairobi reporting below 50 percent coverage and twenty-seven (27) counties achieving the national target of 80 percent, among them eleven (11) achieving 100 percent and above.

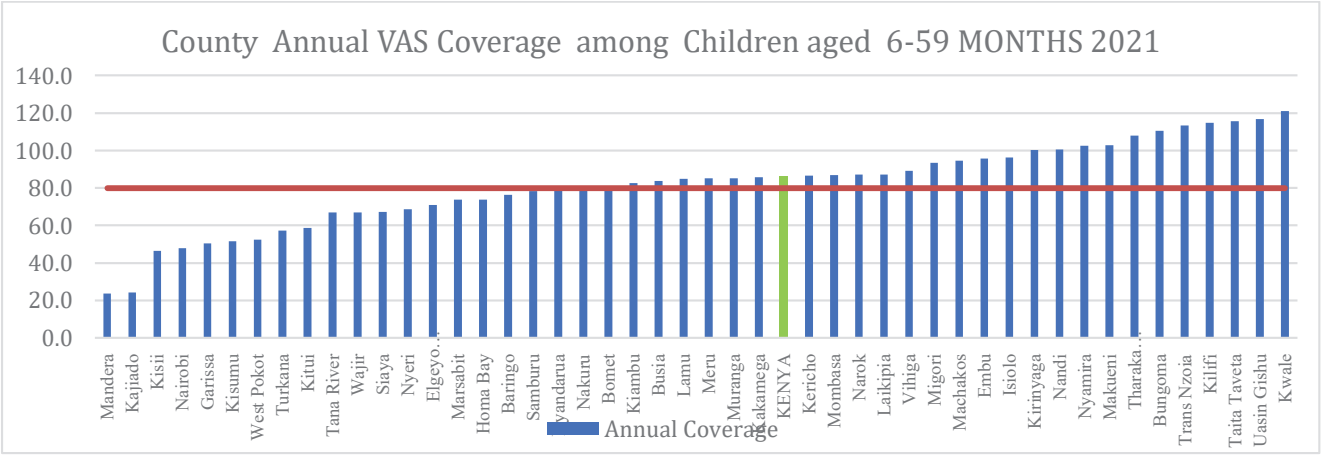

Figure 87: County Annual VAS Coverage among Children aged 6-59 MONTHS 2021

Iron Folate Supplementation (IFAs) for Pregnant women attending ANC

IFAs coverage among pregnant women attending ANC increased to 79 percent in 2020/2021 compared to 75.3 and 76.2 percent reported in the 2018/2019 and 2019/2020 financial years respectively.

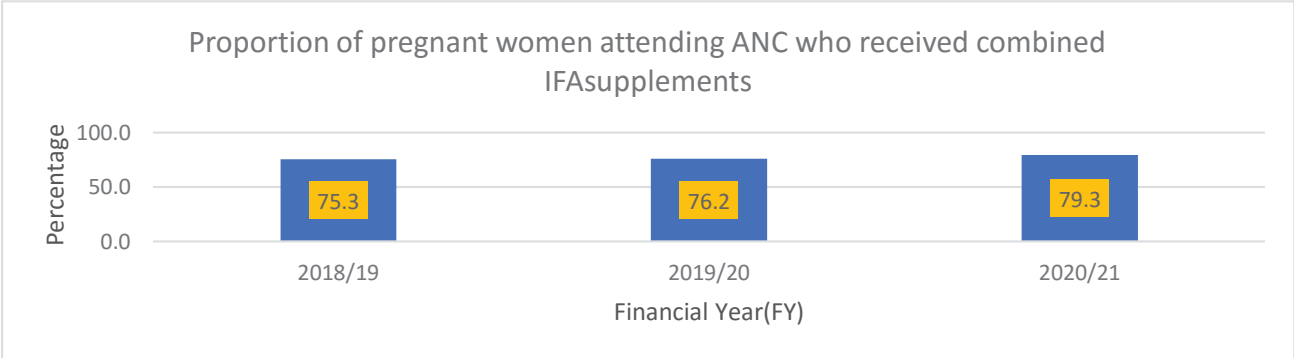

Figure 88: Proportion of pregnant women attending ANC who received combined IFA supplements

The graph below depicts the 2020/2021 county performance which improved compared to 2019/2020 as 29 counties had better achievements compared to the previous financial year.

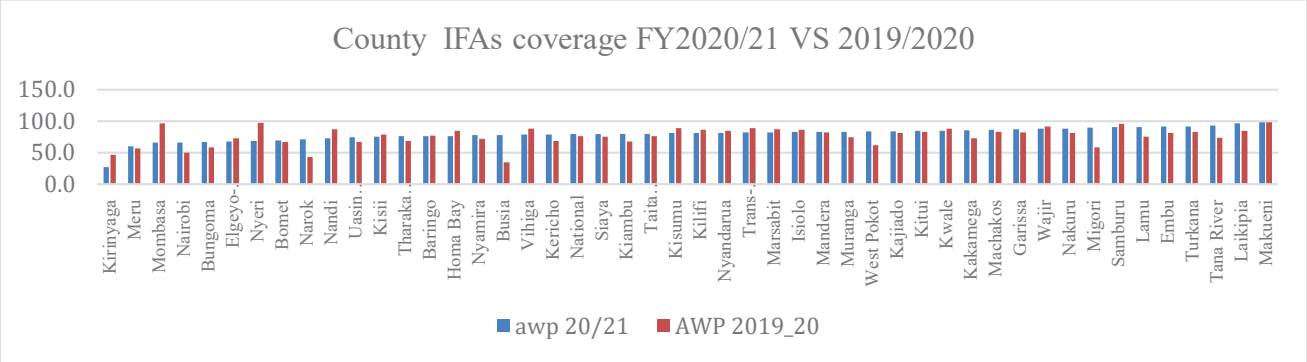

Figure 89: Proportion of pregnant women attending ANC who received combined IFA supplements

5.6 Strengthen collaboration with health-related sectors

The Kenya Health Policy 2014-2030 emphasizes the need to strengthen multi-sectoral collaborations that have an impact on health outcomes and that contribute to the attainment of the health goals. The sector, in collaboration with other sectors, has put in measures to address key health determinants **within and outside of the health care system** including the provision of safe water, sanitation and hygiene for all, reduction of environmental pollution, promotion of healthy living in the physical planning and housing environment, food micronutrient fortifications and prevention of road safety/injury.

As shown in table 25 below, the health sector is yet to achieve most of the targets set for performance indicators based on its collaboration with other sectors except for improvement in the proportion of households using improved sanitation facilities which it collaborates with the Water sector on.

Table 25: Achievement on indicators on strengthening collaboration with health-related sectors

Strengthen collaboration	Achievement					Target	Rating*	Data source
	2016/17	2017/18	2018/19	2019/20	2020/21	2020/21		
Proportion of Children under-5 years attending Child Welfare Clinics who are under weight	4.4	4.3	4.3	4.1	3.8	**7**		KHIS
Proportion of Children under 5 years attending Child Welfare Clinics who are stunted	2.5	2.5	2.8	2.9	*0.51*	**20**		KHIS
% of households using improved sanitation facilities	22.73	ND	ND	82.52	ND	**65**		KDHS 2014/Census Report 2019
% of households using improved safe water facilities	71.33	ND	ND	64.82	ND	**78**		KDHS 2014/Census Report 2019
% of women completed secondary education	37.03	ND	ND	34.22	**ND**	**50**		KDHS 2014/Census Report 2019

Performance Score:** **0-49%,** 50%-79% **and >80%

To be verified with KHIS [2] Census Report 2019 ND=No Data [3] Kenya Demographic Health Survey 2014[HK1]

Key achievements through collaboration with other sectors;

1. The energy sector plays a key role in the provision of a stable source of power which is crucial in health care provision in the Country. The Ministry of Energy connected 48 out of 96 level 3&4 facilities in the last financial year and aims to connect 326 level 2 facilities in the current financial year.
2. Reliable infrastructure facilitates access to health care facilities and emergency services across the country hence improving health outcomes. In the financial year 2020/21, 203 Kms of access roads to level 4 facilities were constructed.
3. The Health Sector continues to embrace ICT as an important aspect to improve health care delivery efficiently and effectively through the adoption of e-health, telemedicine and training. The health sector and the Ministry of Information, Communications and Technology collaborated on the development of standardized health management systems in the country, installation of National Optic Fibre Backbone (NOFBI), installation of LAN and WAN in 18 hospitals and Internet telephony in 121 health facilities across the country.
4. The availability of clean water ensures a reduction in the incidence of waterborne diseases and other associated communicable conditions. The Ministry of Water connected water to 93 Level 2, 3 & 4 facilities in the FY 2019/2020. [HK2]
5. Ten postgraduate students undertaking engineering and science courses were offered cost-free access to the Kenya Nuclear Regulatory Authority laboratory facilities [HK3]
6. One hundred officers from the National Police Service trained on the detection and interdiction of weapons of mass destruction.
7. The agricultural sector plays a big role in ensuring adequate and sustainable food supply to the nation which is key in ensuring a healthy and productive population. The Health Sector will continue collaborating with all stakeholders to address malnutrition among vulnerable groups.

5.6.1. Neglected Tropical Diseases (NTDs)

Kenya is endemic to more than 16 out of 20 neglected tropical diseases (NTDs) listed by the World Health Organization (WHO). Of the endemic NTDs, the country was certified free of guinea worm in 2018. Probable interruption of transmission has been achieved for human African trypanosomiasis (sleeping sickness) and onchocerciasis (river blindness) having reported no clinical cases in the last 15 years. However, the following NTDs still remains of public health importance; dengue and chikungunya, lymphatic filariasis/elephantiasis (LF), schistosomiasis /bilharzia (SCH), soil-transmitted helminths/intestinal worms (STH), trachoma, cutaneous leishmaniasis and visceral leishmaniasis (Kala-azar), rabies, scabies and other ectoparasites, leprosy and snake bite envenoming. Interestingly, the burden and distribution of the following NTDs remain limited; echinococcosis (hydatid diseases), cysticercosis, food-borne trematodiasis. The endemicity of the following 3 NTDs is unknown; Buruli ulcers, Mycetoma and chromoblastomycosis and another deep mycosis.

Achievements

- Successfully interrupted transmission of lymphatic filariasis in 3 Sub counties; Lamu East, Lamu West and Jomvu in 2020 and scheduled to stop treatment of other 20 remaining endemic Sub counties in the coastal region.
- Following effective treatment of blinding trachoma, stopped treatment in 5 counties and expect to scale down in the remaining 7 counties in 2023.
- Rolled out community-wide treatment for intestinal worms and bilharzia following granular mapping in Coastal and Western regions of Kenya.
- Conducted 1,058 hydrocele surgeries (474 in 2019 and 584 in 2021)
- In June 2021 the Ministry launched the Kenya Strategic Plan for control of Leishmaniasis 2021-2025. In response to the upsurge and outbreaks in endemic counties, freely distributed combination therapy (Sodium Stibogluconate [SSG] + Paromomycin [PM]), diagnostic kits and trained 247 (2020) and 412 (2021) health care workers for diagnosis, management and reporting of leishmaniasis

Challenges

- Low levels of resource allocation to operationalize objectives outlined in the NTD master plan and other policy documents.
- Health workers with low skill levels and who lack the equipment to diagnose and manage NTDs in health facilities
- Limited reflection of NTD in the overall health policies and priorities at national and district levels
- Inadequate multi-sectoral collaboration and weak coordination structures for all stakeholders, especially at the district level

Recommendation

- Domestic funding: Kenyan leaders from government, public, private sector and civic society have the opportunity to be effective NTD champions and advocates by using their influence to facilitate an increase in domestic financing at regional, national and local levels.
- Strengthening the health system for integration of NTDs management
- Instituting integrated vector management intervention and surveillance

Key priority control areas

- Instituting integrated vector management intervention and surveillance
- Need to train community health volunteers on prevention and control of leishmaniasis
- Required practical on job training of County Referral Hospital staff on splenic and bone marrow aspirate
- Continual refresher training of health records information officers on DHIS2 event capture, surveillance and reporting and county-level managers on VL surveillance, management and IDSR
- Mapping of new VL hotspots in the country
- Monitoring and support supervision for diagnosis, management and data quality audits
- Community Sensitization on Visceral leishmaniasis
- Printing and distribution of IEC materials
- Strengthening Coordination, surveillance and communication

5.6.2. COVID -19 Pandemic

- 333,290 cumulative COVID-19 Cases and 5.652 deaths had been reported as at June 30th
- 17 County PHEOCs were established while all Counties initiated the process of establishing these units which are now at various stages of development
- There was a marked increase in functional ventilators and pulse oximeters.
- Facilities with Oxygen of any source had increased from 58% at the start of the pandemic to 95% but only 38% had oxygen generators.
- The capacity of facilities to carry out the COVID-19 test was enhanced. Four in ten facilities collected COVID-19 specimens and conducted PCR or RDT testing on site.
- Cumulatively over 1 million PCR and another 176,731 antigen tests were distributed during 2020/21. Overall, 85 labs did 1,721,323 COVID-19 PCR tests while 400 labs did 176,731 antigen-based COVID-19 tests (table 26).
- During the review period, 3000 vaccination posts were established in both public and private sector facilities to increase vaccine uptake.
- 1,008,120 1st doses and 370,465 2nd doses had been administered as of 30th June 2021 against the initial target of 1.25 million adults' full vaccination.
- Chanjo-KE system was a development that is a digital platform to support COVID-19 Vaccine delivery with core functionalities of registration, vaccine scheduling, and digital certification.

Challenges

- Pandemic fatigue and infodemic reduced compliance to Public Health Emergency Management measures and inadequate uptake and compliance to risk communication and community engagement (RCCE) at the community level
- Pandemic related loss of income at individual and industrial level despite economic mitigation measures
- Inadequate budget to support training, communication, community sensitization, and capacity-building efforts.
- Low uptake in counties in the semiarid and hard-to-reach areas due to limited geographical access and hesitancy

One of the responsibilities of the health system is to conduct surveillance of and coordinate response to threats and events that could directly or indirectly affect the health of populations and overwhelm the health system's capacity. The public health emergency operations centre (PHEOC) serves to facilitate response to, and recovery from public health emergencies (PHEs). The PHEOC's mandate is to coordinate the implementation of emergency management plans.

The Coronavirus 2019 (COVID-19) outbreak was first reported on 31st December 2019 in Wuhan City, Hubei Province, China while the first case was reported in Kenya on 13th March 2020. The Public Health Emergency Operations Centre (PHEOC) managed response measures and provided daily situation reports to inform planning and response. In the early phase of the pandemic, teams of rapid responders and contact tracers investigated any alert and followed up with contacts of confirmed cases across the Country.

COVID- 19 Response

a) Establishment of PHEOCs

Over the last 2 years, 17 County PHEOCs were established while all Counties initiated the process of establishing these units which are now at various stages of development. All forty-seven counties have been earmarked for support to establish County PHEOCs which will work in concert with the national PHEOC during both preparedness and response phases.

b) COVID- 19 Testing

The Department of laboratory worked closely with key partners, international organizations and technical agencies to rapidly and equitably support access to COVID-19 health products and diagnostics tools kits. Both polymerase chain reaction (PCR) kits and antigen testing kits were procured and redistributed. Cumulatively over 1 million PCR and another 176,731 antigen tests were distributed during 2020/21. Hand in hand with testing kits, sample collection kits were sourced and redistributed country-wide. Overall, 85 labs did 1,721,323PCR SARS CoV PCR tests while 400 labs did 176,731 antigen-based SARS CoV tests (table 26).

Table 26: COVD-19 PCR and antigen tests

Facilities	Test Type	Number tested
85	PCR	1,721,323
400	Antigen	176,731

Figure 90 shows that SARS-CoV-2 testing capacity has been high and relatively constant over the review periods, increasing in November 2020 and March to April 2021 corresponding to periods of increased transmission/ a pandemic wave.

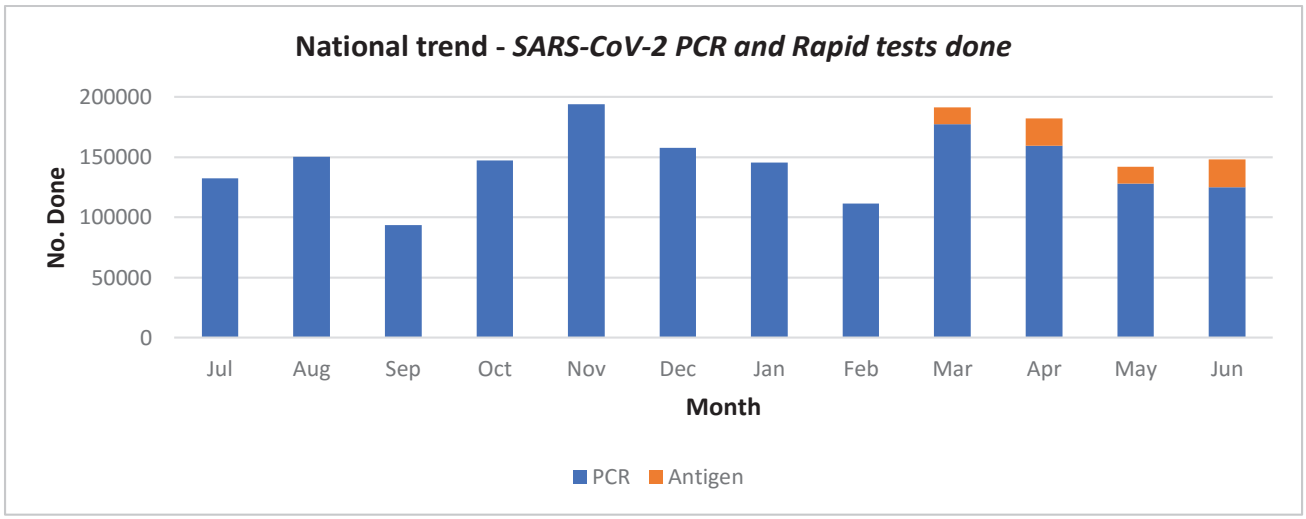

Figure 90: National trend - SARS-CoV-2 PCR and Rapid tests done

c) Access to Medical Oxygen

Adequate ventilation support and oxygen administration are essential for patient survival of patients with severe COVID-19. Since the start of the COVID pandemic, oxygen availability was scaled up in health facilities with emphasis given to the need to establish oxygen-generating plants, particularly in large hospitals due to cost and sustainability. In FY 2020/21, Kenya had about 70 PSA plants, with only 20% operating at optimum capacity. The reason for non-operational PSA plants included; obsolete technology; lack of capacity to regularly maintain and service plants leading to the production of poor-quality oxygen at less than 90 percent purity, failure to factor in population increases in planning, and historical failure to list oxygen as an essential medicine.

In response to the pandemic, a total of 175,711 litres of medical oxygen were delivered by June 2021 to five facilities (Coast general hospital (45,712), Jaramogi Oginga Odinga Hospital (78,855), Tigoni Level 4 hospital (12,762), Kiambu Level 5 County Referral Hospital (22,149) and Thika Level 5 hospital (16,233). In addition, KNH acquired 2 Oxygen tanks of varying capacities; KNH-Othaya (3,000 litres) and Mbagathi 20,000 litres). MTRH completed the construction of a new oxygen plant with a capacity of 2,000 litres per minute of oxygen.

An assessment of oxygen availability in April 2021 showed that all assessed COVID-19 treatment centers (68) across all Counties had access to at least one source of oxygen;

External supply in cylinders was the most common method. Piped oxygen to the bedside was widely available in case management centres.

