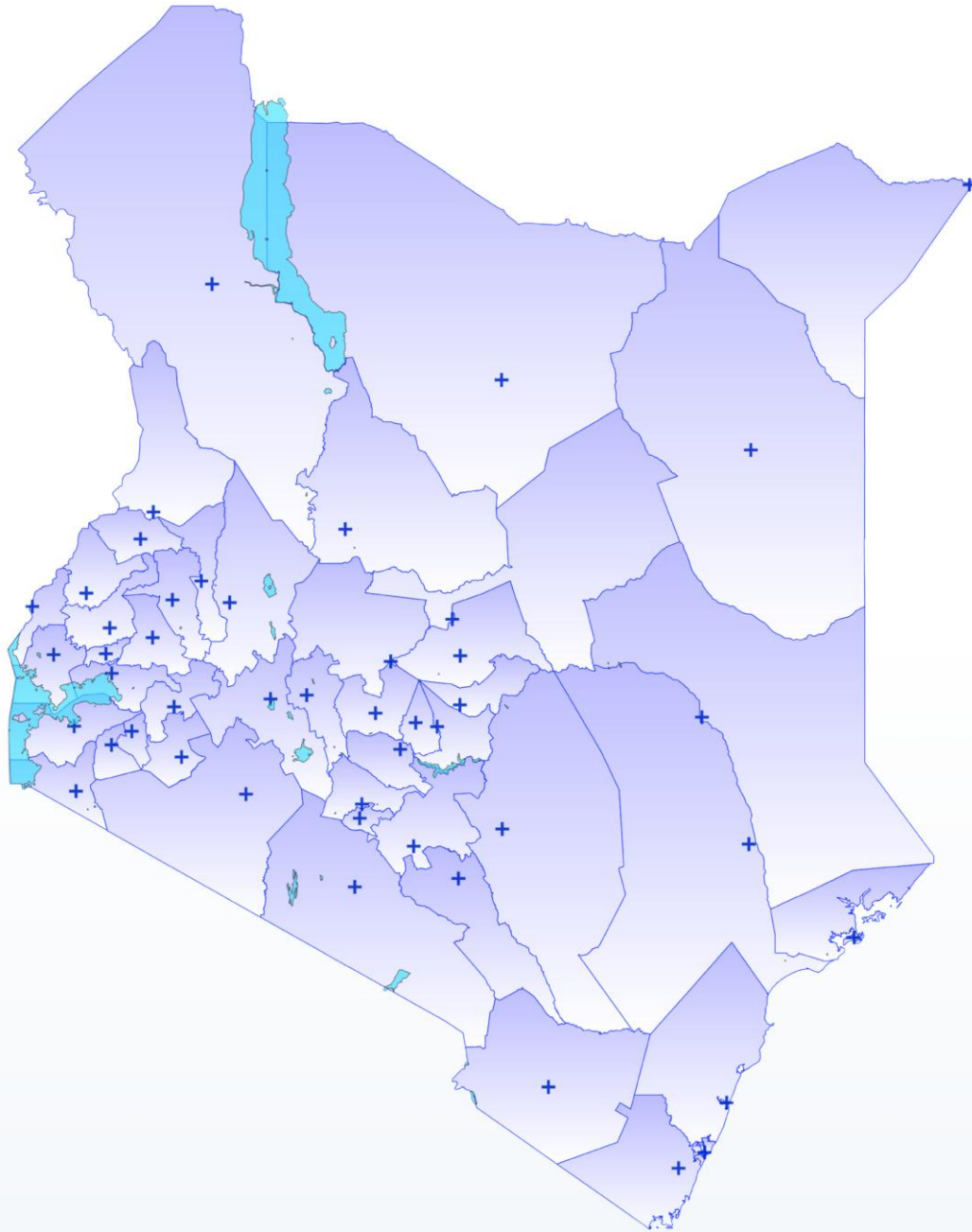




REPUBLIC OF KENYA

MINISTRY OF HEALTH



KENYA QUALITY OF CARE HEALTH FACILITY ASSESSMENT : SERVICE AVAILABILITY AND READINESS REPORT

Preface



The Government of Kenya, through the Ministry of Health, remains steadfast in its commitment to achieving Universal Health Coverage (UHC) and delivering quality, equitable, and people-centered healthcare to all Kenyans. Central to this vision is the assurance that health services provided across all counties meet the highest standards of safety, effectiveness, and responsiveness.

This Quality of Care Health Facility Assessment represents a landmark effort to systematically evaluate the availability, readiness, and performance of health facilities in all 47 counties. The assessment provides critical insights into how our health system is functioning on the ground, highlighting both areas of excellence and those that require targeted investment and improvement.

The findings will serve as a guiding framework for policy formulation, resource allocation, and continuous quality improvement at all levels of the health system. They also reflect our commitment to accountability and transparency in ensuring that every Kenyan—regardless of location—has access to dignified, reliable, and high-quality health services.

I wish to recognize the invaluable contributions of our county governments, health workers, development partners, and communities whose collaboration has made this assessment possible. The Ministry will continue to strengthen such partnerships in order to drive progress towards a resilient health system that leaves no one behind.

It is my hope that this report, which is one part of two cornerstone reports from the assessment will be used as a practical tool by policymakers, county leadership, facility managers, and frontline providers to accelerate improvements in service delivery. Together, we can transform Kenya's health sector into one that guarantees quality care for every citizen.

Hon. Aden Duale, EGH
Cabinet Secretary
Ministry of Health

Foreword



The Government of Kenya remains steadfast in its commitment to advancing Universal Health Coverage (UHC), ensuring that all citizens have access to safe, affordable, and high-quality



healthcare. Quality of care is central to this vision—without it, expanded access alone cannot deliver better health outcomes or inspire the confidence of our people in the health system.

The **Quality of Care Health Facility Assessment (QOC-HFA)** represents an important milestone in our ongoing efforts to strengthen the health sector. By systematically assessing the availability, readiness, and performance of health facilities across all counties, this report provides robust evidence on what is working well, where critical gaps remain, and how resources can be deployed more effectively. The findings particularly highlight the central role of health workers, infrastructure, and essential supplies in shaping the patient experience and improving outcomes.

This assessment also complements Kenya's broader health sector reforms, including the Kenya Health Sector Strategic Plan and the Universal Health Coverage agenda. By linking service readiness data to financing frameworks such as the **Social Health Insurance (SHA)**, we are able to not only measure inputs and outputs, but also ensure accountability, efficiency, and value for money in health investments.

I call upon national and county governments, healthcare providers, and our development partners to embrace the insights from this report as a shared platform for action. Together, we must translate evidence into policy and practice, drive targeted interventions, and strengthen coordination across all levels of the health system.

Let us commit to building a health system that is people-centered, resilient, and capable of delivering high-quality care for every Kenyan—today and for generations to come.

Mrs. Mary Muthoni Muriuki, CBS

Principal Secretary

State Department for Public Health and
Professional Standards

Ministry of Health

Dr. Ouma Oluga, OGW

Principal Secretary

State Department for Medical services

Ministry of Health

Acknowledgment



The successful design, implementation, and completion of the **Quality of Care Health Facility Assessment (QoC-HFA)** would not have been possible without the invaluable contributions of many individuals and institutions. The Ministry of Health extends its sincere appreciation to all stakeholders whose collective efforts, technical expertise, and financial support were instrumental in realizing this important initiative.

We acknowledge the leadership of the Ministry of Health for its stewardship in advancing Universal Health Coverage (UHC) in Kenya through this assessment. Our gratitude also goes to the county governments for their collaboration and support, which were vital for effective data collection and for ensuring that the assessment reflected the realities on the ground.

Special commendation goes to the core team that steered the implementation of this work with dedication and commitment. In particular, we recognize the leadership of Dr. Charles Kandie and Dr. Helen Kiarie, as well as the contributions of Dr. Hannah Kagiri, Dr. Boniface Kimuyu, Anthony Komen, Rose Muthee, Dr. Beatrice Kariuki, Dr. Joseph Mung'atu, Dr. Susan Mambo, Dr. Henry Kissinger, Dr. Betsy Rono, Quintine Kinyanjui, Stella Mwangi, Boniface Muganda, Jackson Muhoro, and Anne Nduta. We also extend appreciation to all technical officers from the Ministry of Health, the Kenya National Bureau of Statistics, and the National Council for Population and Development (full list annexed) for their invaluable input.

We further recognize the invaluable support of our development partners and non-governmental organizations (NGOs), whose technical assistance and funding made the QoC-HFA 2024 possible. In particular, we thank: The Global Fund (Dr. Bartilol Kigen), UNFPA (Charity Koronya, Ezekiel Ngunjiri, and Kigen Korir), UNICEF (Dr. Laura Onyiego and Camlus Odhio), CHAI (Rosemary Kihoto and Joshua Okeyo), WHO (Cosmas Leonard and Wendy Venter), APHRC (Dr. Martin Mutua, Godfrey Adero, and Diana Munjuri). Your contributions significantly strengthened the planning, execution, and overall success of this assessment.

We extend special thanks to healthcare providers and facility managers for their openness and participation, and to the clients who shared their experiences, reminding us of the importance of patient-centered care. We also commend the dedication of the research teams and data collectors, whose professionalism ensured the integrity and reliability of the findings.

Lastly, we acknowledge the Countdown to 2030 Kenya Country Collaboration Team—comprising the Ministry of Health (Division of Health Sector Monitoring and Evaluation), JKUAT, and APHRC—for coordinating the process.

To everyone who contributed in any way, we extend our heartfelt gratitude for making this initiative a success.

Dr. Patrick Amoth, EBS
Director General for Health
Ministry of Health



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ACRONYMS AND ABBREVIATIONS

ACE	Angiotensin-Converting Enzyme
AMR	Antimicrobial Resistance
AMS	Antimicrobial Stewardship
ANC	Antenatal Care
APHRC	African Population and Health Research Center
ART	Antiretroviral Therapy
ARV	Antiretroviral
AWP	Annual Work Plan
BEmONC	Basic Emergency Obstetric and Newborn Care
BETA	Bottom-Up Economic Transformation Agenda
BMGF	Bill and Melinda Gates Foundation
CAPI	Computer-Assisted Personal Interviews
CAUTI	Catheter-Associated Urinary Tract Infection
CEmONC	Comprehensive Emergency Obstetric and Newborn Care
CHAI	Clinton Health Access Initiative
CHP	Community Health Promoter
CIPCs	County Infection Prevention Committees
CLABSI	Central Line-Associated Bloodstream Infection
CME	Continuing Medical Education
COC	Continuum of Care
CoG	Council of Governors
COPD	Chronic Obstructive Pulmonary Disease
CRD	Chronic Respiratory Disease
CSPro	Census and Survey Processing System
CVD	Cardiovascular Disease
DHIS2	District Health Information System 2
DQA	Data Quality Assessment
DRTB	Drug-Resistant Tuberculosis
DSTB	Drug-Susceptible Tuberculosis
E/PMTC	Elimination/Prevention of Mother to Child Transmission
ECG	Electrocardiogram
eCHIS	Electronic Community Health Information System
EKG	Electrocardiogram (alternative abbreviation)
FBO	Faith-Based Organization
FIF	Facility Improvement Fund
FP	Family Planning
FPCF	Finite Population Correction Factor
FY	Financial Year
HAIs	Healthcare-Associated Infections
HBA1C	Hemoglobin A1C
HFA	Health Facility Assessment
HIV-ART	Human Immunodeficiency Virus - Antiretroviral Therapy



HMT	Health Management Team
HPTU	Health Products Technology Unit
HTS	HIV Testing Services
IPC	Infection Prevention and Control
IPTp	Intermittent Preventive Treatment in Pregnancy
JHIC	Joint Health Inspections Checklist
KDHS	Kenya Demographic and Health Survey
KENAS	Kenya Accreditation Service
KEPH	Kenya Essential Package for Health
KHMFL	Kenya Health Master Facility List
KMC	Kangaroo Mother Care
KNBS	Kenya National Bureau of Statistics
KNCP	Kenya National Cancer Policy
KQMH	Kenya Quality Model for Health
LLIN's	Long-Lasting Insecticidal Nets
M&E	Monitoring and Evaluation
MDRTB	Multidrug-Resistant Tuberculosis
MEC	Medical Eligibility Criteria
MOH	Ministry of Health
MPDSR	Maternal and Perinatal Death Surveillance and Response
NCD	Non-Communicable Disease
NCPD	National Council for Population and Development
NGO	Non-Governmental Organization
NHIF	National Hospital Insurance Fund
NTD	Neglected Tropical Diseases
O&M	Operations & Maintenance
OPD	Outpatient Department
PAC	Post Abortion Care
PCN	Primary Care Network
PEP	Post-Exposure Prophylaxis
PHC	Primary Health Care
PNC	Postnatal Care
PPE	Personal Protective Equipment
PrEP	Pre-Exposure Prophylaxis
QIT	Quality Improvement Team
QOC	Quality of Care
QOC-HFA	Quality of Care-focused Health Facility Assessment
RDT	Rapid Diagnostic Test
RMNCAH	Reproductive, Maternal, Newborn, Child and Adolescent Health
SARA	Service Availability and Readiness Assessment
SDG	Sustainable Development Goals
SDI	Service Delivery Indicators
SGBV	Sexual and Gender-Based Violence
SSI	Surgical Site Infection



STI	Sexually Transmitted Infections
TB	Tuberculosis
TOT	Training of Trainers
UHC	Universal Health Coverage
UNFPA	United Nations Population Fund
UNICEF	United Nations Children’s Fund
VAP	Ventilator-Associated Pneumonia
VCT	Voluntary Counseling and Testing
WHO	World Health Organization
WIT	Work Improvement Team

Table 1: List of Contributors

INSTITUTION	
Division of Monitoring and Health Sector Performance	Dr. Helen Kiarie-Team Lead Dr. Hannah Kagiri Rose Muthee Anthony Komen Quintine Kinyanjui Stella Wanja George Kironji Jedidah Oduor Anitah Achieng George Gatuha Ebenezer Njuguna Anne Nduta Peter Njapit Haddison Mureithi Benjamin Mutuku
Ministry of Health	Dr. Charles Kandie Dr. Kigen Baltirol Adan Harakhe Dr. Isaac Bashir Dr. Boniface Kimuyu Dr. Aisha Mohamed Dr. Joel Gondi Dr. David Njuguna Dr. Janette Karimi Dr. Lilly Nyagah Dr. Robert Owino Dr. Peter Mbugua Dr. Jonah Mwangi Dr. Nancy Njeru

INSTITUTION	
	Dr. Martin Mwangi Dr. Stephen Mutiso Dr. Valerian Mwenda Dr. Japheth Athanasio Dr. Joyfrida Chepchumba Dr. Loise Nyanjau Dr. David Soti Dr. Ian Were Dr. Denver Mariga Dr. Amos Oyoko Dr. Emmanuel Tanui Mary Mwangangi Mercy Irene Kimani Tecla Tracy Kogo Dorothy Mibei Scholastica Wabwire
Jomo Kenyatta University of Agriculture and Technology	Dr. Susan Mambo Dr. Henry Kissinger Dr. Betsy Rono- Cheriro
Technical assistance/Consultants	Dr. Beatrice Kariuki Dr. Joseph Mung'atu Boniface Muganda Jackson Muhoro.
Council of Governors (COG)	Khatra Ali Peris Njibu
Kenya National Bureau of Statistics (KNBS)	Paul Waweru
National Council for Population and Development (NCPD)	Bernard Kiprotich Helen Sidha.
Gates Foundation	Dr. Wangari Ng'ang'a



INSTITUTION	
African Population & Health Research Center (APHRC)	Dr. Martin Mutua
Development Partners	Clinton Health Access, UNICEF, UNFPA , WHO, Global Fund
County Governments	All County Directors of Health County Health Record Officers/ M&E officers



EXECUTIVE SUMMARY

Background

The Health Facility Assessments (HFAs) play a central role in evaluating capacity, readiness, and quality of care, particularly in developing countries where routine data sources such as DHIS2 do not capture this level of detail for meaningful analysis. To bridge this gap, the Ministry of Health, in collaboration with county governments and with support from development partners, undertook the Kenya Quality of Care Health Facility Assessment (QoC-HFA). This assessment was designed not only to evaluate facilities, but also to capture perspectives at the county, health worker, and patient levels.

The main objective of the QoC-HFA was to generate evidence to guide strategic planning, identify priority investment areas, and highlight opportunities for accelerated progress toward achieving Universal Health Coverage (UHC) by 2030. As Kenya scales up health investments—particularly in expanding insurance coverage and empaneling citizens into the Primary Care Network (PCN)—it is critical to ensure that services delivered at all levels of care meet the highest standards of quality. This assessment provides valuable insights into existing gaps and recommends practical mechanisms for addressing them at both national and county levels.

Approach

The assessment deployed several **modules**; County health department module, health facility, human resources for health, patient record reviews and client exit interview modules.

Data collection for the Quality of Care Health Facility Assessment was conducted between **February 27th and March 24th, 2024**, spanning a total of 35 days. Information was collected electronically using Android tablets equipped with **CSPro-based software** and stored centrally on a secure server managed by the **Kenya National Bureau of Statistics (KNBS)**.

Out of the targeted **3,605 facilities**, audits were successfully completed in **3,530 facilities**, representing a **97.9% response rate**. Key components of the assessment achieved the following coverage:

- **Client exit interviews:** 806 facilities (22.4%)
- **Human resource rosters:** 3,529 facilities (97.9%)
- **Work environment interviews:** 3,378 facilities (93.7%)
- **Clinical vignettes:** 3,328 facilities (92.3%)
- **Provider availability assessments:** 3,412 facilities (94.6%)

These high response rates underscore the robustness of the data and the strong collaboration between national and county teams, facility staff, and partners.

The assessment output entails two reports.

- Kenya Quality of Care Health Facility Assessment 2024: *Service Availability and Readiness*

- 
- Kenya Quality of Care Health Facility Assessment 2024: *Quality Systems, Human Resource Availability, Knowledge and Practices*

These following sections outline the key findings of the Service Availability and Readiness Report

Results

County Level Management Systems

- Health Product and Technologies (HPTU) structures were the most common in county health departments; 89% of departments had HPTU's established while 70% had funding for supply chain activities.
- County health departments also had various services delivery tracers in place; referral services were implemented by 68%, 47% were remunerating CHP's and only 21% were linked to PCN's.
- Half (51%) of counties had an organogram approved by the county public service board.
- Below half (45%) of counties conducted integrated support supervision, while 38% employed both integrated and program-specific support supervision.
- The least implemented practice by county health departments was employee satisfaction surveys at 19%.
- Fifty-seven percent (57%) of the counties provided documentary evidence of having functional M&E units established as per the M&E institutionalization guidelines.
- Three quarters of the counties (75%) had documentary evidence confirming that their health departments had developed Annual Performance Review (APR) reports for the FY 2022/2023
- Nearly half of the counties (49%) reported with documentary evidence that their health departments had functional research committees
- Sixty-two percent (62%) of the counties had evidence of Infection Prevention Control (IPC) committees, 23% reported to have them with no evidence while 15% reported that they did not have IPC committees.
- Half (51%) of counties' had documentary evidence to show that they had mechanisms to coordinate Antimicrobial Resistance (AMR) prevention and mitigation. 26% reported to have them with no evidence while 23% did not have any mechanisms to coordinate AMR prevention and mitigation.
- Nearly half (47%) of counties had an approved budget, while (23%) did not.
- In terms of Facility Improvement Financing (FIF), 45% of Counties had enacted legislation, 23% have operational FIF accounts, and 17% have implemented some mechanisms, although their FIF accounts are not operational.



Facility level Management and Finance

- Half of the health facilities (50%) implemented systems for performance management while the proportion of health facilities with Health Management Teams and Health facility Committee/Board stood at 56% and 61% respectively.
- Half of the facilities (51%) reported user fees (FIF) as their main source of finance for running the facilities.
- seventy-three percent (73%) of public facilities had the autonomy to plan and spend funds received/collected. On average, 67% of funds budgeted by public level 4 hospitals were provided; 64% of funds budgeted by PHCs were provided

Service Delivery Systems

- Nearly half (47%) of the counties provided documentary evidence of establishing and gazetting Primary Care Networks; 15% of counties reported establishing and gazetting PCNs but they lacked documentary evidence.
- Below half (47%) of counties had documentary evidence to confirm that they were remunerating Community Health Promoters (CHPs) as per the intergovernmental agreement while 38% of the counties reported that they were not remunerating their CHPs.
- About 2 in 3 (68%) of counties had a coordinated referral system with evidence, 21% reported to have the system with no evidence while 11 counties lacked a coordinated referral system altogether.
- About three of every four (72%) counties reported having an established mechanism for coordinating quality improvement, such as a committee, unit team, or designated focal person

General Service readiness

General Service Readiness is the overall capacity of health facilities to provide general health services. Readiness refers to the availability of items that are necessary to provide services such as basic amenities, basic equipment, basic diagnostic capacity, essential medicines and standard precautions for preventing infection.

Overall, the general service readiness was 72%. The domains with the highest average readiness were diagnostic capacity (88%), and basic amenities at 77%, while the domain with the lowest average readiness was basic equipment at 53%.

Specific Service Availability and Readiness

For each service, the percentage of facilities offering the service was computed as a measure of the availability of the service. In addition, for facilities offering the service, readiness to provide that service was assessed based on the presence of several tracer items in the following domains: guidelines, trained staff, equipment, commodities, medicines, diagnostics and infrastructure.



Communicable disease services

Communicable diseases account for the highest proportion of disease burden in the country, with the leading causes being HIV/AIDS, malaria and TB.

- While services for most communicable diseases are widely available, service readiness was mixed, being moderately high for HIV (63%), malaria and STI (61%) and TB (57%), while it was low for Neglected tropical diseases in endemic Counties (28%).

Malaria services

- Service availability: 95% of health facilities in Kenya offer malaria diagnosis or treatment services.
- Service readiness: Overall, the mean availability of malaria tracer items was 61%. However, 15% of facilities that offer malaria service have all items available on the day of the survey

Tuberculosis

- Service availability: In Kenya, 58% of health facilities offer TB diagnosis and treatment services.
- Service readiness: Amongst facilities providing TB services, the mean availability of TB tracer items is 57%. On average, guidelines availability is 43%, medicines 67%, diagnostics 54% (gene expert 88% of hospitals, microbiology 53% of facilities).
- DRTB: The mean availability of services for drug resistant TB was 34% among facilities offering TB services, while 41% of these facilities had all DRTB tracer items.

HIV/AIDS counselling and testing.

- Service availability: 83% of facilities in Kenya offer HIV services. Of facilities offering HIV services 99% provide counselling and testing services.
- Service readiness: the mean availability of tracer items for HIV services among facilities offering the service is 66%, while the percentage of the facilities which reported to have all tracer items for HIV services is 18%.

Sexually Transmitted Infections

- Service availability: in Kenya, 89% of health facility offer STI services.
- Service readiness: The mean availability of STI tracer items is 61%. Only 5% of facilities that offer STI services have all STI tracer items.

Neglected Tropical Diseases

- The most available services were for Schistosomiasis (61%) and Dengue fever (60%), while the least available services were for soil transmitted helminths (12%), Lymphatic Filariasis and Visceral leishmaniasis (both 17%).
- Public facilities had the lowest availability of tracer items across the board
- About half of endemic Counties had services for Trachoma, Chikungunya and Snake bites.
- There's low readiness for Visceral leishmaniasis in Garissa, kitui,wajir and West Pokot, as well as low readiness for Lymphatic filariasis in Tana River, Kilifi, Kwale and Lamu



Non-communicable disease services

The major NCDs are cardiovascular conditions, cancers, diabetes, chronic respiratory diseases, mental illnesses. Nationally 91% of facilities offered NCD services. Among these, availability of management and diagnosis of cardiovascular diseases and diabetes disease was highest at 92% and 90% respectively mental health and diagnosis of cancer was lowest at 52% and 46% respectively.

Diabetes

- Service availability: 90% of health facilities offering NCD services were found to offer diabetes services.
- Service readiness: average availability of the 15 tracer items was 71% with only 8% of the facilities having all the tracer items.

Cardiovascular Disease

- Service availability: nationally, 92% of health facilities providing NCD services offer cardiovascular disease diagnosis and/management.
- Service readiness: the average availability of tracer items for CVD management amongst facilities offering the service was 60%.

Chronic Respiratory Disease

- Service availability: overall, 88% of the health facilities that provided NCD services offered chronic respiratory disease diagnosis and/or management services.
- Service readiness: the mean availability of CVD tracer items was 55%.

Cancers

- Service Availability: Overall, 46% of facilities providing NCD services offered cancer services. The average availability of tracer cancer services (breast, cervix, oesophageal, colorectal and prostate) was 45% with only 5% of facilities providing all tracer services.
- Service readiness: Across across all cancers, trained staff were the most available tracer item (59%) of facilities, while availability of treatment protocols scored the least (18%)

Breast cancer

- Service availability: Breast cancer services were offered by 86% of the facilities offering cancer services
- Service readiness: Of facilities providing breast cancer services, the average availability of tracer items for breast cancer care was 37%.

Cervical cancer

- Service availability: the services were offered in 93% of health facilities offering cancer services
- Service readiness: The average availability of tracer items was 36% in the facilities that reported to offer cervical cancer services.

Esophageal cancer

- Service availability: Only 7% of facilities offering cancer services had esophageal cancer services.

- Service readiness: The mean availability of tracer items amongst facilities providing esophageal cancer services was 39%.

Prostate cancer

- Service availability: the provision of prostate cancer services at 32% of all health facilities offering cancer services
- Service readiness: the average availability of prostate cancer tracer items was 15% among the facilities that said they offer colorectal cancer services.

Colorectal cancer

- Service availability: the provision of colorectal cancer services was low at only 9% of all health facilities offering cancer services.
- Service readiness: The average availability of colorectal cancer tracer items was 43%.

Mental Health Services

- Service availability: nationally, 47% of the facilities offer any services for mental health or neurological health.
- Service readiness: the mean availability of items required to deliver mental health services was 54% with 8% of facilities offering mental health services having all the tracer items.

Palliative care

- Service availability: availability of palliative care services in Kenya was low with only a fifth (20%) of health facilities offering the services.
- Service readiness: the mean availability of ready tracer items for palliative care was 49% among those offering the service. Additionally, of the facilities that reported to offer palliative care services, only 4% had all the tracer items.

Reproductive, Maternal, Neonatal, Child and Adolescent Health Services +Nutrition

Family planning

- Overall, 85% of facilities offer family planning services, with 95% providing counseling.
- Average availability of FP tracer items was 52%; Equipment availability was high(70%), but guidelines (27%) and trained staff (31%) were major gaps.
- These disparities affect service quality and access, especially between urban vs rural and lower vs higher-level facilities.
- Strengthening lower-level facilities and investing in staff training are key to improving national family planning outcomes.

Antenatal care

- Service availability: the national average of facilities offering ANC services was at 77%.
- Service readiness: average availability of tracer items was 67%.

Delivery services:

- 46% of facilities in Kenya offer delivery services with 64% of these offering 24 hour services;
- Overall, average availability of delivery equipment is 68% staff and guidelines scores were below average at 32% and 25% respectively.
- The average availability of maternal care medicines for delivery was 65% at the KEPH levels authorized to stock them

Basic Emergency Obstetric and Newborn Care

- Service availability: The full package of Basic Emergency Obstetric Newborn Care (BEmONC) services (7 signal functions) was available in 37% of facilities offering delivery services.
- More private (45%) than public facilities (32%) had the BEmONC package.

Comprehensive Emergency Obstetric Care

- Service availability: The full package of (Comprehensive Emergency Obstetric Services) CEmONC was offered at 46% of hospitals (level 4 &5)

Postnatal Care for Mothers and Newborns

- Service availability: Of the facilities that had delivery service, 54 % of facilities offered postnatal care (PNC) for mothers as an inpatient service, while 84% offered outpatient postnatal case services.
- Service readiness: average availability of tracer items for inpatient PNC services was 78% while 34% of facilities had all inpatient tracer items.

Malaria In Pregnancy

- 73% of the facilities offering antenatal services in 23 prioritized counties, provided LLIN's for pregnant women as a service.
- 63% of facilities offering antenatal services in 13 prioritized counties provided Intermittent preventive treatment in pregnancy

Post-abortion care

- Service availability: the availability of PAC services was at 77% among facilities providing postnatal services
- Service readiness: Average availability of PAC tracer items was 47%.

Services for low birth weight and sick newborns

- Service availability: 60% of hospital had services for LBW and sick newborns.
- Service readiness: Average availability of tracer items in hospitals was 79% with only 9% of the health facilities having all the tracer items.

Child Immunization

- Service availability: The national average percentage of facilities offering immunization services is 66%.

- Service readiness: average availability of ready tracer item was 90% and 34% of the facilities has all the tracers.

Child Health Preventive and Curative Care Services

- Service availability: in all the health facilities nationally, 90% offered preventive and curative care for under 5 years old children.
- Service readiness: the average availability of all tracer items was at 67%. Only 4% of the facilities nationally had all the tracer items for child preventive and curative care services.

Newborn Health Services;

- 80% of facilities providing delivery services offered essential newborn health services and 60% of Level 4 and 5 facilities provided services for Comprehensive Newborn Care (small and sick newborns) with service readiness at 69%.

Child health services;

- The average availability of under 5 tracer services was 88% with the average readiness to provide under 5 health services at 67%
- The mean availability of essential medicines for children nationally was 63%.

Child Immunization Services

- 66% (8,819) of all health facilities offered child immunization services with the average availability of child immunization tracer items at 90%.

Adolescent health

- Service availability: the national average of facilities offering adolescent health services was 71%.
- Service readiness: The average availability of tracer items stood at 43% nationally

Nutrition

- Service availability: the national average of facilities offering nutrition services was 42%

Inpatient Services:

- Service availability: Nationally, 22% of health facilities had medical in-patient services.
- Service readiness: Of facilities with inpatient services, the average availability of emergency tray tracer items is 69% with 36% of facilities providing inpatient services having all tracer services available.
- Systems to support quality inpatient services: Nationally, 4% of the health facilities that offered medical in-patient services were found to have patients sharing beds. About three quarters (74%) of the health facilities that offered medical in-patient services conducted at least one multi-disciplinary ward round in a week.

Surgical services

The assessment of surgical services in health facilities in the country reveals a mixed landscape of progress and persistent disparities.



Minor surgery

- Minor surgical services are widely available, with 86% of health facilities offering them. The average availability of these services is 72%, but key readiness items like oxygen (36% available) and suction apparatus (49% available) remain scarce.

Major surgery

- Major surgical services are available in 60% of Level 4 and 5 facilities, with a higher average availability in Level 5 facilities (89%) compared to Level 4 facilities (67%).
- While common procedures like ectopic pregnancy surgery are widely accessible (92% availability), specialized surgeries such as craniotomy (35% availability) and repair of cleft lip and palate (28% availability) are limited.
- Overall, there is a heavy reliance on standalone oxygen cylinders (90%), and only 44% of facilities have a functional theatre users' committee, indicating significant gaps in infrastructure, governance, and equity across counties, facility levels, and rural-urban settings.

Blood transfusion

- Service availability: only 7% of health facilities in Kenya offered blood transfusion which demonstrated a large gap in the availability of blood transfusion services.
- Service readiness: the mean availability of tracer items was way above 50% in all the facilities that offered the service of which 10% of facilities that offer blood transfusion services had all tracer items for blood transfusion.

Emergency care

- Service availability: Nationally, the provision of colorectal cancer diagnosis and treatment services was low. Only 2% of all health facilities offering these services.
- Service readiness: The average availability of tracer items for colorectal cancer was 15% among the 77 facilities that said they offer colorectal cancer services. Only 1% of facilities had all the tracer items.

Laboratory Services

Laboratory services are vital to Kenya's healthcare system, supporting up to 75% of clinical decisions. While basic tests such as urinalysis (98%) and malaria microscopy (97%) are widely available, advanced diagnostics remain limited—only 57% of facilities offer Full Haemogram services and 21% provide Culture and Sensitivity testing. Rural facilities are especially disadvantaged (67% availability vs. 78% in urban areas).

Service reliability is a major challenge: 34% of facilities reported interruptions due to equipment breakdowns and reagent stockouts, with the most severe impacts on Full Haemogram (39%) and Renal Function tests (40%). Overall readiness for essential laboratory inputs is low (38%), and participation in external quality assurance programs remains weak.

Addressing supply chain, infrastructure, and quality assurance gaps is critical to ensuring consistent, reliable, and high-quality laboratory services across the country.



Pharmacy

The assessment of pharmacy services shows progress in essential medicines availability but highlights gaps that are likely to undermine quality and safety. Stock-outs remain common, with about 1% of facilities (118) completely out of tracer medicines. Supply chain oversight is weak, as only 41% of facilities conducting audits and just 25% using electronic stock management systems.

Pharmacy governance also had gaps, with only 60% of Level 4 and 5 hospitals having active Medicines and Therapeutics Committees (MTCs), and few met regularly. Quality assurance practices are lacking—only 7% of facilities reported adverse drug reactions, and less than 25% disposed of expired medicines in the past year.

These findings point to the urgent need for stronger county investments in supply chain systems, wider adoption of electronic tools, consistent use of guidelines, functional MTCs, and improved pharmaceutical waste management to enhance safety, efficiency, and equity in service delivery.



INTRODUCTION

Background

The Constitution of Kenya 2010, the Kenya Kwanza Manifesto, and Vision 2030 all emphasize the right to health and the commitment to Universal Health Coverage (UHC). The COK 2010 guarantees the right to health for all citizens. It mandates the government to progressively achieve UHC by providing equitable, affordable, and quality health services at the highest attainable standards to all Kenyans. Vision 2030 envisions a healthy population as a cornerstone of national development, advocating for improved healthcare facilities, equitable access, and enhanced health financing, aiming to reduce the burden of disease and improve life expectancy through comprehensive health sector reforms. In addition, the Kenya Kwanza Government is committed to realizing the constitutional right to health by delivering Universal Health Coverage (UHC) through the enactment of relevant legal frameworks; restructuring of key institutions, and digitization of processes to enhance efficiencies. Together, these frameworks point towards a commitment by the government to enhance healthcare systems, ensure accessibility, and promote the overall well-being of the Kenyan population.

Healthcare System in Kenya

Provision of quality health services is fundamental for effective healthcare delivery, and essentially vital for the achievement of Universal Health Coverage (UHC). Kenya has made significant progress in increasing access to health services as evidenced by the KDHS 2022 report. Skilled birth attendance increased from 66% in 2014 to 89% in 2022. Similarly, unmet need for family planning declined from 35% to 14%. Good performance was noted across key reproductive, maternal, and child health indicators with 98% of women having at least one ANC from a skilled provider while 66% of women had at least 4 ANC visits. Additionally, 80% of children were fully vaccinated at 24 months. (**Kenya National Bureau of Statistics, 2022**). Despite this improved performance in service coverage, impact indicators such as maternal and child mortality remain high. The 2019 population census estimated MMR at 355 deaths per 100,000 live births while the latest UN (UNMMEG) estimates MMR in Kenya at 530 deaths per 100,000 live births. Although these estimates have been queried due to data gaps and the estimated actual MMR is 249/100,000 live births, there is clear evidence that maternal mortality is unacceptably high in Kenya. Similarly, the 2022 KDHS shows that childhood mortality has remained high, declining only marginally; Under-5 mortality declined from 52 to 41 deaths per 1,000 live births, Infant mortality declined from 39 to 32 deaths per 1,000 live births while neonatal mortality remained largely unchanged from 22 to 21 deaths per 1,000 births. (Kenya National Bureau of Statistics, 2022). Further, the proportional contribution of NCDs to mortality increased significantly from 27% to 41% between 2018 and 2022. (**Ministry of Health, Kenya, 2022**). Moreover, access to healthcare services remains uneven, particularly in rural areas, compounded by a government health budget allocation of around 7%, which often falls short of the populations' health needs (World Health Organization, 2022). There was



therefore a need to focus on the quality of care provided across all health facility types in Kenya to help identify gaps in care.

Purpose of the Assessment

While there are several disparate mechanisms to measure the quality of care in a health system, the Health Facility Assessment (HFA) is central to QOC surveys across many developing countries, as routine sources such as the DHIS2 do not capture quality of care data to facilitate useful analysis. The Ministry of Health together with Counties, and with support from the development partners planned to carry out a Health Facility Assessment with a deliberate focus on Quality of Care. The last similar assessment was done in 2018 and has been used as a key reference document to inform policy and programming with a follow up assessment due.

The QOC-HFA aimed to answer the following questions:

1. What services are available and what is the readiness capacity to provide the services for the various types and levels of health facilities
2. What processes exist to institutionalize and sustain quality care in all health facilities
3. Are health workers equipped to identify and manage the major causes of illness and death in health facilities
4. Do health care workers adhere to standards while providing care to patients
5. What are the patient experiences and how satisfied are clients with health services provided at the various types and levels of health facilities?
6. What weak links exist within the programs that need strengthening to scale up the delivery of high-impact interventions
7. How equitable and appropriately distributed are services and resources across the health system particularly Health financing, HRH, HPTs and infrastructure

The gap between investments and the desired outcomes, such as improved health, reduced mortality, and increased healthy life expectancy, highlights the need for a deeper investigation into the processes involved. This is particularly relevant as the focus shifts toward strengthening Primary Healthcare (PHC). This is important now, as the focus shifts to strengthening Primary Healthcare, where services are often of lower quality. The main objective for conducting the Health Facility Assessment 2023 is to provide the necessary information for strategic planning, health sector priority investment areas and areas of acceleration to achieve UHC by 2030. Further, as the scale-up of investments including ensuring that Kenyans have insurance coverage and are empaneled to a primary care network (PCN) continues, there was need to ensure that the care accessed in all levels of care are of the highest quality. The assessment helped identify the gaps, and recommended mechanisms to address them both at National and County Governments

The quality of care study assessed structures, processes and outcomes of health services. The rationale for using the Donabedian model in the study is its comprehensive, structured approach to evaluating healthcare quality through three key components: **structure, process,**

and **outcomes**. This model allowed for a systematic analysis of the health system linking resources (structures) and care delivery (process) to patient outcomes. By identifying gaps or inefficiencies and supporting evidence-based decision-making, the **Donabedian model** is a valuable tool for continuous quality improvement. An illustration of the model is shown in Table 2 below

Table 2: Donabedian Model

Structures	Processes	Outcomes
Availability of staff	Use of guidelines in clinical management	Patient safety
Availability of commodities	Quality of clinical records	Client satisfaction
Availability of equipment	Pathways of care(diagnosis)	Facility mortality
Staff diagnostic capacity		Incidence of hospital-acquired infections

Approach of the survey

The assessment was implemented jointly by National and County teams offering an opportunity for mutual learning and sharing of experiences across the teams implementing the assessments. The assessment leveraged on the Harmonized Health Facility Assessment, the Kenya Quality Module for Health (KQMH) and the patient safety M&E framework among others. This assessment provided an opportunity to combine several health facility assessments into one thus saving on resources and providing follow-up estimates that should be have been provided by several overdue surveys. Some of the key areas assessed included quality of clinical care, adherence to treatment guidelines including documentation, the safety of care and infection prevention, outcome indicators for quality of out and inpatient care, practices to support quality of care, and availability of medical commodities. The assessment also included indicators on the receipt of appropriate, effective, and timely care by patients under safe conditions which was measured by assessing provider adherence to standards when providing care (the care process), assessing patient and provider exposure to safety risks, patient and family engagement, validation of reported patient care outcomes, and assessment of patient satisfaction.

The modules that were deployed in the assessment included;

1. Availability: Information relating to the physical presence of facilities, resources, and services (e.g., building and utilities, infrastructure, staff, beds). This also included the availability of services offered.
2. Readiness: Capacity of facility to provide specific services (e.g., presence of trained and knowledgeable staff, guidelines, drugs, supplies, diagnostics, equipment), appropriate service site systems, and infrastructure conditions to support quality.



3. Quality & Safety of healthcare: Included indicators on the receipt of appropriate, effective, and timely care by patients under safe conditions. This was measured by assessing;

a) Quality Assurance/Improvement

b) Provider Knowledge and adherence to standards when providing care (the care process) using patient simulation (Vignettes)-- Diagnostic accuracy for selected conditions that contribute to high mortality in children and children.

c) Records Review: This review of patient records for adherence to recommended standards of care will be done for sampled conditions in all sampled facilities

d) Use of Evidence-Based Medicine through assessing the availability of relevant guidelines

e) Systems to elicit patient experiences with care through client exit interviews

4. Management & finance: Practices to support continuous service availability and quality care (e.g. management practices and supervisory practices, finance, health worker perspective & absenteeism, and review of Information for decision making)

Use of findings from the assessment

Findings from the quality of care health facility assessment will be useful in informing policy, programming, and efforts towards realization of Universal Health Coverage (UHC) in Kenya. By identifying gaps in service delivery, resource allocation, patient satisfaction, and infrastructure, the findings will inform actionable recommendations that align with actual needs. Further, advancing UHC based on evidence will be useful in prioritizing interventions that ensure equitable access to quality care for all.

METHODOLOGY

2.1 Study Design and Approach

The Quality-of-Care Focused Health Facility Assessment (QoC HFA) by design was a collective effort of several partners of the Kenya Ministry of Health. The survey was consultatively designed and implemented by a group of experts from the Ministry of Health together with Counties and the Council of Governors (COG) in collaboration with the National Council for Population Development (NCPD), The Kenya National Bureau of Statistics (KNBS), academia and Development Partners.

As part of this harmonized approach, the technical working group integrated the existing indicators into a standardized set with clear definitions and recommended assessment methods. They also compiled various data collection techniques into a comprehensive framework, which included a well-organized question bank categorized by subject.

The assessment leveraged on tools and methodologies from previous surveys and frameworks, including the Health Facility Assessment, the Service Delivery Indicators (SDI) survey, the

Kenya Quality Model for Health (KQMH), the Kenya Health Facility Census, and the Joint Assessment. The following service areas were assessed;

Table 3: Assessed service areas

Area	Focus
County Health Department	Evaluated governance, leadership, and resource allocation at the county level.
Health Facility	Assessed available services and infrastructure, equipment, and commodities necessary to provide the services
Human Resources for Health	Assessed staffing levels, provider competency, and the work environment
Record Reviews	Assessed clinical and administrative records for service delivery trends and quality benchmarks.
Client Exit Interview	Collected client feedback on their experiences and satisfaction with family planning services.

The assessment areas and tools were designed to increase the robustness of the survey and allow comparability of health facility data collected over time and across different geographic locations.

2.2 Data collection tools

The QoC-HFA 2024 used several tools to collect data from different service areas, targeting a diverse range of respondents. Data collection tools were meticulously developed based on these assessment areas to ensure comprehensive and accurate data gathering. The survey tools were reviewed by stakeholders representing relevant government ministry departments, agencies, Counties and development partners, including WHO, CHAI and APHRC. The insights and recommendations from technical and program experts informed the final tools used for the survey. The questionnaires were programmed into the CPro survey software ¹and deployed on tablets, which were then used to conduct Computer-Assisted Personal Interviews (CAPI) for data collection. Table 4 provides a list of the tools, the main respondents, and a summary description.

¹ U.S. Census Bureau, *Census and Survey Processing System (CPro)*, retrieved from <https://www.census.gov/data/software/cspro.html>.

Table 4: QoC-HFA 2024 survey tools

Survey tool	Main respondent	Description	Structure and Processes assessed
			Structure
1. County Health Department Questionnaire	County Director for Health	This tool focused on governance and management at the county level and had the following subsections. • Routine and Preventive Maintenance • Governance and Management • External Supervision • Health Financing and Accounting • Accountability Systems • Quality Assurance and Quality Improvement	• Management Systems (committees etc.) • Monitoring Systems • Supplies • Equipment • Certification and Standards
2. Health Facility Audit Questionnaire	In charge of the respective departments and service areas at the facility*	This tool sought information on each service area-specific topic/area for a defined set of indicators The modules included were; • Availability • Readiness • Governance and management structures • Practices • Quality & safety of healthcare	
3. Human Resource Roster	In charge/administrator in the health facility	Used to gather detailed information about the healthcare personnel providing medical services in health facilities.	Health Workforce



Survey tool	Main respondent	Description	Structure and Processes assessed
			Structure
		Collected line data of health workers from 22 cadres of interest and included the following details; • Name of the health workers • Cadre • Sex • Age • Highest level of education • Highest level of medical training • Trainings in last 2 years • Years worked	
			Process
4. Work Environment / Occupational Health and Safety	Health worker sampled for individual interviews	This tool assessed the following key elements. • Promotions in the last 3 years • Payment of salaries • Experience of assault (Physical, verbal, or any other) • Distribution of workload • • Satisfaction working at the health facility. • Factors likely to improve ability to provide good quality of the ability to provide good quality care services.	Health Workforce (through health worker interviews)
5. Diagnostic Accuracy/ Clinical Vignettes	Eligible health workers (medical officers, clinical officers, and nurses) who are sampled for interviews based on the eligibility criteria	• This tool assessed the clinical knowledge of the health workers on the diagnosis and management of six clinical cases • The eligibility criteria was health workers who conduct general out-patient consultations at least once a week and available on the day of the interview	



Survey tool	Main respondent	Description	Structure and Processes assessed
			Structure
6. Record Review	Eligible clinical records	Review clinical records/files for completeness and accuracy documentation of care provided in specific service areas Target records were; • HIV-HTS records • HIV-ART records • TB records • Maternity records	Clinical records
7. Family Planning Client Exit Interview	Clients (men and women 18-54 years) who had visited the healthcare facility seeking FP services, including those receiving counseling for contraceptives, or any other reproductive health services related to family planning	Tool sought to gauge the level of satisfaction and overall experience of clients with the services received	Patients/ Clients (through patient/client interviews)
<i>*Management and finance, Quality of care, Non-Communicable diseases, Communicable diseases, RMNCAH, Surgical Services, In-patient services (medical ward), Emergency Services, Laboratory Services and Diagnostics, Transfusion Services, Anti-Microbial Resistance (AMR)/ Infection Prevention Committee (IPC) /Patient Safety, Pharmacy Services</i>			

2.3 Sampling and sample size determination

2.3.1.1 Constructing of a sampling frame - health facilities

Sampling for the QoC-HFA 2024 was undertaken by the Kenya National Bureau of Statistics (KNBS). The Kenya Health Master Facility List (KHMFL) and the Kenya Health Facility Census 2023 were used to obtain the survey sampling frame for health facilities. The sampling frame did not include Level 6 hospitals, specialized health facilities, such as eye hospitals, dental clinics, and Voluntary Counseling and Testing (VCT) centers. This provided a comprehensive



and up-to-date database of all registered health facilities nationwide. Further, it ensured that the selection of health facilities was representative of the entire population of health facilities by county, level, and ownership. This approach allowed for an accurate sampling, reducing the likelihood of selection bias, and allowed the generalizability of the survey findings to the broader healthcare system in Kenya. A census of all counties was undertaken to assess governance and management structures at the county level.

2.3.1.2 Constructing of a sampling frame - health workers

A list of health workers (roster) across 22 cadres was obtained and verified from the sampled facilities. This list served as the sampling frame for selecting individual health workers participating in the clinical simulations, work environment and provider availability.

2.3.1.3 Constructing of a sampling frame - record reviews

Only sampled facilities providing HIV services (HIV (HTS and ART), TB, and maternity were included. Registers from these service areas namely MOH 362; TB₄ and 333 respectively were used to generate the sample records based on an eligibility criteria. A maximum of 10 eligible records for each service area was listed.

2.3.1.4 Constructing of a sampling frame - client exits

The FP register (MOH 512) from all sampled health facilities offering FP services was used to determine the average number of family planning clients visiting a facility on a typical day and eligibility criteria applied.

2.3.2.1 Sample size determination for Health Facilities

Initially, the sample size was calculated using the standard Cochran's formula for sample size determination for finite populations, with the following parameters; a 95% confidence interval, 5% margin of error were applied (e), a 50% proportion (p) to ensure a conservative estimate. That is

$$n_o = \frac{z^2 p(1 - p)}{e^2}$$

Where:

- n_o - initial sample size.
- z - Z-score corresponding to the desired confidence level (1.96 for 95% confidence).
- p - estimated proportion of facilities with certain characteristics
- e - margin of error

Further adjustments were made using the finite population correction factor (FPCF) to account for the finite number of health facilities but maintaining statistical validity. Thus, the final sample was obtained as follows;



$$n = \frac{n_o}{1 + \frac{(n_o - 1)}{N}}$$

Where

- n – is the adjusted sample size considering the finite population.
- n_o – is the initial sample size.
- N - is the total population of health facilities at the per KEPH level

A final sample of 3,605 facilities was arrived at after considering the following'

- power adjustment (80% power),
- Census of all public Level 4 and Level 5 hospitals and port health facilities (975 facilities in total).
- Oversampling of Level 2 and Level 3 to ensure coverage and representation of the diverse facility types across 47 counties
- Specialized health facilities, such as eye hospitals, dental clinics, and Voluntary Counseling and Testing (VCT) centers were however excluded

2.3.2.2 Sample size determination - health workers

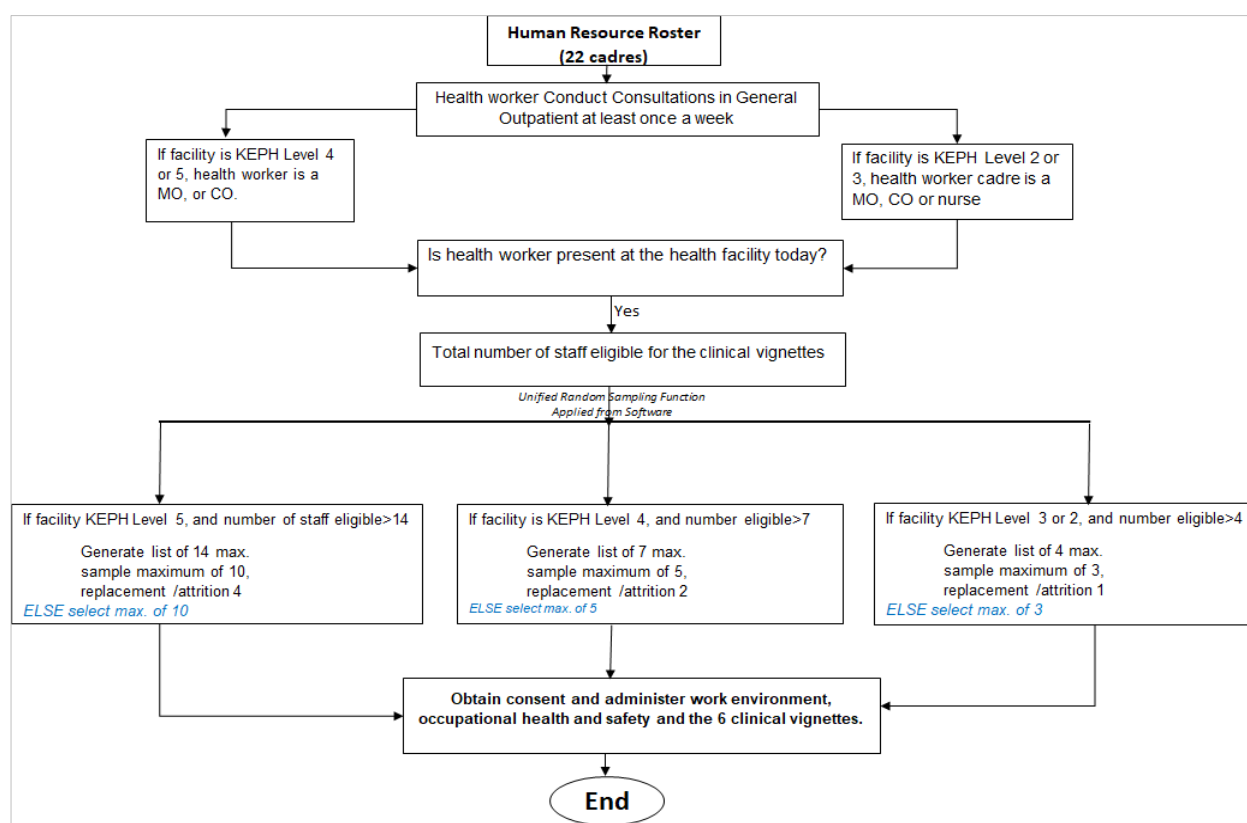
Following the listing of health workers across 22 cadres in sampled facilities, random sampling of clinicians was done through a configured algorithm in the electronic tool

The following considerations were made to determine the sample size for the health workers for the case simulations and work environment on the announced visit (first visit);

- Health workers providing consultation services at least once per week in the outpatient department
- Health workers present in the facility on the day of the interview
- A total of 14 clinicians in level 5 (with an allowance of 4 to cover for attrition), 7 clinicians in level 4 (with an allowance of 2 to cover for attrition) and 4 clinicians in level 2 and 3 (with an allowance of 1 to cover for attrition).
- For level 4 & 5, only doctors and clinical officers were eligible while for level 2 & 3, nurses, doctors and clinical officers were included.

The clinicians were randomly selected using an electronic system as per the above criteria, yielding a final sample of 6,252 health workers. Figure 1 provides a summary of the algorithm used to obtain the respondent for the survey

Figure 1: HR, Clinical Vignettes and Work Environment Assessment Respondents' Selection Algorithm



For the second (unannounced) visit, medical staff were randomly selected from the staff roster, with a maximum of 10 staff members sampled to assess provider availability.

2.3.2.3 Sample size determination - record reviews

The sampling was based on the standard HFA sampling approach. The following criteria was adopted to generate a sample from a line list of 10 eligible records for review in maternity, HIV (HTS and ART) and TB;

- Toss a coin to identify the start point and sampling interval - heads pick odd numbers, tails pick even numbered records.
- Follow this to generate a sample of 5 records (maximum) from the listed 10 records per facility and service area.
- The other five records were put in a replacement pile to cater for any records that may not fulfill all the criteria.

2.3.2.4 Sample size determination – FP client exit

For the family planning (FP) exit interviews, the sampling approach and size were adopted from the 2018 Kenya SDI. After determining the average number of FP clients visiting a facility on a typical day, sampling was done as follows;

- 
- Using the average number of FP clients, the sampling interval was determined by dividing the number by 3 in dispensaries, clinics, health centers and 5 for hospitals.
 - From the first 3 or 5 FP clients, the first interviewee was randomly selected, and the subsequent interviewees were selected by adding the sampling interval to the serial number of the previous client.
 - Where the average number of clients seen by a facility on a typical day is less than 6 (dispensaries, clinics, health centers) or 10 (first-level hospitals) then the first 3 (dispensaries, clinics, health centers i.e. KEPH levels 2 and 3) or first 5 (in KEPH levels 4 and 5) were interviewed.
 - A maximum of 3 clients in dispensaries, clinics, and health centres and 5 clients in hospitals were sampled for interview

2.4 Survey Team

Composition; Training and supervision of survey teams

The survey team consisted of the national coordinating team and the field team. The national coordinating team consisted of national-level officers who provided leadership and managed the overall coordination of the survey, including its design, data collection, and consolidation of key findings.

The field team was made up of 47 national supervisors, 47 county supervisors, and research assistants, along with drivers and security officers in high-risk security areas. County supervisors, typically County Health Records and Information Officers or Monitoring and Evaluation Officers, played a critical role in the data collection process. Their duties included creating a movement plan, assigning tasks to research assistants, scheduling appointments, ensuring quality control, and managing the submission of data to the server. National supervisors were responsible for administering the county tool and coordinating logistics for the teams.

Research assistants, with either a clinical or non-clinical background, were responsible for collecting, entering, and submitting data to the county supervisor for uploading to the server. Those with a clinical background administered the human resource tools (roster, clinical simulations, record review, and work environment), while the non-clinical research assistants handled the facility audit, family planning exit, and provider availability tools.

The data management team, with extensive expertise in programming and CPro data management, played a crucial role in the survey. Their responsibilities included developing electronic data collection forms, training data collectors on the electronic tools, and overseeing all aspects of data management, such as quality assurance.

Training for the survey team was carried out in two phases. The first phase, a Trainer of Trainers (TOT) workshop, occurred in December 2023, where national and county supervisors were trained on all survey modules through a mix of classroom lectures, discussions, practical demonstrations, mock interviews, and field practice.

The second phase, held in February 2024, focused on training research assistants. Led by the TOT-trained supervisors, these sessions covered topics such as data collection tools, procedures for accessing health facilities, and interviewing techniques. The training included classroom lectures, discussions, practical demonstrations, mock interviews, and field practice.

2.5 Pre-testing of tools

This process involved administering the tools to a small, representative sample of facilities consisting of public, private, and FBOs of levels 2-4 to identify and address potential issues such as ambiguous questions, skip logic errors, and workflow challenges that may arise during data collection. Pre-testing was conducted in 28 health facilities within Machakos County, and was distributed as follows: Level 4 – (8); Level 3 – (8), and Level 2 – (12) as in Table 5 below

Level 5 was not included because it was the only one to avoid contamination of the sample

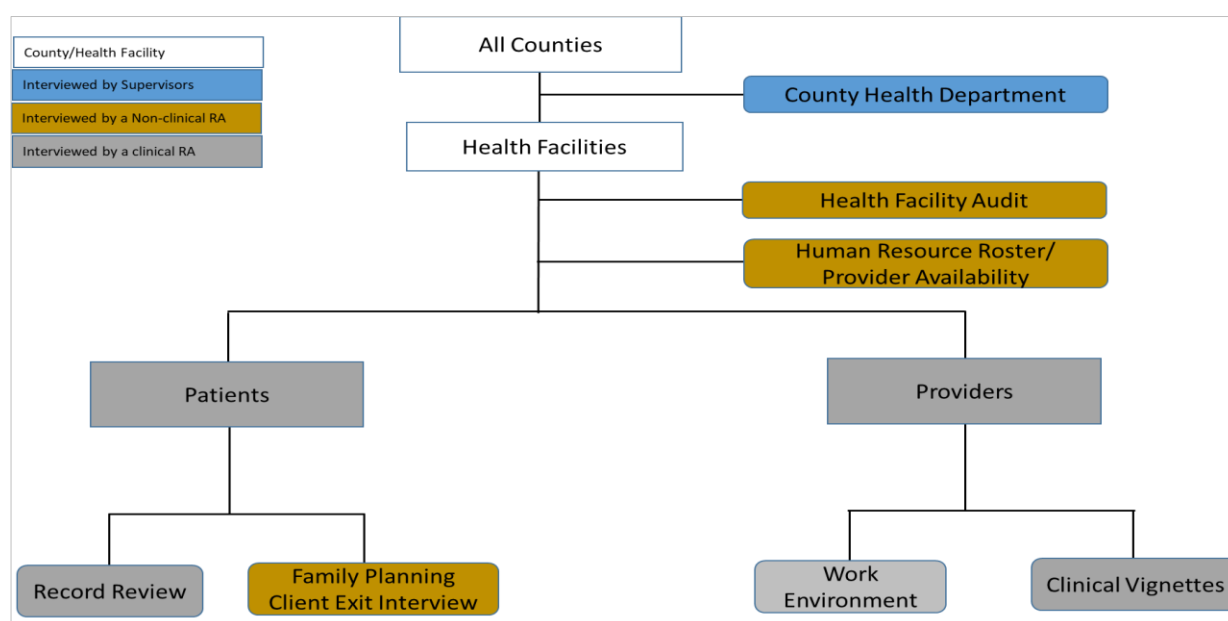
Table 5 : List of Pretest Health Facilities - Machakos County (n = 28)

Level 2	Level 3	Level 4
1. Jamia Medical Clinic 2. Katani Dispensary 3. Kitanga Dispensary 4. Masingu Dispensary 5. Machakos children hospital 6. Kitunduni Dispensary 7. Mlolongo Wellness Centre 8. Mua Hills Dispensary 9. Muthanga Dispensary 10. Reigns community hospital 11. Secret heart dispensary 12. Timiza Medical Centre	13. Kyeleni Health Centre 14. Kyumbi Health Centre 15. Makadara Health Care 16. Mavoko SNP Health Centre 17. Mitamboni Health Centre 18. St Assisi Sisters of Mary Immaculate Nursing Home 19. Thinu Health Centres 20. Ubuntu Hospital	21. Bahati Hospital (Joska) 22. Bishop Kioko Catholic Hospital 23. Katani Hospital 24. Plaza Specialist Hospital Machakos 25. Mlolongo Health Centre 26. RFH Healthcare - Syokimau 27. Ultra Kathiani Hospital Machakos 28. Kathiani Hospital

2.6 Data collection

Data collection occurred from February 27th to March 24th, 2024, over a period of 35 days. The data was gathered electronically using Android tablets with CSPro software and stored centrally on a server managed by KNBS. After research assistants collected the data, it was synchronized with the county supervisor, who reviewed it before uploading it to the central server. The central office received the data, monitored its quality, and provided technical support to all field teams. Figure 2 displays a flowchart diagram of the tools and the points of administration

Figure 2: Flow-chart of the survey tools points of administration



2.7 Data Management

The final collected data was downloaded and saved in multiple formats, including MS Excel and Stata, and shared with the relevant data teams for further cleaning and analysis. Several data cleaning and processing workshops were held with participants from the Ministry of Health, partners, and consultants. These workshops aimed to produce final datasets for analysis and discuss data weighting for the analysis. The data cleaning process included checking for duplicates, identifying missing data, detecting outliers, and ensuring consistency across various data collection modules. Any data quality issues were resolved by contacting the field supervisor for clarification, reviewing contextual reports, and reaching out to health facility management for verification, such as confirming the number of listed equipment when necessary.

2.8 Mechanisms for data quality assurance

Before the main data collection, a pre-test was conducted to ensure the reliability and validity of the survey instruments and procedures. This process allowed the survey team to identify and address potential issues with the survey design and tools, such as unclear questions or problems with skip logic. The feedback from the pre-test led to refinements in the survey tools,



reducing the risk of errors and improving the overall quality of the data collected during the main survey.

To minimize errors during data collection, all research assistants received thorough training on the tools, techniques for data collection and ethical considerations. A digital data entry platform (CSPPro) was used to facilitate real-time data entry, reducing transcription errors and allowing for immediate validation. Features such as skip logic, range checks, and mandatory fields ensured accurate and complete data. Regular backups on secure platforms were also implemented to protect against data loss. Field monitoring was conducted to ensure adherence to protocols and provide real-time feedback to data collectors.

During the data collection phase, interviews with clinical personnel were conducted using a structured questionnaire. The data collected was merged across modules to identify duplicates, missing sections, and incomplete information from the visited facilities. Progress reports were generated and shared with national-level supervisors and the core team. Online tools allowed supervisors to monitor and track data completeness for their respective counties in near real-time.

Each week, the national team conducted a data validation visit to one of the facilities to review and discuss discrepancies with the research assistants. If major discrepancies were found between supervisors and research assistants, the latter were required to revisit the facility to recollect and resubmit the data.

Facility replacements were made when necessary, due to reasons like closed or misclassified facilities, or multiple visits without a complete response. Replacement limits were set for different facility levels, and each replacement was assigned a unique code, which was sent to the county supervisor to unlock the new facility in the sample.

2.9 Data analysis and Report writing

Data was weighted during analysis to account for differentials caused by oversampling and/or under sampling and thus to represent the actual distribution of facilities in the country and their levels. Since facilities were not sampled with equal probability across type, ownership, and counties, sampling weights were required to provide levels 5 to 2 actual estimates. Due to the applied sampling strategy, all level 4 and 5 public facilities were included. Level 3 and 2 health facilities were sampled and hence were assigned the weight of 1. The remaining facilities were assigned a weight equal to the inverse of the probability of being sampled using the health facility roster as the basis for the calculation.

Data analysis was guided by the Service Availability and Readiness Assessment (SARA) indicators developed by WHO² and the WHO Harmonized Health Facility Assessment core indicator document³. Data analysis for this survey was approached through the following steps:

- Analysis based on existing SARA indicators
- Analysis of work environment indicators
- Analysis of quality-of-care indicators
- Analysis of human resources indicators
- Further analysis of linkages and correlations between services to inform the health sector review

All indicators were generated using Stata software (version 17). Tables were generated using a combination of the SARA-type chartbook (Excel) and Stata. Maps were generated using QGIS (version 3.36.2). All analyses were disaggregated by county, facility type, ownership, and location. Data validation workshops were held to get input from relevant stakeholders from the Ministry of Health departments and county governments.

2.10 Response rate

The QoC HFA 2024 was a census for all public Level 4 and 5 hospitals, port health facilities, and sampled level 3 and 2 health facilities across all the 47 counties in Kenya.

Out of the targeted 3,605 facilities, audits were successfully conducted in 3,530 facilities reflecting a 97.9% response rate, 806(22.4%) facilities completed the client exit interviews, HR roster included data from 3,529 (97.9%) facilities, the work environment interviews were successfully conducted in 3,378 (93.7%) facilities, clinical vignettes were completed in 3,328 (92.3%) and provider availability was assessed in 3,412 (94.6%) facilities. Table 6 provides information on the targeted and the actual number of facilities included in the sample by county.

Table 6: Target and number of facilities assessed (unweighted)

County	Targeted	Assessed facilities				
		Facility Audit	FP	HR Roster	Work Environment / Clinical Vignettes	Provider Availability
Baringo	82	81	11	81	80	79
Bomet	72	71	28	71	71	69
Bungoma	80	75	18	75	73	73
Busia	68	67	16	67	67	65
Elgeyo Marakwet	63	61	20	60	58	56
Embu	74	73	13	73	71	72
Garissa	71	68	8	65	61	63

² [https://www.who.int/data/data-collection-tools/service-availability-and-readiness-assessment-\(sara\)](https://www.who.int/data/data-collection-tools/service-availability-and-readiness-assessment-(sara))

³ [https://www.who.int/publications/i/item/harmonized-health-facility-assessment-\(hhfa\)](https://www.who.int/publications/i/item/harmonized-health-facility-assessment-(hhfa))

County	Targeted	Assessed facilities				
		Facility Audit	FP	HR Roster	Work Environment / Clinical Vignettes	Provider Availability
Homa Bay	85	85	20	85	83	80
Isiolo	42	41	6	41	41	41
Kajiado	87	85	16	85	84	85
Kakamega	87	87	40	87	81	85
Kericho	77	75	24	75	53	74
Kiambu	99	99	28	99	98	96
Kilifi	89	88	13	89	87	89
Kirinyaga	75	75	7	75	74	75
Kisii	82	82	19	82	80	81
Kisumu	90	89	24	90	84	88
Kitui	88	88	18	88	86	80
Kwale	81	80	20	80	77	76
Laikipia	74	70	16	70	67	66
Lamu	40	39	6	39	39	38
Machakos	90	87	21	87	85	83
Makueni	83	82	44	82	78	81
Mandera	72	71	5	72	66	72
Marsabit	62	52	1	55	49	47
Meru	92	92	16	92	91	81
Migori	84	84	10	84	84	82
Mombasa	87	82	22	81	79	82
Muranga	86	81	18	81	80	81
Nairobi	107	104	24	104	101	100
Nakuru	97	97	47	97	95	96
Nandi	77	77	21	77	74	77
Narok	74	72	8	71	69	62
Nyamira	75	75	16	75	73	75
Nyandarua	73	70	24	70	70	66
Nyeri	88	88	18	88	84	85
Samburu	61	60	6	60	56	60
Siaya	79	78	17	79	75	78
Taita/ Taveta	58	57	17	58	57	52
Tana River	52	44	3	44	42	32
Tharaka Nithi	72	72	13	72	70	71
Trans Nzoia	70	69	19	69	65	69
Turkana	78	78	8	77	60	76
Uasin Gishu	82	79	25	79	76	79

County	Targeted	Assessed facilities				
		Facility Audit	FP	HR Roster	Work Environment / Clinical Vignettes	Provider Availability
Vihiga	70	69	8	68	66	65
Wajir	66	66	5	65	54	65
West Pokot	65	65	19	65	64	64
Total	3605	3530	806	3529	3378	3412

Overall, there are 13,361 facilities as shown in table 7 below. By location, the majority are in rural areas (7,343), with a slightly smaller but still substantial number in urban areas (6,018). When categorized by facility type, most are Level 2 facilities (9,811), followed by Level 3 facilities (2,548), with fewer higher-level facilities: 965 at Level 4 and only 37 at Level 5, highlighting the limited availability of advanced referral hospitals. In terms of managing authority, public facilities (6,010) make up nearly half of the total, while the private sector (5,376) also accounts for a significant proportion. Faith-based organizations (FBOs, 1,568) and NGOs (407) contribute smaller shares but remain important players in service delivery, particularly in underserved areas.

Table 7: Total number of facilities assessed by category

Category	Number of facilities (weighted)
All	13361
By location	
Rural	7343
Urban	6018
By type	
Level 2	9811
Level 3	2548
Level 4	965
Level 5	37
By managing authority	
FBO	1568
NGO	407
Private	5376
Public	6010

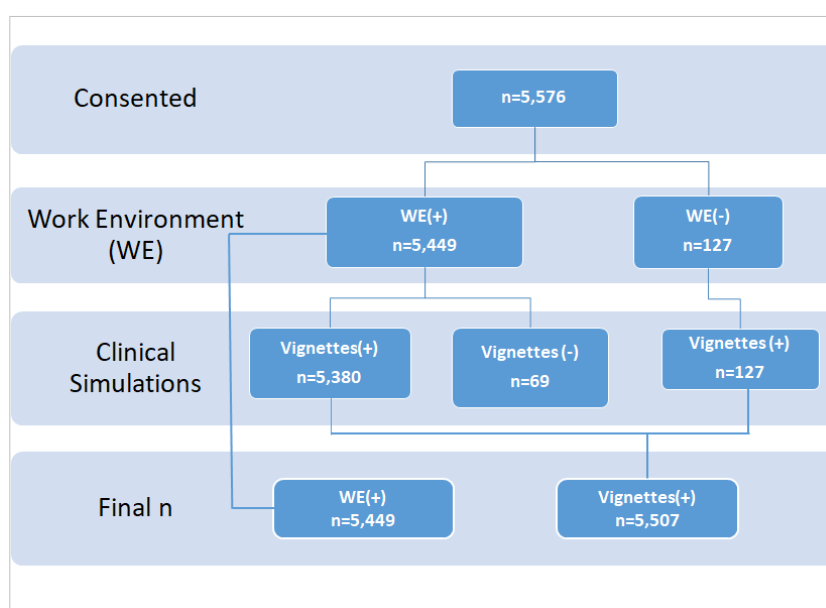
Table 8 provides a summary of the targeted facilities, number of facilities successfully involved in the survey, the weighted and unweighted number of providers or clients. The weighted data had a total of 13,361 facilities, 120,547 HR roster entries, 34,531 work environment, 34,712 for clinical vignettes and 99,773 for provider availability based on the respective unweighted data.