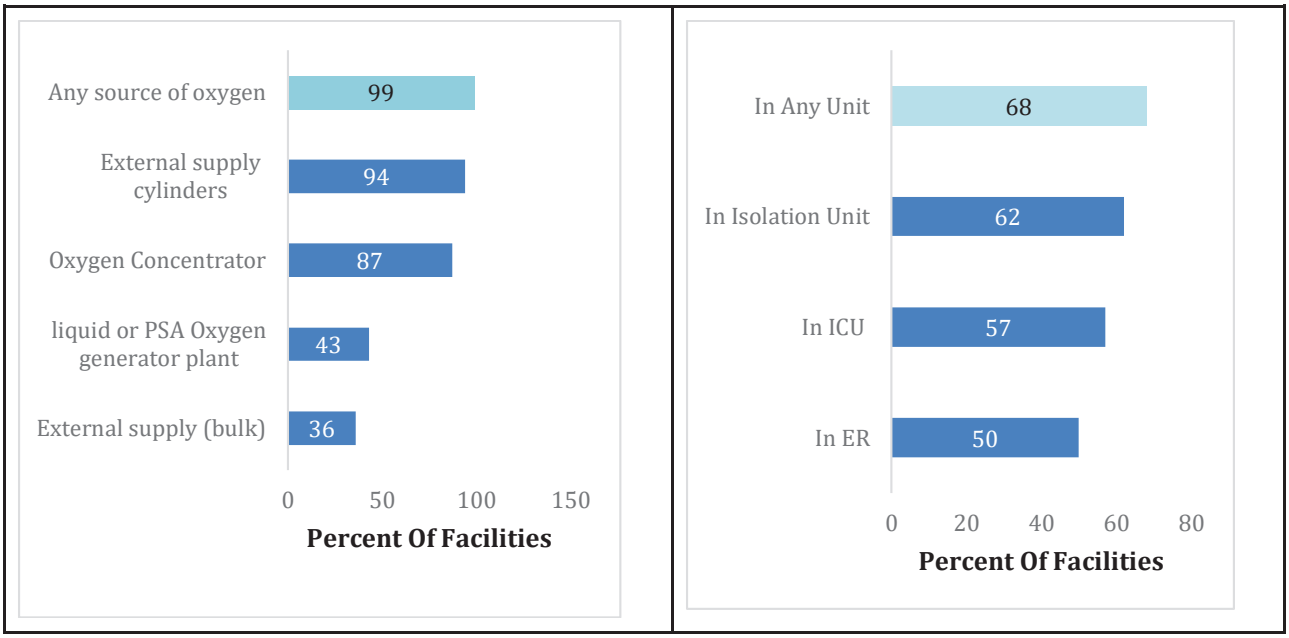

Figure 91: Proportion of facilities (levels 4 – 6) with oxygen by source and Piped O2 to any unit (n=68)

The trend of oxygen availability was noted to have steadily increased with most facilities from 58% in June 2020 to 95% in April 2021 as shown in figure 92 below.

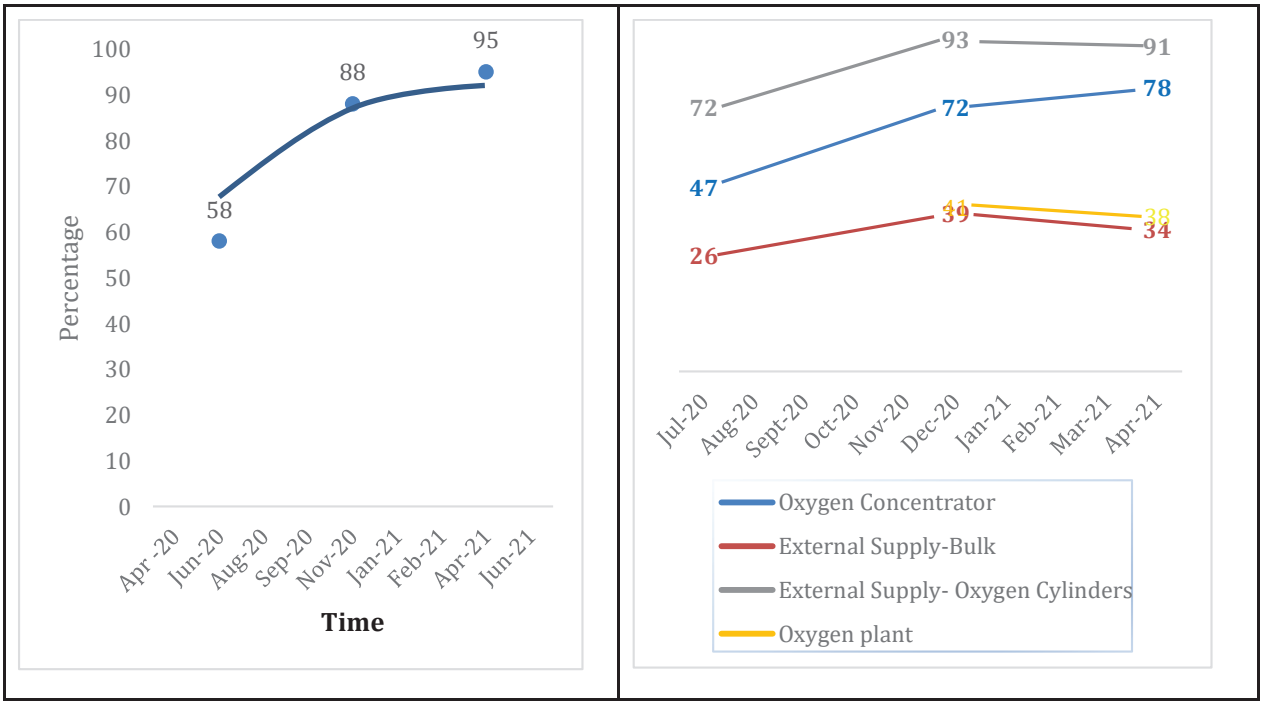

Figure 92: Trend of oxygen availability at case management facilities and oxygen supply methods from Apr 2020 to Apr 2021 (n=80)

Majority of facilities were using oxygen cylinders and only a third of the facilities had liquid oxygen or a PSA generator with minimal change since Dec 2020 (a slight decrease could be attributed to increasing in no. of facilities assessed. This increase was also seen in the various oxygen supply modes with oxygen concentrators being the highest in availability (91%).

d) COVID-19 Vaccination

The Government prioritized vaccination as one of the key measures to contain the spread of COVID-19. Adequate coverage of vaccination is needed to acquire herd immunity in the population and consequently control the COVID pandemic. WHO recommends Kenya vaccination of the entire adult population, approximately 30 million Kenyans (60% of the population) to reduce community transmission of COVID-19, severe illness, hospitalizations, and deaths from COVID. The Ministry through the National COVID-19 Vaccine Deployment Taskforce developed the National COVID-19 Vaccine Deployment Plan 2021-2023 (NVDP) to guide vaccination strategy against COVID-19 as well as support the mobilization of the required resources. The strategy outlined in the NVDP was to vaccinate a total of 26 million Kenyans by June 2022 with an initial target of 10 million Kenyans by December 2021.
The COVID vaccination was introduced within the review period (March 2021). A robust policy, governance, leadership framework, and plan to improve the vaccine supply chain was established with priority populations targeted for vaccination being health workers, security officers, teachers, and persons above 58 years.

The Vaccine supply chain and logistics were improved to support COVID-19 vaccination. The National Vaccine Store had a total of eight (8) cold rooms with a refrigerated capacity of 130M³ and 2 freezer rooms with a capacity of 14 M³. Specialized Ultra Cold Chain (UCC) freezers with a storage capacity of 3 million doses were procured to store the Pfizer / BioNTech vaccines until they are ready to be distributed to vaccination posts. In addition, the UPS foundation donated 15 portable UCC freezers with a capacity of 6,000 doses, used to transport the vaccines to Pfizer designated vaccination posts. The Ministry of Health leveraged UNICEF Mechanisms under the Vaccine Independence Initiative Agreement to expedite logistics from the port of entry to the central vaccine store and onwards to the regional stores.

The following were achieved during the review period;

- A total of 1,378,585 Vaccinations had been administered with a total of 1,008,120 1st doses and 370,465 2nd doses resulting in an uptake of uptake 36.7% and the proportion of adults fully vaccinated at 1.42%
- Development of a digital platform (Chanjo-KE) to support COVID-19 Vaccine delivery with core functionalities of registration, vaccine schedule, and digital certification.
- Training of 2,000 health workers on vaccine administration.
- Establishment of 3000 vaccination posts in both public and private sector facilities
- Demand generation through public vaccination of the president, political, religious and business leaders.
- 1,008,120 1st doses and 370,465 2nd doses had been administered as of 30th June 2021 against the initial target of 1.25 million adult's full vaccination
- GOK budget provision for the procurement of 13 million doses of Johnson and Johnson. Boost from the private sector with commitments for financial support for the purchase of an additional 1,000,000 doses

Table 27: COVID-19 vaccination uptake,1st and 2nd dose

Dose	Cumulative Persons Vaccinated	Vaccinations by gender				AEFI Reported
		Male	Female	Intersex	Transgender	
One	1,008,120	567,160	440,342	525	93	1,001
Two	370,465	204,291	166,008	147	19	0

Table 28: Dose 2 uptake by Priority Groups, 30th June 2021

Priority Group	Dose 2 uptake	Target Population	Fully vaccinated by Priority Group
Health Workers	79,686	208,418	38.20%
Security Officers	27,918	-	-
Teachers	48,572	330,671	14.70%
Above 58 years Old	115,078	2,594,585	4.40%
Others	99,211	-	-
Total	**370,465**	**3,133,674**	**11.80%**

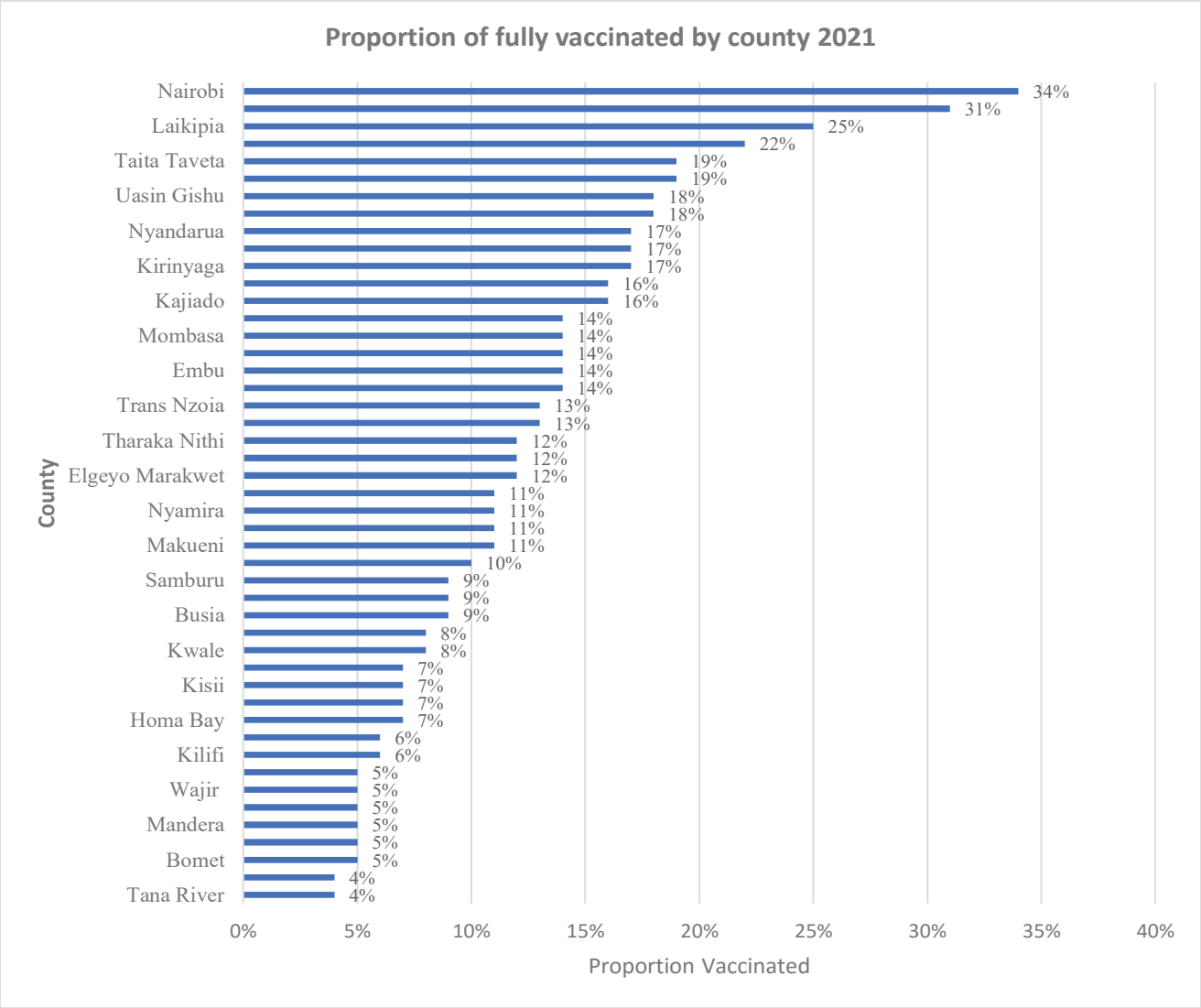

Figure 93: Proportion of population vaccinated per county

Monitoring COVID-19 response capacities in health facilities

A survey was conducted in April-May 2021 to assess health facilities' service capacity to respond to the COVID pandemic, as well as maintain essential health services. This was done as the 2nd of a sentinel survey aimed at assessing the readiness of health facilities to manage COVID-19 as well as sustain essential health services in 128 facilities.

The survey revealed good progress in the management COVID with the following highlights;

- COVID isolation beds had increased since the start of the pandemic; All assessed facilities have 4,378 beds with 10% being ICU beds.
- There was however low bed occupancy of COVID beds in many Counties; 11% of the Level 4 COVID beds were occupied while 36% and 46% of the level 5 and Level 6 beds

COVID beds were occupied respectively. Nearly half of the beds set aside for COVID were plain beds without oxygen piped to them.

- Pulse oximeters are almost universally available in level 4 to 6 facilities There was a marked increase in functional ventilators (from 14% of facilities in June 2020 to 52% by April 2021) but a good proportion was non-functional. Half of the non-functional ventilators were due to non-installation and no trained staff to operate them.
- Facilities with Oxygen of any source had increased from 58% at the start of the pandemic to 95% but only 38% had oxygen generators.
- COVID19 infections were more in higher level facility staff where more COVID-19 patients were attended; Infections among clinical staff were higher than in non-clinical staff (10.4% vs 9.5%). Infections among radiographers (12.8%), public health officers (12.7%), nurses and midwives (10.3%) were all above 10% in the sampled facilities.
- Four in ten facilities collected COVID-19 specimens and conducted PCR or RDT testing on site.
- Training and support supervision on COVID-19-related topics was low especially in level 2 -3 facilities and in rural facilities.

Challenges

- Non-adherence to MOH COVID-19 data upload circular hence late reporting of cases compounded by incomplete data uploads led to data of insufficient quality
- Poor Integration of Public Health Emergency Management (PHEM) activities into county annual work plans; Poor coordination of PHEM activities and fragmentation of PHEM programming; This has led to duplications and inconsistencies in the operation and implementation of PHEM interventions across the country. It is further compounded by an absence of partnership development and coordination framework for emergency response.
- Pandemic fatigue and infordemic reduced compliance to Public Health Emergency Management measures and inadequate uptake and compliance to risk communication and community engagement (RCCE) at the community level
- Unsustainable response to support economic activities
- Lack of established and operationalized county PHEOCs due to lack of /or underdeveloped infrastructure hindered effective coordination of response in Public Health Emergencies (PHEs). This includes a lack of physical space where the emergency responders can meet and coordinate response, ICT equipment to collate, analyze and share information promptly, as well as furniture to facilitate meetings.
- Inadequate human resource
- Lack of institutional and legal frameworks for the establishment and functions of EOCs
- Uptake of COVID Vaccination was initially low due to limited access and supply of vaccines, Vaccine hesitancy among others leading to the expiry of vaccines.
- Global supply constraints led to non -the delivery of scheduled doses. Out of the projected 4.1 million doses, only 1.02 doses were delivered
- Public anxiety over the availability of 2nd doses and the decision to reschedule the administration of 2nd dose from 8 to 12 weeks.
- Crowding at some vaccination posts following the inclusion of persons 58 years and above among whom high morbidity and mortality rates had been recorded. Their inclusion increased the target population by 2.6 million people. Human resource capacities were stretched in many facilities.
- Misinformation and untruths about vaccines and their side effects are channeled through social media.
- Inadequate budget to support training, communication, community sensitization, and capacity-building efforts.
- Low uptake in counties in the semiarid and hard-to-reach areas due to limited geographical access and hesitancy.

Priorities

Testing

- Increase capacity and number of facilities testing for SARS-CoV-2
- Increase the number of SARCOV rounds of External Quality Assurance
- Increase the number of positive samples sent for genomic sequencing
- Finalize the EPT system to manage the External quality assurances

Public Health Emergency Management

- Continue implementation of public health measures including vaccination and awareness creation
- Develop infrastructure through identification and improvement of available physical space to meet a standard PHEOC layout.

Readiness of health facilities

- Utilize existing data on both COVID cases and facility readiness to plan; for example, beds with piped oxygen can be repurposed to serve other critical patients when COVID cases are low.
- Counties should strive to have a minimum of 30% of their total COVID beds connected to oxygen.
- Increase investment in oxygen plants and pipe oxygen to more beds to increase readiness in case of a COVID surge
- Provide all staff with the necessary PPEs and ensure availability of all IPC products to ensure adherence to IPC protocols to avoid the spread of infections

COVID Vaccination

- Scale up vaccination by continuous advocacy
- Develop in-country capacity to produce vaccines to reduce dependency on an external supply of COVID (and other vaccines
- Integration of COVID-19 Vaccination to routine immunization
- Increase the number of tablets and data bundles for reporting
- More funding to support more vaccination campaigns

6.0. CHAPTER SIX: SEMI-AUTONOMOUS GOVERNMENT AGENCIES (SAGAs) PERFORMANCE

The Health Sector has thirteen (13) Semi-Autonomous Government Agencies (SAGAs) through which the Ministry implements some of its core functions. These SAGAs are namely:

1. Kenyatta National Hospital (KNH)
2. Moi Teaching and Referral Hospital (MTRH)
3. Kenyatta University Teaching and Referral Hospital (KUTRRH)
4. Mathari National Teaching and Referral Hospital
5. National Health Insurance Fund (NHIF)
6. National Aids Control Council (NACC)
7. Kenya Medical Training College (KMTC)
8. Kenya Medical Research Institute (KEMRI)
9. Kenya Medical Supplies Agency (KEMSA)
10. National Cancer Institute of Kenya (NCI-K)
11. Kenya Health Professions Oversight Authority (KHPOA)
12. Kenya Health Human Resource Advisory Council (KHHRAC)
13. Kenya Nuclear Regulatory Authority (KNRA)

The mandates of the various agencies and achievements for the period under review plus challenges faced by institutions during the period and priorities for FY 2022/23 are also highlighted.

6.1 National Referral Hospitals

Health Infrastructure

During the period under review, there were varying infrastructural investments across the various national referral hospitals as in table 29 below. Availability of Tracer Health Infrastructure in MTRH, KNH, KUTRRH referral hospitals, Mathari Teaching and Referral Hospital, and Spinal Injury and Referral Hospital.

Table 29: Tracer Health Infrastructure in National Referral Hospitals

	KUTRRH		MTRH		KNH		Mathari Teaching and Referral Hospital		Spinal Injury and Referral Hospital	
Indicator	2019/20	2020/21	2019/20	2020/21	2019/20	2020/21	2019/20	2020/21	2019/20	2020/21
Total Number of health facility beds	650	650	1,020	1,049	1,806	2,516	584	609	35	35
Total Number of Cancer treatment beds	76	76	35	35	95	103	0	0	0	0
Total Number of ICU Beds	24	60	28	37	79	101	0	0	0	0
Total Number of HDU Beds	12	12	3	3	127	131	0	0	0	0
Total Number of Renal Beds	10	20	22	22	32	38	0	0	0	0
Number of functional MRI machines	0	2	1	1	1	1	0	0	1	1
Number of functional CT-Scan Services	1	2	3	3	2	5	0	1	1	1
Number of functional Ultrasound machines	4	4	5	5	12	15	1	1	1	1

	KUTRRH		MTRH		KNH		Mathari Teaching and Referral Hospital		Spinal Injury and Referral Hospital	
Indicator	2019/20	2020/21	2019/20	2020/21	2019/20	2020/21	2019/20	2020/21	2019/20	2020/21
Number of PET/CTs	0	2	0	0	0	0	0	0	0	0
Number of SPECT/CTs	0	1	0	0	0	0	0	0	0	0
Number of Brachytherapy Machines	0	1	0	1	1	1	0	0	0	0
Number of LINAC machines	1	1	0	1	1	1	0	0	0	0
Number of Medical Cyclotrons and Radio Tracer Centre	0	1	0	0	0	0	0	0	0	0

It is important to note that despite being national referral hospitals, Mathari and Spinal Injury do not have critical care facilities (ICU and HDU).

Majority of the infrastructural investments in the 3 referral facilities were in critical care beds (ICU and HDU) which increased from 273 in 2019/20 to 344 in 2020/21; similarly, health facility beds increased from 3,476 to 4,215. An additional 16 renal beds were also procured. The additional critical care units at the KNH prime care centre have contributed to the reduction of the facility mortality rate from 9.3% in FY 2018/19 to 8.8% in FY 2020/21. In addition, theatre cancellation has reduced from 5% in the FY 2019/20 to 2.1% in the FY 2020/21. The facility also established a tissue typing laboratory useful during organ transplants. Othaya hospital, an annex of KNH, partnered with Safaricom Foundation to renovate and equip the New-Born Unit. The renovated facility has 16 beds and four (4) maternal HDU beds. A 3000-litres bulky liquid oxygen tank was also acquired and installed during the same period.