Table 8: Summary of the target, unweighted and weighted number of participants in the sample

		Number included in the sample					
	Targeted	Facility Audit	Client Exit (Interviews)	HR Roster	Work Environment (interviews)	Clinical Vignettes	Provider Availability
Facilities	3,605	3,530	806	3,529	3,378	3,328	3,412
Unweighted	3,605	3,530	1,600	60,933	5,449	5,507	19,054
Weighted		13,361		120,547	34,531	34,712	99,773

The unweighted number of health workers included in the survey for the work environment and clinical vignettes is illustrated in Figure 3. A total of 5,576 health workers gave their consent to participate in the survey, with 5,449 eligible for the work environment interviews, while 127 were excluded. For the clinical vignettes, 5,380 consenting participants were selected for the interviews, including the 127 excluded from the work environment interview. As a result, 5,507 healthcare workers were included in the clinical case simulations interviews.

Figure 3: Steps for selecting HCW included in the work environment and clinical simulation interviews



2.11 Study Limitations

In this enhanced Quality of Care assessment, significant efforts were made to minimize systematic errors in the design, data collection, and analysis phases. However, certain inherent constraints and limitations could not be eliminated.

A random sample of 3,530 health facilities was selected from the Kenya Health Master Facility List (KHMFL). Since sampling probabilities varied by facility type, ownership, and county, sampling weights were applied to produce both national and county-level estimates. During the analysis, facilities were categorized based on their capacity to provide specialized services as defined in the Kenya Essential Package for Health. Using the KHMFL as the sampling frame presented additional challenges. At the outset, the list required substantial cleaning to ensure



accuracy. During the study, some facilities had to be replaced due to closures, misclassifications, or non-responses.

In exceptional cases: e.g. due to insecurity, or distant areas, the electronic tool was adjusted to allow administration of the provider availability tool on the same day. This may affect the results obtained for the facilities that had provider availability carried out on the same day. A total of 5,576 healthcare workers consented to participate in the work environment and or clinical simulations. However, on the application of the inclusion criteria, some were excluded from either of the two groups, for instance, a few nurses were captured in level 4 or level 5 facilities but were later excluded from the clinical vignettes analysis.

A random sample of 3,530 health facilities was selected from the Kenya Health Master Facility List (KHMFL), with sampling probabilities varying based on facility type, ownership, and county. Sampling weights were applied to generate both national and county-level estimates. Facilities were categorized according to their ability to provide specialized services, as outlined in the Kenya Essential Package for Health. However, using the KHMFL as the sampling frame posed challenges due to inconsistencies in assigned level versus scope of services requiring substantial cleaning to ensure accuracy. During the study, some facilities had to be replaced due to closures, misclassifications, or non-responses.

In exceptional cases, such as insecurity or remote areas, the electronic tool was adjusted to allow the provider availability tool to be administered on the same day. This adjustment may have impacted the results for facilities where provider availability was assessed on the same day.

Currently, Kenya has six level 6 hospitals that play a vital role in the healthcare system by providing advanced medical care, serving as training centers for healthcare professionals, and contributing to medical research and policy development. These hospitals, along with facilities offering only specialized services, were excluded from the sample. While this exclusion may have introduced some bias, the impact is minimal as the survey adequately represents the other levels of care.

The analysis in this survey report is primarily descriptive, which is useful for summarizing data and identifying key trends and patterns. However, a limitation of this approach is that it does not allow for the exploration of relationships or causal links between variables. As a result, this method may restrict the ability to identify potential drivers or predictors of the observed trends. Being the second health facility assessment, the broad scope required several adjustments in design and implementation. The numerous variables across the modules added complexity to data aggregation and analysis. Nevertheless, comprehensive training and supervision of research assistants were carried out to ensure data quality. Despite the significant costs associated with the scale of the assessment, the insights gained are invaluable for guiding long-term policymaking.

Chart interpretation

1. General Charts.

In this QOC report, the general charts have been used to show the findings that are applicable to all facilities.

A general chart has 3 main parts.

- The part marked **1** sets the frame for the chart and shows the proportion of facilities that should be included as well as the denominator. In the example below 46% of the 12,113 eligible facilities offer cancer services. This forms the denominator the rest of the chart (5,577)
- The part marked **2** – This shows the percentage availability of each tracer service, based on the denominator set in **1** eg. Of the 5,577 facilities offering cancer services, 93% offer cervical cancer services.
- The part marked **3** summarizes the findings in this area using two parameters: the facilities with all services, and the average availability of all the tracer services in that area.

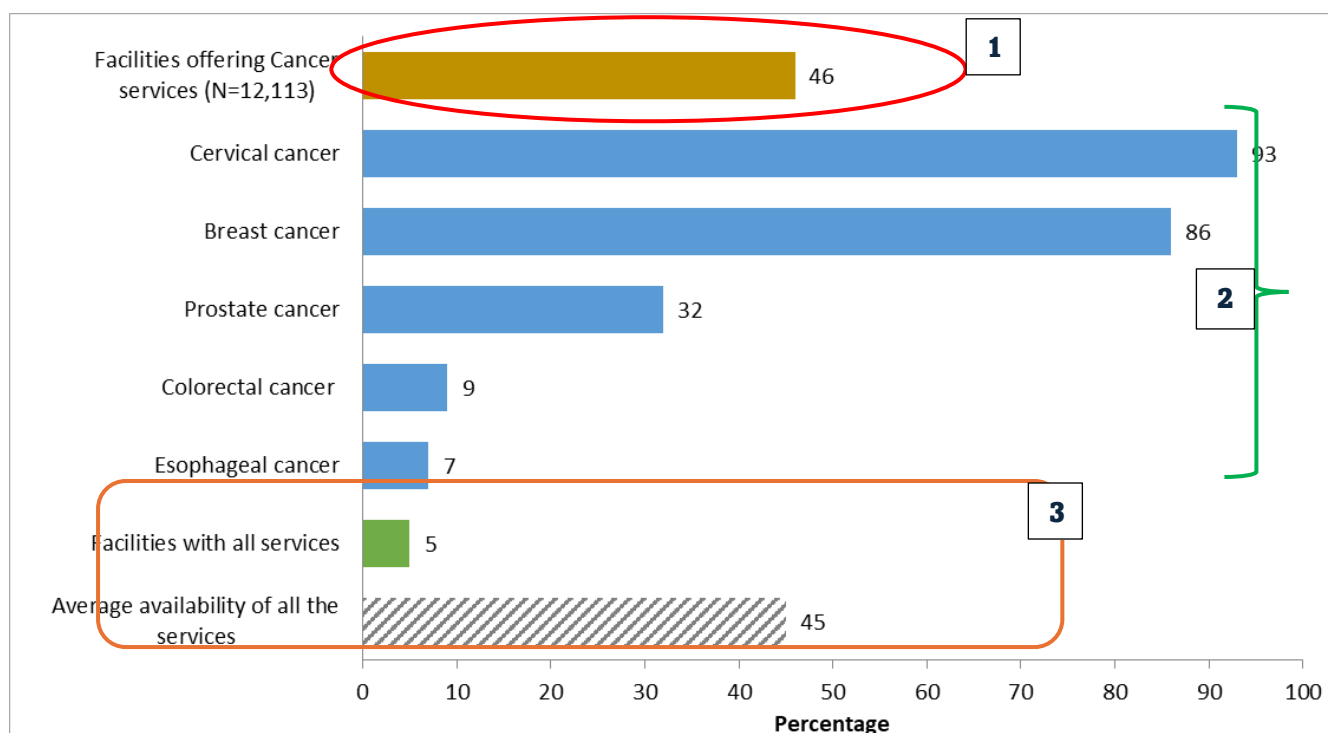


Figure XX: Percent of health facilities that have select tracer cancer services (N=5,577)

2. Charts Reflecting KEPH level.

Given that healthcare delivery in Kenya is organized by KEPH level, there are packages of services that are expected to be delivered at particular levels and not others. This is especially

so for services such as inpatient, delivery particularly CEmONC, caesarian section, major surgical services, laboratory, pharmacy etc.

The color coding of charts by KEPH level is as below.

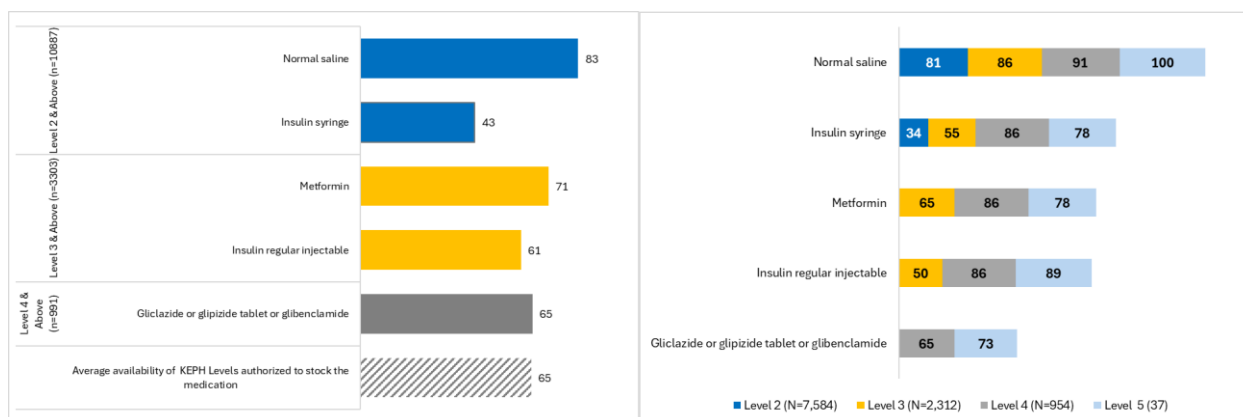
KEPH Level Color Coding

Description of the charts color scheme

- 1  The dark blue shade in the chart means that the drug/ medicine is available in **ALL** KEPH Levels
- 2  The orange shade in the chart means that the drug/ medicine is **ONLY** available from Level 3 and above
- 3  The grey shade in the chart means that the drug/ medicine is **ONLY** available from Level 4 and above
- 4  The light blue shade in the chart means that the drug/ medicine is **ONLY** available from Level 5 and above

This key forms the guide to interpreting the charts such as the ones below.

- The chart on the right shows availability at the levels where the tracer service/ item is **expected** to be. Eg. It was expected that Insulin syringes would be available at level 2 and above thus the blue color code. They were available at 43% of facilities KEPH level 2 and above.
- The chart on the left shows the overall availability/readiness disaggregated by KEPH level eg. Insulin syringes were available at 34% of level 2, 55% of level 3, 86% of level 4 and 78% of level 5 facilities.



FINDINGS

COUNTY HEALTH MANAGEMENT

The County health departments are established within the devolution framework provided for by the 2010 Constitution, Health Act (2017) and the County Government Act of 2012. The Departments are mandated to oversee and coordinate delivery of health services in each respective county. The departments are headed by the County Executive Committee Members for Health while the County Directors of Health serve as the technical advisors on all matters of health in the 47 counties.

To improve health outcomes, county health departments are required to establish various management committees to oversee and coordinate the implementation of health activities. Among these, the Infection Prevention and Control (IPC) Committee—together with an IPC focal person—plays a critical role in guiding efforts to prevent and control infections, as well as in addressing antimicrobial resistance (AMR).

The National Action Plan for the Prevention and Containment of Antimicrobial Resistance (2023–2027) outlines governance and coordination structures for tackling AMR through a One Health approach. In line with this, the plan recommends the establishment of County Antimicrobial Inter-Agency Committees to oversee, coordinate, and drive all AMR-related activities within each county.

Other areas where committees coordinate at county level include; Budget allocations for health products and technologies, quality improvement activities, maintenance of equipment and monitoring and evaluation activities; data quality audits; ring fencing of facility improvement funds; and establishment of primary care networks (PCNs).

The Quality of Care survey evaluated different aspects of health systems at both the county and health facility levels, focusing on the management and coordination involved in providing quality health services across all counties.

The tool was administered to the county directors of health or in their absence, the most knowledgeable member of the county health management teams in all forty-seven counties.

Table 9: County & Health Facility Level Assessment Areas

County Assessment	Health Facility Level Assessment
1. Governance and Management	
Organograms approved by the county public service boards	- Health Management Team - Facility Management Team/ Board
2. Systems to support staff	

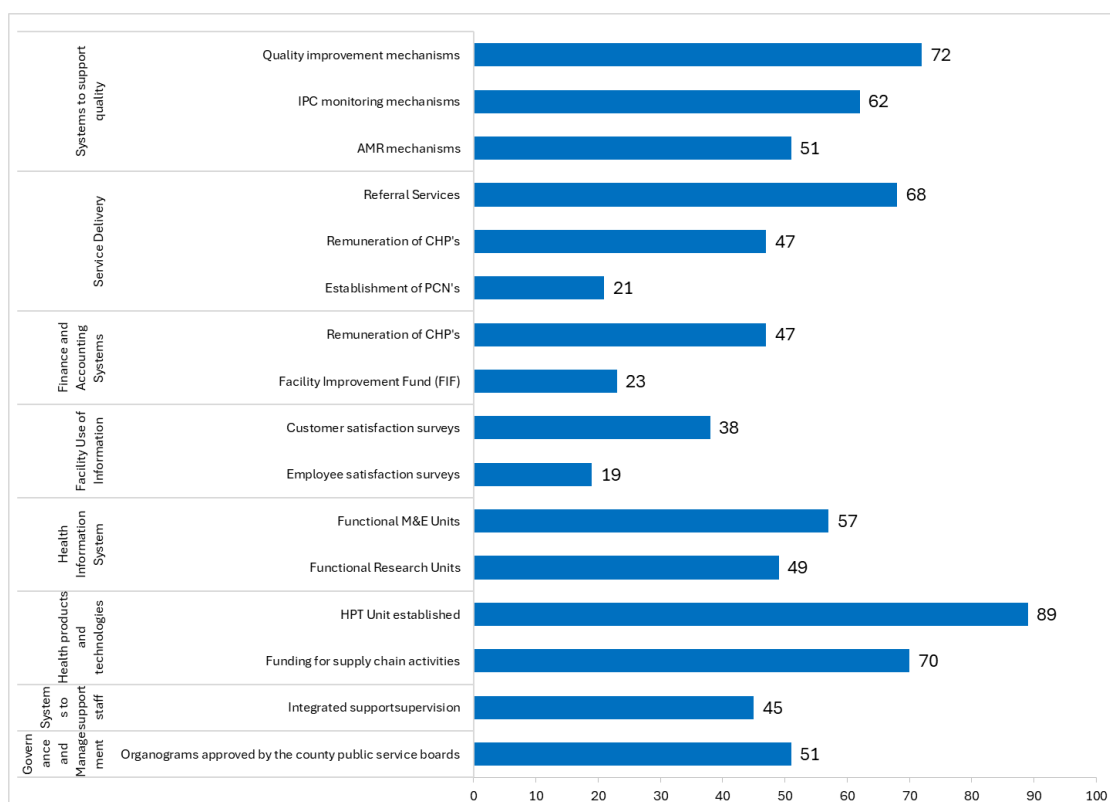
County Assessment	Health Facility Level Assessment
Supportive supervision	- Staff appraisal system - External Supportive supervision - Continuous Medical Education (CME) /Professional Development for medical staff
3. Health Products and Technologies	
- HPT unit established - Funding for supply chain activities	Refer to the Pharmacy section of this report.
4. Health Information Systems	
Monitoring and Evaluation - Functional M&E Units - AWP - APR - Functional Research Units	APR
5. Facility Use of Information	
- Employee satisfaction surveys - Customer satisfaction surveys	- Employee satisfaction surveys - Customer satisfaction surveys
6. Finance and Accounting systems	
Finance systems - Facility Improvement Fund (FIF) - Remuneration of Community Health Promoters (CHP's)	Budget Allocation - AWP - Autonomy to spend funds - Facility revenue streams - Budget 2023/2024 - Funding of budget
7. Service Delivery	
- Establishment of PCN's - Remuneration of CHP's - Referral services	Refer to Specific service section of this report.
8. Systems to support quality	
- Quality Improvement mechanisms - IPC monitoring mechanisms - AMR mechanisms	Refer to facility quality of care report section of this report
Maintenance of Infrastructure, Equipment	
Not assessed	

Key findings

- Health Product and Technologies (HPTU) structures were the most common in county health departments; 89% of departments had HPTU's established while 70% had funding for supply chain activities.

- County health departments also had various service delivery tracers in place;
 - referral services were implemented by 68%,
 - 47% were remunerating CHP's and
 - only 21% were linked to PCN's.
- The least implemented practice by county health departments was employee satisfaction surveys at 19%.

Figure 4: Percentage of counties with management structures and processes.



Governance and Management

Organograms approved by the county public service boards

The County Governments Act of 2012 outlines the functions and powers of county governments, including the establishment and management of public offices. The County Public Service Board is responsible for establishing and abolishing public offices, making appointments, and ensuring that the county's organizational structure is efficient and effective.

County health departments should have their organograms approved by public service boards to ensure that the organizational structure is aligned with the county's overall governance framework and adheres to the standards set by the public service boards. The approval process helps maintain consistency, accountability, and transparency in the management of public health services. Having an approved organogram also facilitates better coordination and communication within the health department, ensuring that roles and responsibilities are clearly defined and understood by all staff members.

According to the results from this assessment, about half (51%) of counties had documentary evidence to show that their health departments had an organogram approved by the county public service boards. On the other hand, nearly one third of the counties (32%) did not have an organogram approved by the County Public Service Board.

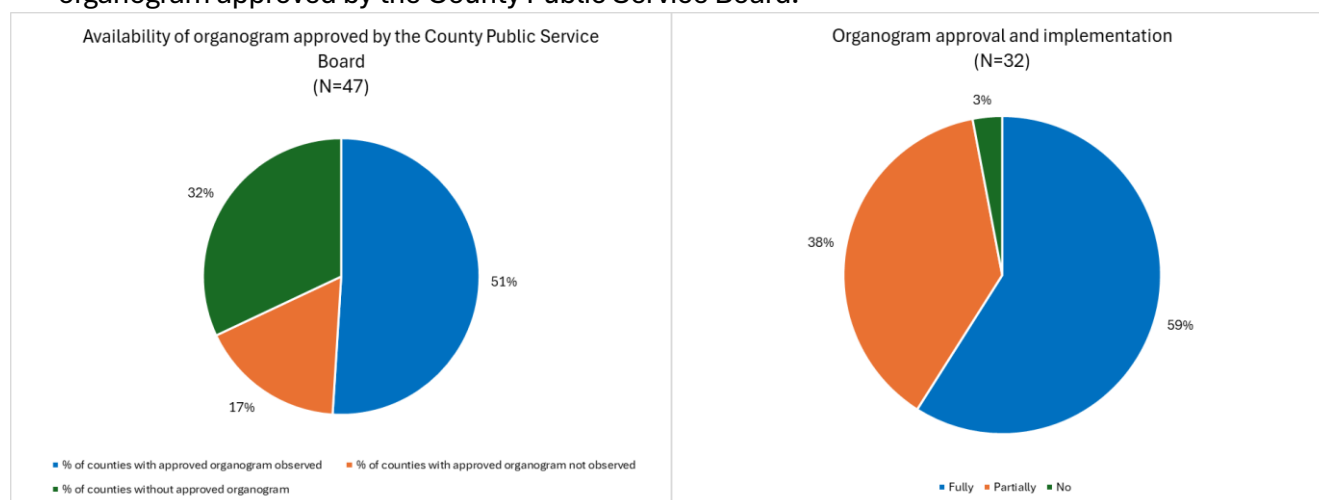


Figure 5: Availability of organogram and approval(left) and implementation as approved(right)

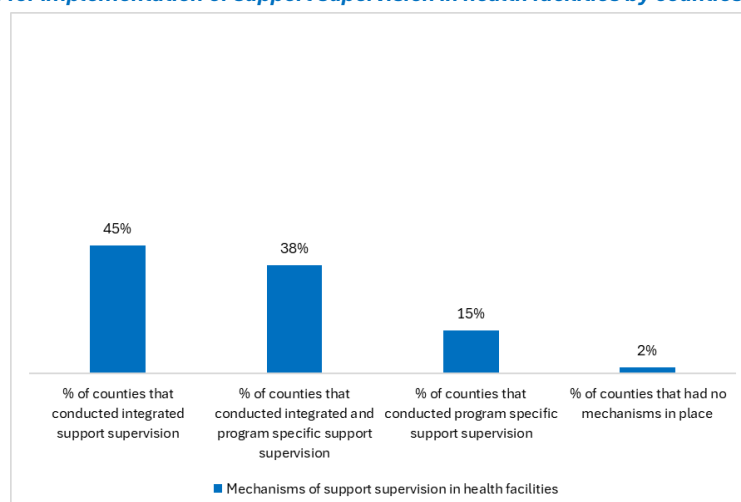
Among the counties that confirmed the existence of organograms (n=32), only 59% were fully implementing them as approved by the county public service boards, while 3% were not implementing the organograms at all, as illustrated above

Systems to support staff

Mechanisms for County Supportive Supervision to Health Facilities.

Effective support supervision mechanisms are vital for maintaining high standards in health facilities. The 2024 QOC assessed various approaches counties use to provide supportive supervision. 45% of counties conducted integrated support supervision, while 38% employed both integrated and program-specific support supervision. Additionally, 15% of counties focused solely on program-specific support supervision. Notably, 2% of counties had no mechanisms in place as shown in Figure 6.

Figure 6: Mechanisms for implementation of support supervision in health facilities by counties

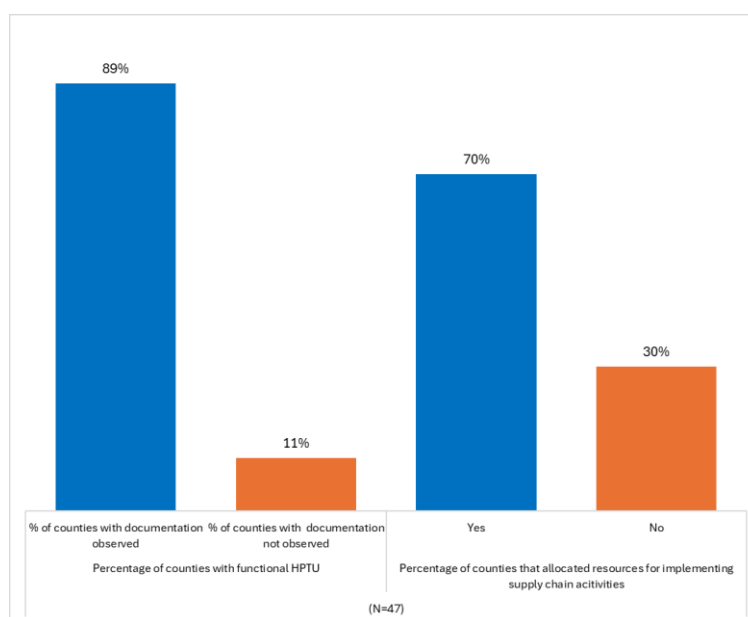


Health Products and Technologies Units (HPTU) and Supply Chain

All the counties had functional Health Products and Technologies Units (HPTU) established as per the HPTU guidelines with 89% having the relevant documentation observed.

Among the counties that had functional Health Products and Technologies Units (HPTU), seventy percent (70%) had allocated resources for implementing supply chain activities (besides procurement of Health products and technologies).

Figure 7 : Counties with functional HPTU and counties that allocate resources for supply chain activities.



Health Information Systems

Monitoring and Evaluation, Planning and Research Mechanisms

The establishment of Monitoring and Evaluation (M&E) units in counties is guided by the Guidelines for the Institutionalization of Monitoring and Evaluation (M&E) in the Health Sector, which emphasize the importance of a robust M&E system to ensure systematic planning, tracking, and evidence-based decision-making in the health sector.

Fifty-seven percent (57%) of the counties provided documentary evidence of having functional M&E units established as per the M&E institutionalization guidelines. However, while 11% of the counties reported having functional M&E Units, they did not have any documentary evidence for the same. Notably, one third of the counties (32%) did not have functional M&E units as per the M&E institutionalization guidelines.

While almost all the counties (94%) had approved Annual Work Plans (AWP) for the FY 2023/2024, 9% of all the counties did not have documentary evidence of the AWP.

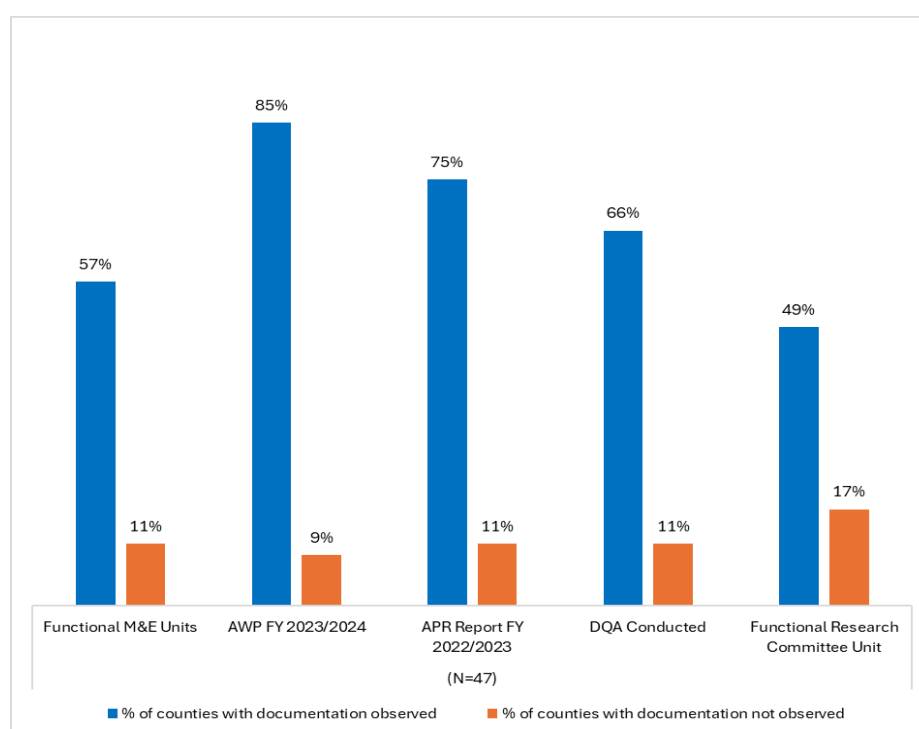
Three quarters of the counties (75%) had documentary evidence confirming that their health departments had developed Annual Performance Review (APR) reports for the FY 2022/2023.

However, while 11% of the counties reported having developed the Annual Performance Review Reports, they did not have any documentary evidence. Notably, 14% of the counties had not developed Annual Performance Review Reports for the FY 2022/2023.

In two thirds (66%) of the counties, the Data Quality Report was observed as documentary evidence of health departments conducting integrated data quality audits (DQA) in the last 12 months. However, while 11% of the counties reported undertaking integrated data quality audits in the last 12 months, there was no documentary evidence to verify this. Notably, 23% of the counties reported not undertaking integrated data quality audits in the last 12 months.

Nearly half of the counties (49%) reported with documentary evidence that their health departments had functional research committees. However, while 17% of the counties reported having functional research committees, they did not have any documentary evidence to confirm. Notably, slightly more than one third of the counties (34%) reported that their health departments did not have functional research committees.

Figure 8: Percentage of counties that had M&E, Planning and Research mechanisms and documentation

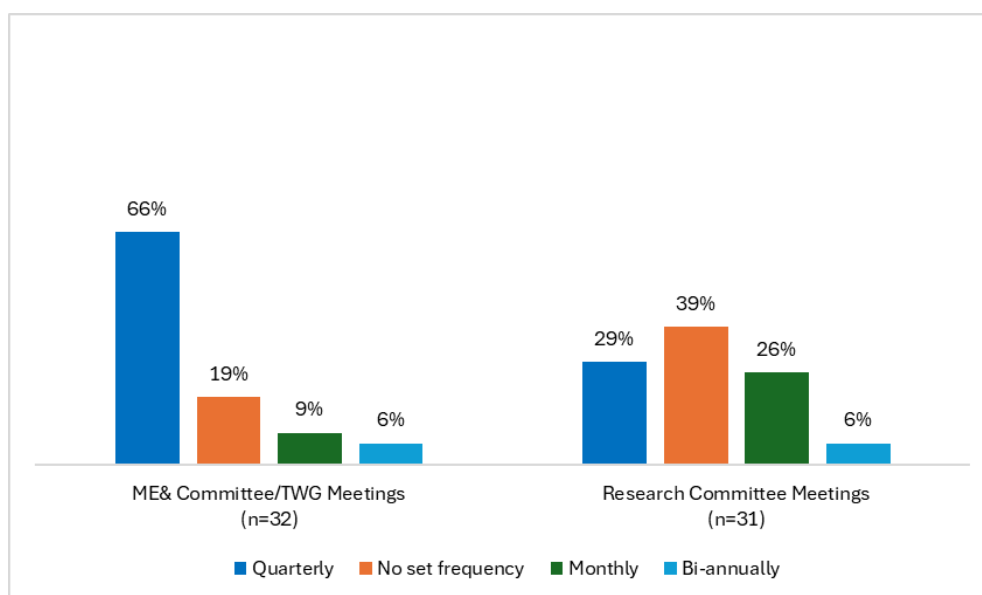


The guidelines for the institutionalization of Monitoring and Evaluation (M&E) in the health sector recommend that M&E units hold regular meetings to ensure effective coordination and oversight. Specifically, the guidelines suggest that M&E units should meet at least quarterly to review progress, discuss challenges, and plan for upcoming activities. These meetings are crucial for maintaining a systematic approach to monitoring and evaluation, ensuring that all stakeholders are aligned, and addressing any issues that may arise in a timely manner.

Among the counties that reported having functional M&E units (n=32), two thirds (66%) reported that their M&E committee/Technical Working Group were meeting on a quarterly basis as provided for in the guideline while 19% had no set frequency for the meetings suggesting some flexibility or as-needed basis. Conversely, 9% reported that the committees meet on a monthly basis and 6% reported meeting bi-annually.

Among the counties with functional research committees or units (n=31), 39% reported no set meeting frequency, 29% held quarterly meetings, and 26% convened monthly.

Figure 9 : Frequency of M&E Committee/TWG and Research committee meetings in Counties

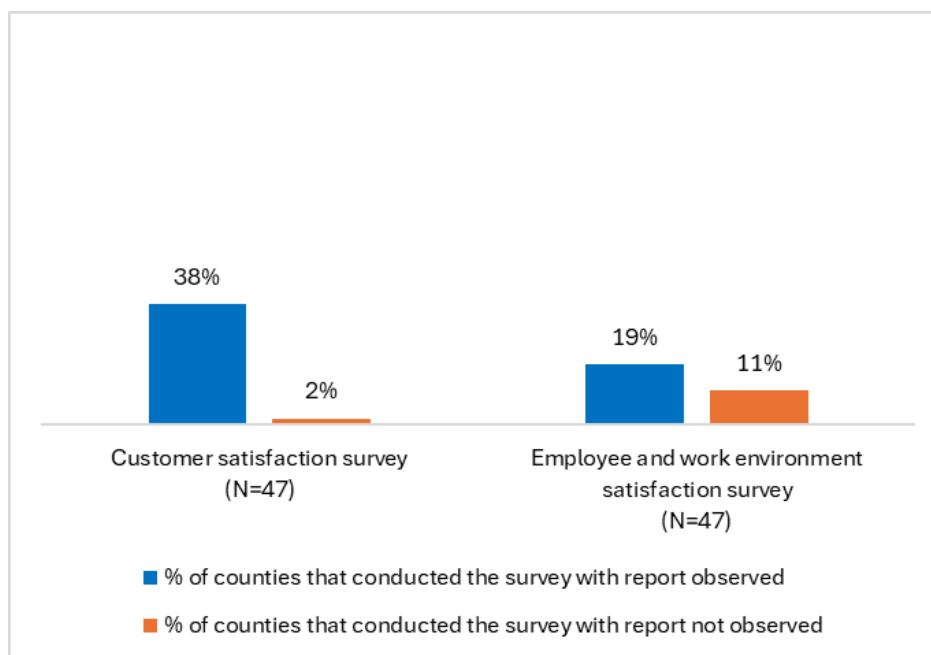


Facility Use of Information

Customer and employee satisfaction surveys

Customer and employee satisfaction surveys are essential tools for assessing the quality of services and identifying areas for improvement, as they provide valuable insights into the experiences and perceptions of both clients and staff. Less than half of the counties (38%) conducted customer satisfaction surveys, while a very low number (19%) performed employee and work environment satisfaction surveys in the 12 months leading up to the assessment (January - December 2023). Among those counties that conducted customer satisfaction surveys (n=19), only a mere 2% provided documented reports for customer satisfaction, and only 11% provided reports for employee and work environment satisfaction, as illustrated in Figure 10 below.