In the last three years, MTRH procured modern medical equipment to improve health service delivery. They included Radiotherapy Equipment (Linear Accelerator), an Oxygen Plant, Radiological and Imaging Equipment including Magnetic Resonance Imaging (MRI), Digital X-Rays, Mammography, and EPG Machine, Laboratory Equipment, C-Arm, Laparoscopic Tower, 32 Slice CT- Scan, Patient Monitors and 128 slices CT-scan. An array of Theatre Equipment was also acquired. The hospital also developed an enterprise resource planning system (ERP) which has increased efficiency in operations and improved customer experience and reduced turnaround time following discharge from 2 hours to 30 minutes.

In response to the growing burden of chronic diseases, KUTRRH invested in equipment to facilitate early diagnosis and treatment of cancer and other chronic diseases; an Integrated Molecular Imaging Centre (for) and a hospitality centre were constructed in the last year. The facility also procured and installed a brachytherapy machine; cyclotron machine, PET/CT's, and SPECT/CT's. Further, the hospital operationalized the Infectious Disease Unit and invested in telemedicine equipment to facilitate consultations with specialists in and out of the country. Mathari teaching and referral hospital undertook major infrastructural developments to improve the patient experience, reduce stigma and enhance the security of the facilities' in-patients. These included the construction of an out-patient waiting bay & gate and renovation of 4 wards, kitchen & walkways. In addition, a CT scan machine was procured and is currently functional with 137 patients having accessed CT services by June 2021.

Health financing in the national referral hospitals

In FY 2020/21, the GOK allocated 33.1B to the national referral facilities, an increase from the 23.6B and 29.3B allocated in 2018/19 and 2019/20 respectively. There has also been an increase in the actual expenditure, up from the 23.1B spent in 2018/19 compared to the 33.6B spent in 2020/21.

A summary of the budgetary allocations from GOK and Cost Sharing Income & Appropriations in Aid (AIA) against the total hospital expenses during the FY 2020/2021 for the 4 referral hospitals are summarised in table 30 below.

Table 30: Summary of hospital finances (Receipts and expenditures) in FY 2020/21

S.No	Indicators	KUTRRH	MTRH	KNH	Mathari
1.	Total Hospital Expenses	3,308,002,607	11,357,531,864	18,259,995,940.01	1,159,751,094
2.	Total Resources received (All sources)	5,675,874,102	11,358,100,717	19,574,662,864.19	1,199,176,953
3.	Resources received from GOK	4,129,649,910	8,154,680,000	11,900,878,272.29	1,049,176,953
4.	User fees collected	1,181,004,943	3,144,833,791	7,133,646,922.63	151,640,812
5.	Donations	165,075,489	58,586,926	12,258,501.21	NIL
6.	NHIF Claims	323,034,845	1,420,583,557	1,758,775,999.68	87,928,500
7.	NHIF Claims reimbursed	160,458,169	1,282,456,353	1,808,217,588.96	66,523,500
8.	Waivers	69,000,668	337,537,715	1,758,775,999.68	28,556,460
9.	Others sources of Income – (Specify)	39,603,591	-	267,982,348.23	NIL

Notably, the biggest expenditure in the referral facilities was on personnel emoluments with MTRH spending Kshs. 8.28B; KUTRRH 1.46B and KNH 12.99B on PE in 2020/21. This is in comparison to amounts spent on goods and services in the same period; MTRH (2.42B), KUTRRH 1.54B and KNH 7.2B respectively. Significant amounts (2.1B) went to waivers and this was due to facilities providing services to patients who were not able to pay their bills. Other than KUTRRH that had only half of their NHIF claims reimbursed, the other referral facilities received rebates for more than 75% of their claims from NHIF.

Health Service Outputs

As mandated, the national hospitals continue to provide specialized services and act as referral centers for other facilities in the country. A comparison of performance for the 3 referral facilities for some select specialized services for FY 2020/21 is outlined in table 31 below.

Table 31: Performance against select tracer output indicators for KUTRRH; MTRH and KNH

Performance Indicator		KUTRRH		MTRH	
		Achievement FY 2020/21	Target 2020/21	Achievement FY 2020/21	Target 2020/21
Overall Service data	No of Inpatient clients admitted	5,986	4,000	40,925	39,280
	No of outpatient clients served	35,476	25,000	405,814	405,110
Surgeries	No of general surgeries	665	300	1,383	1,380
	No of orthopedic surgeries	179	50	2,986	2,850
Specialized Surgeries	Cardiothoracic surgeries	0	0	297	260
	Kidney transplants	0	0	8	8

In 2020/21, KNH performed a ground-breaking procedure including transcatheter closure of a patent ductus arteriosus, a minimally invasive procedure; reattachment of a hand of a seven-year-old boy severed by a chaff cutter; a tracheostomy insertion surgery and administering intra-arterial chemotherapy in the management of a retinoblastoma, greatly reducing the side effects of chemotherapy on the six-year-old girl.
KNH-Othaya reported an increase in the uptake of services with the 2,962 renal dialysis sessions done against a target of 856. In addition, 1398 minimally invasive surgeries were conducted against a target of 746 and 779 chemotherapy sessions were provided in the same year. The hospital also performed fifteen (15) major liver resections during the review period.
KUTRRH attended to an average of 180 oncology patients per day of which 80 were outpatient while 70 & 30 received radiotherapy and chemotherapy treatment respectively.
In 2020/21, MTRH conducted 8 successful kidney transplants, 9 successful corneal transplants, and 8 open heart surgeries. The facility reported a drop in the specialized services against set targets and this was attributed to the disruption of health services due to COVID-19.
As the facility is mandated to provide highly specialized mental health services, Mathari Teaching and Referral hospital offered services to both civil and forensic (mentally ill offenders) patients and reported the following performance;

Table 32: Performance against select tracer output indicators for Mathari Hospital

Categories of health services selected	Indicators	Achievement 2020/21	Target 2020/21
Psychiatric Outpatient Services data	No. of psychiatric outpatient visits	16,761	25,000
	No. of Medically Assisted Therapy (MAT) psychiatric clinics visits	224,908	240,200
	No. of Clinic of Substance Abuse Treatment (CSAT) visits	945	1,250
	No. of psychotherapy clinic visits	1,502	3,000
Psychiatric Inpatients data	No. of admissions	1,676	2,000
	No. of inpatients receiving specialized psychiatric services	183,262	246,729
	ALOS for inpatients (civil)	64	55
Radiology Services	Number of clients receiving CT-Scan Services	0	100
	Number of clients receiving Ultrasound services	3,840	4,500
Electroencephalogram (EEG) Services	No. of clients receiving EEGs services	573	700
Electroconvulsive therapy (ECT) Services	No. of clients receiving ECT services	93	200

There was a decrease in the number of psychiatric civil in-patients; from 164,850 in 2018/19 to141,748 & 104,500 in 2019/20 and 2020/21 respectively. The same decline in numbers was seen in the forensic in-patients. Positively, a total of 103 abandoned patients were re-integrated back into the community during 2020/21.

The National Spinal Injury Referral Hospital reported an increase in workload from 1,254 patients in 2019/20 to 6,229 in 2020/21. This was attributed to the availability of equipment in the physiotherapy department. Introduction of CT- Scan and MRI services also increased outpatient attendance, reduced referrals and waiting time in making a diagnosis and treatment plan for the patients. In addition, 57 patients were resettled/reintegrated into their communities in 2018/19, compared to 52 in 2019/2020 and 16 in 2020/2021 as part of rehabilitation following spinal injuries.

Table 33: Performance against select tracer output indicators for National Spinal Hospital

Categories of health services selected	Indicators	Achievement 2020/21	Target 2020/21
Inpatient Services	Orthopedic Ward admissions	93	125
	No of orthopaedic surgeries	75	95
	No. of spine surgeries	76	100
Rehabilitative services	No. of patients admitted for spinal rehabilitation services	93	125
Specialized Surgeries	Other Specialized surgeries (Plastic surgeries)	7	10
Radiology Services	Number of clients receiving MRI services	138	200
	Number of clients receiving CT-Scan Services	22	35

Challenges across the National Referral hospitals

1. Old and dilapidated infrastructure & equipment in KNH result in increased machinery breakdown and costs of repairs and maintenance
2. Breakdown and ineffectiveness in the referral system as a result of inappropriate referrals, poor coordination of the referral services, inadequate communication and transport system among others
3. Low automation levels lead to system inefficiencies, loss of revenue and insecure and irretrievable patient data, wasted time, delayed health care delivery and opening avenues for corruption
4. Inadequate funding results in the disruption of key functions
5. Low levels of awareness and stigmatization of mental health services in the public
6. Lack of crucial specialties/cadres such as IT specialists, planning managers, economists and legal officers
7. Slow operationalization of Mathari hospital into a fully-fledged SAGA
8. Acute staff shortage and inadequate infrastructure at the National Spinal hospital.

Priorities

1. Operationalization of the Integrated Molecular Imaging Centre Services in KUTRRH
2. End to end automation of services in all referral facilities
3. Construction, equipping and staffing of a new National Spinal Injury Teaching Training & Research Hospital
4. Overhaul of dilapidated and outdated equipment in KNH

6.2 National AIDS Control Council (NACC)

The National AIDS Control Council was established under Act Cap 446 published vide Legal Notice No. 170 of 1999. It is mandated to coordinate the national multi-sectoral HIV and AIDS response through the provision of policy and strategic direction; resource mobilization and provision of strategic information. NACC further provides Technical Assistance to stakeholders at both the National and county levels as well as ensuring efficient utilization of resources while maximizing impact.

Achievements

1. Priority Projects and Equipment

The NACC identified and initiated the establishment of priority projects like re-engineering of the situation room, implementation of eMTCT program, and acquisition of office space as described in table 34 below:

Table 34: Priority projects (NACC)

S.NO	Project	Project Impact	Start date	End date	Status (Completion rate)	Estimated cost for completion	Remarks
1	Situation Room System and Maisha Digital Platform	facilitates tracking of key HIV and health indicators at country, county, sub-county, and facility levels to support programming and decision making	September 17, 2016	June 30, 2025	60%	Ksh 391m	The situation room is to be re-engineered by adding extra modules including the Key Population, people on ART, COVID19 reports, viral load testing, gender-based violence (SGBV), reproductive, maternal, newborn, child, and adolescent health (RMNCAH
2	eMTCT (Elimination of HIV among Children and Adolescents)-Beyond Zero		January 6, 2016	June 30,	Ongoing	Ksh 238.7m	Target was to reach an eMTCT rate of less than 5% by 2019from the current 9.7%
3	Acquisition of Office Space for National AIDS Control Council		2019	2022	New 15%	Kshs. 1,600M	Involves acquiring a building that is fit for all of NACCs needs and the extra space in the building can be rented out or utilized in future

In addition, NACC facilitated all the regional offices by providing IT infrastructure, fast-speed internet connectivity, access to the central server, and roll out of an enterprise resource planning system.

Finally, the NACC website was also re-designed and launched.

2. Program Outputs

The NACC undertook key program activities that impacted positively on the Kenyan population with a key focus of reducing the number of new HIV infections and move toward ending AIDS as a public health threat by 2030. The key achievements included;

i. Financing of Programmes

In 2020, the NACC spearheaded a successful bid to the Global Fund to support HIV/TB/Malaria programs and Kenya was allocated USD 415,310.170. The total allocation to HIV is USD 246,165,248.27 with 80% being for the procurement of commodities.

ii. Policies and guidelines for the management and control of HIV

The NACC led the development of the Kenya AIDS Strategic Framework II (FY 2020/21-2024/25) through a country-wide participatory approach.

In FY 2020/21 the NACC piloted guidelines for HIV and Health Impact analysis in four counties and as of 30th June 2021, 83 infrastructure projects were implementing the guideline.

iii. Peer-to-peer engagement for the young people

NACC, with the support of the Global Fund, institutionalized and operationalized Maisha Youth County Chapters in 46 counties to increase the meaningful engagement of Adolescents and Young People in the country's HIV Response through the Maisha Youth Movement

iv. Installation of condom dispensers in non-health settings

During this period, condom outlets in non-health settings were increased from 3690 to 4611 through the installation of 921 condom dispensers in eleven counties of Kajiado, Homabay, Kwale, Meru, Kitui, Muranga, Kitui, Taita Taveta, Garissa, Bungoma, Bomet and Vihiga county

v. Engagement of local administration

Community gatekeepers are influential and have a key role in addressing cultural and social barriers to HIV services access. With a focus on Taita Taveta and Baringo, the NACC held a Consultative forum with 53 Community gatekeepers in Taita Taveta and 45 administrators in Baringo County to address GBV, Teenage pregnancies, early marriages, FGM and unskilled birth attendance.

vi. Increasing access to justice

The Council, in collaboration with the HIV and AIDS Tribunal (HAT) established 4 Teleconferencing facilities in Nairobi, Mombasa, Kisumu and Nyeri Counties. These facilities are intended to build the institutional capacity of the HAT to effectively and efficiently discharge its mandate of delivering justice to those in need.

vii. Technical Assistance

NACC provided technical assistance to the Beyond Zero program to constitute a multi-sectoral committee for the elimination of new HIV infections in children that has galvanized country leadership and ensured sustained advocacy and momentum at national and county levels on Emtct programming.

Challenges

a) Variations in the negotiated budget during MTEF and the final approved budget for NACC in the printed estimates
b) Delay in Funds Flow from Treasury to the NACC resulting in sub-optimal program implementation
c) An uncertain global environment that negatively impacted external resourcing

Priorities for FY 2022/23

i) Prioritization of interventions towards the elimination of HIV among children and adolescents
ii) Strategies to mobilize and promote uptake of HIV services for adolescents and young people (10 to 24 years)
iii) Promotion of condom use to enable Kenya to reach the global target of 40 condoms per man per year
iv) Communication and Advocacy for the prevention of HIV and UHC promotion
v) Leveraging on Beyond Zero Clinics to facilitate county-level advocacy and communication campaigns to promote uptake of eMTCT, ANC, and pediatric HIV services

6.3 Kenya Medical Research Institute (KEMRI)

Introduction

The Kenya Medical Research Institute (KEMRI) was established under Legal Notice No. 35 of 2021. The overall mandate of the Institute is to conduct research for human health; build human health research capacity; collaborate and partner with other local and international institutions in carrying out human health research & capacity building and undertake scientific and technological innovation including establishing incubation centers for innovation.

Achievements

During the period under review;

i. The Institute developed four hundred and thirty-seven (437) new research proposals covering national health research priority areas, published one thousand and five (1,005) scientific papers in peer-reviewed journals, and presented four hundred and twenty-five (425) peer-reviewed scientific abstracts in national and international conferences and scientific forums. These research studies were conducted in collaboration with over ninety (90) institutions/partners from eighteen (18) countries.
ii. Forty-eight evidence-based policy briefs were developed covering malaria, COVID-19, cancer, TB, HIV and health systems.
iii. In contributing to the Universal Health Coverage (UHC), the institute conducted a rapid situation analysis on population needs and operational research in Machakos, Kisumu, Isiolo and Nyeri. UHC scale-up studies in twelve (12) counties namely Bungoma,Homabay, Bomet, Nyandarua, Nyeri, Isiolo, Meru, Machakos, Kitui, TaitaTaveta, Kisumu, and West Pokot started in January 2020 and are ongoing.
iv. The Institute developed and continues to manage Demographic Health Surveillance Systems (DHSS) targeting population dynamics, validating national census/demographic health surveys, health facility utilization, evaluation of new health interventions, and priority diseases monitoring within Kisumu, Siaya, Homabay, and Kilifi Counties.
v. The institute also invested in conducting clinical trials targeted at the development of Drugs, vaccines, and diagnostic kits. Key clinical trials undertaken during the period include:

1) Malaria:

• **Vaccine**:

- RTSS Phase 3 is completed and pilot deployment ongoing in Kenya, Malawi and Ghana
- New malaria candidate vaccine evaluation ongoing
- Malaria antigen characterization ongoing for new vaccine

• **Drugs:**

- Malaria drug discovery by mining existing chemical libraries (360 compounds evaluated)
- Evaluation of medicinal plants with anti-malarial potential
- Clinical trials on new anti-malarial drugs (KAF, Feroquine, KAE)
- Antimalarial drug resistance surveillance and monitoring

• **Diagnostics:**
- Development of the first locally manufactured new rapid diagnostic tests (RDT)
- Evaluation of new and existing malaria diagnostic tools
- Training of health workers and researchers in malaria diagnosis

2) **Ebola vaccine:**
Phase two proof of concept trial showing that the vaccine candidate was efficacious was completed. Phase three was not done since the epidemic was contained.

3) **HIV:**
A phase 3b, randomized, open-label study of the antiviral activity and safety of dolutegravir compared to lopinavir/ritonavir both administered with dual nucleoside reverse transcriptase inhibitor therapy in HIV-1 infected adult subjects with treatment failure on first-line therapy. Dolutegravir has now been adopted in the country as 2nd line treatment for HIV.

4) **Tuberculosis:**
A phase IIB, double-blind, randomized placebo-controlled study to evaluate the efficacy, safety, and immunogenicity of GSK biologicals' candidate tuberculosis (TB) vaccine GSK 692342 against TB disease in healthy adults aged 18-50 years living in a TB endemic region.

5) **Sickle cell:**
A phase 3, double-blind, randomized, placebo-controlled, multi-center study of GBT440 administered orally to patients with sickle cell disease was completed and proceeded to an open-label study GBT 034. The drug has been registered and is on the market.

6) **Yellow fever vaccine**:
Currently, a fractionated dose regimen has been under development and is currently in the final stages of evaluation.

COVID-19 Response
- KEMRI conducted 704,884 COVID-19 tests across the country and genomic sequencing for 2,200 COVID-19 samples. Phases 2 and 3 clinical trials on Astra Zeneca (Chadox) are ongoing.
- To enhance COVID-19 response in the country, KEMRI sensitized one hundred and twenty (120) laboratory staff from all the counties on emergency laboratory preparedness and response, biosafety, and sample collection.
- Innovations and products developed by KEMRI in response to the pandemic include;
    - COVID-19 PCR kit which is undergoing final evaluation
    - Viral transport media developed with 26,000 pieces distributed to health facilities
    - 157,861 units of bleach (TBCide) were supplied to KEMSA and other health facilities.
    - 292,971 units of Sanitizers (KEMRUB)
    - Obtained accreditation by KENAS (ISO17043) for COVID-19 Proficiency

Ongoing studies during the period under review include;
- Animal studies on the application of characterized stem cells for diabetic wound healing and management of cutaneous leishmaniasis lesions in animal models.
- Pre-clinical studies for herbal medicines for cancer treatment were undertaken for One hundred and forty-seven (147) samples collected in Nairobi and Uasin Gishu.
- Microbial contamination and drug sensitivity studies have been completed for 117 samples and data analyses are ongoing.
- Data compilation for 5 samples tested against prostate and cervical cancer cell lines is ongoing.

Innovations

During the performance period under review, KEMRI developed the following innovations:

- Rapid diagnostic kit for malaria, in support of Africa Leadership Malaria Alliance (ALMA) spearheaded by the President of Kenya.
- Viral Transport Media (VTM) for COVID 19 was developed and 26000 units have been supplied to the Health sector
- Developed Proficiency testing for COVID 19 (The first in Africa) and accredited by KENAS
- Establishment of stem cell research for regenerative and precision medicine application.
- Development of a COVID-19 PCR test kit; is currently at the commercialization stage.
- Evaluation of a loop-mediated isothermal amplification (LAMP) assay for COVID-19 detection
- Development and evaluation of Helicase Dependent Isothermal DNA Amplification Method as point-of-care Diagnosis of Wuchereria bancrofti.

Capacity Development

To enhance KEMRI's capacity and recognition both locally and internationally, KEMRI upgraded and accredited various labs during the period. The included microbiology & clinical research labs (CAP) (KEMRI/WRP Kericho), re-certification of ISO 15189:2012 (Medical laboratory (CVR, CGHRTB/ HVR/DLSP)) ISO 9001:2015 (QMS Requirements KEMRI) certified clinical, microbiology & immunology labs (GCLP) in KEMRI Kilifi, Kisumu, Kombewa, Kondele, and Kericho mong others

Other Infrastructures developed during the period include;

- Renovations of staff quarters in Mbagathi
- Installation of CCTV and barrier access control
- Rehabilitation of access roads and drainage in KEMRI Kisian station and KEMRI headquarters

Human Resource Development

- KEMRI trained a total of 117 Ph.D. and 181 Master's degree scientists, 36 Graduate attaches and 78 postgraduate Diploma students both Kenyan and International.
- In addition, the Institute built the capacity of African region NTDs program managers and health officials from Kenya MOH and county level, Ethiopian MOH, South Sudan and Tanzania in various health-related fields including; deworming for schistosomiasis and soil-transmitted helminths; Onchocerciasis voluvus (OV) 16 Eliza; pre-transmission assessment surveys (Pre-TAS) among others
- The Institute also trained MOH and County officers from Kiambu, Bondo and Kwale on a Schistosomiasis diagnosis kit.
- Through collaboration with JICA, KEMRI trained fourteen (14) participants from seven (7) countries (Ethiopia, Uganda, Eritrea, South Sudan, Rwanda, Burundi, Kenya (Mandera, Busia, Turkana, Nairobi)) on laboratory preparedness for building resilience against public health emergencies in Eastern African region

Service delivery

- KEMRI offered 3,577,412 specialized laboratory services including Viral Load testing which covers 75% of all National tests, PCR- Early Infant Diagnosis of HIV, HIV/Rapid Test and DNA tests. This was made possible through the acquisition of new technology with the capacity to conduct one million tests quarterly. The technology further sends information to the client in real-time (both patients and health facilities).
- The Institute developed and commercialized 1,475,919 diagnostic kits and other products. The products include: culture media (plates), culture media (tubes), Kem-Rub, Safi- Kem (hand wash), sheep blood and distilled water

Recognition
In 2020, among other recognitions, KEMRI was ranked number eight among all research institutions in Africa and number one in health research innovation in Africa, 2020.