Figure 10 : Percentage of counties that had conducted satisfaction surveys in the last 12 months



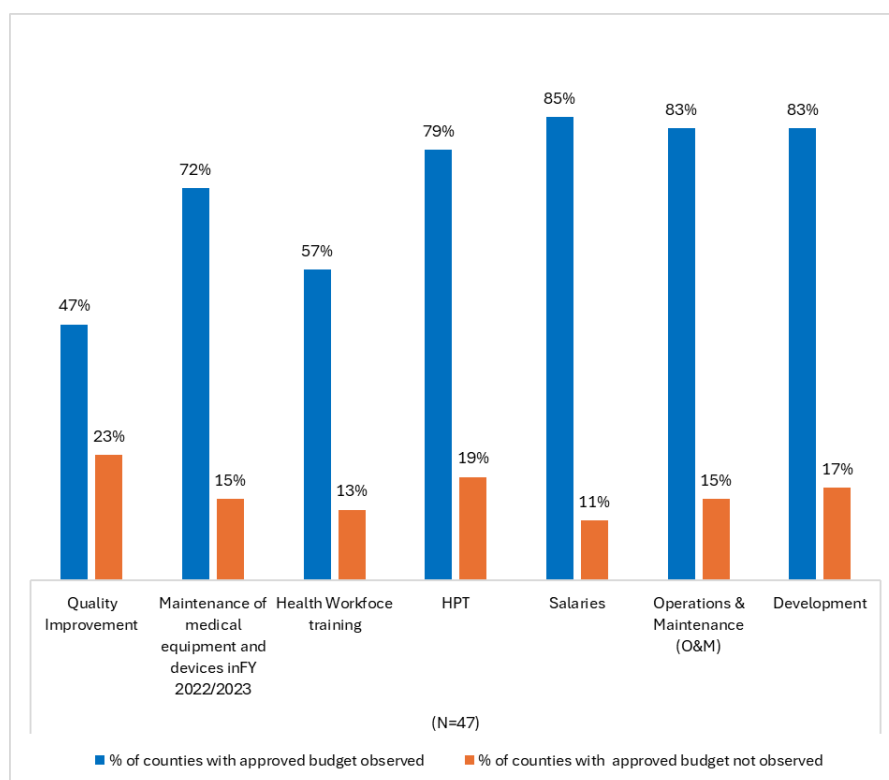
Finance and Accounting Systems

Budgetary Allocation

This survey assessed county budgetary allocations to various activity areas in the current financial year 2023/2024.

The allocation of budgetary resources is essential for ensuring that health systems can effectively operate and improve their services. Percentage of counties with approved budgetary allocations and corresponding documentation for the fiscal year 2022/2023 across several key categories was assessed. In terms of quality improvement, (47%) of counties had an approved budget, while (23%) did not. For the maintenance of medical equipment and devices, a significant (72%) had an approved budget, with (15%) not observed. Regarding health workforce training, 57% had budget approval, and (13%) were not documented. Health program training (HPT) showed a strong (79%) approval rate, while (19%) lacked documentation. Salaries were well-supported, with 85% of counties having an approved budget, and (11%) not observed. Operations & maintenance (O&M) and development both had an (83%) approval rate, with (15%) and (17%) lacking documentation, respectively as shown in Figure 11 below.

Figure 11 : Percentage of counties that had budgetary allocation and documentation

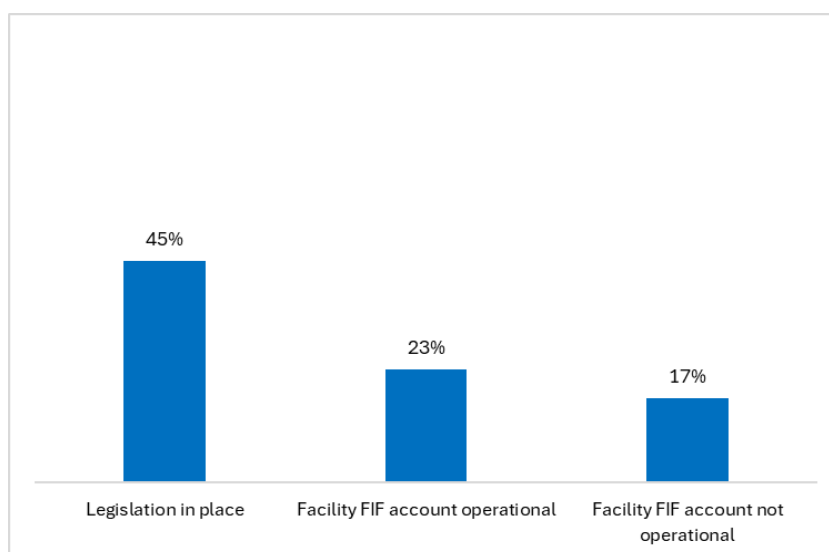


Facility Improvement Financing (FIF)

Ring-fencing facility improvement funds is essential for counties as it ensures financial autonomy and predictability for health facilities, enhancing service delivery and operational efficiency. Dedicated funds enable facilities to manage costs, procure necessary supplies, and maintain high standards of service, promoting sustainability and long-term improvements. By securing these funds, counties can improve healthcare quality, transparency, and accountability, ultimately benefiting the overall health and well-being of their residents.

The chart in Figure 10 illustrates the various mechanisms counties have implemented to ring-fence Facility Improvement Financing (FIF). Of the forty-seven counties, 45% had enacted legislation, 23% had operational FIF accounts, and 17% had implemented some mechanisms, although their FIF accounts are not operational. Notably, 15% of the counties had not implemented any mechanisms to ring-fence Facility Improvement Funds.

Figure 12 : Percentage of counties implementing Facility Improvement Funds ringfencing mechanisms

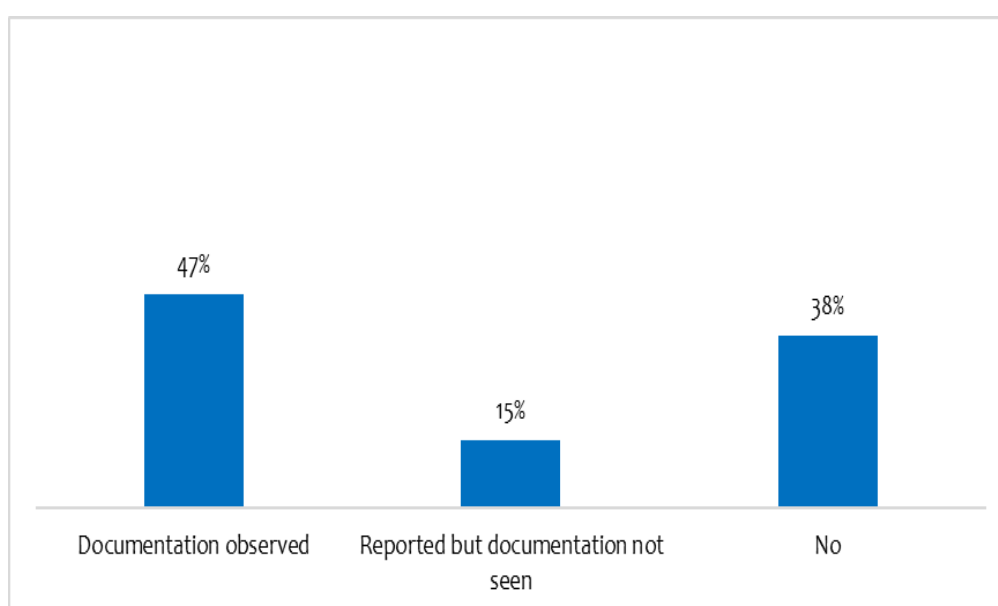


Service Delivery Systems

Primary Healthcare Networks

The Ministry of Health has mandated the establishment of Primary Health Care Networks (PCNs) across all counties. This initiative is part of the Kenya Primary Health Care Strategic Framework 2019-2024, which aims to enhance healthcare accessibility and delivery throughout the country. The results of this assessment shows that 47% of the counties provided documentary evidence of establishing and gazetting Primary Care Networks. However, despite that 15% of counties reported establishing and gazetting these networks but they lacked documentary evidence. Notably, 38% reported not having established and gazetted Primary Care Networks as shown in Figure 13.

Figure 13 : Percentage of counties Remunerating CHPs as per the intergovernmental agreement

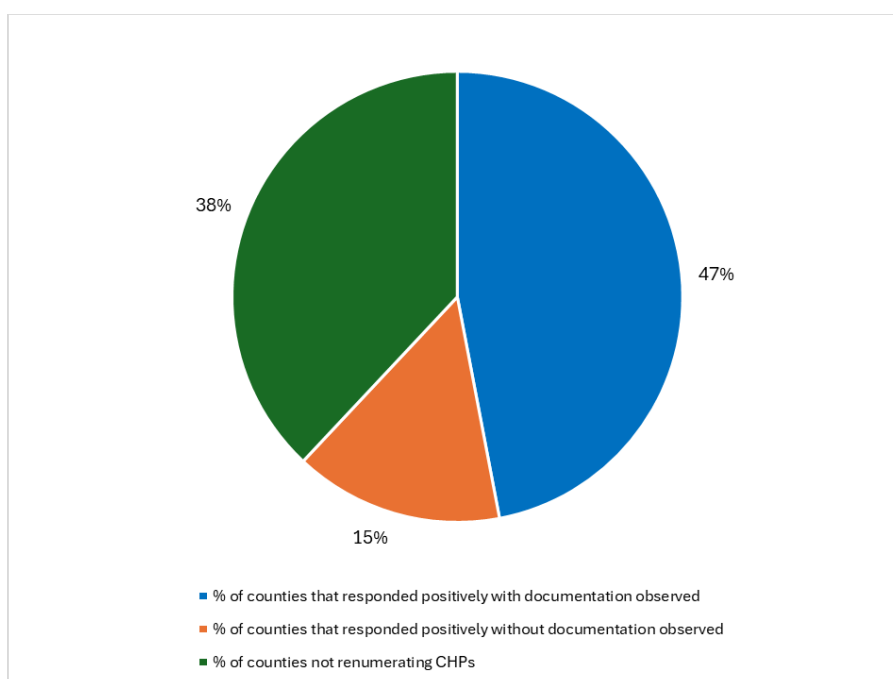


Remuneration of Community Health Promoters (CHPs)

The remuneration and support for CHPs are part of the government's commitment to achieving Universal Health Coverage (UHC) and empowering communities. The national government and county governments have agreed to jointly support CHPs by providing them with a monthly stipend. Each CHP is supposed to receive a monthly salary of Ksh.5,000. This initiative aims to motivate CHPs and provide them with the necessary resources, including smartphones and special kits equipped with an electronic community health information system (eCHIS) for efficient data collection.

Overall, 47% of the counties had documentary evidence to confirm that they were remunerating Community Health Promoters (CHPs) as per the intergovernmental agreement. However, 38% of the counties reported that they are not remunerating their CHPs.

Figure 14 : Percentage of counties remunerating CHPs as per the intergovernmental agreement (N=47)

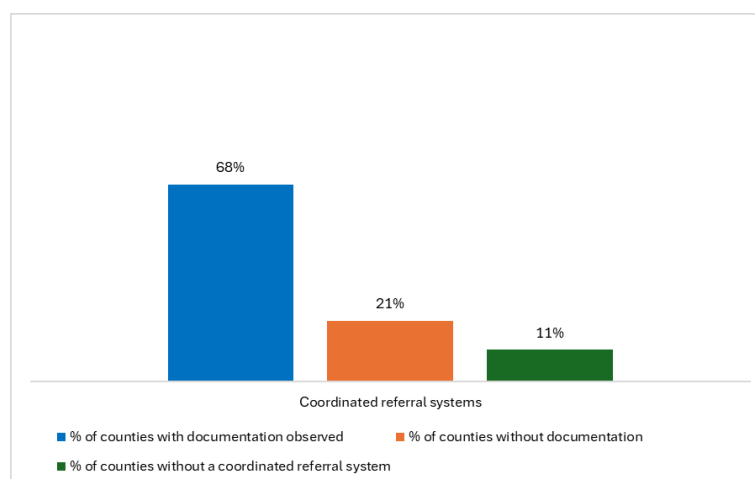


Referral services

Coordinated referral systems are essential for ensuring that patients receive timely and appropriate care across different levels of the healthcare system.

According to Figure 15 below, 68% of the counties provided documentary evidence of having a coordinated referral system. However, 21% of the counties reported to have such a system but could not furnish the necessary proof. Notably, 11 counties lacked a coordinated referral system altogether.

Figure 15: Referral Systems in counties

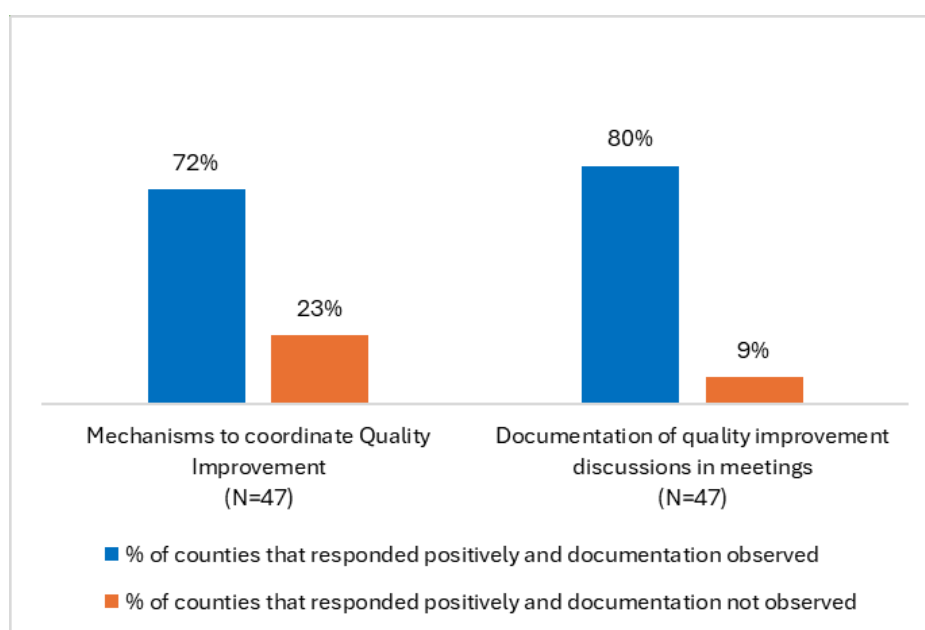


Systems to Support Quality

Mechanism for coordination of Quality Improvement

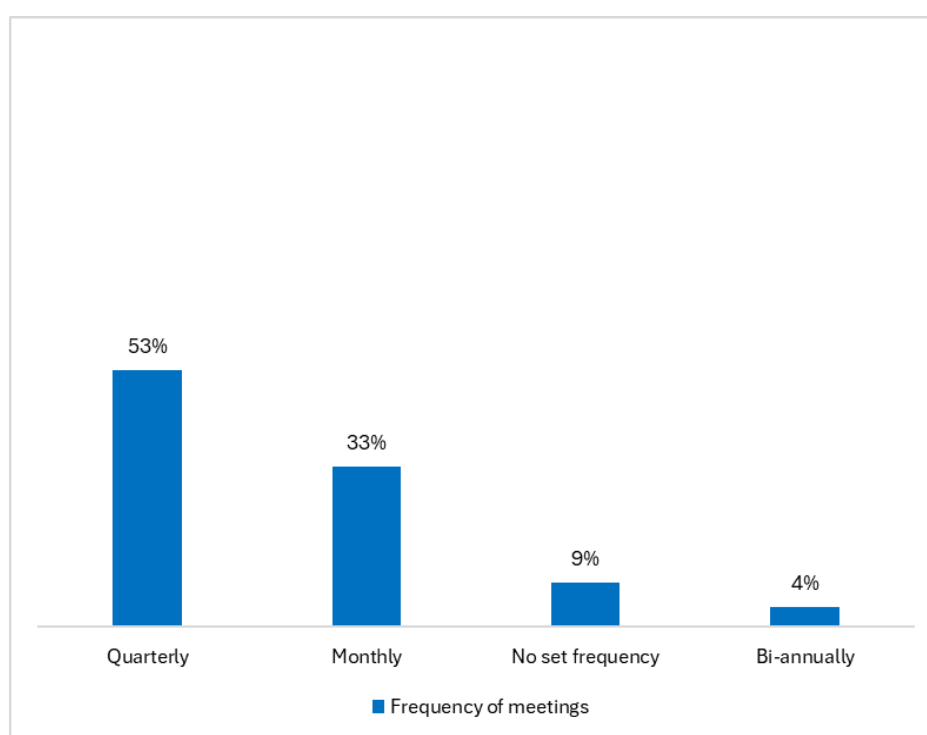
Effective coordination of quality improvement initiatives is crucial for enhancing health service delivery. Although 72% of the counties reported having an established mechanism for coordinating quality improvement, such as a committee, unit team, or designated focal person, only 23% (n=34) had appropriate documentation available for review. Among the counties that reported having quality improvement mechanisms (n=45), (89%) indicated that they had documentation (minutes or reports) as evidence of meetings where quality improvement was discussed within the last 12 months. However, despite (2%) of the counties responding positively, documentation was not observed.

Figure 16: Percentage of counties that had Quality Improvement mechanisms and documentation



The frequency of meetings dedicated to discussing the quality of health services is a critical indicator of a county's commitment to continuous improvement and effective management. Among the counties with quality improvement mechanisms, approximately half 53% of the meetings are held quarterly, while 33% take place monthly. Additionally, 9% of the counties do not have a set frequency for these meetings, and 4% hold them bi-annually.

Figure 17: Frequency of meetings to discuss Quality of health services in Counties

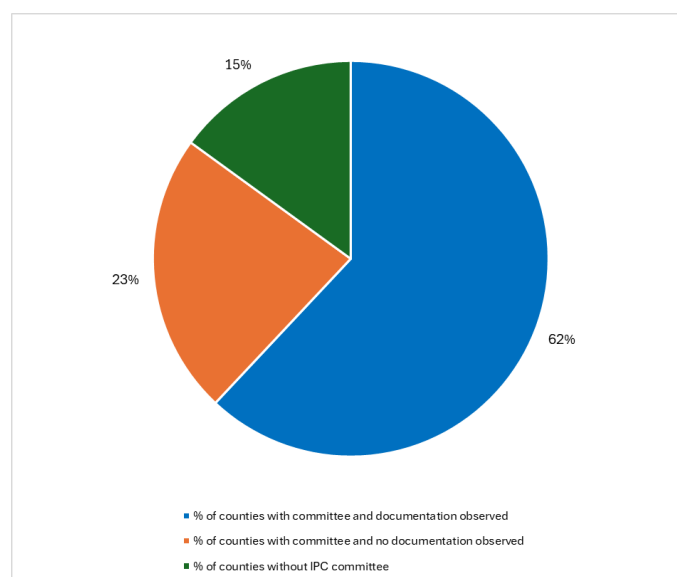


Coordination of Infection and prevention Control (IPC)

The County Infection Prevention Committees (CIPCs), as outlined in Kenya's National Infection Prevention and Control Strategic Plan 2021-2025, are tasked with implementing national IPC policies and coordinating activities across healthcare facilities within their counties. Therefore, all counties' health departments are expected to have functional County Infection and Prevention Committees.

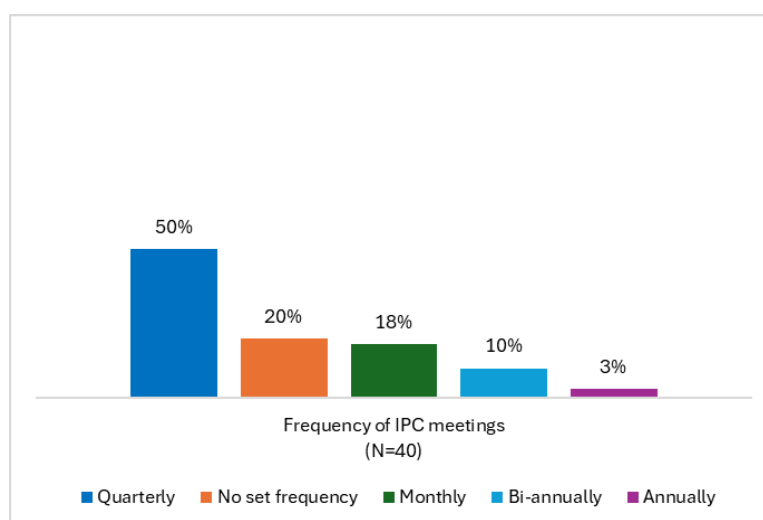
Sixty-two percent (62%) of the counties provided documentary evidence that their health departments had Infection Prevention Control (IPC) committees while 23% did not avail any relevant documentation as evidence despite indicating that their counties had IPC committees. Notably, 15% of the county departments of health reported that they did not have IPC committees.

Figure 18: Percentage of counties with IPC committees(N=47)



Among the counties that reported having IPC committees (n=40), half (50%) indicated that the committees meet quarterly while 20% had no set frequency for the meetings. Only 3% of the counties had the IPC committees meeting on an annual basis.

Figure 19: Frequency of IPC committee meetings in Counties

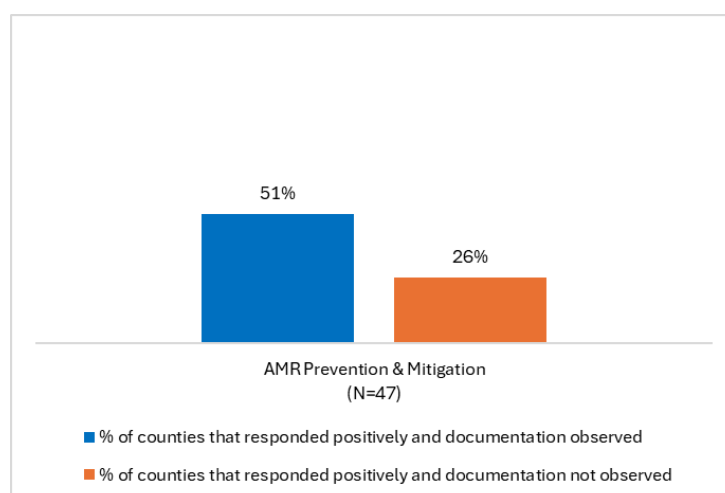


Coordination of prevention and containment of antimicrobial resistance (AMR)

The National Action Plan for Prevention and Containment of Antimicrobial Resistance (2023-2027) provide for governance and coordination structures for tackling AMR in a one health approach. The action plan recommends establishment of County Antimicrobial Inter-Agency Committees to oversee and coordinate all activities aimed at prevention and combating AMR in each county.

According to the results of this assessment, only 51% of the counties' health departments had documentary evidence to show that they had mechanisms to coordinate Antimicrobial Resistance (AMR) prevention and mitigation. While 26% of the counties reported having the same mechanism, there was no documentary evidence. Notably, more than a quarter of the county's health departments (23%) did not have any mechanisms to coordinate AMR prevention and mitigation.

Figure 20: Coordination of prevention and containment of AMR



Discussion

The County health departments are established within the devolution framework provided for by the 2010 Constitution, Health Act (2017) and the County Government Act of 2012. The Departments are mandated to oversee and coordinate delivery of health services in each respective county. The Quality-of-Care survey assessed various aspects of management and coordination on delivery of quality health services.

Overall, county health departments demonstrated commendable performance across various assessed areas including budgetary allocations to various activity areas such as salaries, development, operations and maintenance. Additionally, the allocation of resources in their approved budgets for the fiscal year 2023/24 indicates a proactive approach to health service delivery. However, notable gaps were identified in customer and employee satisfaction surveys, as well as in the establishment and gazettement of primary healthcare networks. Specifically, while more than three quarters of counties reviewed their performance for the 2022/23 fiscal year, alarmingly 10 counties failed to provide documentary evidence to support their claims, highlighting a need for improved transparency and accountability.

The presence of quality improvement mechanisms in nearly all county health departments is encouraging, with quality improvement committees or focal persons facilitating coordinated efforts in this area. Evidence of discussions around quality improvement in more than three



quarters of the departments underscores a commitment to enhancing service delivery. Nonetheless, the fact that less than half of the counties were able to provide documentary evidence of budgetary allocations for quality improvement activities suggests a potential disconnect between policy intentions and actual resource allocation.

The coordination of Infection Prevention and Control (IPC) and Antimicrobial Resistance (AMR) efforts across counties appears to be sub-optimal. While a majority reported having mechanisms for IPC and AMR activities, the actual establishment of committees was significantly lower, with only about half of the counties demonstrating evidence of such structures. This disparity indicates a need for further strengthening of IPC and AMR initiatives to align with national health objectives.

The commitment of the government to achieve universal health coverage through a shift from curative to primary healthcare services is commendable. However, the establishment and gazettement of primary care networks remain a challenge, with less than half of counties achieving this milestone. This gap emphasizes the importance of focused strategies and support to ensure that all counties can effectively establish and operationalize primary healthcare networks.

The establishment of functional M&E units is critical for effective monitoring and evaluation. The fact that 32% of counties lack functional M&E units as per guidelines indicates significant gaps in M&E capacity. This could hinder the ability to track and improve healthcare outcomes. Additionally, the lack of documentary evidence for various M&E activities (such as approved Annual Work Plans and Annual Performance Review Reports) in some counties suggests weak documentation practices. This may lead to challenges in accountability, transparency, and evidence-based decision-making.

The varied frequencies of M&E committee and research committee meetings suggest differences in the prioritization and execution of M&E and research activities. Regular meetings are important for ensuring continuous monitoring, evaluation, and research activities.

The results noted varying levels of adherence to conducting integrated data quality audits (DQAs) which reflect inconsistencies in data quality assurance practices across counties. This inconsistency can affect the reliability of health data, which is crucial for planning and policy formulation.

The presence of functional research committees in only 49% of counties highlights the need for stronger research governance. This is essential for fostering evidence-based healthcare practices and addressing emerging health challenges.



The gap in the implementation of the approved organogram in 41% suggests potential inefficiencies or bottlenecks in translating policy into practice, which could impact the overall functionality of health departments.

With only 23% of counties having operational Facility Improvement Funds (FIF) accounts, there's a clear need to improve the mechanisms for managing and ring-fencing these funds. The absence of such mechanisms in 15% of the counties indicates a lack of financial safeguarding, which could hinder healthcare infrastructure development.

According to the results, 47% of counties provided documentary evidence of CHP remuneration which is a positive step toward incentivizing and retaining CHPs. However, this implies that more than half of the counties might not be fully compliant, potentially affecting the motivation and performance of CHPs.

While 68% of the counties had documented referral systems, the lack of evidence in 21% and the absence of systems in 11 counties highlight significant gaps in ensuring seamless patient referrals, which is crucial for effective healthcare delivery.

Conclusion

County health departments have shown strong performance in budget allocations and quality improvement, despite some lacking evidence of allocated budgets. There are ongoing challenges in establishing primary care networks and effectively coordinating IPC and AMR efforts. Performance reviews for some counties revealed gaps in evidence and transparency. A notable portion lacks functional M&E units, affecting monitoring and healthcare outcomes. Data reliability issues persist due to inconsistent M&E activities and audits. Research committee functionality and policy implementation also face challenges. Financial safeguarding is weak in some counties, and CHP remuneration compliance is inconsistent, affecting motivation. Additionally, documentation gaps in referral systems need addressing to improve healthcare delivery.

Recommendations

Based on the mandate of the County health departments, it is imperative to enhance transparency and accountability. This can be achieved through robust documentation requirements for performance reviews and budgetary allocations, along with establishing independent audit mechanisms to ensure counties provide documentary evidence for their fiscal and operational activities.

The County health departments can drive the attainment of Universal Health Coverage by strengthening primary healthcare networks through providing targeted support and resources to counties that face challenges in establishing and gazettement these networks is crucial.



Developing a standardized framework for primary healthcare network implementation and monitoring will ensure consistent and effective healthcare service delivery.

To improve quality improvement mechanisms, all counties should allocate specific budgets for quality improvement activities and document these allocations meticulously. Regularly reviewing and updating quality improvement plans and activities to align with national health standards will further enhance service delivery. In terms of Infection Prevention and Control (IPC) and Antimicrobial Resistance (AMR) efforts, it is essential to standardize the establishment of IPC and AMR committees across all counties. Increasing training and resources for IPC and AMR activities will ensure consistent implementation and monitoring, thereby aligning with national health objectives.

The establishment of functional Monitoring and Evaluation (M&E) units is critical for effective healthcare management. Mandating the creation of such units in all counties, with clear guidelines and performance indicators, will enhance monitoring and evaluation capacity. Improving documentation practices for M&E activities, including the approval of Annual Work Plans and Annual Performance Review Reports, is necessary for accountability and evidence-based decision-making. Strengthening research governance by establishing functional research committees in all counties will also foster evidence-based healthcare practices and address emerging health challenges. Standardizing the frequency and process of conducting integrated Data Quality Audits (DQAs) will ensure consistent data quality assurance, which is crucial for planning and policy formulation.

Financial management of Facility Improvement Funds (FIF) requires urgent attention. Implementing guidelines for managing and ring-fencing these funds will safeguard healthcare infrastructure development. Regular audits and reporting on the utilization of FIF accounts will ensure financial transparency and accountability. Incentivizing and supporting Community Health Personnel (CHPs) through the development and implementation of a standardized remuneration and incentive framework across all counties will help maintain their motivation and performance. Monitoring and ensuring compliance with CHP remuneration policies are essential for sustainable healthcare delivery.

Finally, streamlining referral systems by standardizing and documenting these systems across all counties will ensure seamless patient referrals, which is critical for effective healthcare delivery. Providing training and resources to healthcare personnel to manage and utilize referral systems effectively will further enhance the overall healthcare service delivery.



FACILITY MANAGEMENT AND FINANCE.

Effective management in healthcare delivery is crucial for providing quality, patient-centered care while ensuring financial stability and adaptability in a constantly evolving healthcare environment. Management encompasses strategic planning and decision-making, setting both long-term and short-term objectives, and effectively allocating resources such as finances, personnel, and technology. Operational management entails overseeing the daily activities of health facilities, ensuring smooth operations and adherence to healthcare regulations and standards. Quality assurance measures are implemented to maintain and enhance the quality of care, while financial management focuses on keeping the organization financially sound through budgeting, cost control, and effective revenue cycle management. Human resource management plays a vital role in recruiting, training, and retaining qualified healthcare professionals.

This section assessed the processes essential for ensuring effective management and financing practices in health facilities. It included an assessment of the availability of services related to routine and preventive maintenance, governance and management, external supervision, health financing and accounting, accountability systems, and quality assurance and improvement.

Management and finance practices

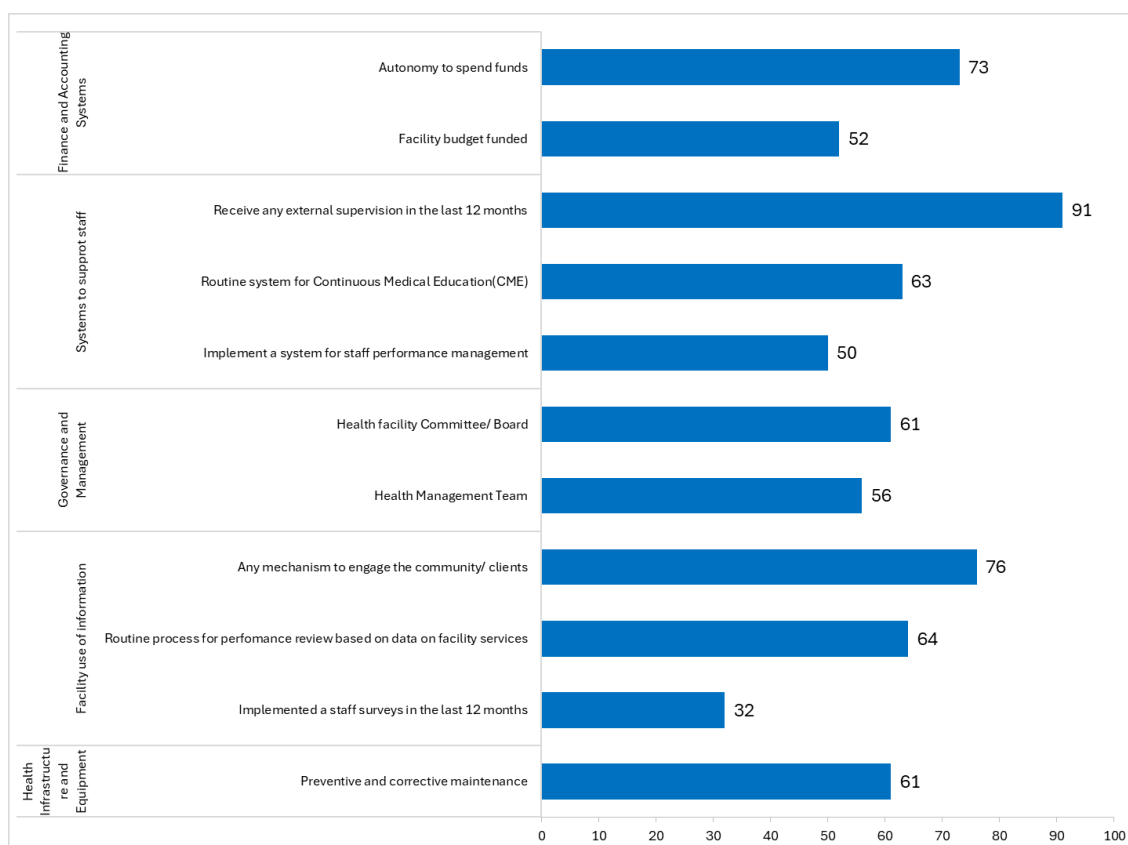
The management and finance practices assessed included the following; systems for staff performance management; Continuous Medical Education (CMEs); availability of Health Management Teams (HMTs) and Facility Management Committees/Boards; maintenance of equipment; availability of Annual Work Plans (AWPs); routine performance reviews; community engagement and implementation of staff satisfaction surveys.

Refer table 9 which has the county assessment details and the facility management details

Key findings-

- Half of the health facilities (50%) implemented systems for performance management while the proportion of health facilities with Health Management Teams and Health facility Committee/Board stood at 56% and 61% respectively.
- Most of the health facilities (91%) had received external supportive supervision in the 12 months preceding the survey.
- About three quarters (76%) of the facilities had mechanisms to engage the community/clients while the proportion of facilities that had implemented staff surveys in the 12 months preceding the survey was quite low at 32%.
- More than half of the health facilities (58%) had an Annual Work Plan for the FY 2022/23 while about one in every ten facilities (64%) conducted routine performance reviews. A summary of these findings is shown in the figure below.

Figure 21: Percent of facilities that have the following management and finance practices (N=13,361)



Annex Table 1 shows disaggregation by location, KEPH level, ownership and by county.

Management and finance practices by facility location

- Overall, more facilities in the urban areas (56%) implemented systems for performance management compared to health facilities in rural areas (46%).
- Almost all health facilities in the rural areas (92%) received external supervision in the 12 months preceding the survey while 89% of the health facilities in the urban areas received external supervision in the same period.
- In the urban areas, the percent of health facilities with a Health Management Team and Health facility Committee/Board stood at 60% and 49% respectively while in the rural areas the percent of health facilities with a Health Management Team and Health facility Committee/Board stood at 53% and 70% respectively.
- The percent of health facilities that had implemented staff surveys in the 12 months preceding the survey in both rural and urban areas was very low at 27% and 39% respectively.

Management and finance practices by level of care

- Most level 5 facilities had systems for management and finance ranging from 70% to 100% for the various indicators on management and finance.
- Only a small percent of level 2 and 3 health facilities implemented staff surveys at 29% and 36% respectively.

Discussion:

All health facilities, both public and private, in each county are mandated to utilize facility information and data to make informed decisions. There has been a notable improvement in the availability of routine processes for performance reviews, rising from 34% in the 2018 KHFA survey to 64% in 2024.

Preventive maintenance is essential for ensuring that all equipment in facilities operates optimally, thereby minimizing service disruptions caused by breakdowns and extending the lifespan of the equipment. The availability of preventive and corrective maintenance has increased from 43% in 2018 to 61% in 2024 across all facilities, attributed to enhanced investments in the health sector by both National and County governments.