Challenges
- Inadequate government funding for health research and infrastructure results in a high reliance on donor funding. This has led to an inability to fully address research in national priority areas.
- Non-competitive terms of service for research scientists and declining human resources in specialized areas
- Inadequate upgrading of research facilities in tandem with advanced technology
- Low uptake of research findings by policymakers

Priorities
i. Conduct research in health priority areas to support and inform Universal Health Coverage
ii. Build human health research capacity through training and research infrastructure upgrade
iii. Scientific and technological innovations

6.4 Kenya Medical Training College (KMTC)

Introduction
The Kenya Medical Training College (KMTC) was established through an Act of Parliament in 1990 vide Cap 261 and is entrusted with the training of various health disciplines in the health sector to serve the East African Region and beyond. The College has 71 campuses.

Achievements

1. Graduations
Despite the negative effects of the COVID-19 pandemic, the College continues to graduate students to bridge the healthcare workforce gaps. Towards this, 11,624 students graduated in 2020/21 against a total of 12,621 in 2019 and 10,869 in 2018/2019. The graduations were against 12,962; 14,403 and 15,859 students enrolled in FYs 2018/19; 2019/20 and 2020/21 respectively.

2. Curricula
In order to address the Primary Health Care requirements as a component of UHC, KMTC developed 3 Curricula in FY 2018/19;2 in 2029/20 and 5 in 2020/21. In addition, the College reviewed 2 existing Curricula in FY 2019/20 and 1 in 2020/21 to address emerging diseases and to embrace new innovations and technologies

3. Trainings
In 2020/21, KMTC trained 938 CHAs, up from the 599 trained in FY 2019/20. Sixty-six CHEWs were also trained in the same year.
In addition, 800 enrolled nursing students were trained under the MOH/World Bank scholarship, with 758 having graduated from the program.

4. Use of technology to support teaching and learning
The College rolled out an enterprise resource planning system (ERP) with four modules (human resource, finance, procurement, and academic) to 38 campuses against a target of 25 campuses. This was especially useful in ensuring learning and teaching continued during the COVID-19 restrictions

Challenges

1. Withdrawal of donor funding (USAID) under the Afya Elimu Fund and redirection of HELB Fund to strictly TIVET institutions has hampered funding for underprivileged learners
2. Inadequate physical infrastructure and human resources (lecturers) to support the high demand for middle-level health care training
3. Government funding gaps: The College receives only 75% of its P.E requirements which is inadequate for this purpose

Priorities

1. Expansion of ICT network and capacity to optimally reach and serve all campuses.
2. Equipping laboratories (skills & simulation) for the development of various competencies.
3. Building capacity of the lecturers to teach using the latest skills and teaching methodologies

6.5 Kenya Medical Supplies Authority (KEMSA)

Introduction

Kenya Medical Supplies Authority was established under the KEMSA Act No. 20 of 25th January 2013 with a mandate to procure, warehouse, and distribute health products and technologies to the public and other health facilities in Kenya.

Achievements

i. KEMSA procured HPTs worth Kshs.35.84B; of this Kshs.6.985B was allocated to the procurement of KEMSA sales items and Kshs. 28.499B for procurement of program items.

ii. Stock availability for essential health products and technologies to meet the national requirements was lower in 2020/21 compared to 2019/20. This was because the country imports over 95% of its HPTs and movement was limited in 2020/21 due to the COVID-19 pandemic. Nonetheless, the authority distributed HPTs for essential medicines and medical supplies (EMMS) and national health strategic programs as shown in table 35 below.

Table 35: Comparison of value of HPTs for EMMS and strategic programs for FY 2018/19-2020/21

FY Year	KEMSA EMMS (Kshs)	Strategic Programs (Kshs)	Totals (Kshs)
2018/19	4,729,597,711.00	23,421,155,915.00	**28,150,753,626.00**
2019/20	11,956,113,932.16	25,691,698,382.72	**37,647,812,314.88**
2020/21	8,245,609,961.85	21,444,688,359.14	**29,690,298,320.99**

There were variations in the order fill rate for essential medicines and program commodities across the three years as described in table 36 below.

Table 36: Comparison of order fill rate for KEMSA EMMS and Programs EMMS

Category of Order Fill Rate	FY 2018/19	FY 2019-2020	FY 2020-2021
For KEMSA EMMS	83%	69%	45%
For Programs EMMS (HIV, TB, FP, Malaria)	95%	90%	94%

iii. KEMSA successfully procured and distributed HPTs worth Kshs. 6,856,655,805 for the UHC roll out to all the counties from March 2020 to June 2021

iv. The order turnaround for hospitals in the FY 2018/19, 2019/20 and 2020/21 stood at 9.7 days, 12.3 days, and 12.6 days respectively against a target of 7 days, while that of primary health facilities (PHFs) stood at 14. 6 days, 17.5 days and 18.1 days respectively against a target of 10 days.
In FY 2020/21 there was a slight drop in the performance of the hospital and PHFs orders compared to previous years which was due to a backlog of orders occasioned by the prioritization of COVID-19 orders.

v. To reduce the cost of medical commodities for NCDs the authority signed MOUs with Merck Foundation and Norvatis to increase the availability and affordability of ant-diabetic medicines and increase availability and affordability of leukemia medicines respectively.

Challenges

i. Failure by Counties to honor the credit terms and delayed remittance of payment for the supplied commodities. This has a negative impact on operations and procurement since KEMSA's business model is based on a revolving fund.

ii. Lack of consumption data for EMMS and this is particularly when Counties procure from other vendors

iii. Persistent stock outs attributed to tender non-responsiveness, poor supplier performance on meeting delivery timelines and long procurement turnaround time.

iv. Delays occasioned by lengthy clearance processes in the pre-shipment inspection at country of origin and the ports of entry

v. Delay of commodities supply occasioned by the COVID-19 pandemic. The Pandemic led to limited importations of HPTs into the country due to border closure.

Priorities

i. Acquire a new enterprise resource planning system

ii. Deployment of the new automated supplier appraisal tool

iii. Redesign order processing and visibility to the customers on the LMIS.

Recommendations

I. Ring-fencing monies for HPTs at National and County levels of Government through amendment of the PFM ACT2012.

II. Mandatory reporting on the utilization of trace commodities (56 HPTs) by all health facilities

III. Need to optimize the KEMSA-LMIS to collect consumption data during facility order.

IV. Conduct supplier appraisals and enforce the punitive contract clause for non-performing suppliers

V. Reduce the procurement turnaround time through business process re-engineering

VI. Enhance forecasting and quantifications at the county level and automation of the process

VII. Support local manufacturing by ensuring a substantial number of HPTs are manufactured locally in order to ensure a continuous supply of critical HPTs.

VIII. Support of the jua kali sector to manufacture some equipment and non-pharmaceuticals.

6.6 National Hospital Insurance Fund (NHIF)

The NHIF is a state corporation established under the National Insurance Fund Act number 9 of 1998. NHIF is mandated to facilitate access to quality healthcare through strategic resource pooling and healthcare purchasing in collaboration with stakeholders. NHIF works to secure financial risk protection against the cost of healthcare services for all Kenyan residents through prudent financial management of the resources contributed by members in the formal and informal sectors.

Achievements

Revenue Collection

In 2020/21, the fund collected KSh. 62,149,119,295 against a target of KSh 64,492,970,652, which translates, to 97% performance. The target was not achieved due to macroeconomic factors in the country as well as economic disruptions due to the COVID 19 pandemic hindering contributions into the fund.

The NHIF Revenue Collection in the past three years is described in table 37 below;

NHIF Membership

In 2020/21, the fund registered 821,548 new members bringing the total membership to 12.9 million Kenyans and active membership of 5.3M. This is approximately about 20.7M Kenyans under the NHIF cover (43% of the Kenyan population).

Paid-out Benefits

Total claims paid out during the financial year 2020/21 was Ksh.54 B, which indicates 89% utilization as tabulated in table 37 below;

Table 37: Performance of various schemes within NHIF

Source	FY 2020-21 Target	Contributions & Premiums	Benefits	Utilization %
	KSh	**KSh**	**KSh**	
NHS contributions	43,437,897,000	31,321,331,719	28,236,045,834	89%
HISP program (OVC)	1,091,808,000	1,341,820,000	250,641,181	19%
Elderly and PWSD	252,000,000	276,000,000	81,847,746	30%
Civil servants' medical scheme	4,000,000,000	6,022,658,067	6,734,203,627	112%
NPS/KPS Medical scheme	4,785,806,000	7,028,116,989	8,255,928,224	117%
Free maternity cover	3,898,000,000	4,948,139,361	4,948,139,361	100%
County medical schemes	1,543,344,652	2,739,988,156	1,234,656,419	45%
Secondary School Medical Scheme	4,050,000,000	4,050,000,000	1,850,335,509	46%
WIBA Cover (NPS&KPS)	-	1,147,797,220	643,769,429	56%
TOTAL	**63,058,855,652**	**60,775,432,571**	**54,061,738,618**	**89%**

As of 2020/2021, the total number of households under HISP as at is 181,968. Since its inception in 2014, a total of Ksh. 7,255,127 had been paid out as benefits to the poor and vulnerable, who are the beneficiaries of the program.

A decline in the number of elderly and PWSD accessing their fund in 2020/21, was attributed to the disruption of health services and policy directives related to the COVID -19 Pan

6.7 Kenya Nuclear Regulatory Authority (KNRA)

Introduction

The Kenya Nuclear Regulatory Authority is a statutory body established under the Nuclear Regulatory Act No. 29 of 2019 with a mandate to regulate and ensure safe, secure, and peaceful development, production, possession, use, storage, transport, transfer, disposal, or handling of nuclear and radioactive materials, activities and facilities and other apparatus generating radiation; and to protect persons, property and the environment concerning nuclear and radioactive material, activities and facilities and other apparatus generating ionizing radiation.

Achievements

During the review period, the Kenya Nuclear Regulatory Authority achieved the following;

a) Reviewed the radiation protection legal framework driven by the need to address emerging issues and risk areas not covered under the then legal framework. Key among the risk areas identified were public concerns about emerging technologies.
b) Development of Regulations related to nuclear security; Radioactive waste management; non-ionizing radiation and Radiation protection. The draft regulations are currently awaiting discussion in parliament
c) KNRA finalized the drafting of the Nuclear Regulatory Bill 2018. The Bill was presented to Cabinet and subsequently granted Cabinet approval. The Bill was passed by Parliament as the Nuclear Regulatory Act 29 of 2019 thereby transforming the Radiation Protection Board to the Kenya Nuclear Regulatory Authority as a State Corporation under the Ministry of Health;
d) Processed and approved license applications for one cyclotron private medical facility. This facility has commenced operation and currently producing radioisotopes for disease diagnosis and treatment. Currently, the authority is processing license applications for Kenya University Teaching Research and Referral hospital. The license approval for one private facility has been delayed due to location considerations
e) Considered ten license applications for installations of linear accelerators which are considered the best alternative to radiotherapy centers because they do not pose nuclear security challenges
f) Processed one license for Positron Emitted Tomography Computed Tomography (PET/CT).
g) Supported local institutions in the management of radioactive waste arising from medical, industrial and research use.
h) Conducted Chemical Biological Radiological and Nuclear (CBRN) explosives training for forty officers from the National Police Service;
i) Considered and approved ultra violet decontamination ensemble for COVID-19
j) Operationalized the Central Radioactive Waste Management Facility and launching of the same by the president on the 20th March 2022;
k) Inspected and licensed radiological facilities in the country.

Challenges

a. Limited knowledge in the public with perceptions that nuclear technology involves nuclear weapons.
b. Proliferation of nuclear materials and the risk that nuclear material could fall into wrong hands.
c. Inadequate funding
d. Inadequate technical capacity
e. Insufficient protection of nuclear materials

Priorities

a. Build capacity of KNRA technical staff and stakeholders for effective nuclear power regulation
b. Collaborative approach to nuclear cyber security management
c. Development of relevant regulations for the nuclear power program
d. Participate in climate change for a and assure of effective regulation of nuclear power

6.8 National Cancer Institute of Kenya (NCI-Kenya)

Introduction

The National Cancer Institute of Kenya is a statutory body created under the Cancer Prevention and Control Act (No. 15 of 2012). This was in recognition of the need for a more coordinated and multisectoral response to the growing cancer burden in Kenya. The overall mandate of the Institute is to coordinate and centralize all activities, resources and information related to cancer prevention and control in Kenya.

Achievements

i. Public Education and Awareness Creation

In 2020/21, NCI-Kenya reached 5.8 million Kenyans out of a possible 49 million with messages on cancer and associated risk factor through social media platforms & websites; leveraging on the national coverage of Huduma Centres and physical visits. This was an increase from the 2,399,000 persons reached in FY 2019/20. In addition, the Institute translated cancer messages and 58 frequently asked questions (FAQs) available in English & Kiswahili into 11 local languages (Ekegussi, Kitaita, Gikuyu, Luhya (Lugoli), Kalenjin (Kipsigis), Borana, Somali, Kikamba, Dholuo, Kitharaka & Maa) as well as the braille version transcription.

ii. National Cancer Registry

The Institute initiated the process of establishing the national cancer registry (NaCaRe-KE) to provide population-level data in the respective county to support evidence-based decision-making in cancer prevention and control. Key achievements include the development and dissemination of the National Cancer Notification tool; the development of a web-based system for cancer notification and the training of 63 cancer clinicians and HRIOs in 11 counties and 5 hospitals in Nairobi on cancer registration and notification. Presently, 11 counties are now notifying cancer cases to the central database.

iii. Engagement of Stakeholders

Cancer, like other non-communicable diseases, is caused by an interplay of multiple risk factors and therefore its response requires collaboration with all relevant stakeholders. In 2020/21, the Institute engaged 9 County Assemblies and 19 County Health Management Teams with an aim of sensitizing them on the need to prioritize cancer response in their planning and budgeting processes and increase resource allocation towards cancer prevention and control, an increase from the 3 counties engaged in FY 2019/20.

In FY 202/21, the NCI-Kenya engaged 9 MDAs (Kenya Forest Service, Commission of University Education, Laikipia University, University of Nairobi, Chuka University, Teachers Service Commission, Kenya Institute of Curriculum Development, Media Council of Kenya and the ICT Authority) up from the 3 engaged in FY 2019/20 with aim of leveraging on their respective programs to advance interventions for cancer response.

iv. In line with its mandate and in conjunction with other regulatory bodies, the Institute embarked on the process of designating cancer centres, to secure the appropriate quality of cancer services provided in these health facilities. In the last year, the Institute assessed 2 private sector cancer centers (Malkia Cancer Center in Kiambu County and Advanced Cancer Centre in Kisii County) to provide technical assistance geared towards ensuring conformity to the minimum standards as per the available guidelines.

Challenges

i. Inadequate numbers of staff and requisite skills to effectively deliver on its mandate
ii. The lack of internal structures to enable administrative functions like audit, finance, planning, communication and legal remain a key barrier to the operationalization of the Institute
iii. Further, cancer being an increasing public health concern, the response has huge resource requirements which have remained largely inadequate.
iv. COVID-19 pandemic that interfered with planned activities either because of Government policies that restricted movement or reallocation of funds
v. The lack of utility vehicles greatly hampers programming
vi. Inadequate clarity of NCI-Kenya mandate as outlined in the ACT

Priorities

i. Launch a sustained public awareness campaign through mainstream media
ii. Initiate and sustain existing collaborations with stakeholders for cancer awareness creation and notification of cancer diagnosis'
iii. Develop and enforce standards to ensure regulation of cancer care
iv. Fast track recruitment of staff to NCI-Kenya
v. Develop regulations to operationalize the cancer control ACT
vi. Designation of treatment centres as per the national cancer management standards
vii. Build capacity of stakeholders in cancer prevention and control for increased resource allocation towards cancer prevention and control.

6.9 Kenya Health Human Resource Advisory Council (KHHRAC)

The Kenya Health Human Resource Advisory Council (KHHRAC) was established under Part V of the Health Act, 2017. The Council's mandate is to review policy and establish uniform norms and standards on: the management of interns and medical specialists, intergovernmental transfers (county to county and between the two levels of government), welfare and the scheme of service for health professionals and maintenance of a master register for all health practitioners in the country

Achievements

1. In 2019, the Council initiated the implementation of the National Health Workforce Accounts (NHWA) through the establishment of the governance structure for its implementation; Training of 43 Counties on NHWA and Integrated Human Resource Information System (iHRIS) for the national government and the national referral facilities targeting the County Human Resource Management Officers for Health (CHRM) and County Health Records Information Officers (CHRIOs).
2. During the same period, the Council initiated the process of establishing a framework for the training and management of medical specialists in the country through a multi-stakeholder taskforce
3. The Council carried out countrywide a country-wide mapping of specialists in the Country. The report that is envisaged to inform policy on training, management, and deployment of medical specialists for equity specialized service delivery in the country is awaiting validation by stakeholders
4. The development of a multi-dimensional health worker productivity index in Kenya commenced in the period under review and piloting of the same was done in the FY 2021/2022.
5. During the period under review, the Council with support from the State Department of Public Service, Ministry of Public Service and Gender finalized the development of operationalization documents namely: - the Organization Structure and Staffing, Career Progression Guidelines, Salary Structure, Human Resource Policies and Procedures Manual. The documents are awaiting approval by the Salaries and Remuneration Commission (SRC) and State Corporation Advisory Committee (SCAC) for operationalization.

Challenges

1. Slow process of establishing the council as stipulated in the Health Act, 2017.
2. Inadequate funds to support planned activities and to procure the necessary stationery, furniture and office equipment.
3. Inadequate numbers of staff to support all ongoing activities.

6.10 The Kenya Health Professions Oversight Authority (KHPOA)

The KHPOA is a body created by part VI of the Health Act of 2017 to provide oversight roles of the regulatory boards and councils.

Achievements

1. The Authority developed job descriptions in line with the guidelines on Conducting Job Evaluation for the 2021/22 - 2024/ 25 Remuneration Review Cycle for the Public Sector.
2. The Authority also drafted regulations relating to various aspects of its mandate and the same were validated by key stakeholders. The regulations have been forwarded to the legal unit of the MOH for approval and submission for gazettement. This includes:
    - The Health Act (KHPOA, Joint inspections) Regulations, 2021
    - The Health Act (KHPOA, Complaint handling) Regulations, 2021
    - The Health Act (KHPOA, Monitoring the Execution of Mandates and functions of Health Regulatory bodies) Regulations, 2021
    - The Health Act (KHPOA, Criteria for forming a regulatory body)
3. The Authority inspected 1,176 health facilities for quality improvement and compliance to standards, and another 691 facilities were inspected for verification of health facilities for licensing and gazettement.
4. Thirty-six joint health inspectors from 12 counties were trained to conduct quality of care inspections in health facilities. Draft assessment tools for enforcement and compliance to norms and standards in training institutions were also developed Awaiting validation
5. In regards to its mandate on Complaint resolution and mediation of disputes, the Authority received and handled 13 complaints, with 2 of the complaints investigated by a multidisciplinary team and 11 referred to respective regulatory bodies.

7.0. SECTION SEVEN: ANALYSIS OF HEALTH FINANCING AND PROGRAM-BASED BUDGET

ANALYSIS OF PROGRAM-BASED BUDGET: FY 2018/19– 2020/21

Program-based Budgeting (PBB)[1] is one of the reform initiatives that the Kenya Government embraced in recent years due to its effectiveness in delivering results. In 2007, the government embraced PBB as a commitment to undertake Public Financial Management Reforms. The adoption of PBB follows the realization that the current investment outlays do not necessarily translate to outcomes and therefore there is a need to focus on tangible outputs and outcomes of all public programs as opposed to inputs. PBB aims to provide decision-makers on resource allocation with the information required to take decisions based on information on effectiveness, efficiency and equity.