Staff surveys play a crucial role in identifying issues within the work environment and developing strategies to address them, ultimately enhancing staff motivation. The implementation of staff surveys has significantly improved, increasing from 11% in 2018 to 32% in 2024. High staff motivation is a key factor in delivering quality healthcare services.

Conclusions

There was evidence of management practices starting from the management systems that were in place in a majority of the facilities. However, there is a need to strengthen some areas such as staff surveys, use of routine processes for performance management in the health facilities.

Recommendations

- County Governments to allocate resources to support management functions at the facility levels.
- County Department of Health in collaboration with the Ministry of Health should provide support to facilities in planning processes/preparation of AWP
- There is a need for facilities to prioritize preventive maintenance in their policies and budgetary and human resource allocation to ensure health facilities deliver a full service unimpeded by non-functioning health care technology. There is a need to build the capacity of human resources to perform preventive maintenance of medical equipment.

Table 10: Management and Finance recommendations

Area	Key finding	Conclusion	Recommendation
Management and finance	-51% of urban and 30% of rural facilities operate without a board - 32% implementation of staff survey	-Reduced oversight authority over patient care -Lack of staff motivation tracking	-The MoH and county government to enforce establishment of Boards -Health management team to allocate resources for frequent scheduled surveys

Governance Systems

Frequency of Health Facility Management Teams (HMTs)

Health Facility Management Teams (HMTs) are essential for the effective operation and management of healthcare facilities. They are responsible for overseeing various aspects of the facility, ensuring the delivery of quality healthcare services, and promoting a safe and efficient environment for patients and staff.

Effective HMTs are critical for the success of healthcare facilities. They provide leadership, direction, and oversight, ensuring that the facility operates efficiently, delivers high-quality care, and meets the needs of the community. Strong HMTs contribute to improved patient outcomes, enhanced staff satisfaction, and the overall well-being of the community.

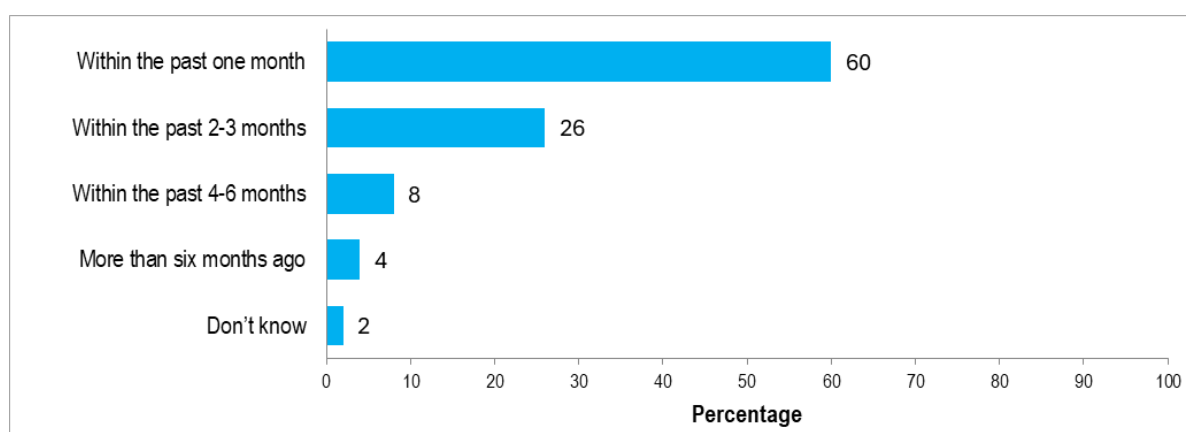
Key findings

Of 13,361 facilities nationally, 61% of health facility had committees/boards while 56% had health management teams as their leadership and governance structures.

Amongst those that had health management teams (N=7470),

- Only 60% of the facilities with HMTs held meetings within the past one month preceding the survey
- Four percent (4%) of the health facilities held their meetings more than six months preceding the survey.

Figure 23: Percent of facilities with recent HMT meeting (N=7470)



Annex Table 11 shows the disaggregation by location, KEPH level , ownership and by county

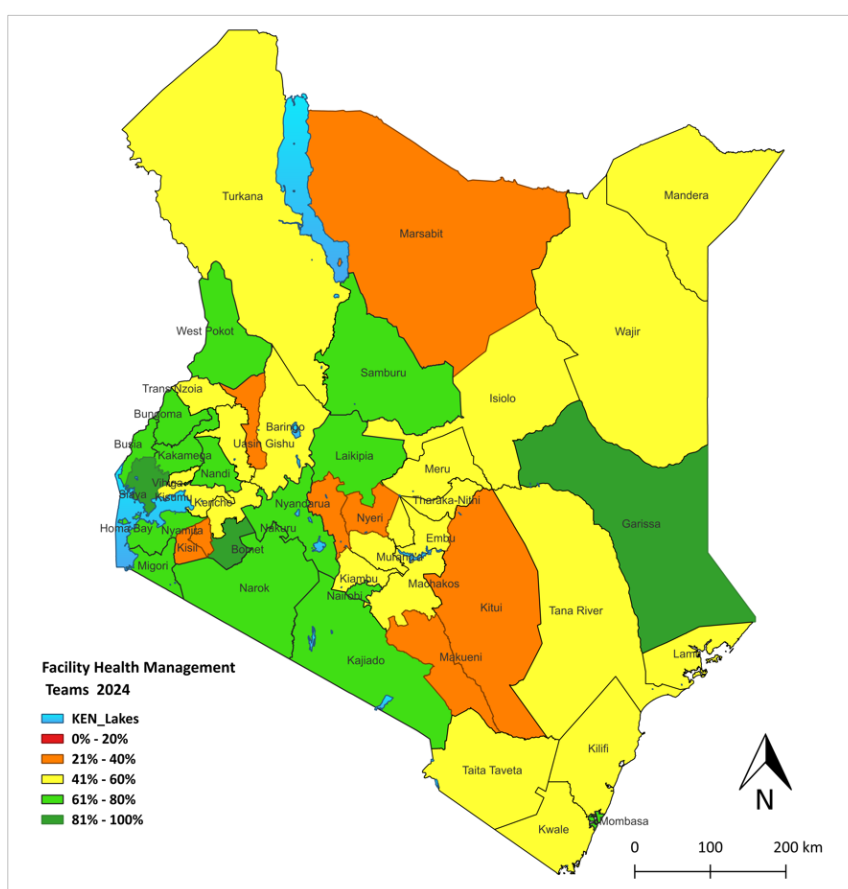
- By location, about half (53%) of the HMTs in rural facilities met in the one month preceding the survey while in urban areas the same was reported at 67%
- By KEPH level, level 2 facilities had the lowest percentage of facilities that had conducted a HMT meeting in the one month preceding the survey at 56% while level 5 had the highest at 86%.

- By ownership, public facilities had the lowest percentage of facilities that had conducted a HMT meeting in the one month preceding the survey at 52% while NGOs had the highest.

County Distribution

- County analysis shows that most facilities had a health management team, with the percentages ranging between 40% and 100% for most Counties.
- Eight (8) Counties namely Marsabit, Kitui, Makueni, Nyeri, Nyandarua, Elgeyo Marakwet, Nyamira and Kisii had a low percentage of health facilities with HMTs ranging between 20% to 40%.

Figure 24: Availability of Facility Health Management Teams by county



Discussion:

Kenya Quality Model of Health (KQMH) recommends that health facility management teams meet **monthly**. Out of the health facilities with HMTs, slightly above half of the health facilities (60%) held health management meetings in the one month preceding the survey. Failure to discuss quality and management matters regularly can impact negatively on the quality of care.

Table 11: HMT Recommendations

Section	Finding	Recommendation
HMT Meetings	Only 60% of the facilities with HMTs held meetings within the past one month preceding the survey. Four percent (4%) of the health facilities held their meetings more than six months preceding the survey..	The government to support Health facility managers in establishment and operationalization of health facility management teams in all facilities to oversee day to day operations. The HMTs should be encouraged to hold routine monthly meetings.

Systems to Support Staff

Continuous Medical Education (CME)

Continuous Medical Education (CME) is crucial in ensuring that healthcare providers remain knowledgeable about the latest advancements in medicine, including new research, technologies, and evidence-based practices. CME enhances clinical skills and competence through practical training and specialized knowledge acquisition. It promotes patient safety by keeping providers informed about safety protocols and error prevention strategies, reducing the likelihood of medical errors. Additionally, CME encourages the adoption of quality improvement initiatives, fostering a culture of continuous improvement within healthcare settings.

Findings

Of 13,361 facilities nationally, 63% had facilities had routine continuous medical education systems in place

Amongst those that had routine continuous medical education systems (N=8440),

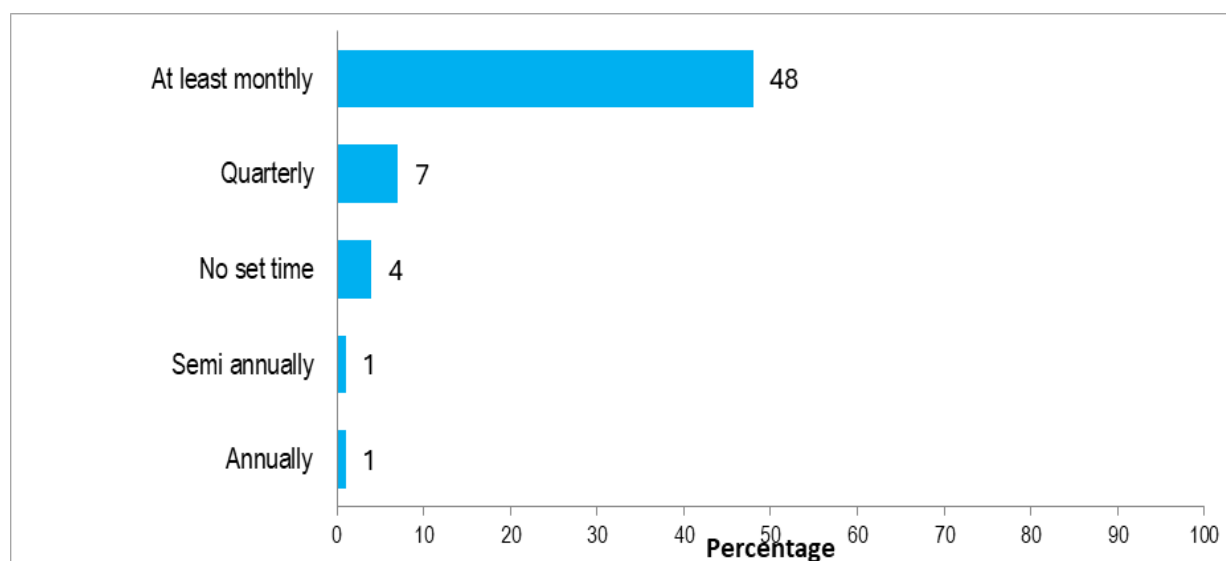
Annex Table 2 shows the disaggregation by location, KEPH level and ownership.

- CMEs were majorly done in hospitals compared to primary care facilities led by level 4 at 93%, level 5 at 92%, level 3 at 78% and level 2 at 56% correspondingly.
- The highest proportion of facilities that had mechanisms for CMEs were in NGO facilities at 89% compared to 58% of private facilities
- CMEs were carried out in over 80% of facilities in Bomet county (84%) and Siaya county (83%) and least done in health facilities within Marsabit county (31%)

Frequency of CMEs

- Nearly half of facilities having mechanisms for CMEs conducted them on a monthly basis at (48%)

Figure 25: Percent of facilities with frequency of CME meetings (N=8440)



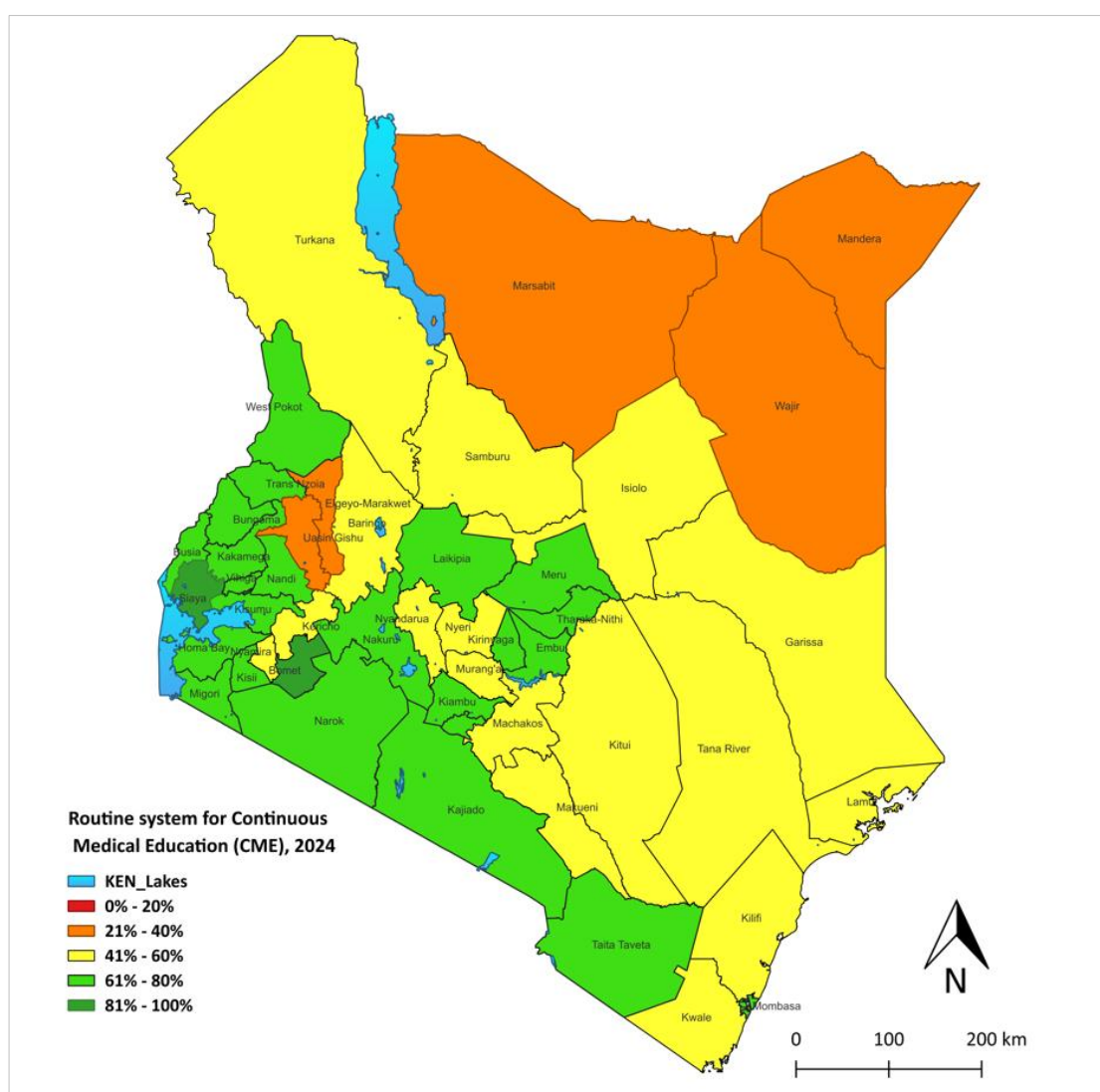
Annex Table 5 shows the disaggregation by location, KEPH level, ownership and by county.

- By location, availability of monthly CME meetings was 50% in urban and 47% in rural health facilities.
- By KEPH level, availability of monthly CMEs was highest in level 5 facilities at 74% and lowest in level 2 facilities at 43%.
- By ownership, monthly CMEs was highest in FBO at 57% and lowest in private facilities at only 43% of the facilities.

County Distribution

County analysis showed that all Health facilities in Bomet and Siaya Counties, implement a routine system for Continuous Medical Education while less than 40% of the health facilities in Mandera, Marsabit, Wajir, Elgeyo Marakwet and Uasin Gishu implement a routine system for Continuous Medical Education. The map below summaries the scores for all counties:

Figure 26: Average facilities conducting a routine system for CME's by county



Discussion:

There has been a slight improvement in implementation of regular continuous medical education in health facilities from 44% in 2018 to 63% in 2024. Almost half (48%) of health facilities implemented CMEs regularly on a monthly basis.

Table 12: CME Recommendations

Area	Key finding	Recommendation
Continuous medical education (CME)	63% of facilities implement a routine system for CME. Of these, 48% offer monthly CME's.	-The County Department of Health needs to support health facilities to implement CMEs so as to strengthen skills and competencies of health care providers and improve on the service delivery and quality of care to patients.

Area	Key finding	Recommendation
		-The MoH to Strengthen and enforce implementation of CME in all for Counties. with less than 40% of facilities with CMEs

Staff performance management.

Recognizing and rewarding good performance boosts morale and encourages staff to engage more fully in their roles, ultimately leading to higher quality care. This supportive atmosphere enhances provider performance and promotes a commitment to delivering the best possible patient care.

This section provides information about health facilities with the availability of mechanisms for recognizing and rewarding good performance.

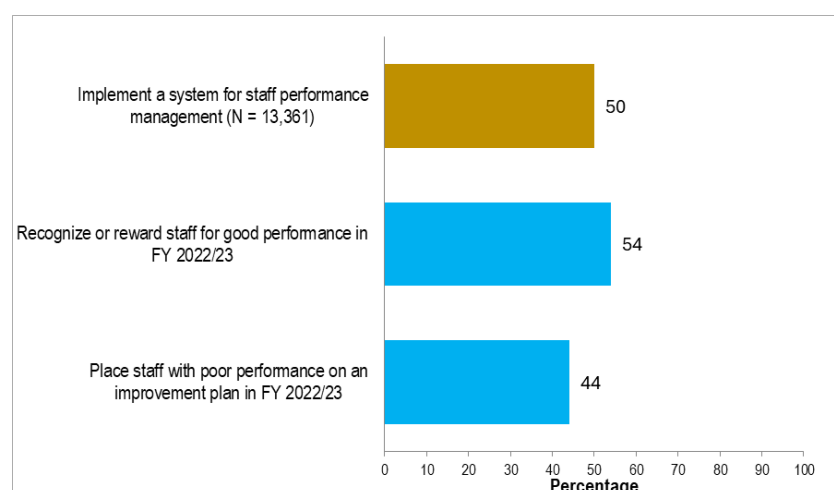
Key findings

Half (n=6722) of the facilities nationally had facilities implemented a system for staff performance management.

Amongst facilities implementing a system for staff performance management.

- More than half of them (54%) recognized/rewarded good performance while 44% placed staff who performed poorly on a performance improvement plan.

Figure 27: Percent of facilities that implemented staff performance management (n=6722)



Annex Table 8 shows the disaggregation by location, KEPH level , ownership.

Of the facilities that implement a system for staff performance management,

- By location, only 40% in the rural areas recognize/reward staff for good performance while only 33% place staff with poor performance on an improvement plan

- By KEPH level, 44% of the level 2 facilities implement a system for staff performance management while only a small percentage of level 2 and 3 facilities place staff with poor performance on an improvement plan at 39% and 49% respectively.
- By ownership, public facilities that implement systems for staff performance management, only 32% recognized or rewarded staff for good performance while only 27% placed staff with poor performance on an improvement plan

Discussion

The findings indicate that while half of the health facilities have implemented a staff performance management system, there is room for improvement in ensuring all facilities adopt such mechanisms. Recognizing and rewarding good performance has been shown to boost staff morale and encourage engagement, which ultimately contributes to higher-quality patient care. The fact that more than half (54%) of the facilities with a performance management system recognize and reward good performance suggests that many institutions understand the value of motivation and positive reinforcement. However, a significant proportion (44%) of facilities also focus on addressing poor performance through performance improvement plans. This suggests an effort to provide corrective support rather than punitive measures, which can be beneficial in helping staff develop their skills and improve overall service delivery. Despite these efforts, the fact that only 50% of health facilities have implemented staff performance management indicates a gap that needs to be addressed to ensure consistent quality care across all institutions.

Table 13: Staff performance Management recommendations

Section	Finding	Recommendation
Staff performance management	Nationally, half of the health facilities (50%) implemented a system for staff performance management. Out of the facilities that implemented staff performance management, more than half of them (54%) recognized/rewarded good performance while 44% placed staff who performed poorly on a performance improvement plan.	Policy and Guidelines Development Standardized policies should be developed at the national or regional level to ensure consistency in how performance management is implemented across all health facilities.

Supportive Supervision

Supportive supervision plays a vital role in improving the quality of care by emphasizing continuous skill development, capacity-building, and mentorship. Unlike traditional supervisory

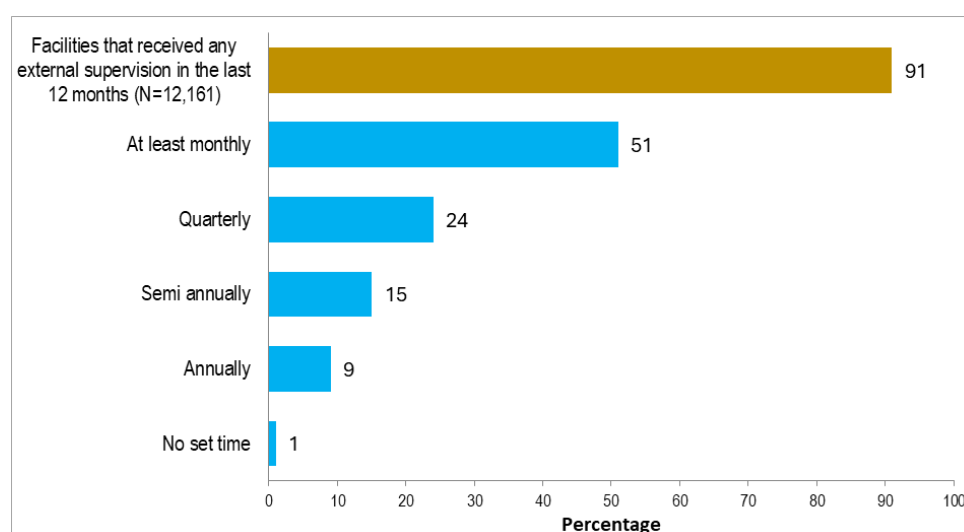
methods, which may focus on oversight and correction, supportive supervision fosters an environment of collaboration and ongoing training. This approach ensures that healthcare providers consistently develop their skills and stay updated with the latest medical practices, leading to enhanced competency and performance. Supportive supervision also contributes to quality assurance and improvement by providing regular monitoring and constructive feedback. Supervisors help identify and address issues promptly while promoting the adoption of best practices and evidence-based protocols. This continuous feedback loop is crucial for maintaining high standards of care and ensuring that healthcare delivery is consistent with current guidelines.

Key findings

Of 13361 health facilities nationally, 91% had received external supportive supervision 12 months prior to this assessment.

Of those that received external supportive supervision. (N=12161), about half received monthly supportive supervision while about a quarter received quarterly supportive supervision.

Figure 28: Percent of facilities with frequency of supportive supervision (N=12161)



Annex Table 9 shows the disaggregation by location, KEPH level and ownership

- By location, more than half (57%) of the facilities the rural areas received supportive supervision at least monthly compared to 44% of the facilities in urban areas.
- By KEPH level, the percentage of facilities that received supportive supervision at least monthly ranged between 48% to 65% across the level 2 to level 5 facilities.
- By ownership, most of the public facilities (63%) received monthly external supervision, however monthly external supervision in private facilities was notably low at 34%.

Table 14: Supportive supervision recommendations

Section	Finding	Recommendation
Supportive supervision	91% of facilities had received external supervision 12 months prior to this assessment. However, only 51% of health facilities that received external supervision had supportive supervision at least once a month in the 12 months preceding the survey.	● Increase Frequency of Supportive Supervision: Efforts should be made to ensure that more health facilities receive regular, structured supportive supervision. ● Capacity Building: Training programs for supervisors should focus on mentorship, feedback mechanisms, and continuous learning to maximize the benefits of this approach. ● Standardized Guidelines: Implement clear guidelines and checklists to ensure consistent and effective supervision across all facilities. ● Monitoring & Evaluation: Strengthen monitoring systems to assess the effectiveness of supportive supervision and make necessary improvements. ● Stakeholder Engagement: Collaborate with policymakers, healthcare managers, and frontline workers to enhance supervision strategies and allocate resources effectively.

Facility Use of Information

Community Engagement

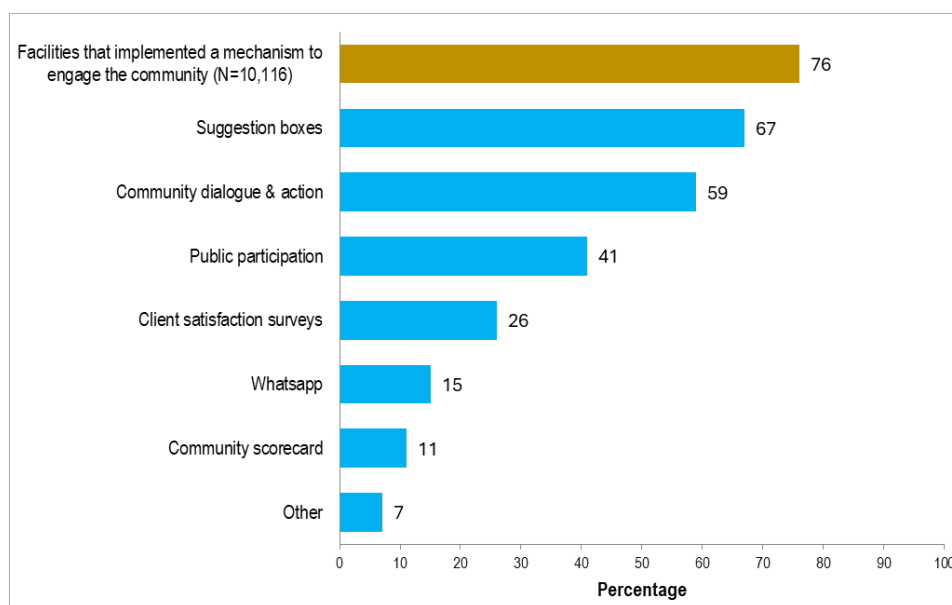
Community engagement in the health sector is essential for understanding the specific health needs and priorities of various population groups. By conducting needs assessments and involving community members through surveys, focus groups, and public forums, healthcare providers can gain insights into cultural beliefs and practices that influence health behaviors. The survey assessed the modalities health facilities used in community engagement such as client satisfaction surveys, public participation, suggestion boxes, community scorecard, community dialogue & action days and WhatsApp

Key findings

Of 13,361 facilities nationally, 76% had a mechanism to engage community or clients. Of those that had a mechanism to engage community/clients,

- The most used method of engaging the community was suggestion boxes as reported by 67% of the facilities. The community scorecard was used by only 11% of the health facilities.
- Use of client satisfaction surveys in health facilities was low at only 26% while community dialogue and action days were implemented in more than half of the facilities (59%) as shown in the figure 29 below.

Figure 29: Percent of facilities that had mechanisms to engage the community (N=10116)



Annex Table 4 shows the disaggregation by location, KEPH level , ownership and by county

By location,

- Public participation and community dialogue as methods of community engagement were mostly used by facilities in the rural areas at 47% and 68% respectively compared to 32% and 48% of urban facilities.

By KEPH level,

- Most level 5 facilities implement mechanisms for community engagement with suggestion boxes being the most commonly used across all level 5 facilities (83%) compared to other mechanisms.
- The use of community scorecards for community engagement was generally low across all levels of facilities ranging from 8% to 25%.

By ownership

- Half of the public facilities (50%) used public participation as a mechanism to engage the community.
- Use of client satisfaction surveys as a mechanism for community engagement was notably low in public health facilities at 16% compared to close to half (49%) of NGO facilities

- About 71% of public facilities with community engagement mechanisms engage the community through community dialogue.

By county,

- The proportion of facilities that had mechanisms for community engagement ranged from 40% -100%, being lowest in Marsabit county and highest in Laikipia county.
- Client satisfaction surveys were done in more than half of facilities in Nyeri and Nairobi counties (56% and 53% respectively while only 2% of facilities in Tana River County conducted client satisfaction surveys
- Community dialogue and action days happened in nearly all health facilities in Homa Bay county (96%) and was least practiced in Kirinyaga county (20% of facilities)
- The highest proportion of facilities that engaged community through community scorecards was in Vihiga county (34%). None of the facilities in Tana River, Murangá, Lamu, Elgeyo Marakwet and Isiolo counties had a community score card.

Discussion

There was an improvement in the percentage of facilities with mechanisms for community engagement from 62% in 2018 to 76% in 2024. The use of scorecards was very low in level 2 health facilities highlighting the need to be strengthened.

Table 15: Community engagement recommendations

Area	Key finding	Recommendation
Community engagement	-Client satisfaction survey nationally was 26% and lowest in public facilities at 16%	Enhance use of client satisfaction surveys in health facilities

Finance and Accounting

Health Financing

Health financing is essential in determining the quality of care within a healthcare system, influencing resource allocation, access, and overall care standards. Adequate funding ensures healthcare facilities have the necessary medical equipment, supplies, and staffing levels to provide high-quality care. The impact of health financing on the quality of care is profound, leading to improved health outcomes, enhanced patient satisfaction, and the creation of a robust, equitable, and high-quality healthcare system capable of meeting the population's needs.

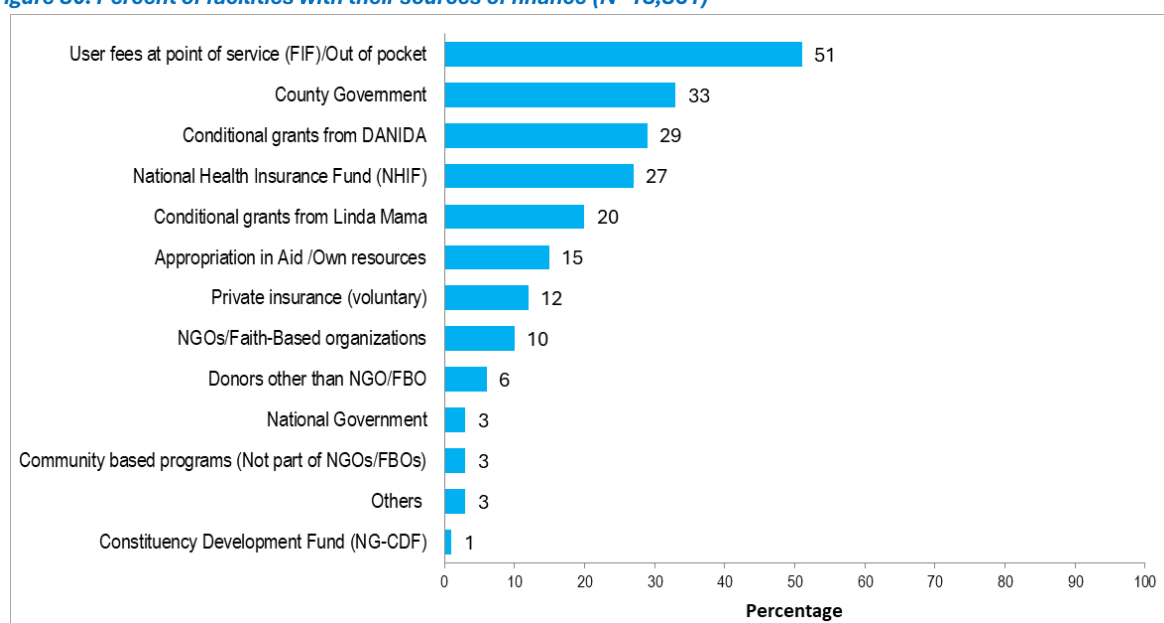
The quality-of-care survey assessed health facility sources of revenue, their autonomy to spend the budgets and proportion of 2022/23 FY budget that was funded by the county governments (for public facilities only).

Key findings

- Half of the facilities (51%) reported user fees (FIF) as their main source of finance for running the facilities.

- More than a quarter (27%) of the health facilities received reimbursements from the national health insurance fund (NHIF) and 20% of the health facilities got funding through the Linda Mama program under NHIF
- Only 1% of health facilities reported NG-CDF and only 3% reported National Government as a source of funding.

Figure 30: Percent of facilities with their sources of finance (N=13,361)



Annex Table 6 shows the disaggregation by location, KEPH level, ownership

By location,

- None of the health facilities in urban areas reported NG-CDF as their source of funding while most health facilities in urban areas (68%) generate their revenue from user fees compared to facilities in rural areas (37%)

By KEPH level,

- NHIF is a major source of revenue for most secondary facilities as reported by 83% of level 4 facilities and 81% for level 5 facilities.
- Only 17% of level 2 facilities reported NHIF as their source of funding

By ownership,

- Most public facilities (69%) reported County Governments as their source of revenue while private insurance was low source was low at 2%
- Only 1% of the public facilities received their funding from NG-CDF
- User fees as a source of funding for public facilities was low as reported by only 21% of the public health facilities

Discussion:

User fees and out-of-pocket expenses represent significant barriers to healthcare utilization, with the potential to drive households into catastrophic health expenditures and poverty. The percentage of facilities charging user fees has risen from 28% in the KHFA 2018 survey to 51% in 2024, likely due to the cessation of various conditional grants, including reimbursements to health facilities for waived user fees during the fiscal year 2021/22.

Although 40% of health facilities are accredited by the National Hospital Insurance Fund (NHIF) as of the 2023 Health Facility Census, only 27% reported NHIF as a source of funding.

Table 16: Finance and Accounting Recommendations

Key Findings	Recommendations
● 48% of level 2 facilities and 52% of level 3 facilities reported user fees as a source of revenue. ● 41% of level 3, 83% of level 4's and 81% of level 5's had NHIF as a source of financing.	● Strengthen Policy Implementation: Health ministries at both national and county levels should reinforce the policy directive on abolishing user fees in level 2 and 3 facilities. This could include regular audits and monitoring to ensure compliance. ● Enhance Social Health Insurance engagement: Increase efforts to promote and facilitate enrollment with Social Health Authority among healthcare facilities. This may involve outreach programs, training for facility administrators, and streamlined processes for claims and reimbursements. ● Diversify Funding Sources: Encourage health facilities to explore alternative funding sources, such as public-private partnerships, grants from international health organizations, and community fundraising initiatives. This can help reduce reliance on user fees and enhance financial sustainability.