7.1 National level Program Based Budgeting

The Ministry of Health maintains five key programmes namely; Preventive and Promotive and RMNCAH Services; National Referral and Rehabilitative Services; Health Research and Development; General Administration, Planning and Support Services; and Health Policy, Standards and Regulations.

7.2 Analysis of Budget Performance by Program and Sub-Program Area

Table 38 below shows spending for the FY 2018/19 to 2020/21 by programmes. In 2020/21, National Referral and specialized Services programme was allocated 36.7 percent of all resources, followed by the Health Policy, Standards, and Regulations Programme at 24.6 percent. The other three programmes were allocated a cumulative 38.7 percent of all the resources. A breakdown of spending by programmes is provided in figure 94.

Breakdown of MOH Budget by Programmes, FY 2018/19– 2020/21

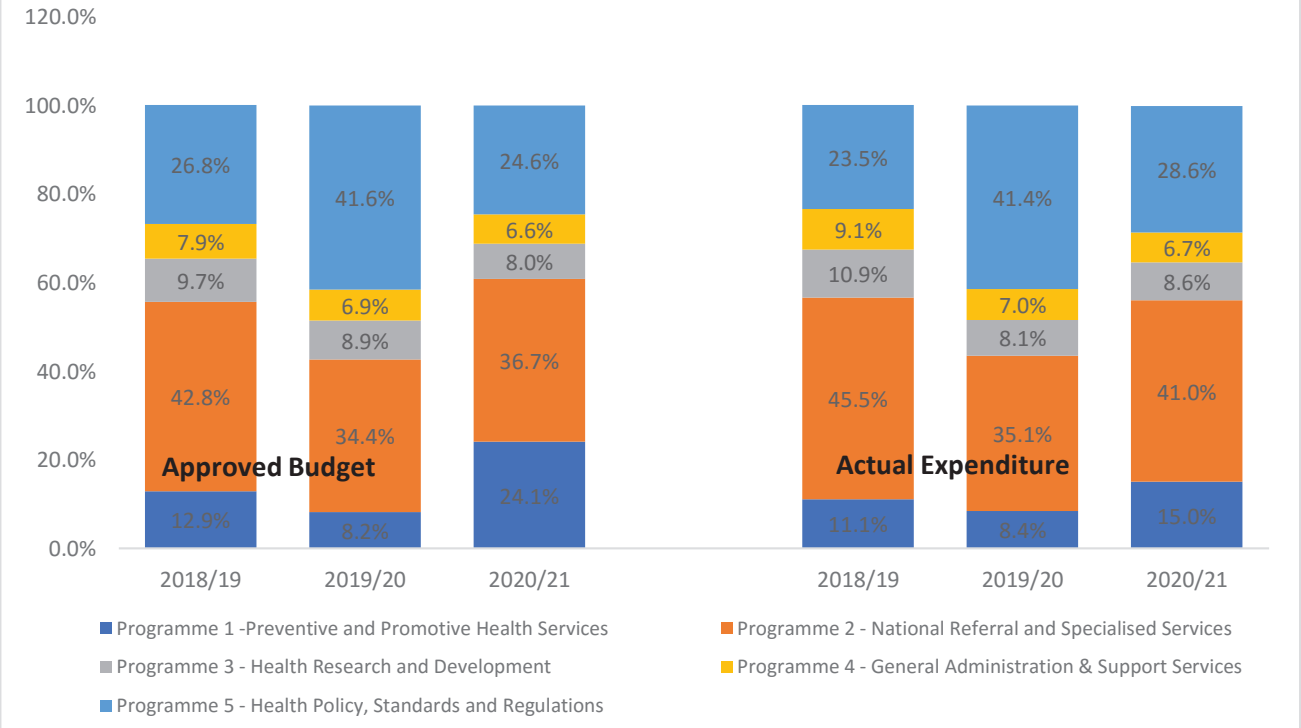

Figure 94: Breakdown of MOH budget by programmes, FY 2018/19– 2020/21

Table 38: Analysis by Programme FY 2018/19– 2020/21

Programme	Approved Budget (KSh. Millions)			Actual Expenditure (KSh. Millions)		
	2018/19	2019/20	2020/21	2018/19	2019/20	2020/21
Programme 1 - Preventive and Promotive Health Services	10,943	9,780	29,355	8,249	9,078	16,200
As % of Total	12.90%	8.20%	24.10%	11.10%	8.40%	15.00%
Programme 2 - National Referral and specialized Services	36,464	41,060	44,705	33,878	38,091	44,222
As % of Total	42.80%	34.40%	36.70%	45.50%	35.10%	41.00%
Programme 3 - Health Research and Development	8,243	10,570	9,774	8,141	8,814	9,323
As % of Total	9.70%	8.90%	8.00%	10.90%	8.10%	8.60%
Programme 4 - General Administration & Support Services	6,696	8,213	7,983	6,762	7,622	7,281
As % of Total	7.90%	6.90%	6.60%	9.10%	7.00%	6.70%
Programme 5 - Health Policy, Standards and Regulations	22,797	49,671	29,932	17,504	44,900	30,878
As % of Total	26.80%	41.60%	24.60%	23.50%	41.40%	28.60%
Total Expenditure Health Vote	**85,143**	**119,295**	**121,749**	**74,534**	**108,505**	**107,902**

7.3 COVID-19 Financing in Kenya

Financing for COVID-19 in Kenya focused on the prevention of COVID-19 and management of existing COVID-19 cases. Figure 95 below shows the interventions to which the national government allocated resources in the FYs 2019/20, 2020/21, and 2021/22.

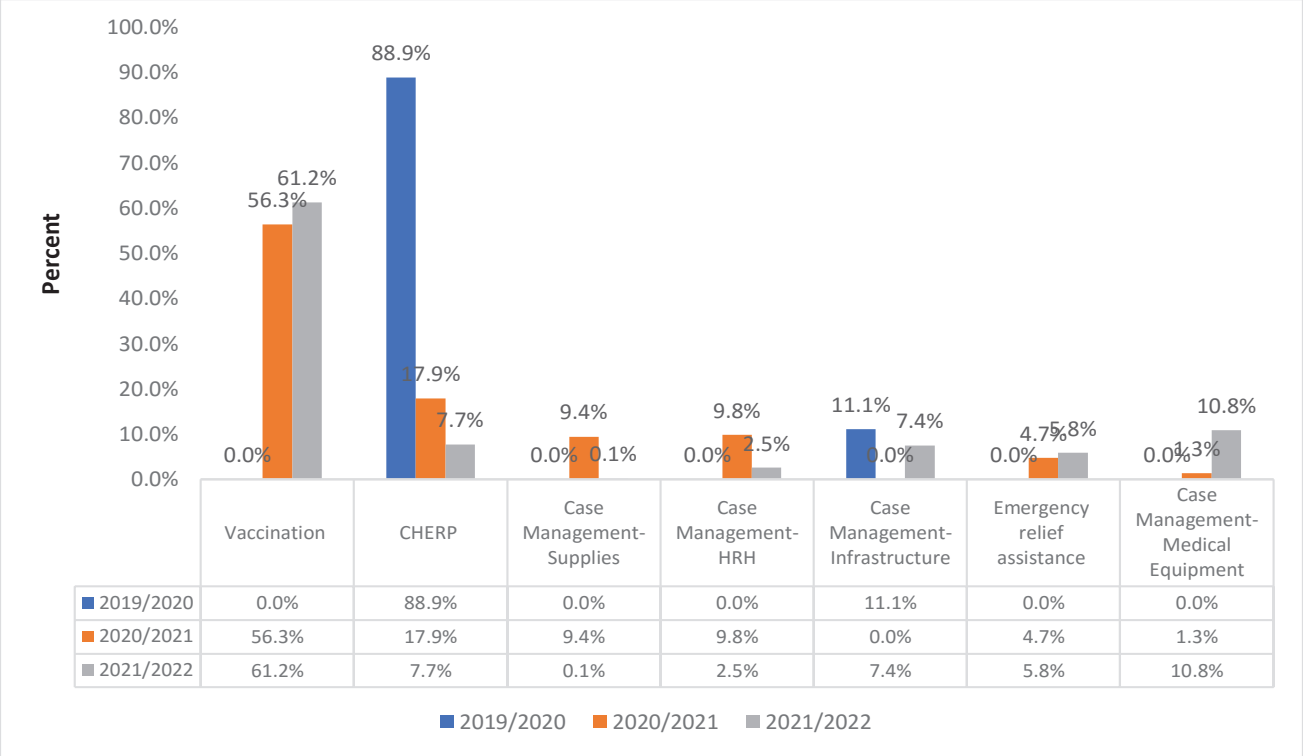

Figure 95: Key COVID-19 budget items FY 2019/2020 to 2021/2022

Source: National Government supplementary budget (2019/2020) and budgets (2020/2021 and 2021/2022). Table 39 below shows the budget item allocation in absolute terms for COVID-19 for FY 2019/20, 2020/21, and 2021/22 respectively.

Table 39: National Level Absolute Budget allocation by Item and Function (KES) FY 2019/2020 to 2021/2022

Item	Function	FY 2019/2020	FY 2020/2021	FY 2021/2022
Acquisition of COVID 19 vaccines	Vaccination		7,613,217,632	
Kenya COVID-19 Emergency Response Project	Other Expenses	5,350,000,000	2,420,522,591	6,031,400,000
Kenya COVID-19 Emergency Response Project	Other Expenses			1,000,000.00
COVID-19 Emergency Response	Supplies		1,277,060,622	755,813,584
GeDESK - Basic Wages - temporary Employees	Case management			14,324,590
GeDESK - Other Operating Expenses	Other Expenses		65,000,000	248,745,252
GeDESK - Routine Maintenance Other Assets	Case management	666,500,000		431,409,963
GeDESK- Emergency Relief and Assistance	Food, medicine etc		629,636,992	730,652,227
GeDESK - Purchase of Specialized Plant and Equipment	Case Management		180,942,188	574,867,968
Emergency Allowances and Benefits for Frontline Workers	Case Management		1,330,000,000	1,067,121,480
TOTAL		**6,016,500,000**	**13,516,380,025**	**9,855,335,064**

Source: National Government supplementary budget (2019/2020) and budgets (2020/2021 and 2021/2022).

7.4 Analysis of PBB budget allocation and expenditure: FY 2018/19– 2020/21

The Ministry of Health maintains five key programmes namely; Preventive and Promotive and RMNCAH Services; National Referral and Rehabilitative Services; Health Research and Development; General Administration, Planning and Support Services; and Health Policy, Standards and Regulations. The Programmes are constructed to ensure that the Ministry carries out its mandate as per the Fourth Schedule of the Constitution namely; Health policy, health regulation, national referral facilities, capacity building, technical assistance to Counties and provision of Universal Health Coverage.

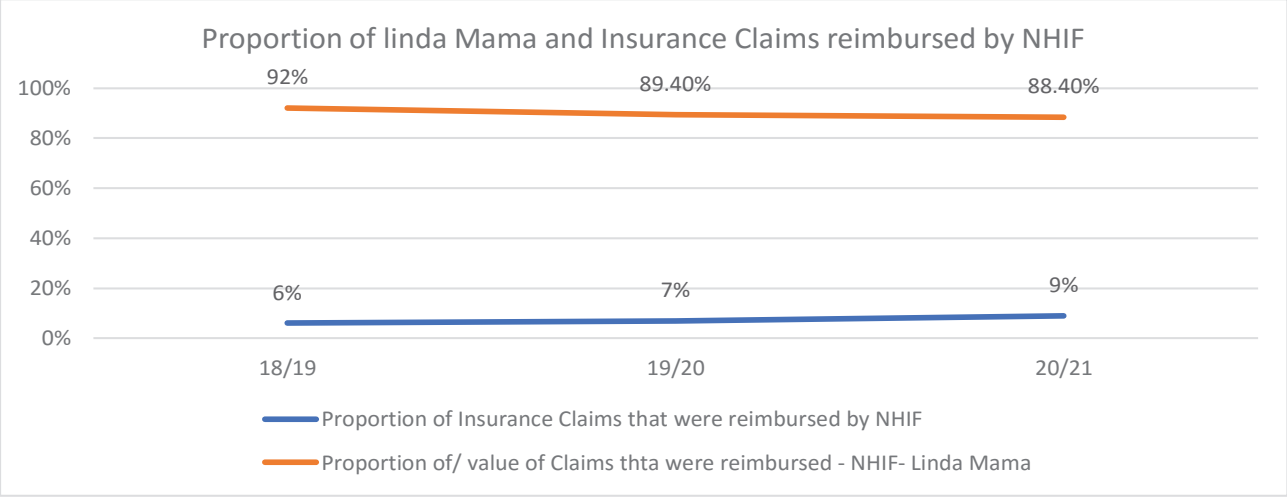

Figure 96: Proportion of Linda Mama and Insurance claims reimbursed by NHIF

7.8 Analysis of the Health Sector Resource Envelope

The approved estimates for national Ministry of Health was at KSh 121.7 Billion in 2020/21 which represented a 43 percent increase from KSh 85.1 Billion in 2018/19. Analysis by vote indicates that the recurrent vote had been allocated 62 percent, 64 percent and 56 percent of the sector resources in FY 2018/19, FY 2019/20 and FY 2020/21 respectively. The actual expenditures was at KSh 74.5 billion, KSh 108.5 billion and KSh 107.9 billion respectively for the years FY 2018/19, FY 2019/20 and FY 2020/21 respectively. Transfers to government agencies and other levels of government (conditional grants) consumed the largest share of funds in FY 2020/21 at 76.8 percent; followed by compensation to employees at 12.3 percent during the period. Overall, budget execution levels for the ministry of health were at 88 percent, 91 percent, and 89 percent respectively for the FY 2018/19, FY 2019/20 and FY 2020/21.

7.5 Analysis of Budget Performance by Program and Sub-Program Area

Table 40 below shows spending for the FY 2018/19 to 2020/21 by programmes. In 2020/21, National Referral and specialized Services programme was allocated 36.7 percent of all resources, followed by the Health Policy, Standards and Regulations Programme at 24.6 percent. The other three programmes were allocated a cumulative 38.7 percent of all the resources. A breakdown of spending by programmes is provided in table 40 that follows.

Expenditure Analysis by Programmes for FY 2018/19– 2020/21

Table 40: Analysis by Programme FY 2018/19– 2020/21

Programme	Approved Budget (KSh. Millions)			Actual Expenditure (KSh. Millions)		
	2018/19	2019/20	2020/21	2018/19	2019/20	2020/21
Programme 1 - Preventive and Promotive Health Services	10,943	9,780	29,355	8,249	9,078	16,200
As % of Total	12.9%	8.2%	24.1%	11.1%	8.4%	15.0%
Programme 2 - National Referral and specialized Services	36,464	41,060	44,705	33,878	38,091	44,222
As % of Total	42.8%	34.4%	36.7%	45.5%	35.1%	41.0%
Programme 3 - Health Research and Development	8,243	10,570	9,774	8,141	8,814	9,323
As % of Total	9.7%	8.9%	8.0%	10.9%	8.1%	8.6%
Programme 4 - General Administration & Support Services	6,696	8,213	7,983	6,762	7,622	7,281
As % of Total	7.9%	6.9%	6.6%	9.1%	7.0%	6.7%
Programme 5 - Health Policy, Standards and Regulations	22,797	49,671	29,932	17,504	44,900	30,878
As % of Total	26.8%	41.6%	24.6%	23.5%	41.4%	28.6%
Total Expenditure Health Vote	**85,143**	**119,295**	**121,749**	**74,534**	**108,505**	**107,902**

Breakdown of MOH Budget by Programmes, FY 2018/19– 2020/21

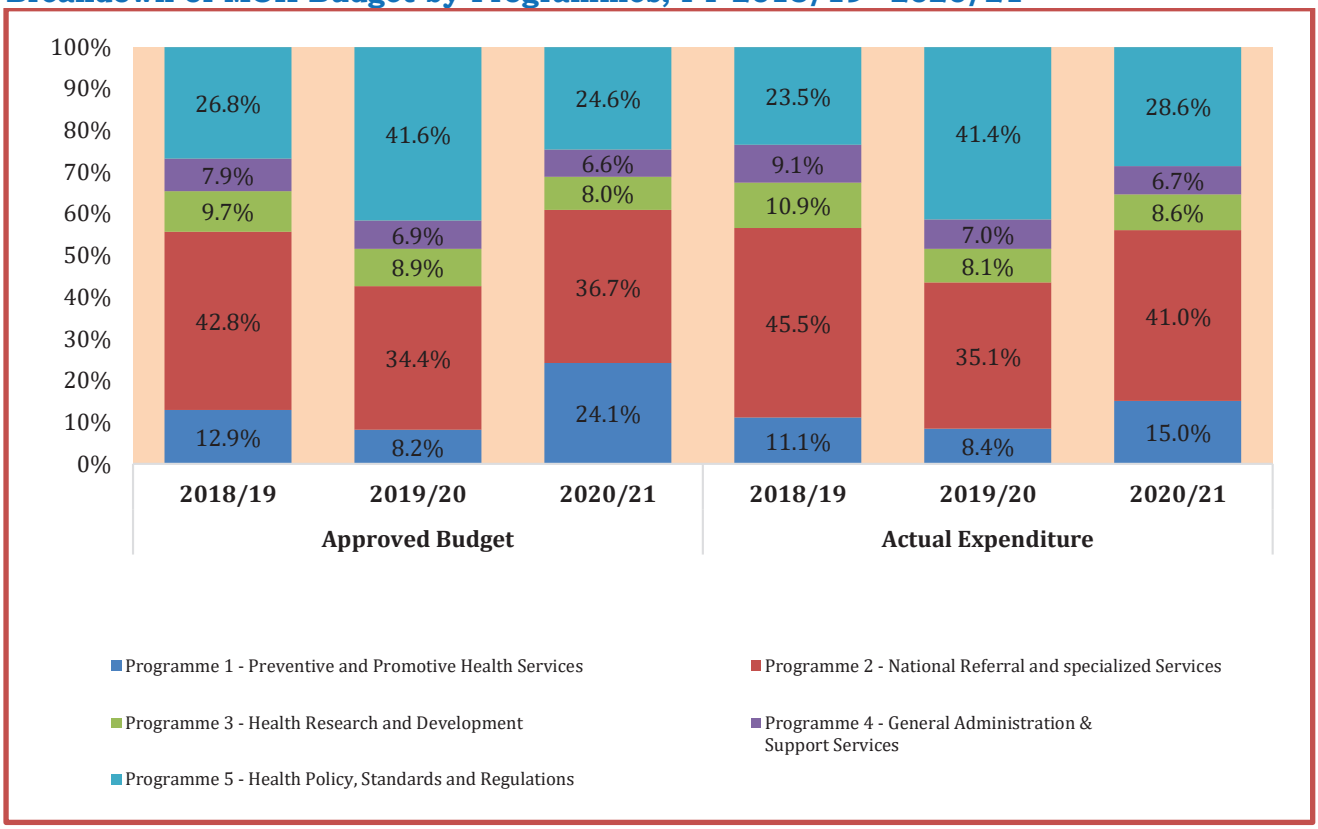

Figure 97: Breakdown of MOH Budget by Programmes, FY 2018/19– 2020/21

Programme and Sub-Programme expenditure analysis

This section shows the breakdown of approved and actual expenditures in FY 2018/19 to 2020/21 disaggregated by programmes and sub-programmes.

Table 41: Analysis by category of expenditure: Programmes (KSh Million)

Programme	Approved Budget (KSh. Millions)			Actual Expenditure (KSh. Millions)		
	2018/19	2019/20	2020/21	2018/19	2019/20	2020/21
Programme 1 - Preventive and Promotive Health Services						
SP1.1 -Communicable disease prevention	5,459	4,365	6,366	4,736	3,219	5,580
SP1.2 - Non-communicable disease prevention & control	435	423	367	286	420	333
SP1.3 - Radioactive Waste Management	185	142	142	201	88	120
SP1.4- RMNCAH	4,320	1,357	8,047	2,497	2,654	4,445
SP1.5 Environmental Health	544	61	66	529	57	146
SP1.6 Disease Surveillance and Response		3,432	14,366		2,640	5,575
Total Expenditure Programme 1	***10,943***	***9,780***	***29,355***	***8,249***	***9,078***	***16,200***
Programme 2 - National Referral and specialized Services						
SP2.1 - National Referral Services	23,577	29,326	33,095	23,176	28,681	33,643

Programme	Approved Budget (KSh. Millions)			Actual Expenditure (KSh. Millions)		
	2018/19	2019/20	2020/21	2018/19	2019/20	2020/21
SP2.2 -Specialized Medical Equipment	9,150	6,205	6,205	8,872	6,189	6,195
SP2.3 - Free Primary Healthcare		8	8	-	4	8
SP2.4 - Forensic and Diagnostics	559	658	1,705	531	346	1,035
SP2.5 - Health Products and Technologies	3,178	4,864	3,692	1,299	2,871	3,341
Programme 3 - Health Research and Development						
SP3.1 - Pre-Service and In-Service Training	5,584	7,955	7,130	5,584	6,288	6,619
SP3.2 - Research & Innovations	2,659	2,615	2,644	2,557	2,526	2,704
Total Expenditure Programme 3	***8,243***	***10,570***	***9,774***	***8,141***	***8,814***	***9,323***
Programme 4 - General Administration & Support Services						
SP 4.1 - General admin	5,908	7,234	6,117	5,990	6,842	6,088
SP4.2 - Finance and planning	788	980	1,866	772	780	1,193
Total Expenditure Programme 4	***6,696***	***8,213***	***7,983***	***6,762***	***7,622***	***7,281***
Programme 5 - Health Policy, Standards and Regulations						
SP5.1 -Health Policy	11,294	37,356	14,759	8,721	33,189	17,438
SP5.2 -Social Protection in Health	10,926	11,162	14,216	8,212	10,765	12,597
SP5.3 -Health Standards and Regulations	577	1,154	957	571	945	843
Total Expenditure Programme 5	***22,797***	***49,671***	***29,932***	***17,504***	***44,900***	***30,878***
Total Expenditure Health Vote	***85,143***	***119,295***	***121,749***	***74,534***	***108,505***	***107,902***

8.0 CHAPTER EIGHT: BEST PRACTICES AND INNOVATIONS

The Ministry of Health and Council of Governors called for submissions of best practice and innovation abstracts from stakeholders within the health industry both in the public and private sector.

The submissions on best practice and innovations was aimed at improving health outcomes and patient experiences in the areas of service delivery, quality assurance and standards, health information research, monitoring and evaluation, human resources for health, health financing, leadership and governance, legislation, as well as health products, infrastructure and supply chain. A total of 240 best practices were received. The best practices and innovations were reviewed by a committee constituted by the Ministry of Health. The **top five best practices and innovation** selected by the committee are outlined below, the other top 15 were documented in the best practice report.

The selection criteria for best practices and innovation took into consideration the Effectiveness, Efficiency, Relevance, Leadership, Sustainability, Replicability, in other environments, Ethical Soundness, Partnerships, Community involvement and Innovativeness of the submissions based on a standard template.

8.1 Best Practice 1

Health Financing

1. Title of the Best practice/Innovation: Experience Sharing on Best Practice; The case of Kisumu Solidarity Health Insurance Scheme (Marwa)	
2. Institution/ County of operation: Kisumu County	
3. Description	**[Expected outputs]:** *(BEFORE: what were the health challenges?)* When the UHC pilot program was launched in Kisumu in December of 2018, the program promised improved access, improved quality, attaining equity in service delivery and financial protection for households. The Kisumu County government pre-registered approximately 850,000 potential beneficiaries ahead of the launch. The pilot specifically involved 100% provision of free essential health care services to all registered households in the UHC program. At the end, there was an overall 34% increase in utilization of health services. There was a higher rise in utilization of level 4 facilities than primary care facilities and a marked increase in use of specialized services like x-rays
	[Processes]: (*What was done? how was it started, prepared, implemented?)* 1. November 2019 – 2020: Approval of the Kisumu County Health Bill and Kisumu Indigent Health Insurance Bill. 2. August 2020: Negotiations and signing of MOU and NHIF for funding and provision of a socio-health insurance cover for its vulnerable households. 3. September 2020: Kisumu County and Pharmaccess Foundation signed an MOU for funding of 45,000 indigents Households in which CGK finances 50% and Pharmaccess 50% in the first year. 4. October 2020: Sensitization and unveiling of the Health Insurance Cover. 5. November 2020: The county with support of the Pharmaccess Foundation invested Ksh 67,500,000 as the first quarter premium payment for the 45,000 vulnerable households that had been identified. 6. January 2021: Kisumu County mapped out 49 public health facilities across the 7 Kisumu sub-counties ranging from local dispensaries to County Referral Hospitals. 7. March 2021: Service delivery was initiated, and Marwa beneficiaries were required to use their Mobile phone numbers or

	National Identification numbers to access healthcare services. The scheme was officially launched by HE, The Governor of Kisumu on the 8th March 2021.
	[Outputs] *(AFTER: what was achieved? Describe tangible changes.)* In a joint verification process that was carried out in May 2021, 42,564 vulnerable Households were successfully identified and registered onto the Kisumu Solidarity Health Insurance Scheme (Marwa) scheme as part of Phase 1 of implementation. The households registered on NHIF gave them and their dependents access to healthcare services within designated Marwa health facilities. Since its inception, Marwa has become the predominant health insurance cover for households in Kisumu as at the end of the year 2021.
	Key inputs: *(Human, material, and financial inputs)* To support Marwa achieve universal healthcare, a number of activities have been undertaken by the Department of Health in Kisumu County to support the health systems 1. A 24-hour Emergency operation center with a toll-free emergency call number (0800720575) that is also linked to the ambulance system for easy coordination of referrals. 2. Enrollment into Quality programmes**: -** The county is currently implementing both the KQMH and SafeCare models of quality assessment. 3. Robust Data management: The programme has developed a MARWA dashboard to provide real time data on the service delivery and financial aspects of the scheme from the facilities. 4. Commodity accountability: - the County Department of Health has invested in an end-to-end digitization system of commodity management. 5. Human resource: -Increasing CHV coverage and Digitalization of community data**.** The county government also embarked on a process of employing staff from various cadres including doctors, nurses and clinicians. Most of these have been absorbed into the public service scheme
	[Conditions]: *(What were the prerequisite? What was necessary to implement?)* • Registration of the vulnerable required identification documents which were not easily available • Enactment of the health scheme into the Kisumu County Health Act
4. Effectiveness	Currently, 49 public health facilities offer services under the MARWA Health Insurance Scheme. 38 of these offer outpatient services while 9 offer both out and inpatient services. Two facilities - Jaramogi Oginga Odinga Training and Referral Hospital (JOOTRH) and Kisumu County Referral Hospital (KCRH) serve as the referral centers also known as hubs where the beneficiaries are entitled to receive similar benefit packages to the NHIF supa cover. Once at the facility, the clients are identified using their phone numbers or national identification cards.
5. Efficiency	The programme has developed a MARWA dashboard to provide real time data on the service delivery and financial aspects of the scheme from the facilities. Data is collected at the facilities through the MTIBA platform. It is envisaged that this data will assist in decision making and policy development.
6. Relevance	Kisumu Solidarity Health Insurance Scheme (Marwa), as displayed below, has acted as an enabler of Universal Health Cover. Kisumu

	county was one of the four pilot counties. After the end of the pilot phase, Kisumu County initiated its own health insurance scheme to enable access of health care services for her residents without enduring financial hardship.
7. Sustainability	Currently the number of indigents supported are limited to availability of resources. For complete coverage of the 90000 households that were identified through socio-economic statuses, there is need for increased budgetary allocation from the department and aggressive lobbying from external stakeholders. This includes line ministries e.g., social protection.
8. Replicability	For the scheme to be replicated a number of factors will need to be considered: • Availability of funding to sustain the scheme through payment of premiums • Identification of vulnerable households should be carried out through existing government structures • Availability of facilities within the county
9. Others	• **Partnership-** The scheme enjoys strengthened partnership with NHIF who provide the health cover for the beneficiaries; and with PharmAccess Foundation who provide technical assistance and resource mobilization for the scheme. • **Innovativeness-** Kisumu Solidarity Health Insurance Scheme (Marwa) has an advanced Digitized Platform - M-TIBA, which is a mobile health payment platform powered by CarePay. It's an end-to-end digital benefit and claims management solution with a mobile connection to users, that aids in data collection and storage and Member data management. Data collected from M-TIBA platforms feeds the information to the Marwa Dashboard for further analysis.
Score (Out of 100)	**83**

8.2 Best Practice 2

Service Delivery

1	**Title of the Best practice/Innovation:** Beyond the Health Facilities: Bringing Together Early Childhood Development Educational Centres, Communities and Multisector Stakeholders for Affordable and Sustainable Under-five Nutrition Projects in Soin-Sigowet Sub-county, Kericho County, Kenya 2017-2022	
2	**Institution/ County of operation:** Department of Health Services /Kericho	
3	**Description**	**[Expected outputs]:** *(BEFORE: what were the health challenges?)* Soin-Sigowet Sub-County in Kericho County has a population of 136,119 and 13,290 children aged 3-6 years. The sub county is semi-arid, with an average poverty rate 45% with varied economic inequalities (Gini coefficient ~0.35) and faced food security vulnerabilities compared to the other five sub counties in Kericho. Soin-Sigowet reported a higher proportion of malnourished (stunted 26%, underweight 11%, wasted 4%) children 6-59 months higher than the national KDHS 2014 findings. For years, there was inadequate school health nutrition programs, few children completed the under-5 health monitoring and screening as per MoH child welfare requirements, and poor diets were practiced at most households. The majority of the population had lower level of education, for instance, only 42% of women had above primary education, signalling the fact that school transition rates had been sub-optimal compounded by early marriages, teenage pregnancies and men in the search for meaningful work
		[**Processes**] (What was done? how was it started, prepared, implemented?) • ECDE centres were selected primarily on the need's basis. The availability of a community unit and active involvement of community health volunteers (CHVs) were also considered. The primary informants were experienced field health worker such as CHAs, CHEWs, CHOs, PHOs in different areas. • Advocacy workshops were provided to government stakeholders, Board of School Management members, including head teachers, to invite their participation in the project. • Two Community Health Units were established where 11 centres are located. • Training for Smokeless Jiko installation and marketing as an Income Generating Activity (IGA) was provided to CHVs. • Training on various areas (i.e., Agrinutrition, Growth Monitoring, Nutrition and Hygiene, Meal Monitoring, Nutrition and School health, Pre-construction Induction training and Facility operation & maintenance) were provided to the participants to implement the programmes. • The progress of action plans developed by the participants at the end of each training was uploaded on each WhatsApp group for HANDS and relevant stakeholders to assess and give feedback. • CHVs promote kitchen garden practices and balanced diet during household meal monitoring. • ECDE parents were invited to participate in school model kitchen garden maintenance to learn about the kitchen garden activities to increase knowledge and skills to apply at home. • Each ECDE centre submitted a proposal for a facility and its type to be constructed.

	• HANDS coordinated with a foreman to quality assure each facility construction process. • Engineers and Public Health Officers inspected construction processes and certified the complete structures. • Monitoring by CHAs and agriculture extension officers were regularly conducted to guide through implementation and maintenance of the programmes. • Growth monitoring on-site coaching by nutritionists was provided to ECDE teachers identified needed. • Government stakeholders attended strategic planning and coordination meetings organized by HANDS. • The implementation manual was developed by involving stakeholders in validation processes and by including tips and advice from the project participants, and distributed to all public ECDE centres and health facilities. • The implementation manual was pilot-tested, and modifications, new tips and advice made based on the results are communicated through FB.
	[**Outputs**] (AFTER: what was achieved? Describe tangible changes.) • Total of 31 ECDE centres participated in the projects in five years. Approximately 2,500 ECDE children and their families, 300 school community members participated • As of February 2022**: -** 100% of ECDE centres implemented and maintained growth monitoring program; 100% of ECDE centres implemented and 96 % maintained a feeding program; at 100% of ECDE centres had an improved menu; and 100% of these centres implemented and maintained the model school kitchen garden to support the feeding program; • All selected ECDE centres (23 out of 31 centres) and their communities co-built and maintained a VIP latrine, a water tank or a modern kitchen with smokeless jikos to create an enabling environment where children's behavior change is promoted; • As of March 2021: -90% ECDE children hand wash regularly at ECDE centres after a water tank constructed; 95% ECDE children used latrines regularly at ECDE centres after a pit latrine constructed; • All selected 5 ECDE centres' school access roads were repaired and are maintained by trained community members leading to an increase in the attendance rate. During rainy seasons, the rate increased from a range of 10% to 50% up to a range of 70% to 100% at ECDE centres • 100% of the monitoring reports by Agriculture extension officers were submitted timely • As of February 2022, more than 50% of the households in the community have latrines with handwashing facility;the number of the households with a kitchen garden which produces a variety of crops (i.e., at least 4 out of 5 food groups) increased from 0% to 66%; • As of February 2022, 79% of the households provided children with balanced diet and 99% provided 3 meals a day;
	[**Key Inputs**] (Human, material, and financial inputs) • A set of height board and weight scale donated to each ECDE; Stainless steel cups and essential kitchen equipment/tools to start a feeding program were donated to each ECDE centre;

	Vegetable and fruit tree seedlings to establish a model kitchen garden. • 70% of material cost for each facility construction paid by the project, whereas 30% was community contribution. • Construction crew including a foreman and engineer to inspect the construction were contracted. • An NGO CORE (Community Road Empowerment) specializing in the Do-nou technology to train community members on the technology and supervise the work. • Funding to cover cost of hall hire, materials and daily sustenance allowance, and transport allowance for each participant.
	[Conditions]: *(What were the prerequisite? What was necessary to implement?)* • There be no major political disturbances, or major economic and agricultural crises.
5. Effectiveness	The monitoring program has helped improve: - • **Improve Access**: Community Health Assistants' (CHA) monthly monitoring reports revealed that growth monitoring program helped establish a functional referral system for a child identified nutritionally at-risk by ECDE teachers to a nearest health facility. WASH facilities which were unavailable at home became available and accessible to children at ECDE centres. Nutritionally sound food prepared in a hygienic way became available to children. • **Health-seeking behavior for children**: CHA monthly monitoring reports also revealed that growth monitoring program created a demand for the service being extended to pre-ECDE children in the community. Several ECDE centres now invite 2- to 3-year-old children to be growth-monitored with ECDE children.
6. Efficiency	• **Cost-contained idea**: A design of school model kitchen garden is innovative and carefully planned so that if adopted by a household, it automatically increases the family's dietary variety without extra resources. • **Learning experience**: HANDS continuously improved how to deliver training contents in a way that the learners more actively participate and interact with co-learners as well as facilitators.
7. Relevance	**Aligned with the National Guidelines:** The project addresses health and nutrition challenges of children under-five five by providing an opportunity to the school community to implement ECDE programmes that are required by the National Pre-Primary Education Policy Standard Guidelines in a way that their sustainability is maximized.
8. Sustainability	• The project emphasizes providing opportunities to all the participants to learn skills by providing well designed series of training on 6 different areas. In addition, in case of a transfer of school personnel and/or a replacement of members, they were trained to train new employees and persons using teaching/visual aids developed and provided by HANDS. • The project used a variety of ways in order to promote a sense of ownership of the project among the participants and community members including ECDE children • HANDS has been aggressively advocating to various levels of county government and relevant offices for inclusion of the activities to help sustain the programmes

	• The use of household smokeless stoves in the community can contribute to a reduction of health risks and environmental adverse effects, while the environmental awareness among the community increases.
9 Replicability	**Publication:** HANDS developed "Implementation Manual: Affordable and Sustainable Under-five Nutrition Programmes for Early Childhood Development and Education (ECDE) Centres in Kericho County, Kenya", and distributed all public ECDE centres, over 700 centres, all health facilities and stakeholders in the county to guide individual ECDE centres step-by-step to plan, implement and sustain a program or programmes without assistance from development partners.
10 Others	• **Partnership:** Multisectoral approach involving 6 departments; Promoting collaboration with primary school's 4K club activity to help the school model kitchen garden be sustained at the same time enrich the 4K club activity, creating a mutually beneficial relationship. • **Leadership:** County Ministry of Education supports rolling-out the programme(s) using the implementation manual by coordinating with Teacher Service Commission to call for the primary school head teachers' involvement. • **Community Involvement:** Community contributed 30% of materials for facility construction and provided safety/security on site; Community members learned Do-nou Technology and applied the skills to school access roads repair and maintenance; Children participated in mural painting to personalize the facility. • **Ethical Soundness:** The design of pit latrine and kitchen catered for specific physical and psychological needs of the young children as well as children with disabilities. Each member's confidentiality, respect and informed decision making was not breached at implementation • **Innovativeness:** Nutrition-sensitive agricultural practice (household kitchen garden modeled after School Model Kitchen Garden) was used in the project; Behavior change communication through graphic designs promotes the use of pit latrine by ECDE children.
Score (Out of 100)	**83**

8.3 Best Practice 3

Service Delivery

1	**Title of the Best practice/Innovation: Taking the Classroom to the Health facilities: Using Evidence-based Low-Cost Mentorship to strengthen Emergency Obstetric and Newborn Care (EmONC)**	
2	**Institution/ County of operation:** Kericho County	
3	**Description**	**[Expected outputs]:** *(BEFORE: what were the health challenges?)* Prior to the project: indicator status • % of 4th ANC coverage 32% • % of skilled deliveries 60% • No. of facility maternal deaths – 26 • % of Postnatal coverage after 3 days 20% • Few healthcare workers were not sensitized on EmONC • Nearly 50% referrals to hospitals
		[Processes]: (*What was done? how was it started, prepared, implemented?)* a) Conceptualization and generation of the idea – the need to improve maternal and newborn indicators in Kericho County by the CHMT informed by the annual review of data and other desk top review to triangulate data from various sources b) Stakeholder mapping to explore their influence and interest on maternal and neonatal care c) Deep situational analysis was conducted/SWOT and selection of viable strategies
		[Outputs] *(AFTER: what was achieved? Describe tangible changes.)* • Two Facilities initially selected • 49 facilities included, a total of 51 out of 214 (24%) • Coverage: six sub counties • Six Mentors from initial two pilot facilities • A total of 146 mentees successfully mentored • Reduced burden of upward case referrals, decongesting hospitals. • Improved existing and new clinical skills. • Improved clinical management practices: • Reduced and improved timeliness of referrals to higher-level facilities • Continued relationships and support post mentorship • Reduction in disability and mortality • Overall improvement of lower-level facilities, increased in number and staff retention, infrastructure, joint supervisory visits • Improved data documentation, data visibility and use for decision making
		[Key inputs]: *(Human, material, and financial inputs)* • Mentors- Refresher trainings of the mentors • Mentees and Mentee's time- sometimes utilizing the mentees leave days/time offs. • Mentorship logbooks and manuals • Transport allowances for the mentees and mentors • Equipment and supplies for skills lab/demonstration rooms
		[Conditions]: *(What were the prerequisite? What was necessary to implement?)* • Availability of experienced, EmONC trained mentors • Fully equipped, functional CeMONC facilities (capacity to provide all the 9 signal functions) • No health care strikes • Market costs remained constant • No emerging outbreaks/pandemics
6.	**Effectiveness**	It is noteworthy that the inputs achieved the expected outputs/outcome within the stipulated time period as per the resource budget. Maternal and

	neonatal indicators improved. In 2018, prior to the project: increased access and demand for services, (indicator status vs. 2021**(x)**) • % of 4th ANC coverage 32%: 2021 (43%) • New ANC clients 2018 – 23660, In 2021- 26646 suggest improved health seeking • % of skilled deliveries 60 %: 2021 (84%) • No. of facility maternal deaths:– 26 (19) • % of Postnatal coverage after 3 days 3.2% :(17%) • Few healthcare workers were not sensitized on EmONC • Nearly 50% referrals to hospitals • Mentorship in 51 HFs
7. Efficiency	• Remarkable outcomes achieved using available/existing resources i.e., mentors and CeMONC facilities with minimal costs i.e., allowances • The target number of mentees surpassed • Improved blood and blood products availability and responsiveness at the county, improvement at the satellite blood bank
8. Relevance	• Sub-standard care has been identified as a key driver of 90% of maternal deaths in Kenya (Confidential Enquiry into Maternal Deaths, 2016). • Health care workers require frequent mentorship exposure and supervision to advance and retain their clinical skills. • EmONC Mentorship is one of the cost-effective ways to improve skills, quality of care in the maternity units and thus reduce maternal and newborn morbidities and mortalities
9. Sustainability	• EmONC mentorship is cost efficient and heavily depends on available resources and thus can be sustained by the county. • The trained Mentees will cascade service delivery • Institutionalize the mentorship programme as an EmONC training model so that those participating in the programme can be listed on training days. • County to invest in a fully equipped skills lab at tertiary facilities. This would enable mentees to refresh their knowledge in the skills labs before proceeding to wards to manage patients. • MOH to prioritize the rollout of the National EmONC Learning Resource Package developed in collaboration with partners to ensure programme's sustainability
9 Replicability	The mentorship EmONC mentorship model can easily be replicated in other counties since its success depends on existing health system structures and resources.
10 Others	10. **Partnership**: The County involved other departments and partners ensure timely and successful achievement of the project, private and faith-based health facilities were included 11. **Political involvement:** Sensitization and involvement of the legislators and county assembly members to ensure the planning and budgeting function 12. **Community Involvement:** through the CHV and CHA s to create demand at the community level, there were periodic dialogue and action meetings, CHVs played a critical role in defaulter tracing, a stipend was given to the CHVs 13. **Ethical Soundness:** The EmONC service delivery model is part of Ministry of Health and Kericho County's approach to deliver quality health services in an efficient and responsive manner to reach a majority of the clients affordably. Each client confidentiality, respect and informed decision making was not breached at service delivery.
Score (Out of 100)	**82**