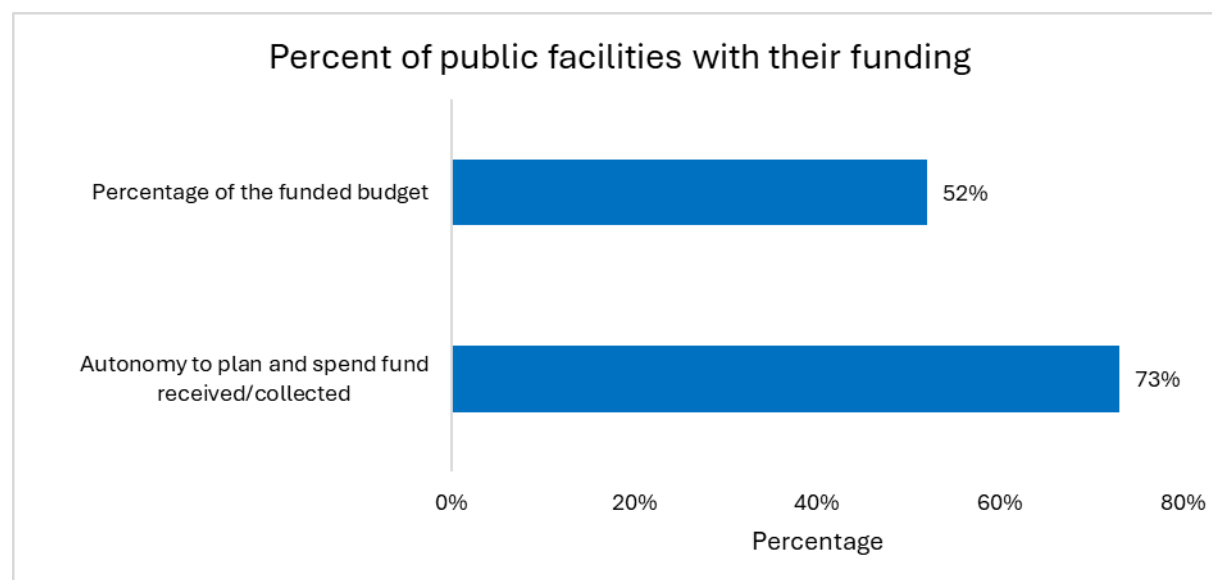
Facility level Health Budget Funding (Public Facilities)

Sustainable domestic resource mobilization for health involves strategies to secure and manage financial resources within a country to support its healthcare system effectively and further improves health outcomes by ensuring adequate and efficient use of funds, reducing dependency on external aid, and strengthening health systems. Key strategies include increasing government funding by prioritizing health budgets and exploring innovative financing mechanisms such as health bonds or dedicated taxes. Efficient resource management and transparency are crucial for optimizing the use of available funds and ensuring that resources are directed towards essential health services.

Key findings

Nationally, seventy-three percent (73%) of public facilities had the autonomy to plan and spend funds received/collected, while 46% of public facilities had 75% of their budgets funded in the FY 2022/23 as in Figure 31 below

Figure 31: Percent of public facilities with their funding (public only) (N=6010)



Annex Table 10 shows the disaggregation by location, KEPH level, ownership and by county

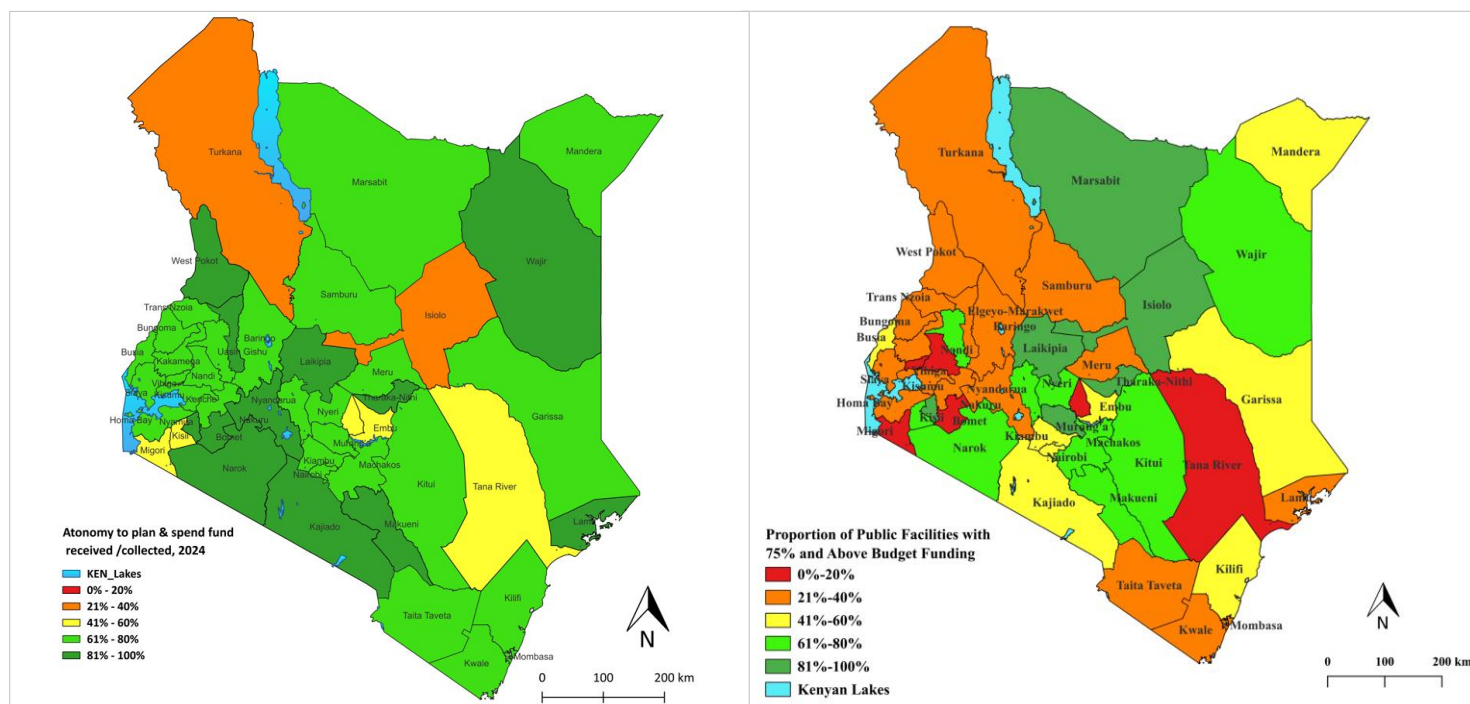
- By location, in the rural areas, the public health facilities, less than half (45%) had 75% of their budget funded while in the urban areas, 52% the facilities had 75% of their budgets funded.
- By KEPH level, funding of 75% of budgets in public facilities ranged between 47% in level 2 and 5 facilities to 45% in level 3 and 43% of level 2 facilities

County Distribution (public health facilities only)

Of the public facilities,

- Turkana and Isiolo counties had the lowest percentage of health facilities with autonomy to spend funds ranging between 21% to 40%.
- More than 60% of the health facilities in 40 Counties had autonomy to spend their funds.
- In regards to funding of the FY 2022/23 budget, almost all facilities in Tharaka Nithi (98%) and Laikipia (97%) had 75% of their budget funded compared to only 4% of facilities in Vihiga County

Figure 32: Percentage of public facilities with autonomy to plan and spend funds received/ collected (2024) distributed by county



Discussion:

Funding of public facilities is crucial to ensure uninterrupted service delivery for clients. With only 46% of public facilities having 75% of their budgets funded, this affects service delivery since health facilities are unable to operate optimally with the available budgets. There has been an increase in health sector funding both at the National and County levels; however, funding of health facilities still remains low.

The Constitution mandates that all funds collected by health facilities be deposited into the County Revenue Fund before being distributed by the County Government. This process poses a challenge, as health facilities often receive inadequate allocations, especially when the health sector is not prioritized in county budget allocations. As a result, many facilities lack the necessary funds for operations and maintenance (O&M).

The recent passing of the Facility Improvement Fund (FIF) Bill into an Act presents a significant opportunity for improving funding. The Act ensures that funds collected by health facilities are earmarked specifically for O&M needs, granting them greater financial autonomy and improving service delivery.

Conclusions

Funding of health facilities is crucial for effective service delivery and must therefore be supported by allocating adequate funds to health facilities to ensure their smooth running. The

percentage of health facilities that had 75% of their budgets funded was low (46%) hence the need to advocate for additional funding to the health sector.

Recommendations

There is a need for Counties to fully implement the FIF Act to ensure that facilities are able to retain collections and have the autonomy to spend them for O&M

Counties need to allocate adequate funds to run health facilities to ensure smooth operations and effective service deliver

Table 17: Healthcare Financing recommendations

Section	Finding	Conclusion	Recommendation
Health care Financing	Seventy-three percent (73%) of public facilities had the autonomy to plan and spend funds received/collected while 52% of their budgets were funded in the FY 2022/23	The percentage of health facilities that had their budgets fully funded was very low	Counties should fully implement the FIF Act to allow health facilities to retain and autonomously utilize their collected funds for O&M needs. County governments should prioritize health sector funding and allocate adequate resources to ensure the smooth operation of health facilities and effective service delivery.
Health finance	51% use user fee as main finance source to run their health facilities	Citizens are not protected from financial hardship(catastrophe)	Enhance strategies to reduce reliance of out-of-pocket payments and improve health equity for all people -Enhance public awareness of national health insurance fund, registration and regular monthly subscriptions

HEALTH INFRASTRUCTURE

Health Facility Distribution and Infrastructure

Kenya's public health system continues to grow in physical footprint. As per the Kenya Master Health Facility List, Kenya has achieved a national facility density of 2.2 per 10,000 population, thus surpassing the World Health Organization (WHO) minimum target of 2 per 10,000. However, 14 counties (30%) still fall below this threshold, indicating significant disparities in facility distribution.

Inpatient and Maternity Bed Availability

- The average inpatient bed density is 13.3 per 10,000, still far below the national target of 25.
- The average inpatient bed occupancy rate stands at 46%, much lower than the desired 80%.
- On a positive note, national maternity bed density is 13.8 per 1,000, exceeding the target of 10 per 1,000.

While the infrastructure meets some national targets, inadequate utilization and regional inequities persist. For instance, urban areas have 28% of facilities offering inpatient services, compared to only 17% in rural areas.

Table 18: Percentage of facilities with Inpatient Facilities

Availability of Inpatient services			Number of Facilities
By County			
	Baringo	19%	287
	Bomet	3%	182
	Bungoma	38%	269
	Busia	31%	174
	Elgeyo Marakwet	12%	146
	Embu	29%	199
	Garissa	36%	180
	Homa Bay	34%	365
	Isiolo	18%	73
	Kajiado	23%	367
	Kakamega	28%	362
	Kericho	12%	237
	Kiambu	27%	642
	Kilifi	19%	409
	Kirinyaga	25%	202
	Kisii	37%	276
	Kisumu	25%	402
	Kitui	18%	369
	Kwale	9%	278
	Laikipia	15%	201
	Lamu	27%	73
	Machakos	19%	457

Availability of Inpatient services			Number of Facilities
	Makueni	9%	297
	Mandera	50%	200
	Marsabit	19%	140
	Meru	14%	459
	Migori	40%	323
Availability of Inpatient services			Number of Facilities
	Mombasa	25%	370
	Muranga	12%	360
	Nairobi	28%	1220
	Nakuru	15%	605
	Nandi	14%	232
	Narok	19%	200
	Nyamira	35%	208
	Nyandarua	4%	212
	Nyeri	6%	395
	Samburu	13%	136
	Siaya	33%	248
	Taita Taveta	12%	113
	Tana River	23%	97
	Tharaka Nithi	13%	186
	Trans Nzoia	20%	190
	Turkana	16%	247
	Uasin Gishu	18%	271
	Vihiga	23%	178
	Wajir	37%	162
	West Pokot	9%	162
By type			
	Level2	8%	9811
	Level3	48%	2548
	Level4	95%	965
	Level5	97%	37
By managing authority			
	FBO	29%	1568
	NGO	10%	407
	Private	28%	5376
	Public	16%	6010
By location			
	Rural	17%	7343
	Urban	28%	6018
All		22%	13361

GENERAL SERVICE READINESS INDEX

General Service Readiness is the overall capacity of health facilities to provide general health services. Readiness refers to the availability of items that are necessary to provide services such as basic amenities, basic equipment, basic diagnostic capacity, essential medicines and standard precautions for preventing infection.

Table 19 below shows the components used in the general service readiness index and the data sources.

Table 19: General Service Readiness index

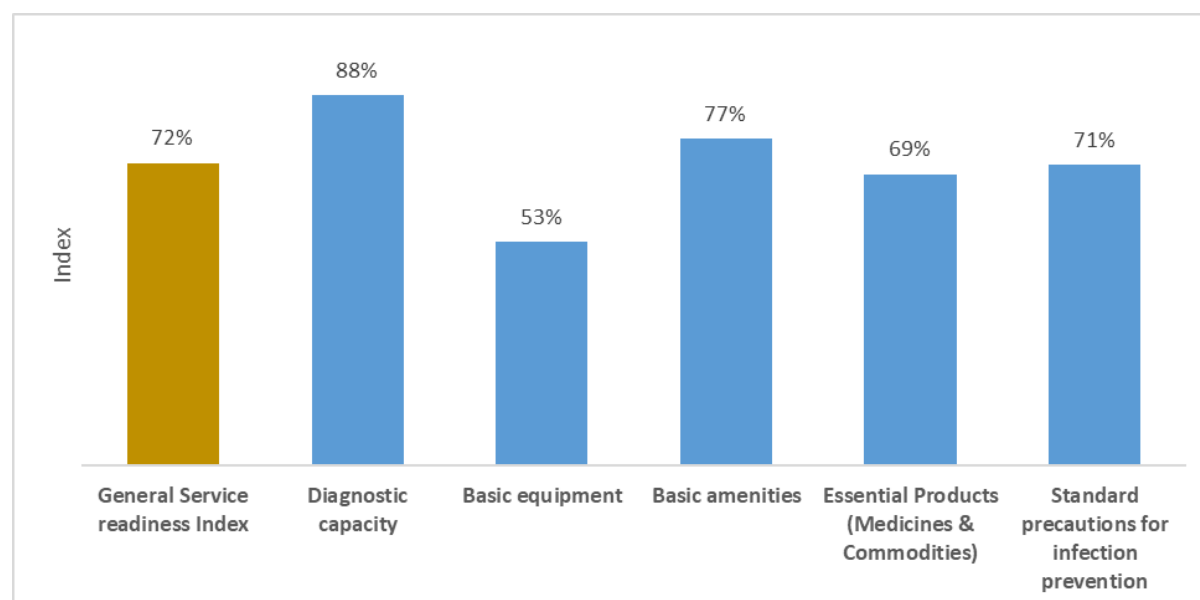
General Service Readiness	Domains for Service Readiness
Basic Amenities	- Reliable Power Source (KHFC) - Reliable water source (KHFC) - Room with privacy (KQoCHFA) - Mobile signal availability (KHFC) - Emergency transportation (KQoCHFA)
Basic Equipment	(KHFC)
Basic Diagnostic Capacity	- Haemoglobin (tracer items for antenatal care services) (KQoCHFA) - Blood glucose (KQoCHFA) - Malaria diagnostic capacity (KHFC) - HIV diagnostic capacity (KHFC) - Urine dipstick – Protein (KHFC) - Urine dipstick – Ketones (KQoCHFA) - Syphilis Rapid Diagnostic test (RDT) (KQoCHFA)
Essential Medicines	- Availability of 22 tracer medicines in health facilities (KHFC) - Availability of 23 non pharmaceutical in health facilities (KHFC)
Standard precautions for infection prevention	- Sharps boxes availability (KHFC) - Hand washing facility next to all toilets in the facilities (KQoCHFA) - Latex gloves availability (KQoCHFA) - Availability of face masks in health facilities (KHFC) - Standard operating procedure (SOP) for waste management (KHFC) - Safe disposal of infectious/medical waste segregated into 3 color-coded bins (KHFC) - Availability of disposable syringes (KHFC) - Availability of IPC guideline of hygiene protocol (KHFC)

Kenya Health Facility Census 2023 (KHFC); Kenya Quality of Care Health Facility Assessment 2024. (KQoCHFA)

Findings:

Overall, the general service readiness was 72%. The domains with the highest average readiness were diagnostic capacity and basic amenities at 88% and 77% respectively, while the domain with the lowest average readiness was basic equipment at 53%.

Figure 33: General service readiness index and domain scores



Annex Table 206, shows the General Service Readiness scores and domains by KEPH Level, Ownership and County.

Disaggregation by KEPH level and Ownership

- The readiness score for all domains, basic amenities, basic equipment, standard precautions for IPC, diagnostic capacity and availability of essential medicines and commodities increased as the KEPH level increased: Level 5 facilities had the highest readiness at 96%, 95% , 89% and 99% for the domains compared to Level 2's readiness of 77% , 53%, 71%, 88% and 69% respectively.
- The readiness scores for basic amenities and equipment, diagnostic capacity and essential medicines and commodities were higher in FBO, NGO and Private facilities compared to public facilities.
- The readiness score for standard precautions for IPC and diagnostic capacity was at least 64% and 73%, respectively, regardless of the facility ownership.
- Public and private facilities had the lowest readiness score for essential medicines at 46% and 58%, compared to NGO and FBO facilities at 60%.
- FBO facilities had the highest general service readiness score at 77%, followed by Private (74%), NGO at 72%, while public facilities had the least at 65%.

Disaggregation by county:

Figure 34 and Annex table 206 show the general service readiness distributed by county and disaggregated by domains.

- Basic amenities average readiness was highest in Mombasa at 90% while Baringo County had the lowest at 43%.
- Kajiado and Nairobi counties had the highest basic equipment average readiness at 68% and 67% respectively, while Vihiga county had the lowest at 38%.
- Average readiness for standard precautions for infection prevention was highest in Kisii and Siaya counties at 81% and 80% respectively and lowest in Turkana and Tana River counties at 56% and 55% respectively.
- Diagnostic capacity was highest in Kiambu and Mombasa counties at 96% and 95% respectively, while Homa Bay (63%) had the lowest basic diagnostic capacity.
- Mandera County had the highest essential medicines and commodities readiness score at 83% while West Pokot and Baringo counties had the lowest at 56% and 54% respectively.
- Only 6 counties had an essential medicines and commodities readiness score of less than 60%: West pokot (56%), Vihiga (59%), Elgeyo marakwet (58%), Bomet (57%) and Baringo (54%).

Figure 34: General Service Readiness domain and index by county

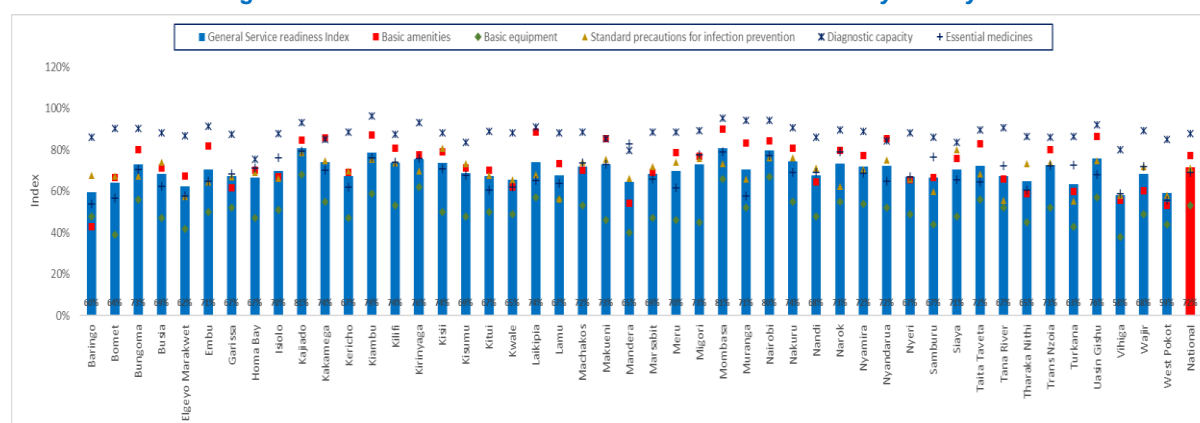
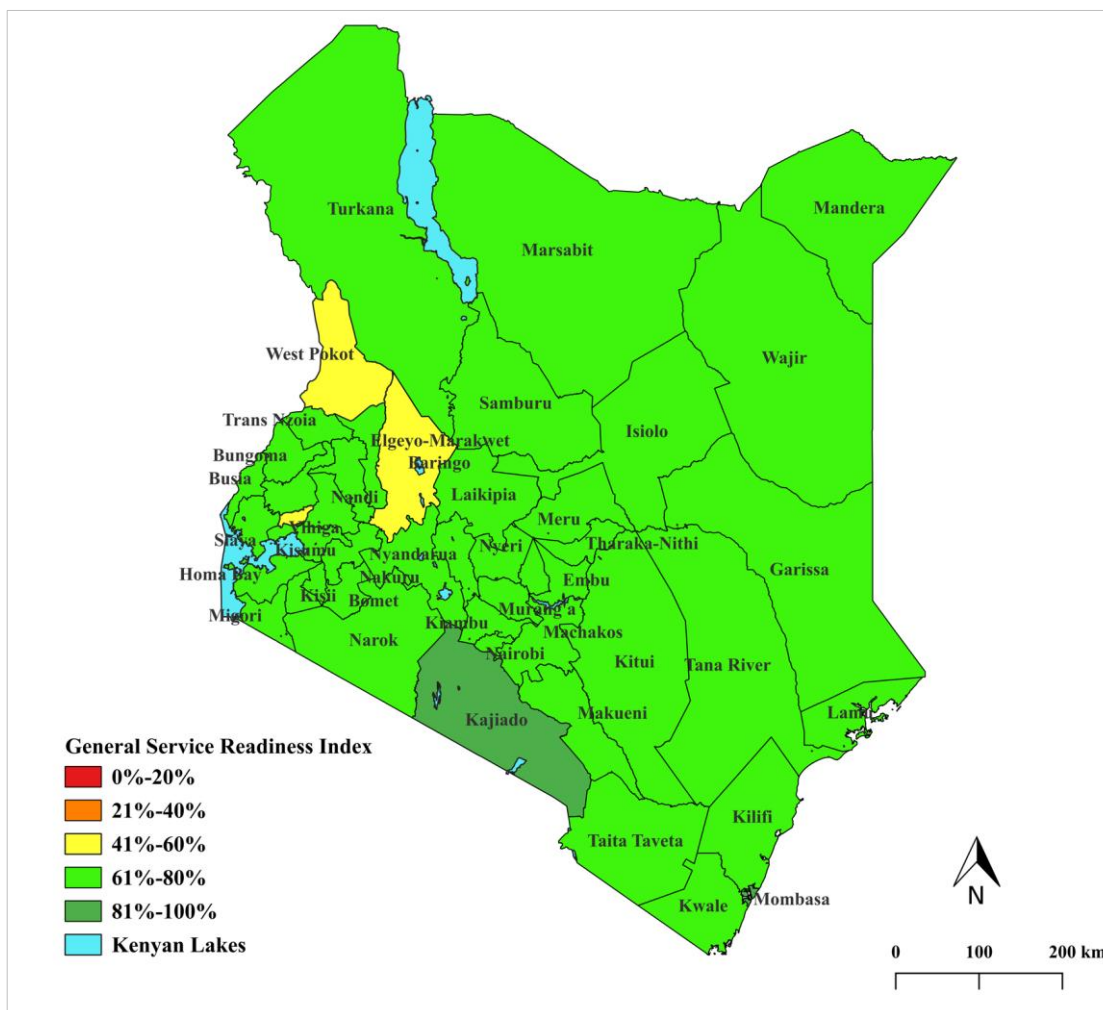


Figure 35 show the general service readiness index by county.

- Kajiado and Mombasa counties had the highest general service readiness score at 81% while Vihiga had the lowest at 56%.
- Majority of the counties had a general service readiness score ranging from 61-75%.
- The counties with the lowest general service readiness of less than 60% were Vihiga and West Pokot at 58% and 59% respectively.

Figure 35: General service readiness index by county



COMMUNICABLE DISEASES

Communicable diseases accounts for the highest proportion of disease burden in the country with the leading causes being HIV/AIDS, Malaria and TB. The QOC assessment sought to assess availability and readiness of health facilities to provide services for communicable diseases. The main areas of focus were;

- ❖ Malaria
- ❖ Tuberculosis
- ❖ HIV
- ❖ Sexually Transmitted Infections (STIs)
- ❖ Neglected Tropical Diseases (NTDs)

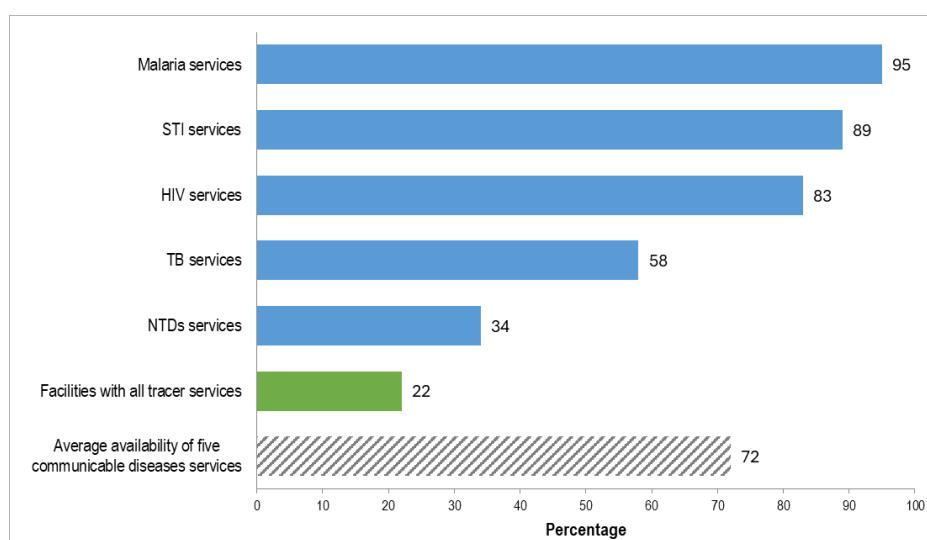
Key Findings

Overall Service Availability

The overall availability of services for communicable diseases in Kenya is shown in Figure 36 below;

- The most commonly available service for communicable diseases was malaria at 95%.
- Over 80% of Kenyan health facilities offered HIV and STI services at 83% and 89% respectively.
- Slightly more than half (58%) of facilities offered TB services
- The least available communicable disease service was neglected tropical diseases (NTDs), with only 34% of facilities offering these services
- The average availability of the five communicable diseases was 72% with only 22% of the health facilities having all the five tracer services

Figure 36: Availability of services for communicable diseases (N=13,361)

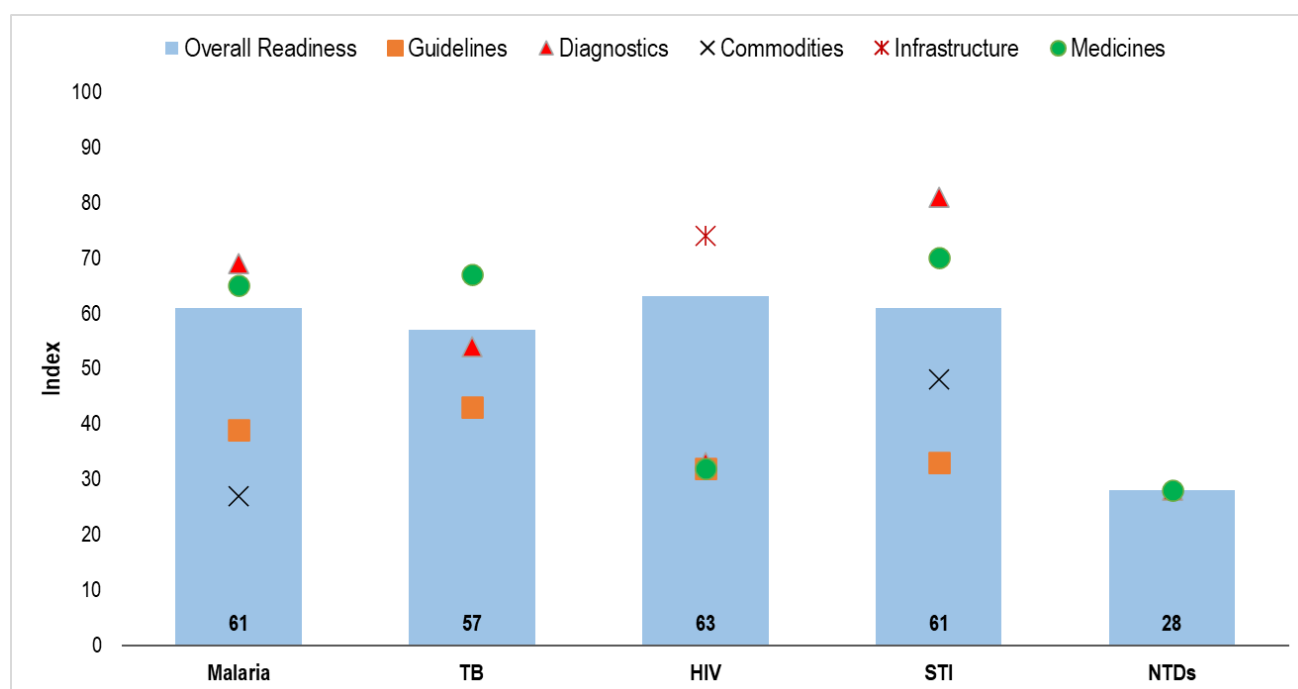


Overall Service Readiness

Figure 37 below shows that, among health facilities offering services for communicable diseases;

- Service readiness was moderately high for HIV (63%), malaria and STI (61%) and TB (57%). Service readiness was low for Neglected tropical diseases in endemic Counties (28%).
- Malaria services were limited by low availability of commodities while diagnostics limited availability of TB services.
- Medicines and guidelines were the weak points in HIV service availability

Figure 37: Availability of tracer items for communicable diseases



Disaggregation by location, KEPH level and ownership

Annex Table 19 shows the average availability of communicable diseases services disaggregated by location, KEPH level, ownership and by county.

- There was no variation in the availability of communicable diseases services by location
- Generally, communicable diseases services were more available in level 4 and 5 compared to level 2 and 3 health facilities
- By the management authority, TB and HIV Services were less available in private facilities while Malaria services were less available in NGO facilities

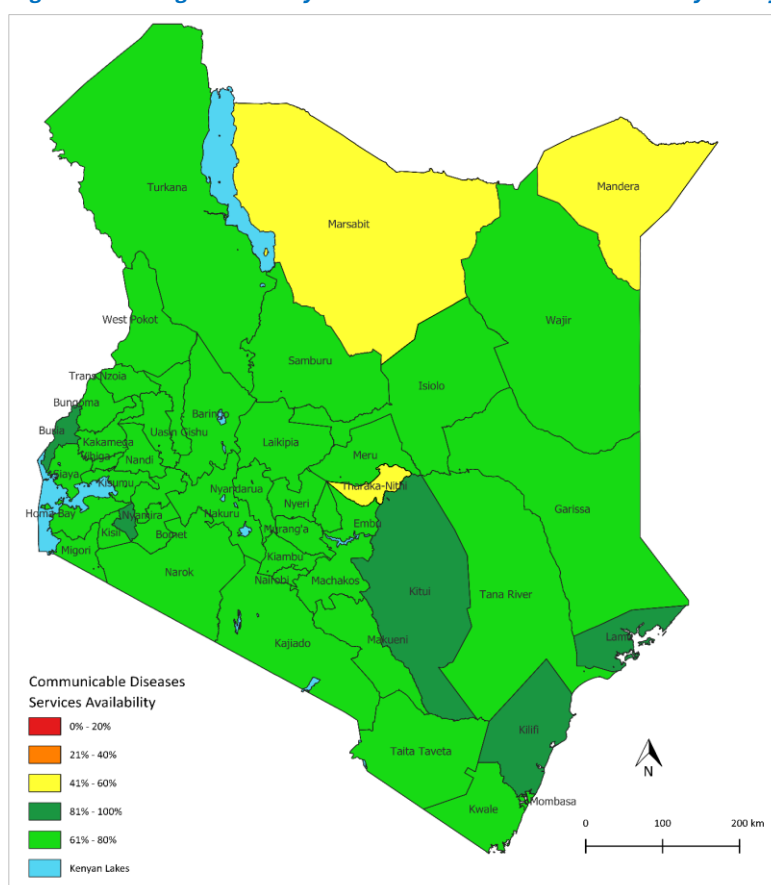
County Distribution

Service Availability

There were variations across the counties in the average percentage availability of communicable diseases in the health facilities;

- Generally, there was good availability of communicable diseases services in most counties. Nyamira county had the highest average 84% while Mandera county had the least at 50%
- Seven (7) counties, (Nyamira, Lamu, Kilifi, Kitui, Busia, Bungoma and Meru) had an average score of at least 80%
- None of the counties had all the communicable disease services available in all their health facilities

Figure 38: Average availability of Communicable disease services by county



Discussion:

Overall, the availability of communicable diseases has increased compared to the KHFA 2018 performance while readiness has declined slightly. The overall readiness for facilities to provide Malaria services has remained unchanged at 61% from 62% in 2018, TB has declined somehow from 67% to 57%, STIs from 72% to 61% and HIV services from 69% to 63%. Similarly, readiness to provide NTD services has declined from 35% in KHFA 2018 to 28%.



Malaria

Malaria is one of the main public health problems in Kenya. Data from the 2020 Kenya Malaria Indicator Survey (KMIS) indicate that approximately 70 per cent of the population is at risk for malaria, including 13 million people in endemic areas and another 19 million in highland epidemic-prone and seasonal transmission areas (Division of National Malaria Program & ICF, 2021).

Malaria medicines are critical for the effective treatment and management of malaria. These medications aim to eliminate parasites, reduce symptoms, and prevent complications. Commonly prescribed malaria medicines include artemisinin-based combination therapies (ACTs) such as artemether-lumefantrine, which are highly effective against uncomplicated malaria.

In Kenya, Malaria vaccination services are administered in 8 target counties namely Busia, Bungoma, Siaya, Kakamega, Homabay, Vihiga, Kisumu and Migori

Service Availability

The tracer services assessed for Malaria are outlined in Table 20 below.

Table 20: Malaria Tracer Services

Domain	Tracer services
Services	• Malaria Diagnostic Tests • Treatment for Malaria

**Noted that Intermittent Preventive Treatment for pregnant women (IPTp) and malaria vaccinations are only offered in malaria endemic areas. Note that Malaria in Pregnancy is discussed under the RMNCAH section.*

Findings

Malaria tracer services were offered in 95% (n=12,634) of all facilities nationally.

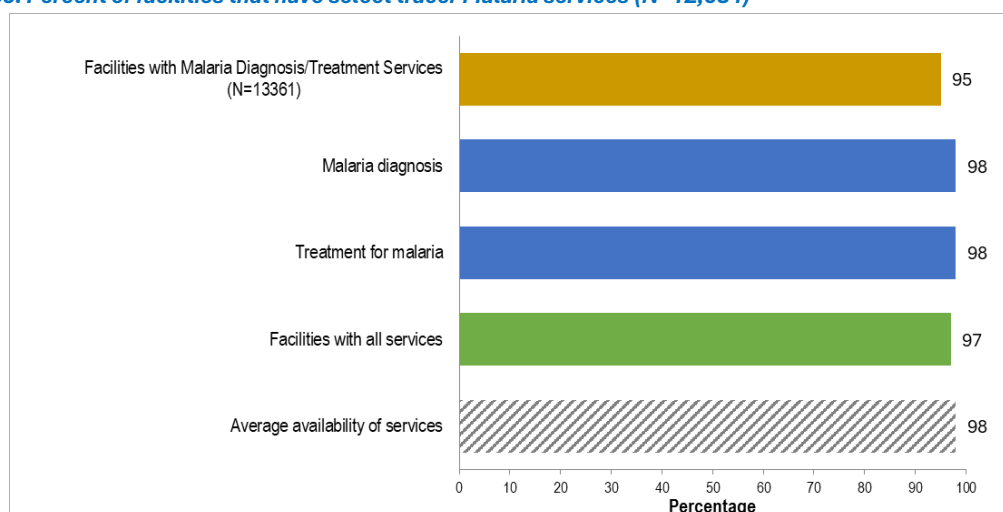
Among the health facilities offering services for Malaria,

- Availability of malaria diagnosis and treatment was generally high at 98% each. The average availability of Malaria services was 98%
- Almost all facilities (97%) had all malaria services.

****It should be noted that intermittent preventive treatment for pregnant women (IPTp) and malaria vaccinations are only offered in malaria endemic areas.***

Figure 39 below shows the availability of Malaria services in the country.

Figure 39: Percent of facilities that have select tracer Malaria services (N=12,634)



Disaggregation by location, KEPH level and ownership

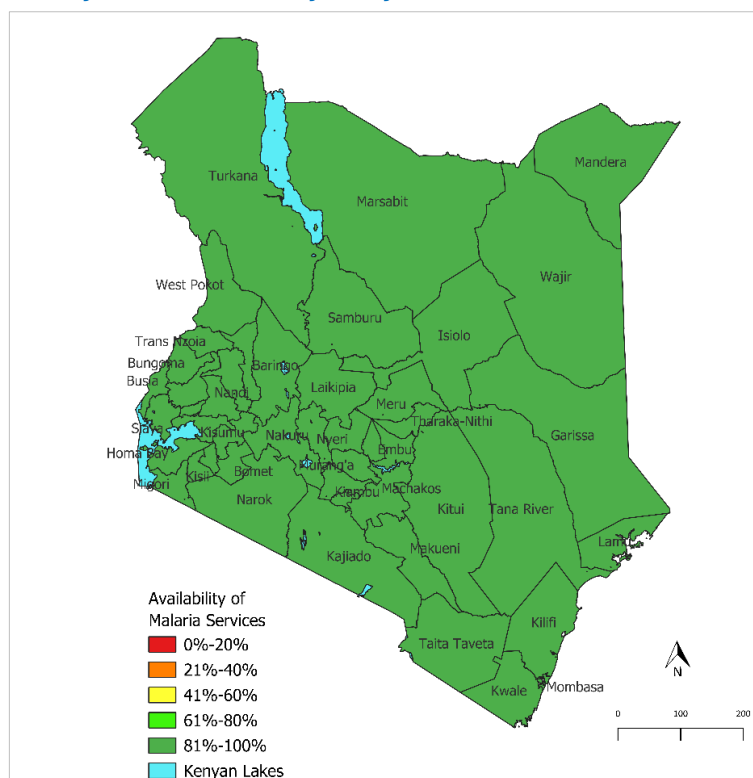
Annex table 51 shows the average availability of Malaria services disaggregated by location, KEPH Level, ownership and by county. Among the facilities offering Malaria services,

- Average availability of malaria services is almost universal across location, KEPH level and ownership.

County Distribution

Average availability of Malaria services was generally high across all the counties ranging from 89% to 100%.

Figure 40: Average availability of Malaria services by county



Service Readiness

The QOC assessed readiness to provide Malaria services based on the 5 tracer items outlined in Table 21 below.

Table 21: Tracer items for malaria services

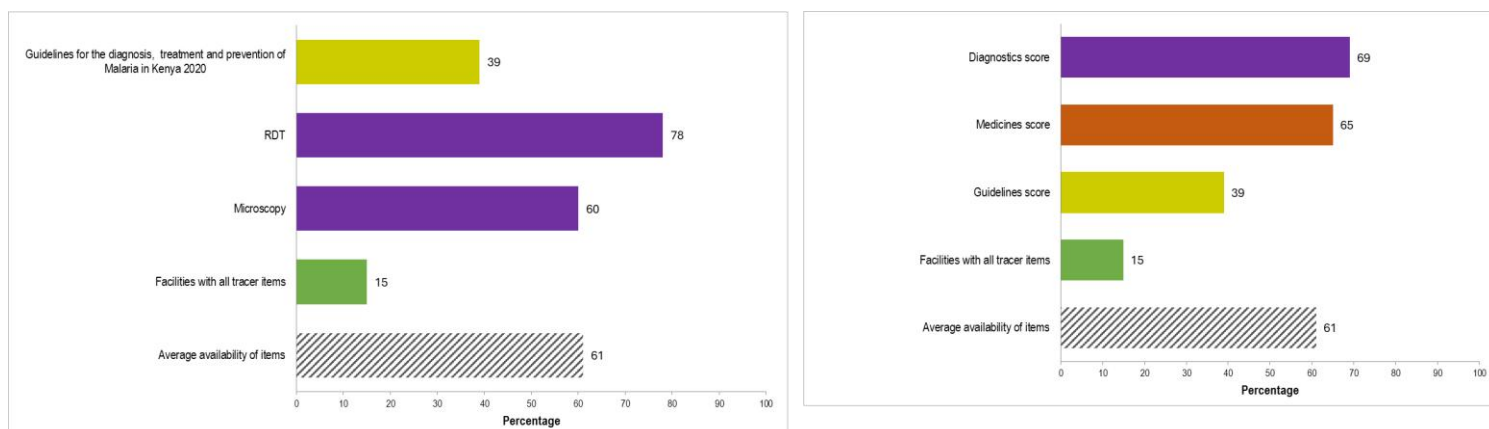
Domain	Tracer items
Guidelines	Guidelines for the diagnosis, treatment and prevention of Malaria in Kenya 2020
Diagnostics	- RDT - Microscopy
Medicines	- First line antimalarial in stock -Artemether- lumefantrine (AL) - Second line antimalarial in stock -Artesunate Injection

Findings:

Among the health facilities offering malaria services, Figure 41 shows the percentage availability of these tracer items in facilities that offer malaria services (N=12,634)

- Slightly more than a third (39%) of the health facilities offering malaria services had guidelines for the diagnosis, treatment and prevention of Malaria in Kenya 2020
- Among the facilities offering malaria services, 78% had RDT services while 60% had microscopy services. The overall diagnostic score was 69%
- The average availability of malaria tracer items was 61% among the facilities offering the services.
- However, only 15% of the facilities had all the five tracer items available on the day of the survey

Figure 41: Percent of facilities that have select tracer items (N=12,634)



Disaggregation by location, KEPH level and ownership

Annex table 52 shows the average availability of malaria tracer items disaggregated by location, KEPH Level, ownership and by county.

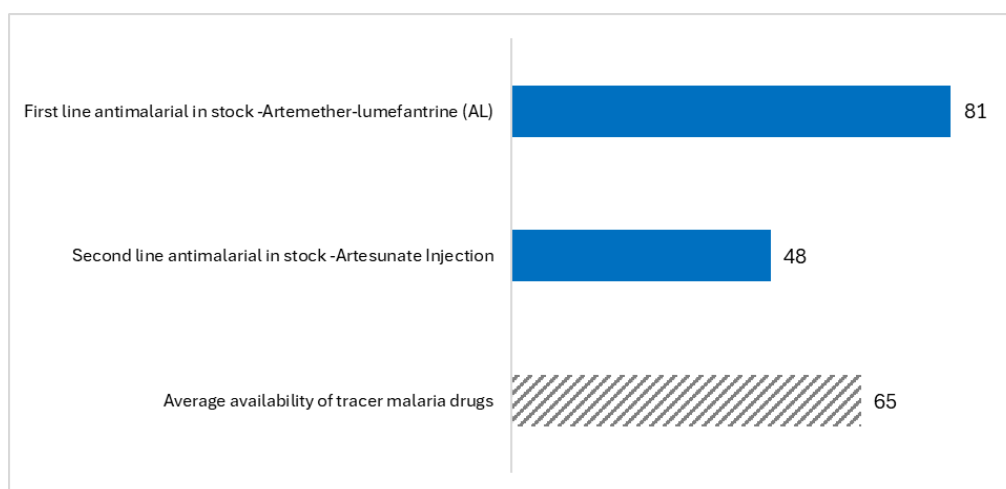
- By location, less than half of the rural facilities had microscopy for malaria available compared to 76% of urban facilities.
- Urban facilities had the highest Availability of *guidelines for diagnosis, treatment and prevention of Malaria in Kenya 2020* at 42% as compared to Rural Facilities at 37%.
- By KEPH level, RDT was least available in level 2 facilities, 77% and most available in level at 97%.
- All level 5 facilities had Microscopy services available, compared to a half of level 2 facilities.
- By ownership, less than half of public facilities (47%) had microscopy services available compared to 85% of FBO facilities.

Medicines

Figure 42 shows the availability of the malaria medicines;

- The first line antimalarial- Artemether Lumefantrine was available in 81% of facilities, while the second line antimalarial- Artesunate was available in below half of facilities.
- The average availability of the tracer malaria medicines was 65%

Figure 42: Availability of Malaria medicines



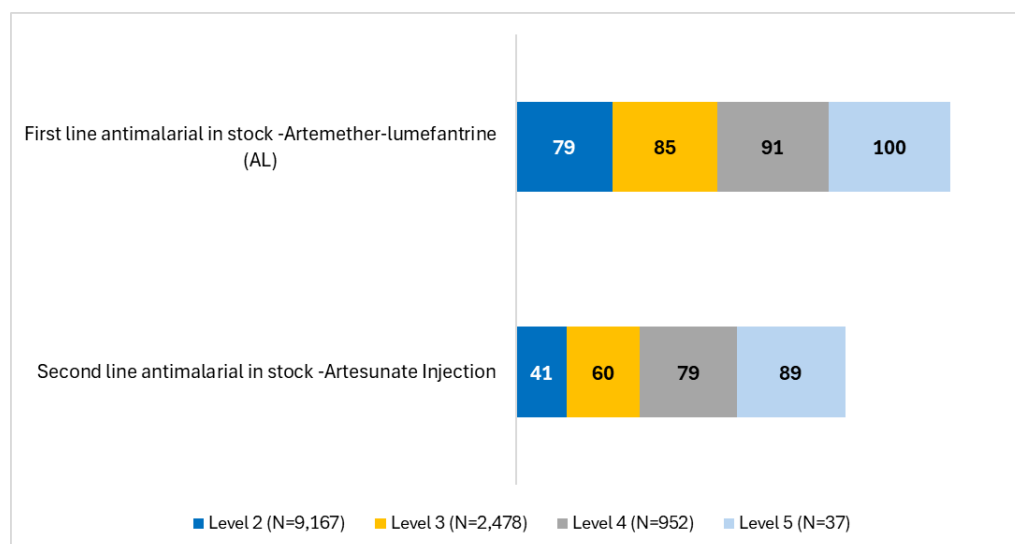
Disaggregation by location, KEPH Level and ownership.

Annex Table 168 shows the average availability of Malaria tracer items disaggregated by location, KEPH Level, ownership and by county.

- By KEPH level, First line treatment was available in all level 5's compared to 79% of level 2 facilities; Less than half of level 2 facilities (41%) had the second line treatment compared to level 5 at 89%.

- First line treatment for Malaria was least available in NGO facilities (70 %) and most available at private facilities (85%).
- Second line treatment for Malaria was least available in public facilities (39%) and most available at private facilities (58%).

Figure 43: Availability of malaria medicines by facility level



County Distribution

Figure 44 shows the average availability of Malaria tracer items and medicines disaggregated by county.

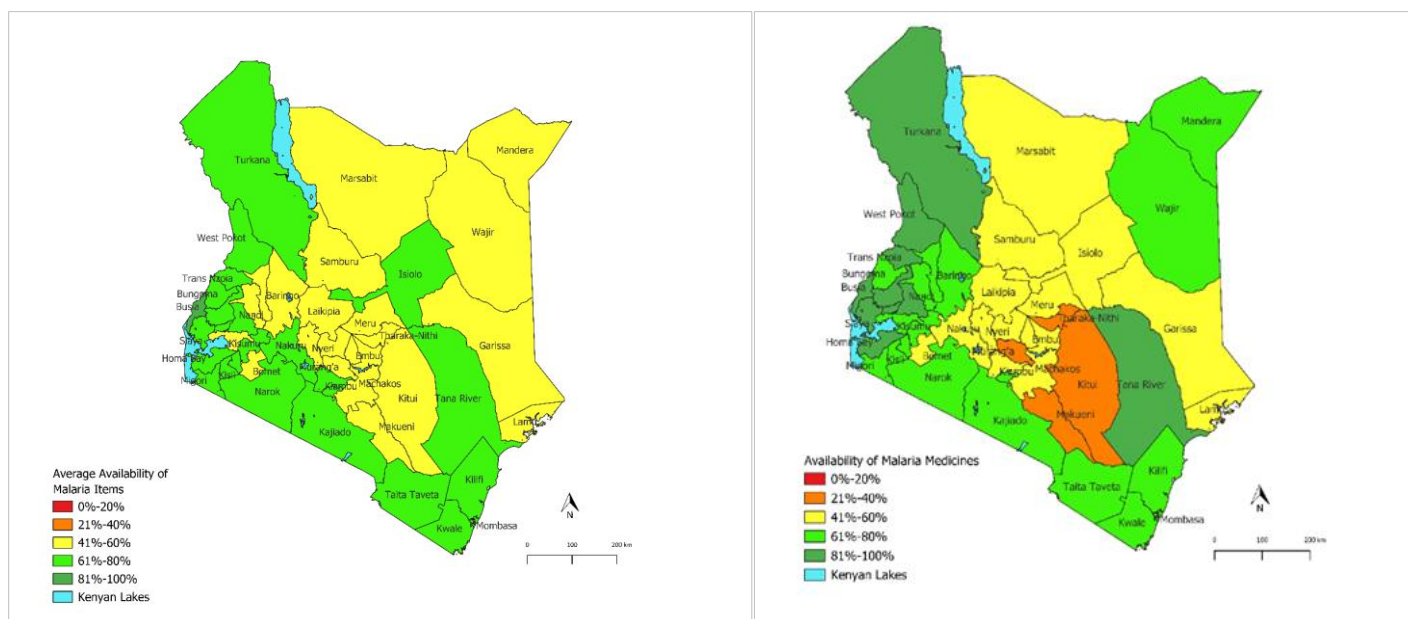
Tracer items in the health facilities.

- Majority of the counties had average availability of malaria items ranging between 41-60%.
- Busia county had the highest average percentage availability at 85% while Makueni and Nyandarua had the lowest at 43%.
- The average availability of malaria tracer items was 61%.

Medicines

- There is a notable variability on the average availability of malaria medicines across the counties; three counties, Homabay, Siaya and Busia had an average availability of over 80%.
- Around 25% of the counties had an average availability of 61% to 80%.
- Fourteen counties had an average availability of 21% to 40%.

Figure 44: Availability of malaria items(left) and medicines(right) by county



Malaria Vaccination Services

In Kenya, Malaria vaccination is administered in 8 target counties namely Busia, Bungoma, Siaya, Kakamega, Homabay, Vihiga, Kisumu and Migori.

Table 22: Malaria Vaccination availability and readiness tracer items

Domain	Tracers
Malaria Vaccination Availability	Malaria Vaccinations
Malaria Vaccination readiness	Malaria vaccines

Service Availability

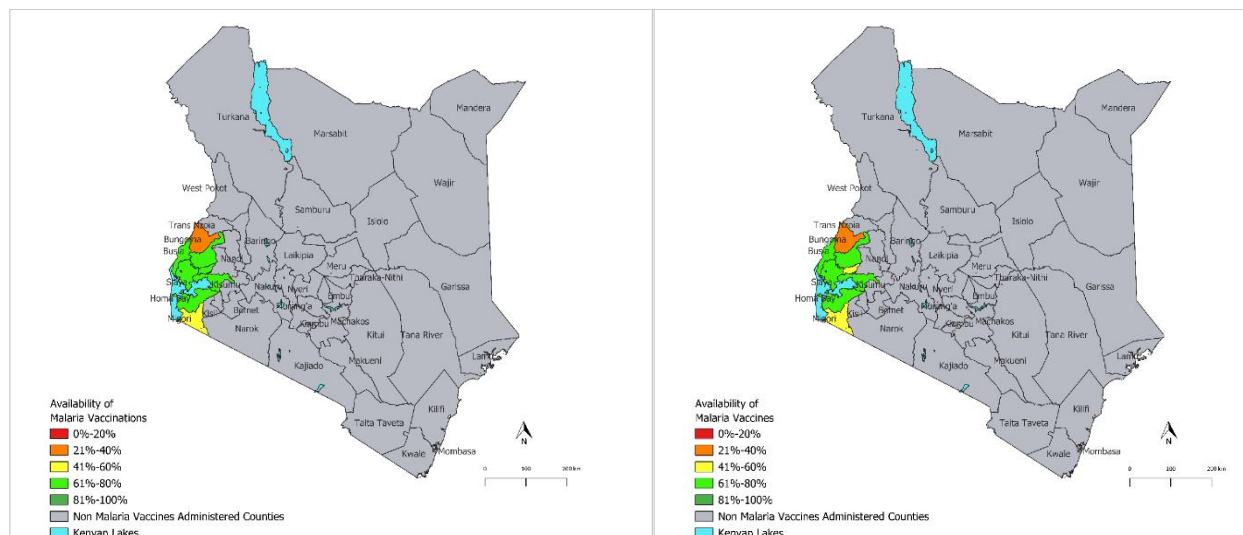
- Malaria vaccination services are offered in 64% of facilities in the 8 target counties (N=2277)
- Bungoma (35%) has the lowest availability of malaria vaccination services compared to Busia (76%) and HomaBay (76%) where the service was most availability.
- By ownership, malaria vaccination was least available in private (41%) compared to public facilities (81%) where it was most available

Service Readiness

- Amongst the facilities in the 8 target counties, the Malaria vaccine availability in 61%

- Bungoma county had the least availability of the vaccine at 35% with HomaBay at the highest availability at 76%.

Figure 45: Malaria Vaccination(left) and vaccines(right) by county



Discussion

Overall, the availability of malaria services has increased compared to the KHFA 2018 performance: diagnostic services from 89% to 98% among the facilities offering malaria services. More specifically, the availability of treatment services has increased from 45% in 2018 to 98% in 2024. However, the Malaria service readiness improved; Availability of first line medicine has increased slightly from 78% (2018) to 81%.

Conclusions

Malaria services are generally available nationally and what remains is improvement of quality.

Table 23: Malaria recommendations

Findings	Recommendations
Readiness ● Availability of diagnostics, especially microscopy, was low.	● Enhance diagnostic capacity, second line medicines and guidelines in health facilities for effective management of malaria.
● Second line treatment for Malaria was available in less than half of the facilities offering services	
● Availability of guidelines was low across location, KEPH and ownership	

HIV

HIV is a major global public Health priority and Kenya continues to face a significant HIV burden with an estimated 1.4 million people living with HIV (PLHIV) as of 2020 reflecting on adult prevalence rate of 3.7% according to the 2023 HIV estimates. This emphasizes the need for evidence-based strategies for prevention, testing, treatment and stigma reduction to achieve the 95-95-95 target.

HIV tracer medications, or antiretroviral therapy (ART) adherence is crucial in Kenya's efforts to combat the HIV epidemic. These medications help ensure that patients maintain consistent and effective ART regimens, which is vital for suppressing the virus, reducing transmission rates, and improving the quality of life for individuals living with HIV.

By strengthening ART adherence, the national goals of reducing HIV prevalence and advancing toward the UNAIDS 95-95-95 targets, which aim for 95% of people living with HIV knowing their status, 95% of those diagnosed being on treatment, and 95% of those on treatment achieving viral suppression.

Service availability

Five (5) services were selected for HIV as follows:

Table 24: HIV tracer Services

Domain	Tracer services
HIV	• HIV Counselling and testing • PrEP (Pre-Exposure Prophylaxis) • PEP (Post-Exposure Prophylaxis) • Antiretroviral Treatment (ART) Services • Treatment of opportunistic infection and Elimination/Prevention of Mother to Child Transmission of HIV (E/PMTC) Services

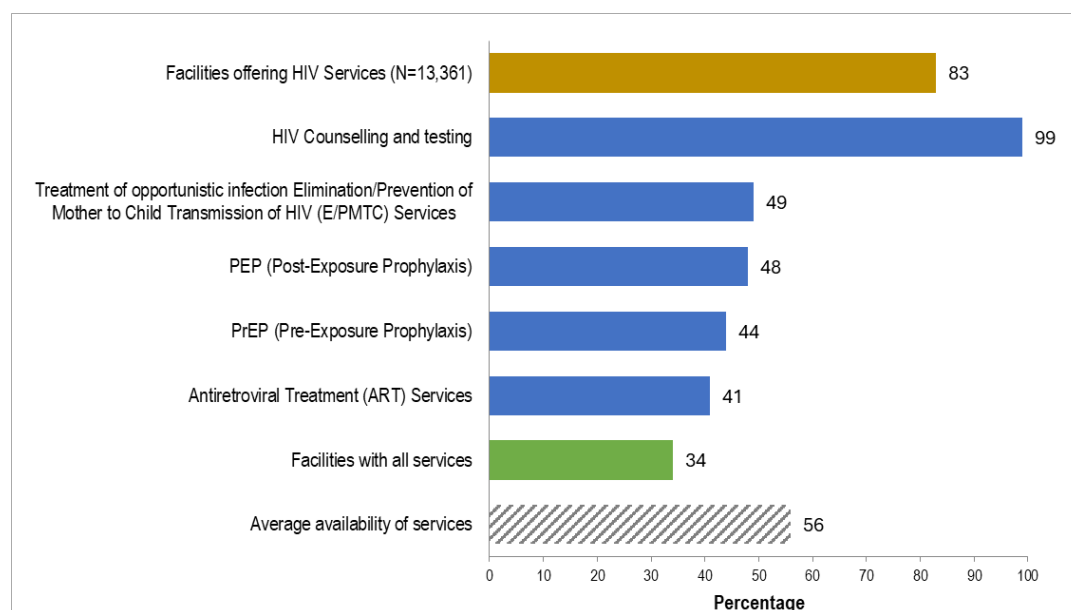
Key findings

Figure 46 below shows the availability of HIV services in the country;

Among the facilities offering HIV services;

- HIV Counselling and Testing was the most available service at 99%, whereas Antiretroviral services (ART) were the least at 41%
- About half of the facilities had Elimination/Prevention of Mother to Child Transmission of HIV (E/PMTC) and PEP (Post-Exposure Prophylaxis) Services at 49% and 48% respectively
- Overall, the average availability of HIV services was at 56%.
- About a third (34%) had all five tracer HIV services available

Figure 46: Percent of facilities that have select HIV tracer services (N=11,071)



Disaggregation by location, KEPH level and ownership.

Annex Table 160 shows the average availability of HIV tracer services disaggregated by location, KEPH level, ownership and by county.

Among the health facilities offering HIV services;

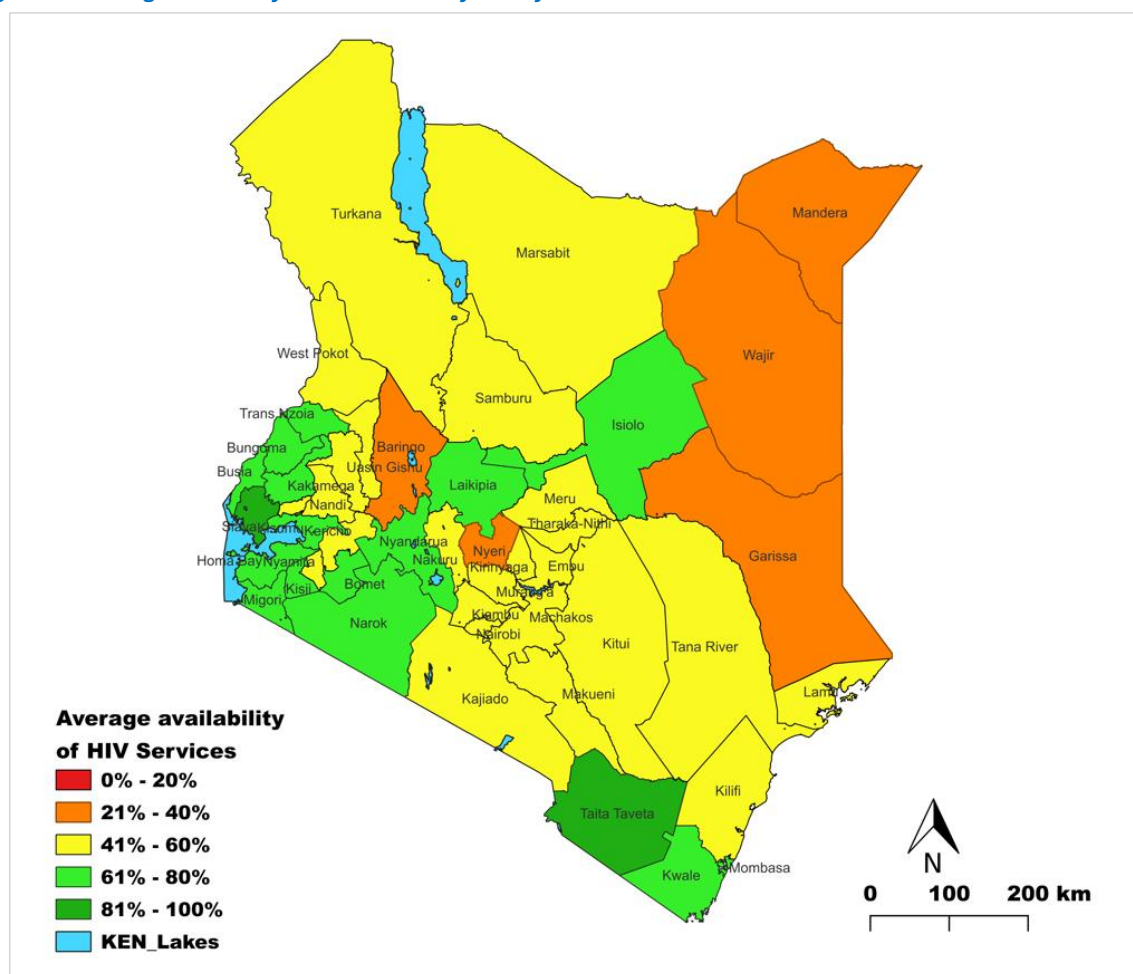
- By location, among the facilities offering HIV services, all rural facilities had HIV testing and counselling services. Rural facilities had a slightly higher availability of PEP, PrEP, ART and E/PMTCT services compared to urban facilities.
- By facility type, all the level 3,4 and 5 facilities had HIV testing and counselling services.
- HIV testing and counselling services were available in almost all health facilities regardless of the ownership. However, private facilities had the least availability of PEP, PrEP, ART and E/PMTCT services.

County Distribution

There were variations across the counties in the average percentage availability of HIV services in the health facilities;

- Taita Taveta County had the highest average 82% while Wajir had the least at 23%
- Five (5) counties had an average percentage availability of HIV services in the health facilities of less than 40%: Baringo (38%), Nyeri (37%), Mandera (36%), Garissa (35%) and Wajir (23%)
- None of the counties had all the HIV services available in all their health facilities
- Siaya County had the highest percentage of its health facilities having all the HIV services available at 71% while Wajir had the least at 2%

Figure 47 : Average availability of HIV Services by county



Service Readiness

Readiness to provide HIV services was assessed based on the presence of the 5 tracer items found in Table 21. Figure 45 shows the percentage availability of these tracer items in facilities that offer HIV services (N=11,071)

The tracer items assessed for HIV service readiness are outlined in Table 25 below.

Table 25: Tracer items for HIV services

Domain	Tracer items
Guidelines	- Kenya HIV Prevention and Treatment Guidelines 2022 - The Kenya HIV Testing Services Manual 2022
Diagnostics	- Viral load - CD4 - HIV test kits - Renal function test - Liver function test

Domain	Tracer items
Equipment	● Room with visual privacy ● Room with auditory privacy
Medicines	Adult First-line antiretrovirals ● TDF/3TC/DTG (Tenofovir Disoproxil Fumarate/ Lamivudine/ Dolutegravir) ● AZT/3TC/ATVr (Zidovudine/ Lamivudine/ Atazanavir/ritonavir) Children first line ART ● ABC (Abacavir)+3TC (Lamivudine) +LPVr Lobinavir/Ritonavir ePMTCT regimen- (Zidovudine syrup and Nevirapine syrup) ● PEP Drugs -Tenofovir, Lamivudine & Dolutegravir (TLD) - ● Prep Drugs -Tenofovir/Emtricitabine - Management of HIV in children 0-9years ● Nevirapine (NVP) syrup ● Lamivudine (3TC) syrup ● Dolutegravir (DTG) syrup ● Abacavir confirm if they are syrups/soluble tablets ● Tenofovir (TDF) ● Cotrimoxazole syrup or dispersible tablets

Primary health facilities

Among the health facilities offering HIV services in Level 2 and 3;

- The most available tracer items were HIV test kits at 94% while about 1 out of 3 facilities had HIV Guidelines
- 8 out of 10 health facilities and 7 out of 10 health facilities had rooms with visual and audio privacy, respectively
- The average availability of the items was 60% while only 18% had all the HIV tracer items available on the day of the survey.

Hospitals

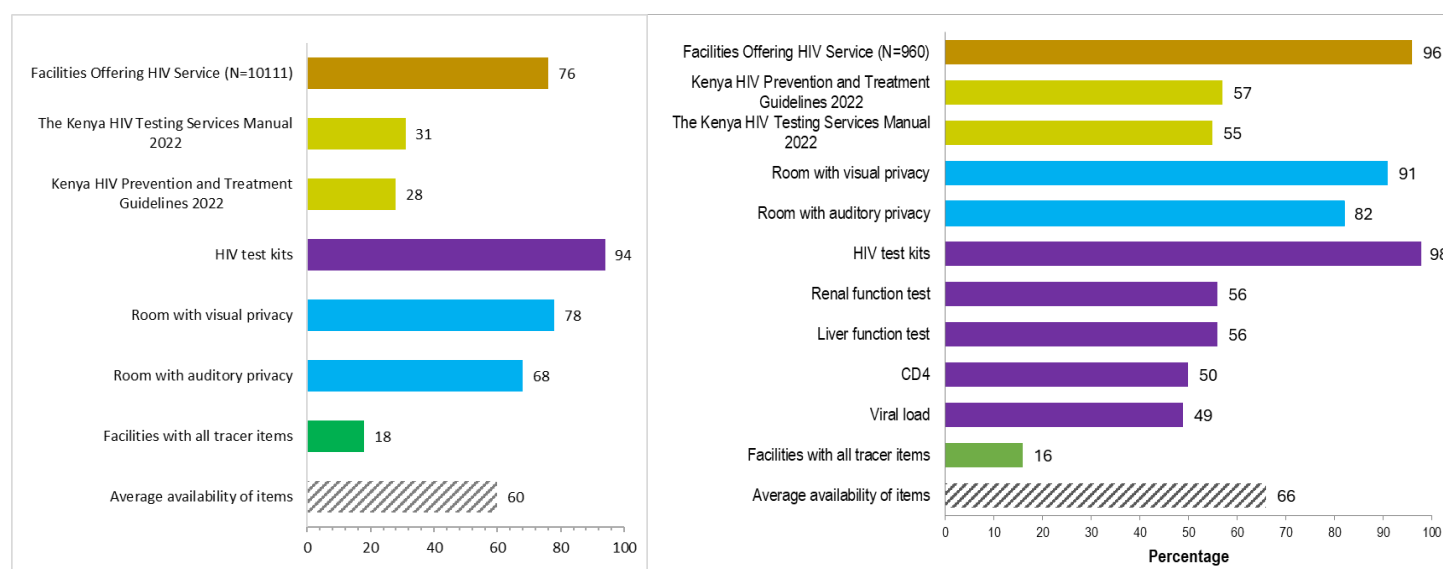
Among the health facilities offering HIV services in Level 4 and 5;

- The most available diagnostics were HIV test kits at 98%, while about 1 in 2 facilities Viral Load and CD4 tests
- 9 out of 10 health facilities and 8 out of 10 health facilities had rooms with visual and

audio privacy, respectively

- The availability of the 2 guidelines was 55% and 57%
- The average availability of the items was 66% while only 16% had all the HIV tracer items available on the day of the survey.
- Figure 48 below shows the readiness of health facilities in the provision of HIV services for primary health facilities and hospitals.

Figure 48: Percent of facilities that have select HIV tracer items for primary health facilities(N=10,111) and hospitals(N=960)



Disaggregation by location, KEPH level and ownership.

Annex Table 62 shows the average availability of HIV tracer items disaggregated by location, KEPH level , ownership and by county.

Among the health facilities offering HIV services;

Tracer Items

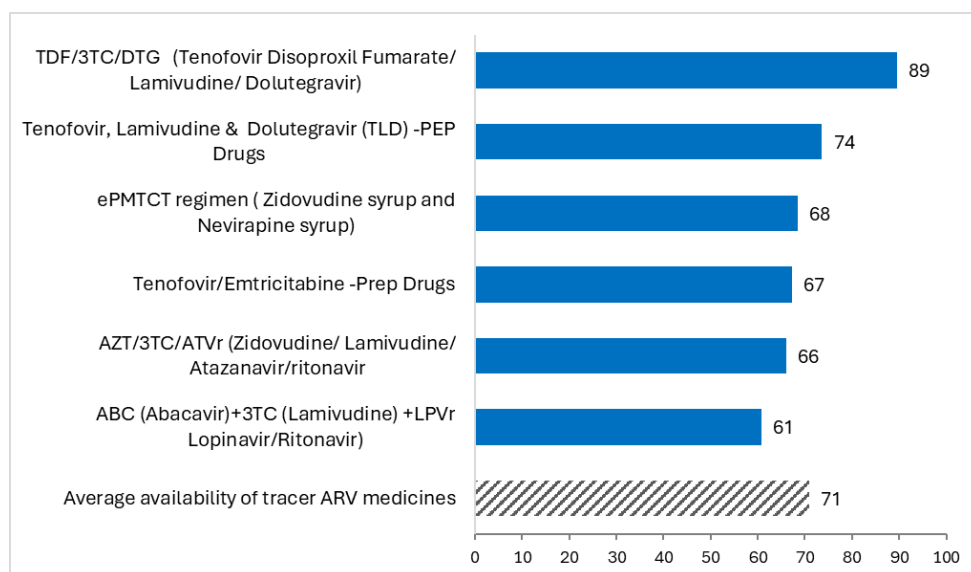
- Average availability of HIV tracer items in the health facilities was slightly more than a third at 38%
- Average availability of tracer items was comparable in Urban facilities (39%) and rural facilities (37%)
- By KEPH Level, level 2 facilities had the least average availability of items at 31%, while level 5 had the highest at 86%
- By ownership, private facilities had the least average availability of items at 28%

Medicines

Among health facilities providing HIV services;

- Adult first-line ARVs (Tenofovir Disoproxil Fumarate/Lamivudine/Dolutegravir TDF/3TC/DTG) had the highest availability at 89%
- Children first line ARVs [Abacavir/Lamivudine/Lopinavir/Ritonavir (ABC+3TC+LPVr)] have the least availability at 61%
- Generally, there was lower availability of ARVs for children, just above 60% compared to adult ARVs, which ranged between 74% and 89%.