8.4 Best Practice 4

Health Information System

<table>
<tr><td colspan="2">1. Title of Best Practice/Innovation: Afya Kijijini
A digital health enabled end-to-end primary health care model for screening and management of diabetes and hypertension</td></tr>
<tr><td colspan="2">2. Institution/County of Operation: Currently six counties with planned scale up to 35 counties</td></tr>
<tr><td rowspan="4">3. Description</td><td>[Expected Outputs] (BEFORE: what were the health challenges?)
The STEPwise survey for Non-Communicable Disease (NCD) Risk Factors showed that:
• Only 44% and 13% of Kenyans had ever been screened for hypertension and diabetes respectively.
• Further, only 43% of those with diabetes and 16% of those with hypertension knew of their condition before the survey.</td></tr>
<tr><td>[Processes] (What was done? how was it started, prepared, implemented?)
The project entails awareness creation, screening and referral for diabetes, hypertension and overweight/obesity at household and community level by trained and kitted Community Health Volunteers (CHVs). The CHV then feeds the blood pressure (BP), blood sugar, weight, height and basic socio-demographic readings into an electronic platform (Empower Health) that has in-built decision support tools, which give a notification when the readings are outside the normal ranges.</td></tr>
<tr><td>[Outputs] (AFTER: what was achieved? Describe tangible changes.)
• Between March 2018 and April 2022, the program has screened 210,000 people from which 40,000 persons living with diabetes/hypertension were identified and enrolled into care. The program is currently running in 6 counties (Makueni, Kakamega, Nyeri, Nakuru, Mombasa, Kilifi) across 57 facilities, 22 of which are primary healthcare facilities.
• The program has also trained a total of 1,500 healthcare providers and 550 Community Health Assistants/CHVs & tele-counsellors on the current MOH guidelines for diabetes and hypertension and distributed 420 NCD kits to CHVs and peer educators to support household and community-based screening and follow-up.</td></tr>
<tr><td>[Key Inputs] (Human, material, and financial inputs)
• The program implementation is embedded within the mainstream health system infrastructure, leveraging on national MOH officers for capacity building and policy direction and county for officers for oversight. The program also recruits operations associates seconded to counties to support operations as well as tele-counselors for patient follow-up and psychosocial support.
• The program provides point of care diagnostics such as BP Monitors, Glucometers and HbA1c machines for health facilities and NCD kits for CHVs and peer educators.
• Other inputs are digital health related, including system development, upgrades and maintenance, tablets for health facilities and smart phones for CHVs, as well as airtime.
• Financial support for field visits, training, purchase of equipment and system development/maintenance and currently</td></tr>
</table>

	provided by the partners in the program convened by MOH and Medtronic Labs.
	[**Conditions**] *(What were the prerequisite? What was necessary to implement?)* 1. Alignment with the MOH clinical and data management guidelines 2. A stable and reliable digital health platform (Empower Health-powered by SPICE) 3. Buy-in by the respective counties and health facilities 4. Joint planning/co-creation between all partners and timely iterations based on user feedback 5. Training and continued mentorship of healthcare providers and CHVs.
4. **Effectiveness**	The program tracks the entire patient journey including documenting screening, linkage to care, follow-up, treatment status, retention in care and control in real time through a digital health platform (Empower Health)
5. **Efficiency**	CHVs are provided with NCD kits to help increase access to blood pressure and blood sugar tests at the household level without subjecting the client to travel and time-out-of work costs. Further, this reduces the workload on health facilities and saves health workers time to focus on other duties. The Empower Health platform helps to risk stratify patients into cohorts for optimized care.
6. **Relevance**	The project is aligned with the country's primary health care framework and is currently being integrated into the pilot Primary Care Networks (PCNs) in Makueni, with potential for scale up to other PCN pilot counties. It is also aligned with the country's UHC aspirations of improving access to quality care, financial risk protection and equity.
7. **Sustainability**	Data generated by the program is hosted in the National MOH Data Warehouse, with ongoing work on integration into the National Digital Health Platform and the Electronic Community Health Information System (e-CHIS).
8. **Replicability**	The program is currently operating at scale with planned expansion from the current 6 counties into an additional 35 counties in the next four years. The program has also been implemented in Rwanda, Tanzania, Ghana & Sierra Leone and expanding into 5 additional countries by January 2023.
9. Others ***(if applicable, tick and explain)***	**Partnership:** MoH, Medtronic Labs, County Governments, World Diabetes Foundation, PATH, Novo Nordisk, Novartis. The partners provide both/either technical & financial support **Leadership**: The program provides leadership in screening, care and management of persons living with hypertension and diabetes. It also provides leadership in NCD reporting where out of 57 facilities, the reporting rate is at 80%. **Community Involvement:** Through existing community health structures as guided by the Community Health Strategy and respective county community engagement structures. **Ethical Soundness**: Alignment with the Data Protection Legislative framework, Medical Ethics and seeking relevant ethical approvals whenever scientific research and publication is intended. **Innovativeness:** The program uniquely combines both technology and operational/programmatic efficiency to provide positive outcomes and enhance patient experience.
Score (Out of 100)	**79**

CHAPTER NINE: EMERGING HEALTH ISSUES AND CHALLENGES IN THE SECTOR

9.1 Analysis of Health Status and Elaboration of Priorities for the Coming Year

In alignment with the Kenya Health Policy (2014-2030), the six policy objective areas were analyzed during the reporting period, and areas performing below par were earmarked for improvement.

9.2 Health Sector Problem Analysis and Priorities for Coming Year

Table 42 highlights the key challenges affecting the performance of each objective, and the respective interventions prioritized for the year 2022/23.

Table 42: Problem Analysis and Priorities for Coming Year

Strategic Area	Key challenges* Relate to access (demand side) and/or quality (supply side) of service delivery	Priority Interventions to address identified challenges
Eliminate Communicable conditions	Inadequate or irregular supply of commodities leading to stock outs	Allocate sufficient funds to the procurement of health commodities.
	Limited diagnostic capacity at lower-level facilities	Build capacity of HCW and equip laboratories
	Inadequate capacity to use data to quantify disease burden, and commodity consumption.	Strengthen data capture, availability, analysis, visualization and use for decision making
Halt, and reverse the increasing burden of non-communicable conditions	Inadequate allocation of resources to NCD programming	Prioritize NCD programming at the National and county level
	Low NCD and mental health literacy at the community level	Strengthen advocacy and health education at community and facility levels.
	High cost of NCD medicines	Implement government subsidies to reduce cost; Pooled procurement for economies of scale; Local manufacturing of the medicines
	Weak NCD surveillance and data management systems,	Strengthen NCD reporting and institutionalize NCD data audits
	Limited access to specialized care	Increase infrastructure and resources for specialized care – Oncology centres, dialysis centres
Reduce the burden of Violence & Injuries	Limited access to timely care and treatment	Implement the trauma framework to ensure improved access to timely care
Provide essential Medical services	Quality of care gaps in maternal and newborn care	Disseminate MNH guidelines, Basic Paediatric Protocols and QoC guidelines.

	Unreliable supply of essential commodities	Allocate sufficient resources for supply chain management
	Inadequate sensitization of HCW on high-impact interventions	Build capacity of HCW on Child Health High Impact Interventions
	Limited availability of blood and blood products at health facilities	Strengthen regional blood bank capacity to source, screen and distribute and blood products.
Minimize exposure to health Risk factors	Lack of prioritization of Immunization program thus weak coordination of services	Allocate adequate funds to the Immunization program
	Limited access to immunization services at health facilities due to scheduled immunization days, lack of service provision	Meet staffing norms and ensure a regular supply of vaccines.
	Inadequate policies to control advertising and marketing of unhealthy products and activities, food labeling and nutritional profiling	Strengthen policies that promote the sale and consumption of healthy products.
	Lack of operational PHEOCs at county level thus weak coordination of public health events response eg COVID 19	Establish and operationalize PHEOCs at the county and sub-county level
Strengthen collaboration with Health-Related Sectors	35% of households have no access to safe water facilities	Collaborate with the Ministry of Water and other partners to ensure the availability of safe water and sanitation facilities
	Lack of reliable water supply in some health facilities	Collaborate with the Ministry of water and other partners to connect health facilities with clean water
	Lack of electricity in some health facilities	Collaborate with the Ministry of Energy and Petroleum Services to connect health facilities to the power grid.

* Challenges are those problems within your control to manage. They form the basis for the planned activities, and should therefore have achievable solutions

CHAPTER TEN: KEY CHALLENGES, RECOMMENDATIONS AND PRIORITIES AREAS

To address the challenges encountered during this reporting period, interventions were prioritized as shown in table 43 below.

Table 43: Challenges and Priority area

Building Block	CHALLENGES	PRIORITY AREAS
LEADERSHIP AND GOVERNANCE	•Inadequate prioritization and funding of leadership and governance at all levels.	• Adequate funding should be provided for the planning, budgeting and Performance Review process (AWP, APR, and PC) in the MTEF budget
	• Slow operationalization of the health sector governance structures, particularly those outlined in the partnership framework	•Sustained technical assistance on planning budgeting and M&E in line with the aspirations of one plan, one budget one M&E out outlined in the partnership framework.
	• Frequent changes of management at county level hampering discharge of mandate of management	•Dissemination and implementation of Kenya Health Sector Partnership and Coordination Framework
	• Process of planning, budgeting and monitoring especially at County level is not well aligned	• Provide Technical Assistance to Counties to establish Partnership Coordination Structures
SERVICE DELIVERY	• Suboptimal capacity for laboratory diagnosis e.g. Tuberculosis in children.	• Screening and early detection of communicable and non-communicable diseases, conditions, and related risk factors for all ages
	• Minimal improvement in maternal mortality due to gaps in quality of care at health facilities	• Implement PHC strategy including PCNs and Community Health Systems
	• Inadequate specialized skill at health facilities	• Strengthen the joint health inspection of facilities to ensure attainment of the minimum quality standards of healthcare.
	• Weak emergency response and referral systems	• Establish and strengthen EOCs for an adequate response to emergencies
HEALTH INFRASTRUCTURE	• Over-investment in infrastructure, especially the construction of health facilities without commensurate investment in human resources and equipment	
	• Dilapidated infrastructure and equipment leading to high costs of maintenance and repair.	• Adhere to the Health Infrastructure Norms and standards

Building Block	CHALLENGES	PRIORITY AREAS
	• Lack of structured mechanisms of identifying needs and placement of specialized equipment.	• Prioritize budget allocation for maintenance of infrastructure and equipment
	• Lack of basic utilities at such as reliable sources of electricity and water in some health facilities.	• Maintain a master register of inventories of all Major equipment and machines
		• Ensure availability and capacity of staff to operate and maintain medical equipment
		• Collaborate with other health-related sectors to ensure seamless implementation of projects and infrastructure improvement.
HUMAN RESOURCES FOR HEALTH	• Poor compliance with human resource management guidelines.	• Compliance with human resource management guidelines.
	• High turnover of staff especially at the county level	• Develop guidelines to standardize HRD&M in the counties
	• Poor matching of human resource skills, numbers, and roles.	
HEALTH PRODUCTS AND TECHNOLOGY	• Inadequate funding for health commodities at national and county levels thus chronic stock-outs	• Revision of the National Pharmaceutical Policy (2012) to guide the use of health products in the sector
	• Inadequate skills in commodity management (including forecasting and quantification) among HPT managers in Counties	• Building capacity, through training and mentorship, of HPT managers in Counties to effectively manage health products
	• Late payment of funds owed to KEMSA by counties thus inconsistent supply of commodities	• Continuously lobby for sufficient allocation of resources for HPTs and supply chain activities
	• Poor tracking of commodities at Health Facilities due to lack of proper tracking system	
HEALTH FINANCING	• Inadequate financing for the health sector due to fiscal space challenges to finance health priorities	• Increasing financing to the health sector to ensure implementation of the priorities to match economic growth
	• Lack of prioritization of the health sector in budget allocation	• Adherence to PFM Act and regulations 2015

Building Block	CHALLENGES	PRIORITY AREAS
	• Lack of adherence to PFM Act regarding timely disbursement of funds	• Allow budget flexibility to cater to emerging health issues
	• Lack of fungibility in budget implementation due to the use of PBB and line items	• Regular monitoring of financial flows and mechanisms
	• Inefficiency and inequity in resource allocation	• Implement a Social Health insurance policy to support the actualization of UHC
	• High out-of-pocket spending at the point of use which is a barrier to access	• Encourage prepaid financing mechanisms to curb catastrophic health spending and facilitate access to health
HEALTH INFORMATION MONITORING & EVALUATION	•Inadequate Government allocation of health information, monitoring, and evaluation	• Prioritization of HISM&E activities at both the national and county levels
	• Lack of prioritization of HISM&E activities at both the national and county levels	•Develop a standardized Electronic Health Records (Digital Health Platform) which will be used across all health facilities
	• Over-reliance on donor support at both the national and county levels for health information, monitoring, and evaluation.	• Strengthen the data analytic capacity at both levels of the government
	• Poor data demand and use to inform decisions	
	• Inadequate capacity for data analytics	
	•Fragmented health information systems	
HEALTH RESEARCH & DEVELOPMENT	• Inadequate Government allocation of health information, monitoring and evaluation	• Finalize appointments to the National Health Research Committee with clear terms of reference as provided for under the Health Act (2017)
	• Lack of prioritization of R&D activities at both the national and county levels	•Dissemination of the R4H Policy Framework (2018-2030) & Research for Health Priorities (2018-2023)
	• Over-reliance on donor support at both the national and county levels for R&D.	• Develop a Research for Health (R4H) strategic plan
	• Inadequate staff with the prerequisite skills and equipment for R&D	• Conduct a Knowledge Management Survey in the health sector
		• Prioritization of R&D activities at both the national and county levels
		• Strengthen the health research capacity at both levels of the government.

ANNEXES

Annex 1: Chapter 1, Health facilities put up in a place by National Government from 2018/2019 - 2020/2021

	HEALTH CARE FACILITIES	LEVEL	LOCATION	Status as at end of FY 2021
1	Muthuia Uthiru Health centre	3	Uthiru	Facilities opened in February 2021
2	Kiamaiko, Dispensary	2	Kiamaiko	
3	Soweto-Kayole Dispensary,	2	Kayole	
4	Ushirika HC -Dandora2	3	Dandora	
5	Green Park hospitals	2	Green Park	
6	Gichagi Health centre	3	Kangemi-Westlands	Facilities Opened in July 2021
7	Reuben Health centre	3	Mukuru Kwa Rueben	
8	Tassia Kwa Ndege Health centre	3	Tasia Eastate	
9	Our Lady of Nazareth Njenga HC	3	Mukuru Kwa Njenga	
10	Kianda 42 Health Centre,	3	Kibera	Facilities Commissioned and Ongoing November 2021
11	Undugu Upendo Dispensary,	2	Starehe	
12	Ng'undu Kamulu Health Centre -	3	Kamulu,	
13	Ngomongo Dispensary	2	Kasarani N	
14	Zimmerman Picken dispensary	2	Githurai 44	
15	Mathari -Korogocho (Mama Magrate)	5	Korogocho (Rehabilitated)	
16	Lunga lunga health centre	3	Viwandani (Rehabilitated)	
17	Dandora 2 health centre	3	Dandora (Rehabilitated)	
18	Karura Health centre	3	Mwiki (Rehabilitated)	
19	Gatina Dispensary	2	Datina	
20	Sinai Dispensary	2	Sinai -Viwandani	
21	Githurai Kwa chief Helth Centre	3	Githurai 45	
22	Pumwani Majengo Health Centre	3	Pumwani (Rehabilitated)	
23	Lucku summer Health centre	3	Lucky summer	
24	Riruta Health centre	3	Kawangware	

Annex 2: Chapter 3, Infrastructure – Number of Facilities by KEPH level and Ownership

KEPH Level[1]	Type of Health Facility	Ownership	2016	2017	2018	2019	2020	2021	Growth rate
Level 2	Dispensary	MOH	4,019	4,350	4,459	4,652	4,818	4,902	22
		Private	121	126	138	147	153	118	-2
		FBO	792	812	819	829	843	661	-17
		NGO	20	21	23	27	36	35	75
	Sub-Total		**4,952**	**5,309**	**5,439**	**5,655**	**5,850**	**5,716**	15
	Medical Clinic	MOH	11	11	13	14	20	31	182
		Private	3,570	3,902	4,193	4,427	4,890	4,619	29
		FBO	10	11	16	17	23	49	390
		NGO	217	233	238	240	245	217	-
	Sub-Total		**3,808**	**4,157**	**4,460**	**4,698**	**5,178**	**4,916**	29
	Total		**8,760**	**9,751**	**10,194**	**10,671**	**11,372**	**10,632**	21
Level 3	Medical Centre	MOH	0	0	0	0	0	0	
		Private	387	469	582	685	719	533	38
		FBO	3	3	7	8	9	10	233
		NGO	20	21	23	24	18	13	-35
	Sub-Total		**410**	**493**	**612**	**717**	**746**	**556**	36
	Health Centre	MOH	1,014	1,023	1,028	1,039	1,093	1,109	9
		Private	10	11	12	13	14	15	50
		FBO	198	201	202	204	214	192	-3
		NGO	30	37	37	39	47	33	10
	Sub-Total		**1,252**	**1,272**	**1,279**	**1,295**	**1,368**	**1,349**	8
	Nursing Home	MOH	0	0	0	0	0	0	
		Private	194	214	249	286	226	358	85
		FBO	5	5	5	5	5	4	-20
		NGO	8	8	9	10	10	6	-25
	Sub-Total		**207**	**227**	**263**	**301**	**241**	**368**	78
	Total		**1,869**	**1,992**	**2,154**	**2,313**	**2,355**	**2,273**	22
Level 4	Primary Care Hospitals	MOH	358	353	354	356	357	365	2
		Private	202	231	269	303	373	409	102
		FBO	100	101	106	109	106	110	10
		NGO	12	12	12	14	13	11	-8
	Total		**672**	**697**	**741**	**782**	**849**	**895**	33
Level 5	Secondary Care Hospitals	MOH	9	13	13	13	13	13	44
		Private	2	2	2	2	2	2	-
		FBO	3	3	3	3	3	5	67

KEPH Level[1]	Type of Health Facility	Ownership	2016	2017	2018	2019	2020	2021	Growth rate
		NGO	0	0	0	0	0	0	
	Total		**14**	**18**	**18**	**18**	**18**	**20**	43
Level 6	Tertiary Referral Hospitals[2]	MOH	4	6	6	6	6	6	50
		Private	0	0	0	0	0	0	
		FBO	0	0	0	0	0	0	
		NGO	0	0	0	0	0	0	
	Total		**4**	**6**	**6**	**6**	**6**	**6**	50
Grand total			**11,319**	**12,464**	**13,113**	**13,790**	**14,600**	**13,826**	22

Annex 3: Chapter 3, Health facility number of beds and Bed density per 10,000 population by County

County	2013		2016		2017		2018		2019		2020		2021	
	No. of beds	Beds per 10,000 pop	No. of beds	Beds per 10,000 pop	No. of beds	Beds per 10,000 pop	No. of beds	Beds per 10,000 pop	No. of beds	Beds per 10,000 pop	No. of beds	Beds per 10,000 pop	No. of beds	Beds per 10,000 pop
Baringo	660	11	806	13	806	13	816	12	824	12	841	12	1043	15
Bomet	763	10	824	10	831	10	842	10	845	10	849	9	1008	11
Bungoma	1083	7	1,782	12	1,850	11	2,021	12	2,061	12	2,204	13	2440	14
Busia	967	12	1,168	14	1,202	14	1,272	14	1,272	14	1,374	15	1594	17
Elgeyo Marakwet	798	20	860	20	860	20	860	19	860	19	892	19	935	19
Embu	1222	23	1,421	25	1,446	25	1,576	26	1,648	27	1,820	29	2038	32
Garissa	1026	10	697	7	775	7	827	7	857	8	936	8	1177	10
Homa Bay	1477	15	1,621	16	1,753	16	1,875	17	2,035	18	2,290	20	2812	24
Isiolo	535	23	592	25	604	24	636	25	636	24	731	27	883	32
Kajiado	1188	12	1,392	14	1,453	13	1,469	13	1,546	14	1,661	14	1996	17
Kakamega	2059	12	2,263	13	2,278	13	2,373	13	2,437	13	2,772	14	3262	17
Kericho	1172	15	1,850	22	1,870	21	1,872	21	1,876	21	1,886	20	2018	21
Kiambu	2867	13	3,250	15	3,427	15	3,764	16	3,815	16	4,132	17	4995	20
Kilifi	1355	10	932	7	965	7	982	7	1,016	7	1,163	8	1349	9
Kirinyaga	737	14	999	18	1,053	18	1,431	24	1,461	24	1,871	30	2471	39
Kisii	2092	19	2,600	22	2,670	22	2,817	23	3,024	24	3,405	26	4102	31

County	2013		2016		2017		2018		2019		2020		2021	
	No. of beds	Beds per 10,000 pop	No. of beds	Beds per 10,000 pop	No. of beds	Beds per 10,000 pop	No. of beds	Beds per 10,000 pop	No. of beds	Beds per 10,000 pop	No. of beds	Beds per 10,000 pop	No. of beds	Beds per 10,000 pop
Kisumu	2132	21	2,501	23	2,580	23	2,710	24	2,783	24	3,087	26	3698	30
Kitui	1168	12	1,439	14	1,475	13	1,553	14	1,573	14	1,580	14	1804	15
Kwale	1019	13	473	6	479	6	481	6	481	5	529	6	605	7
Laikipia	477	10	768	16	775	15	792	15	793	15	838	16	976	18
Lamu	379	30	146	11	159	11	231	16	239	16	266	18	295	19
Machakos	2025	16	1,969	15	2,150	16	2,384	17	2,389	17	2,601	18	3027	20
Makueni	958	11	1,230	14	1,294	14	1,294	13	1,322	13	1,356	14	1915	19
Mandera	803	10	675	8	790	9	1,166	14	1,333	15	1,981	22	2371	26
Marsabit	546	13	602	14	606	14	634	14	643	14	650	14	787	16
Meru	1794	13	2,035	14	2,074	14	2,218	15	2,329	15	2,355	15	3118	19
Migori	1851	19	2,203	21	2,430	22	2,698	24	2,894	26	3,232	28	3580	30
Mombasa	2043	19	1,597	14	1,702	15	1,795	15	1,895	16	2,162	17	2537	20
Muranga	722	8	964	10	968	10	972	9	972	9	1,123	10	1388	13
Nairobi	8128	21	7,866	19	8,193	19	8,707	20	9,631	22	10,399	23	12682	27
Nakuru	2443	13	3,042	15	3,089	15	3,302	15	3,522	16	3,362	15	4330	19
Nandi	613	8	774	10	779	9	829	10	829	9	951	10	1117	12
Narok	964	9	1,184	11	1,212	11	1,218	11	1,223	10	1,255	10	1518	12
Nyamira	891	17	944	17	1,034	18	1,083	18	1,124	19	1,519	24	1745	27
Nyandarua	776	14	603	10	610	10	611	10	611	10	857	13	1073	16
Nyeri	1594	24	2,081	30	2,081	29	2,081	28	2,166	29	2,234	29	2483	31
Samburu	510	18	582	20	593	20	643	21	646	20	670	21	759	23
Siaya	806	9	1,183	13	1,231	13	1,384	14	1,473	15	1,521	15	1727	17
Taita Taveta	754	25	450	14	453	14	456	14	457	13	507	15	568	16
Tana River	712	25	297	10	338	11	340	11	340	11	422	13	488	14
Tharaka Nithi	796	23	906	25	906	24	1,014	26	1,014	26	1,094	27	1134	27
Trans Nzoia	618	7	760	8	778	8	808	8	873	9	978	10	1041	10
Turkana	750	9	777	9	781	9	784	8	868	9	929	10	1255	13

County	2013		2016		2017		2018		2019		2020		2021	
	No. of beds	**Beds per 10,000 pop**	**No. of beds**	**Beds per 10,000 pop**	**No. of beds**	**Beds per 10,000 pop**	**No. of beds**	**Beds per 10,000 pop**	**No. of beds**	**Beds per 10,000 pop**	**No. of beds**	**Beds per 10,000 pop**	**No. of beds**	**Beds per 10,000 pop**
Uasin Gishu	1403	14	1,886	18	1,898	17	1,997	17	2,224	19	2,327	19	2546	21
Vihiga	722	14	815	15	815	14	866	15	873	15	923	15	1086	17
Wajir	847	12	525	7	557	7	595	8	613	8	999	12	1326	16
West Pokot	461	8	510	9	522	9	522	8	522	8	557	9	612	9
Grand Total	59706	14	**64,844**	15	**67,195**	15	**71,601**	15	**74,868**	16	**82,091**	17	97714	19

Source: Kenya Master Health Facility List, Ministry of Health

Annex 4: Chapter 3, Major medical equipment 2013- 2021

County	MRI			CT scans			Digital X-ray			Ultrasound			ICU beds			HDUs	
	2013	2020	2021	2013	2020	2021	2013	2020	2021	2013	2020	2021	2013	2020	2021	2020	2021
Baringo	0		0	0	1	1	1	5	5	3	12	27	0	4	6		18
Bomet	0		1	1	2	2	0	2	4	2	3	4	1	23	8		23
Bungoma	0		1	0	2	2	0	2	15	4	20	15	4	6	14		19
Busia	0		4	0	1	3	0	3	10	3	7	3	1		4		0
Elgeyo Marakwet	0		0	1	1	1	0	2	1	1	4	1	2		2		3
Embu	1	2	2	0	4	3	1	5	6	7	12	3	1	6	18		20
Garissa	1	1	1	1	1	3	1	5	7	4		19	1	6	6		0
Homa Bay	1	1	1	3		0	0	4	7	3	11	13	0		10		24
Isiolo	0		0	0	1	2	0	2	4	1	4	5	0	23	7		6
Kajiado	0		1	0	1	1	1	10	5	6	18	5	0	12	10		0
Kakamega	0	1	1	1	3	3	1	10	20	3	20	20	0	9	16		0
Kericho	0		0	1	10	2	2	5	13	7	15	12	1	22	28		0
Kiambu	1		2	2	2	2	3	12	12	19	16	12	3	10	62	29	22
Kilifi	0		1	0	1	4	2	3	19	10	6	3	0	2	7		15
Kirinyaga	1		0	0	1	3	0	3	7	1	6	6	0	2	5		0
Kisii	2	2	3	1	7	4	5	9	13	7	21	29	2	14	25		11
Kisumu	2	2	3	3	3	3	1	4	18	10	3	30	5	11	25		6
Kitui	0		0	2	1	8	1	17	10	5	21	10	1		3		0
Kwale	0		0	0	2	1	0	4	3	3	5	4	0	9	6		0

County	MRI			CT scans			Digital X-ray			Ultrasound			ICU beds			HDUs	
	2013	2020	2021	2013	2020	2021	2013	2020	2021	2013	2020	2021	2013	2020	2021	2020	2021
Laikipia	0		0	1	7	0	0		0	1	1	0	0	16	0		0
Lamu	0	1	0	1	1	1	0	3	3	2	4	3	0		0		0
Machakos	1	1	5	1	4	5	0	7	20	7	8	20	6	20	25	3	11
Makueni	0		0	0	1	2	0	6	11	3	9	6	0	4	4		6
Mandera	0		0	1	1	1	0	4	6	1	7	12	0		3		2
Marsabit	0		2	1		7	0		19	3		28	0		10		29
Meru	1	2	0	1	4	1	0	7	4	13	14	4	0	21	0		0
Migori	1		2	0	1	1	3	3	3	5	1	2	1	4	12		0
Mombasa	3	2	5	5	3	1	2	8	15	12	14	15	27	23	20	10	11
Muranga	1	1	1	2	2	2	1	4	11	6	7	16	0	6	45		8
Nairobi	5	7	22	9	17	33	9	34	85	37	49	265	31	243	242	145	217
Nakuru	1	11	2	2	8	7	3	13	14	13	31	10	8	24	26		12
Nandi	0	1	1	0	1	1	0	5	9	0	10	9	0	3	18		0
Narok	0		0	0	1	1	1	2	6	3	1	1	1	6	6		3
Nyamira	0		0	0	2	1	1	2	5	1	4	1	0		5		0
Nyandarua	2		0	2	2	1	1	2	4	6	2	4	0	4	16		5
Nyeri	1	3	3	2	4	3	0	11	8	11	12	9	5	21	15		3
Samburu	0		3	0	1	1	1	1	1	1	2	3	1		0		5
Siaya	0		0	2	2	1	0	3	6	9	6	6	0	14	0		0
Taita Taveta	0		0	0		1	0	2	5	3	6	16	0		4		0
Tana River	0		0	0	1	1	0	1	4	0	2	3	0		0		0
Tharaka Nithi	0		1	1	1	3	0	4	4	1	6	3	0	16	14		10
Trans Nzoia	0	1	3	0	11	3	0	3	8	1	6	14	0	3	8		2
Turkana	0		0	0	2	1	0	5	4	1	5	7	0	3	10		3
Uasin Gishu	1	3	5	2	5	7	0	8	2	3	20	2	4	54	16		0
Vihiga	0		0	0	3	2	0	4	0	2	11	7	1	24	5		0
Wajir	0		0	0	3	1	0	3	5	2	6	5	0	6	9		0
West Pokot	0		0	0		0	0	3	6	0	6	4	1		6		3
Kenya	**26**	**42**	76	**49**	**132**	137	**41**	**255**	447	**246**	**454**	696	**108**	**674**	781	187	497

Source: MOH and County reports

Annex 5: Chapter 3, Health Workforce Distribution in the Counties by cadre

SNo.	Staff cadres	2018/19	2019/20	Achievement 2020/21	Target 2020/2021	Rating*
1	Consultants	629	729	1019	1269	
2	Medical officers	1822	2876	2841	3574	
3	Dentists	673	414	373	634	
4	Other dental staff (Dental technologist, Community oral health officers)	251	279	368	504	
5	Pharmacists	2151	1155	901	1319	
6	Pharmaceutical Technologist		2065	1893	2811	
7	Clinical Officers (specialist)	5936	1424	2125	3426	
8	Clinical Officers (general)		6279	6178	7831	
9	Nursing staff (BSN, specialists, KRCHN/KRN, KECNH)	27071	32666	32631	34260	
10	Laboratory officers (Lab officers, Lab Technologist, Lab Technicians)	3681	6553	6106	7135	
11	Public Health staff (Public health officers, public health technicians)	5423	4402	4631	7783	
12	Orthopedic technologists	375	447	343	754	
13	Nutritionists	1005	1762	1867	2393	
14	Radiographers	439	505	650	865	
15	Physiotherapists	485	534	691	960	
16	Occupational Therapists		490	449	646	
17	Orthopedic Trauma (plaster technicians)	235	376	311	487	
18	Health Records & Information management Officers	1166	1836	1886	2349	
19	Medical engineering (Technologist/Technicians)	513	730	640	1150	
20	Health promotion officer	97	82	121	118	
21	Community Health Officer	447	540	583	888	

SNo.	Staff cadres	2018/19	2019/20	Achievement 2020/21	Target 2020/2021	Rating*
22	Statisticians	38	40	17	40	
23	Economists	49	45	151	85	
24	Health Administrative Officers	726	728	395	1444	
25	Accountants	423	351	365	841	
26	Human resource officers	163	212	141	323	
27	Supply chain officers	237	284	288	459	
28	Information & communication Technology officers (ICT)	60	75	175	120	
29	Artisan (electricians, plumbers, tailors)	107	109	113	214	
30	Mortuary Personnel (Morticians, Mortuary attendants)	137	172	193	290	
31	Drivers	1023	1151	1359	2025	
32	Office Administrators	354	414	532	694	
33	Office Clerks	1062	1172	1427	2124	
34	Support Staff (Cooks, cleaners, security)	5334	5505	7259	10692	
35	Community Health Assistants	1164	4030	6736	7633	
36	Community Health Volunteers	43558	56274	90778	79226	
37	Other (specify	1634	2672	3573	3268	

***Performance Score: 0-49%, 50%-79% and >80%**

Annex 6: Chapter 3: Leadership and Governance Health Policies and Regulations developed in the FY 2020/21

Service Delivery

1. The UHC Policy 2020-2030
2. The Kenya Primary Health Care Strategic Framework 2019-2024
3. Community Health Strategy 2020-2025
4. Targeted Testing Strategy for Corona Virus Disease 2019 (COVID-19) in Kenya and series of COVID-19 guidelines and protocols including, guidelines on management of COVID-19 in Kenya 2021, COVID-19 Home-based Isolation and Care guidelines
5. The National Infection Prevention and Control Policy 2021
6. Kenya COVID-19 RMNCAH guidelines 2021
7. The National Community Health Digitization Strategy 2020-2015
8. Targeted Testing Strategy for Corona Virus Disease 2019 (COVID-19) in Kenya and series of COVID-19 guidelines and protocols including, guidelines on management of COVID-19 in Kenya 2021, COVID-19 Home-based Isolation and Care guidelines
9. Initiated development of the Inter-Governmental Framework on Coordination of Blood Transfusion Services
10. Initiated development of the Kenya Policy on Donation, Transfusion and Transplant of Medical Derived Products.
11. The National Infection Prevention and Control Strategic plan 2021-2025
12. Kenya Menstrual Hygiene Management Policy 2019-2030 and Menstrual Hygiene Management Strategy.
13. The second Kenya AIDS Strategic Framework (KASF II) 2020/21 -2024/25
14. The Kenya Latent Tuberculosis Infection (LBTI) Policy 2020
15. Kenya Injectable-Free Regimen Policy 2020.
16. The Kenya Strategic Plan for Control of Leishmaniasis 2021-2025
17. National Eye Health Strategic Plan 2020-2015
18. Suicide Prevention Strategy 2021-2026
19. Kenya Palliative Care Policy 2021-2030

Health Financing

20. Kenya Health Financing Strategy 2020-2030
    Health Management Information System
21. Revised E-health policy 2019-2024 and interoperability guidelines

Health Human Resource

22. The Kenya Human Resource for Health Strategic Plan 3 (KHRHSP) 2019-2023
23. Internship Policy for Healthcare Professionals 2020

Health Leadership and Governance

24. Officially launched the Kenya Health Sector Partnership and Coordination Framework 2018-2030
    Health Research and Development
25. Research for Health (R4H) Policy Framework 2018-2030

Health Product Technology

26. The Emergency Medical Care Policy 2020-2030 and Strategic Plan 2020-2025
27. The Health Products and Technologies Supply Chain Strategy 2020-2025

Health regulations

1. Kenya National Blood Transfusion and Transplant Bill
2. Traditional and Alternative Medicine Practice Bill
3. Draft e-Health Bill.
4. Breast Milk Substitute Control Act Regulations 2021

Annex 7: Chapter 5, Kenya Health Sector Strategic Plan Output Indicators

Strategic Objectives	Achievement					Target	Rating*	Data source
	2016/17	2017/18	2018/19	2019/20	2020/21	2020/21		
Eliminate Communicable Conditions								
% Of children under 1 year of age fully immunized	71.6	69.9	78	79.6	82.5	**80**		KHIS
% Of TB patients treatment success rate	83	84	85	85	84	**90**		TIBU
% Of eligible HIV clients on ARVs	74	75	73	71.9	81.7	**90**		KHIS
% Of children under five years treated for Diarrhea with ORS & Zinc (Community)	82.1	85.8	89.7	88.9	91.1	**65**		KHIS
Total confirmed malaria cases [per 1,000 persons per year]	105.2	77.6	86.2	93.2	78.8	**47**		KHIS
Halt and Reverse Increase in Non-Communicable Conditions								
% Of Women of Reproductive Age screened for cervical cancer	3.1	1.9	2.4	2.4	2.6	**28**		KHIS
Proportion of adolescent girls vaccinated with HPV vaccine	NS	NS	NS	64.8	55.7	**50**		KHIS
Number of new hypertension cases per 100,000 new OPD visits	2689	2771	3,205	2,907	3,611	**2,953**		KHIS
Number of new Diabetes per 100,000 new OPD visits	875	965	1,010	1,056	1,404	**981**		KHIS

Reduce the Burden of Violence and Injuries								
% Of new outpatient cases attributed to gender-based violence	0.2	0,3	0.3	0.4	0.3	**14**		KHIS
Road traffic injuries in OPD as a % of all diagnoses	0.33	0.36	0.39	0.44	0.36	**1.8**		KHIS
% Of Patients with injury related conditions dying in the facility	4.2	3.7	3.5	3.8	3.5	**ND**		
Provide Essential Health Care								
% Of Women of reproductive age (WRA) receiving family planning (FP) commodities	42.3	37.2	43.6	44	42.3	**65**		KHIS
% Of Pregnant women attending at least 4 ANC visits	38.3	36.4	5.4	51	50,3	**55**		KHIS
Proportion of pregnant women getting IFAS supplements at 1st ANC	56.4	56.7	70.8	72.2	78.8	**ND**		KHIS
% of deliveries conducted by skilled attendants in health facilities	57,5	56.6	66.8	72.1	78.1	**70**		KHIS
Number of Facility Maternal deaths per 100,000 deliveries	127.3	98.7	102.1	98.4	104.2	**89**		KHIS
Fresh Stillbirth rate per 1,000 births in health facilities	12.4	12.5	9.8	10	9.3	**9**		KHIS
Minimize exposure to health risk factors								
Percentage of children 0-5 (<6 months) months who were exclusively breastfed	68.9	70.3	3708	82.3	83.1	**67**		KHIS

Strengthen Collaboration with Health-Related Sectors								
Proportion of Children under 5 years attending Child Welfare Clinics who are under weight	4.4	4.3	4.3	4.1	3.8	**7**		KHIS
% of households using improved sanitation facilities	52			64.9		**65**		KDHS2014/Census Report 2019
% of households using improved safe water facilities	71			73.3		**78**		KDHS2014/Census Report 2019
% of health facilities access to source of power						**85**		MOH/KNBS
% of women completed secondary education	27			34.2		**50**		KDHS2014/Census Report 2019

Performance Score:** **0-49%,** 50%-79% **and >80%

Annex 8: List of Contiributors

NO	Name of officer	Affiliation/Department	NO	Name of officer	Affiliation/Department
1	Dr.Helen Kiarie	Division of M & E	35	Bernard Wambu	Child Health
2	Dr.Joseph Sitienei	Dir. HPRME	36	Cosmas Leonard	WHO
3	Dr.Joyce Wamicwe	Research	37	David Njuguna	Planning
4	Dr.Janette Karimi	Division of M & E	38	Pepela Wanjala	UHC
5	Dr.David Kariuki	Dept. of HIM & E	39	Dorothy Mibei	Division of M&E
6	Dr.Isaac Kimani	THS	40	Anthony Komen	Division of M&E
7	Dr.Consolata Oggot	Health Financing	41	Emmanuel Towett	Planning
8	Dr.David Soti	DG office	42	Eunice Ndungu	UNICEF
9	Dr.Elizabeth Wangia	UHC	43	Faith Mukami	Division of M&E
10	Dr.Stephen Muleshe	Inter-Governmental Relations	44	George Kironji	Division of M&E
11	Dr.Beatrice Onyando	Vital Strategies	45	Gilbert Mboro	Division of M&E
12	Dr.Debra Rabera	PS office	46	Idah Pamela	Standards
13	Dr.Gladwell Gathecha	NCDs	47	James Kiarie	Malaria
14	Dr.Hannah Kagiri	NCI-Kenya	48	Jedida Odour	Division of M&E
15	Dr.Jonah Macharia	HPTs	49	John Toweett	Primary Health Care
16	Dr.Lilly Nyagah	Division of M&E	50	John Wanyungu	Community Health
17	Dr.Martha Muthami	Policy	51	Joyce Felab	Family Health
18	Dr.Kiogora Gatimbu	THS	52	Khaing Soe	UNICEF
19	Dr.Nancy Etiang	THS	53	Kirstine Nojgaard	Danida
20	Dr.Oren Ombiro	NCDs	54	Kumiko Yoshida	JICA
21	Dr.Silas Ogutu	Inter-Governmental Relations	55	Mary Mwangangi	Planning
22	Dr.Violet Oramisi	NASCOP	56	Mulonzi Mutiso	Healt Financing

NO	Name of officer	Affiliation/Department	NO	Name of officer	Affiliation/Department
23	Wycliff Omondi	Public Health	57	Peter Njapit	Division of M&E
24	Dr.Loise Nyanjau	NCI-Kenya	58	Quintine Kinyanjui	Division of M&E
25	Dr.Silas Agutu	IGF	59	Dr. Rose Jalango	NVIP
26	Anne Marimbet	Administration	60	Rose Muthee	M&E Division
27	Athanasio Japheth	Directorate of Special Services	61	Samuel Murage	Nutrition
28	Onesmus Mwaura	Informatics	62	Scholastica Wabwire	Reproductive Health
29	Paul Bartilol	CoG	63	Stephen Macharia	Planning
30	Khatra Ali	CoG	64	Stephen Mutiso	NTDS
31	Paul Malusi	DPRME	65	Tecla Kogo	NVIP
32	Raphael Pundo	Health IT	66	Terry Watiri	Planning
33	Peris Njibu	COG	67	Warutere Patrick	Informatics
34	Benson Murimi	Finance			

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