Figure 49: Percent of facilities that have select tracer ARVs

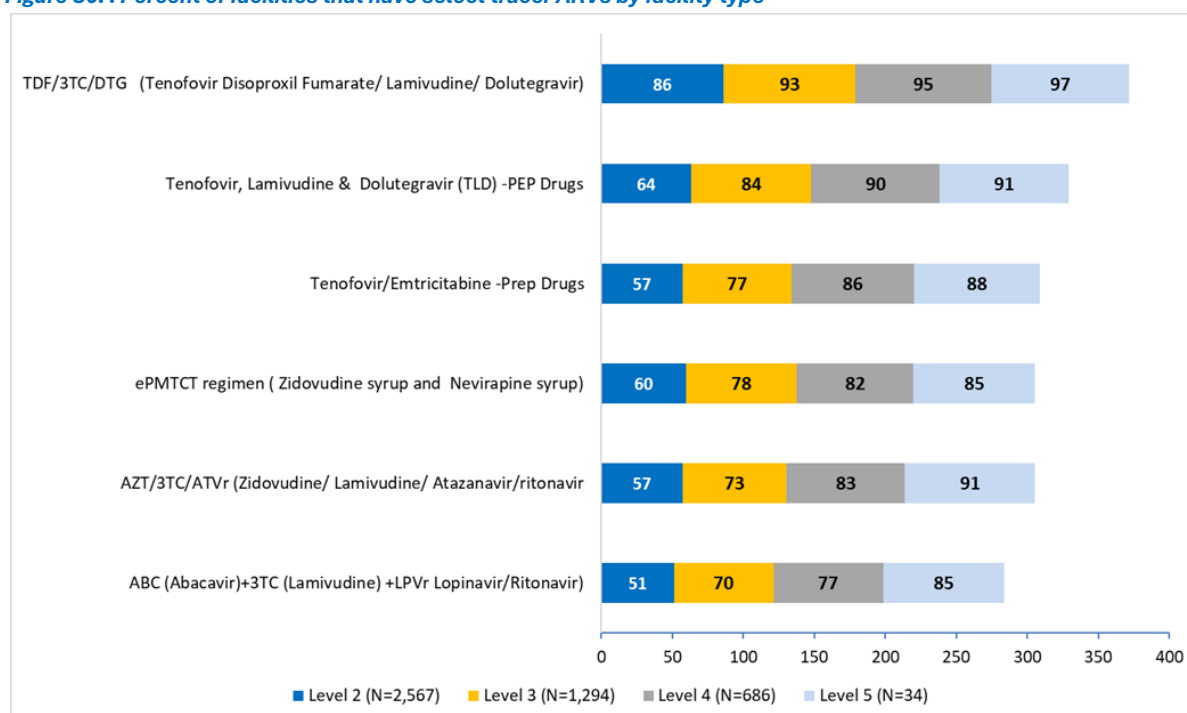


Disaggregation by location, KEPH level and ownership.

Annex Table 166 shows the average availability of ARVs disaggregated by location, KEPH level, ownership and by county.

- All the drugs' combinations were available across all the levels of care with over 50% availability.
- By location, HIV medicines were more available in rural (35%) compared to urban (28%) facilities
- By ownership, private facilities had the least availability of HIV tracer items with medicines being the least at 10%

Figure 50: : Percent of facilities that have select tracer ARVs by facility type



County Distribution

Annex Table 63(*PHC facilities*), 62(*hospitals*) and Figure 51 show the average availability of HIV tracer items disaggregated by county.

There were variations in the readiness to provide HIV items across counties;

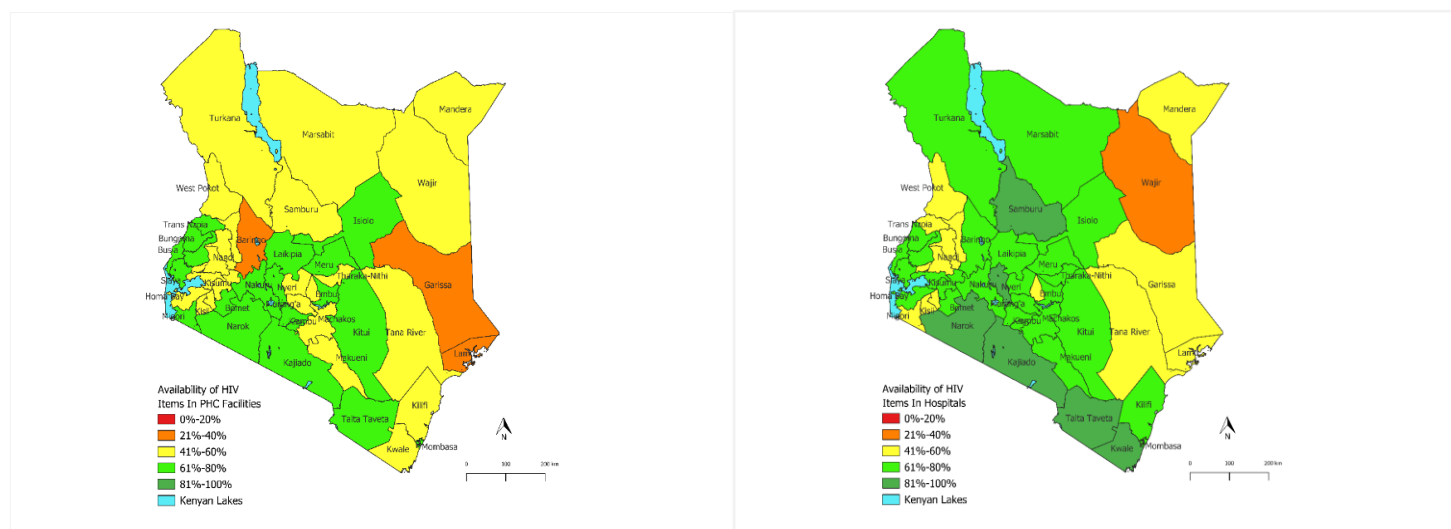
Primary healthcare facilities

- Majority of the counties had average availability of the tracer items ranging between 41% to 80%
- Kakamega county had the highest average availability of the tracer items at 80%
- Baringo and Garissa counties had the lowest average availability of the tracer items at 28% and 33% respectively

Hospitals

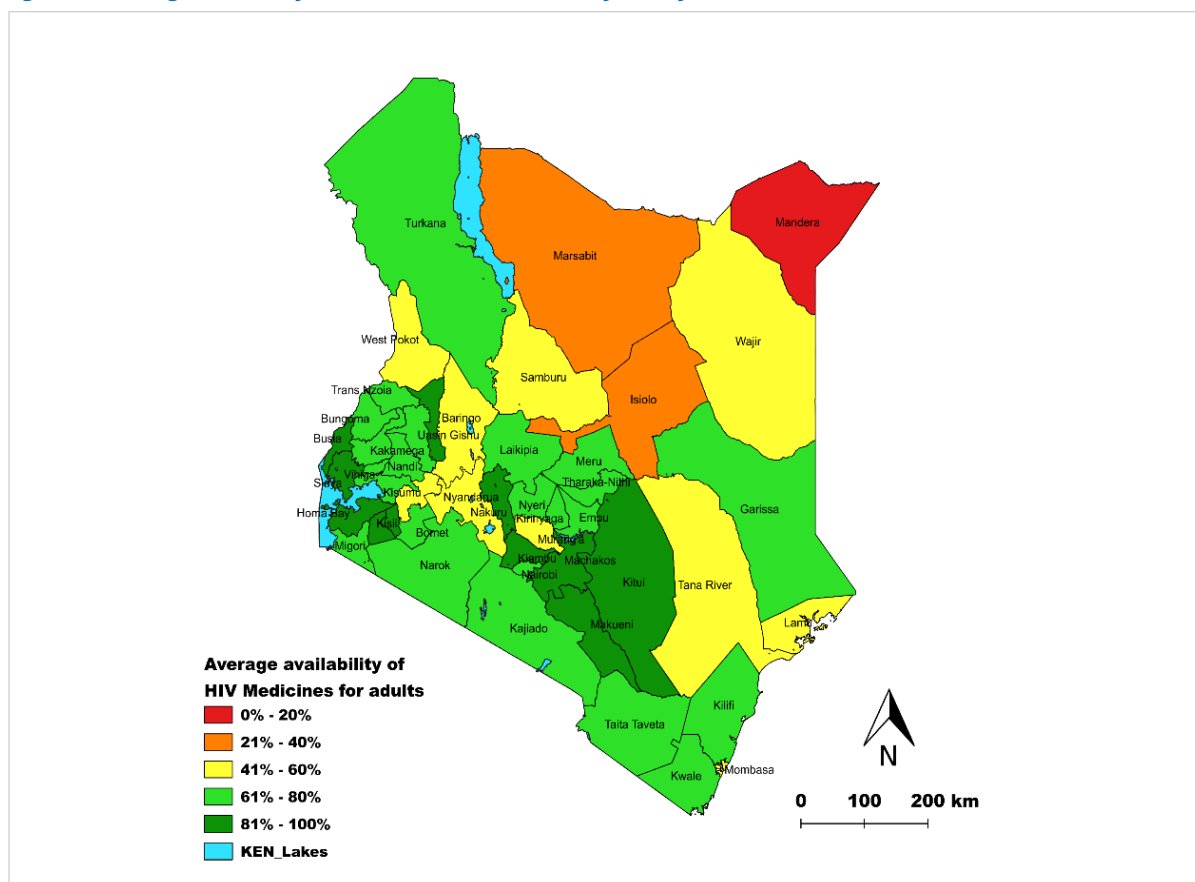
- The majority of the counties had average availability of the tracer items ranging between 61% to 89%
- Nyandarua County had the highest average availability of the tracer items at 89%
- Wajir County had the lowest average availability of the tracer items at 33%

Figure 51: Average Readiness of HIV tracer items in PHC facilities(left) and Hospitals(right) by county



- The average availability of the tracer ARVs varied across the counties: Annex 166.
- 11 counties had an average availability of over 81%
- Nyamira County had the highest average availability at 92%, while Mandera County had the least availability at 15%

Figure 52: Average availability of HIV Medicines for adults by county

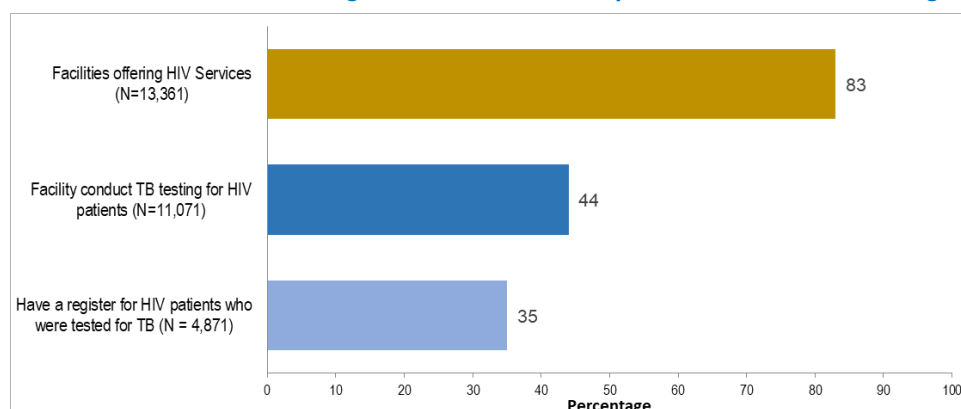


HIV/TB Co-infection

Figure 53 below shows the availability of TB services among the facilities offering HIV services;

- Among the facilities offering HIV services, less than half (44%) were conducting TB testing for their HIV patients
- Of the facilities conducting TB testing for their HIV patient, slightly more than a third (35%) had registers

Figure 53: Percent of facilities offering HIV services that test patients for TB and have registers



Discussion

While Kenya has made tremendous progress in HIV Prevention, Care and Treatment through introduction of better medicines, diagnostics and patient centered approaches in service delivery, erratic supply of essential commodities, infrastructure and inadequate staffing continues to be a challenge.

Despite 83% of the health facilities offering HIV services, all tracer services were available in a third of facilities, limiting availability of most HIV services.

HIV testing and counselling services improved from 78% in KHFA 2018 to 99% in the QOC 2024. Similarly, ART services improved from 35% in KHFA 2018 to 41% in the QOC 2024.

Generally, the availability of HIV guidelines was low across all facility levels, which is likely to compromise provision of standardized care for HIV. Privacy (both auditory and visual) has increased from 52% in KHFA 2018 to over 70% in the QOC 2024.

Table 26: HIV Recommendations

Finding	Recommendation
The apparent inequalities seen across counties are likely to be due to the varied distribution of HIV burden across the country.	Deliberate investments should be made to provide HIV services prioritizing high burden Counties
In facilities offering HIV services, readiness (availability of tracer items) was moderate, with 2 of every 3 facilities (63%) having all the tracer HIV items.	
Generally, there was lower availability of ARVs for children compared to adult ARVs	Improve the availability of ARVs for children to ensure families can receive treatment from one facility

Tuberculosis

Kenya is among the top 30 countries with a high burden of TB, with a prevalence rate of 426 per 100,000 population in 2017⁴, and an estimated 133,000 new TB cases in 2021⁵. TB is categorized into Drug Susceptible TB (DSTB) and Drug-Resistant TB (DRTB). Drug-resistant TB strains and TB/ HIV coinfection are significant public health and economic challenge. Kenya has made substantial progress in TB control, with decreasing incidence and mortality rates since 2015, putting the country on course to meet End TB milestones.

The Integrated guideline for TB, Leprosy and Lung Disease (2021) Kenya prioritizes the GeneXpert over Chest x-rays for TB testing due its superior diagnostic accuracy particularly in detecting TB among high-risk populations.

The standard treatment for DSTB involves a combination of antibiotics taken over an extended period, usually six months or more, to effectively eliminate the bacteria and prevent drug resistance. The most commonly used TB medicines include; Rifampin (R), Isoniazid (H), Pyrazinamide (Z) and Ethambutol (E) which are the first-line TB treatment drugs (RHZE). For cases of DRTB, additional or alternative medications, such as Bedaquiline or Linezolid, may be used. Adherence to the full course of TB medicines is essential to cure the infection, reduce the risk of transmission, and prevent the development of more resistant strains of the bacteria.

Service Availability

The 2024 QOC assessed the availability of DSTB services based on six tracers across all the facilities that offered TB services as shown in Table 27 below

Table 27: Tracer items for Tuberculosis services

Domain	Drug Susceptible TB (DSTB)Tracer Services
Services	● TB Screening ● TB Diagnosis (<i>level 3 and above</i>) ● TB treatment ● Patient clinical follow up ● Patient follow-up for adherence ● Refill of individual patient drugs

Findings

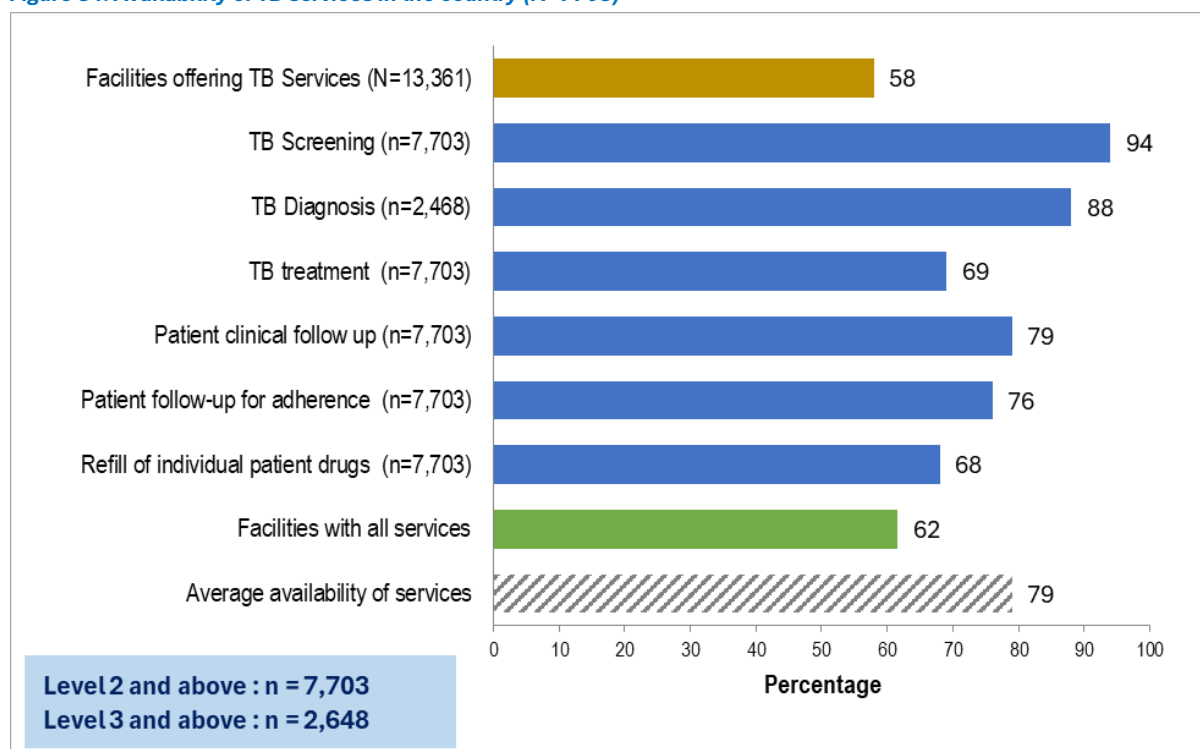
The availability of TB services was 58% (n=7,703) among all the health facilities. Figure 54 shows the availability of TB in the country.

⁴ Kenya TB Prevalence Survey 2017

⁵ NLTP Annual Report https://nltp.co.ke/wp-content/uploads/2024/01/Annual-Report_2022_22_12_2023.pdf

- Overall TB services were moderately available with screening, diagnosis and treatment at 94%, 88% and 69% respectively.
- Availability of follow up services were above 65%; clinical follow up (79%), follow up for adherence (76%) and refill of individual patient drugs (68%).
- Overall, the mean availability of TB services was at 79%. Facilities with all TB services available were 62%.

Figure 54: Availability of TB services in the country (N=7703)



Disaggregation by location, KEPH level and ownership

Annex Table 54 shows availability of TB tracer services by location, facility type, ownership and by county.

Among the facilities offering TB services,

- Overall, slightly more than two thirds (62%) of the facilities had all TB services available.
- Rural facilities (66%) had higher availability of all services than urban facilities (55%).
- By facility type, level 2 facilities had the least availability of all services at 54% while level 5 had the highest availability at 94%.
- Availability of all TB services in public facilities was 76%.

Screening

- Availability TB screening services was generally high across all locations, KEPH level and ownership.

Diagnosis

- 
- Availability of diagnostic services was comparable across rural and urban health facilities at 89% and 87% respectively.
 - By KEPH level, availability of TB diagnosis services was generally high across all levels ranging from 85% in level 3 facilities to 97% in level 5 facilities; By ownership, NGO facilities had the least availability of TB diagnostic services at 66%.

Treatment

- TB treatment and refill of individual patient drugs services were most available at Level 5 (both at 97%) and least available in level 2 facilities at 62% each. Both services were least available in private facilities at 40% and 35% respectively.

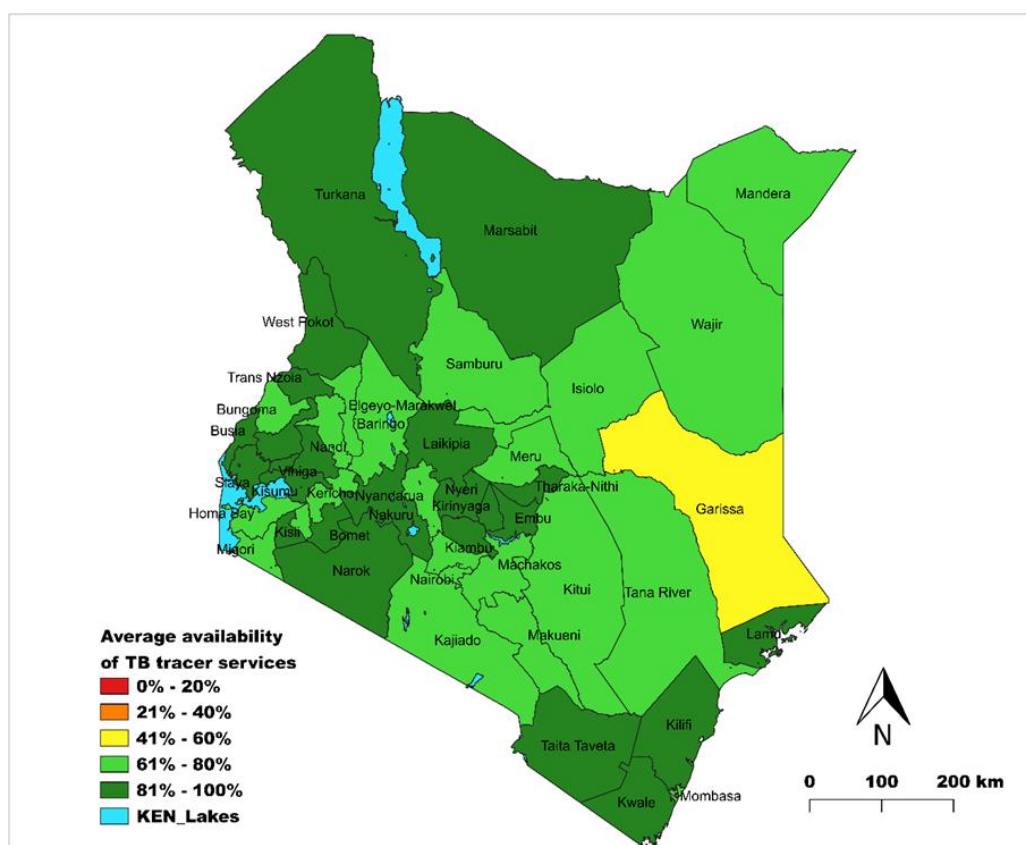
County Distribution

Figure 55 shows availability of TB tracer services distributed by county.

There were variations across the counties in the average percentage availability of TB services in the health facilities;

- TB services were moderately available across the country with majority of the counties registering above 60% availability.
- Siaya county had the highest average availability of TB services 93% while Garissa had the least at 56%.
- Seven (7) counties, Bomet, Embu, Kirinyaga, Siaya, Kwale, Trans Nzoia and Narok had an average percentage availability of TB services in the health facilities of 90% and above.
- Narok County had the highest proportion of facilities with all the TB services available in all their health facilities, while tana River had only 35% of facilities with all items.

Figure 55: Average availability of TB tracer services by county



Service Readiness

The 2024 QOC assessed readiness to provide TB services based on the presence of the 4 tracer domains found in Table 28 below. These items were assessed based on the level of facility where each service is expected.

Table 28: Tracer items for TB Services

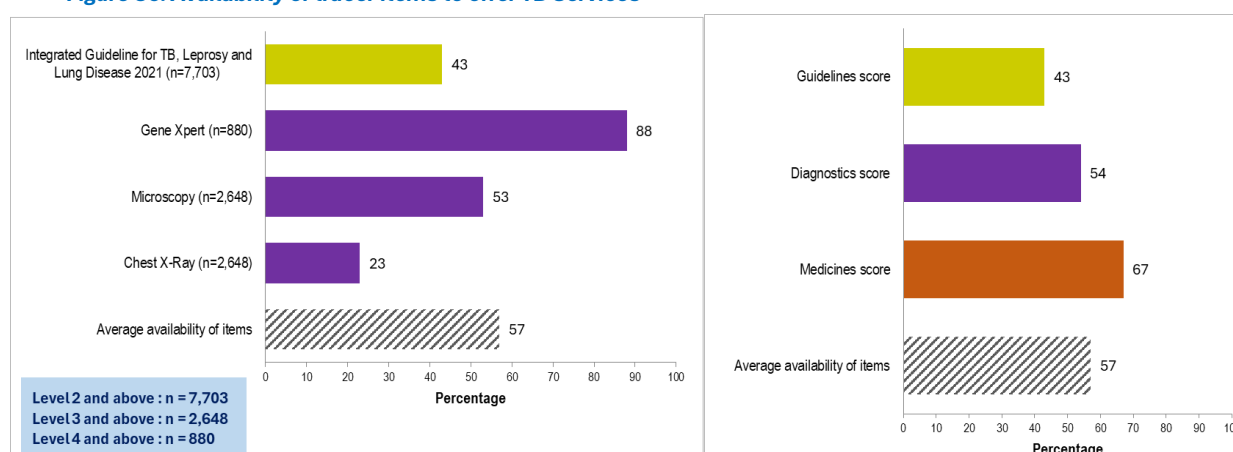
Domain	Tracer items
Guidelines	Integrated Guideline for TB, Leprosy and Lung Disease 2021
Diagnostics	- Microscopy - Gene Xpert - Chest X-Ray
Medicines	- First-line TB medications adults- Rifampicin, Isoniazid, Pyrazinamide, Ethambutol (RHZE) - Pyridoxine 50mg - Children -Rifampicin 75 mg: isoniazid 50 mg: pyrazinamide 150mg (RHZ 75:50:150) tablet - Rifampicin 75mg: Isoniazid 50mg (RH 75:50) tablet - Pyridoxine 50mg

Findings

Figure 56 below shows the average availability of tracer items that offer TB (N=7,703) services. Among the health facilities offering TB services;

- The overall readiness of health facilities to provide TB services was 57%, with diagnostic availability at 54%.
- Gene Xpert, microscopy and Chest Xray services being 88%, 53% and 23% respectively.
- Availability of Integrated Guideline for TB, Leprosy and Lung Disease 2021 was 43%.
- About 2 of every 3 facilities had TB Medicines (67%).

Figure 56: Availability of tracer items to offer TB Services



Disaggregation by location, KEPH level and ownership

Annex Table 55 shows availability of TB tracer items by location, facility type, ownership and by county.

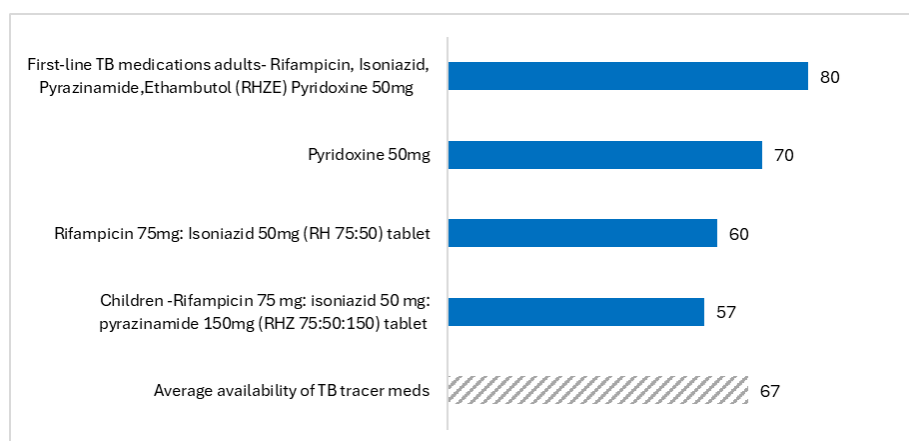
- Average availability of TB tracer items was slightly lower in rural (55%) compared to urban facilities (61%).
- By Owner, NGO's facilities had the highest availability of TB tracer items at 67% while private facilities had the least (48%).
- By KEPH level, level 5 facilities had the highest availability of TB tracer items at 89%; GeneXpert diagnostic services were widely available (87% of level 4 facilities and 94% of level 5 facilities), while only 37% of level 4 facilities had chest Xray diagnostic services for TB; 2 of every 3 level 4 facilities had guidelines and microscopy screening services.

Medicines

Figure 57 shows the percentage availability of the select tracer medicines for TB;

- The first line TB treatment for adults was available in 80% of facilities while availability of first line for children was much lower at 57%.
- The average availability of the TB tracer medicines was 67%.

Figure 57: Percent of facilities that have select TB medicines



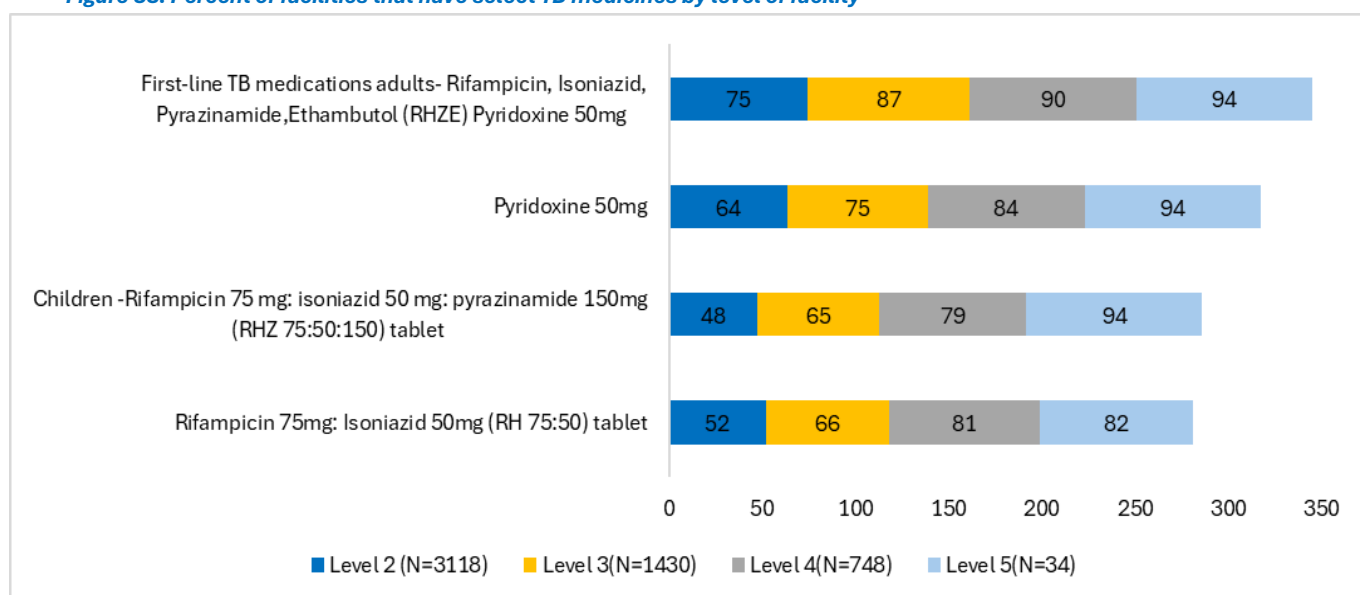
Disaggregation by location, KEPH level and ownership

Annex Table 154 shows the availability of TB tracer medicines by location, facility type, ownership and by county

Figure 58 shows the percentage availability of the select tracer medicines by facility level

- More than three quarters of the facilities across all the levels had the first line TB medication for adults with the highest availability being among the Level 5 facilities at 94% and Level 2 at 75%.
- Majority of the Level 5 facilities had all the tracer medicines for TB with RH 75:50 being the least available.
- Availability of the first line TB medication for children compared to that of adults was lower in Level 2, 3 and 4.

Figure 58: Percent of facilities that have select TB medicines by level of facility



County Distribution

Figure 59 shows availability of TB tracer items and medicines distributed by county.

Tracer Items

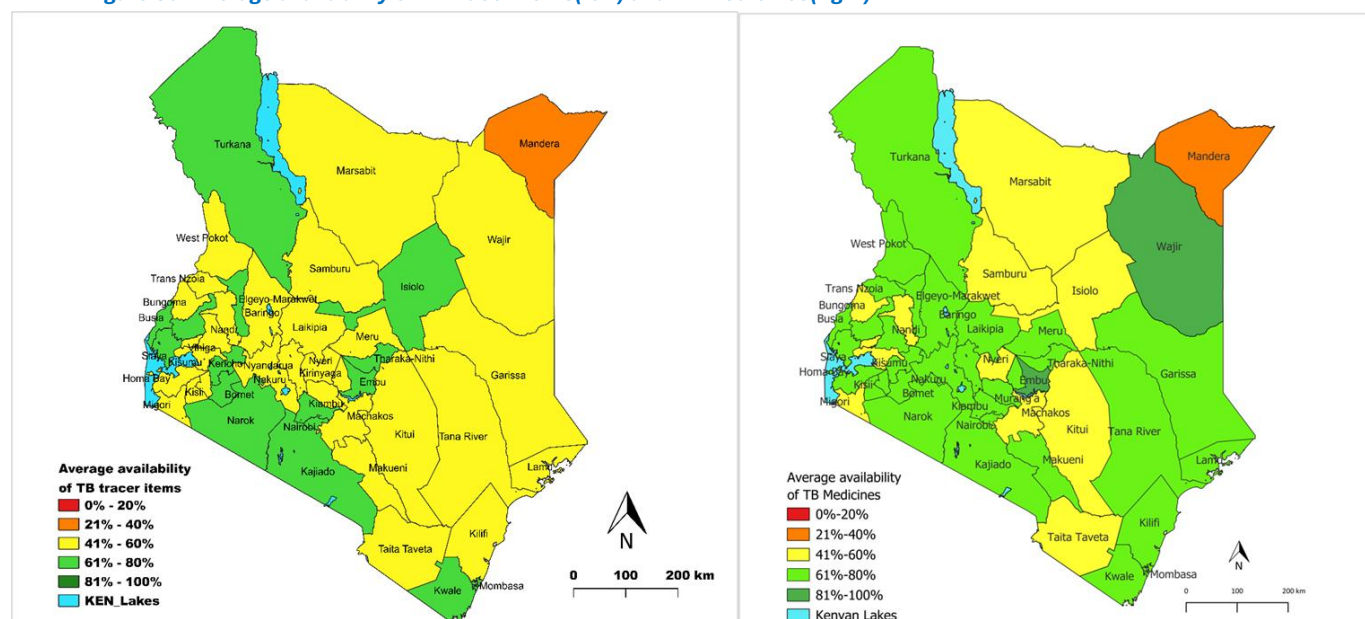
There were variations across the counties in the average percentage availability of TB tracer items in the health facilities.

- Majority of the counties had average availability of all TB tracer items ranging from 21-40%.
- Four counties (Bomet, Embu, Siaya and Narok) had average availability of at least 50% of all TB tracer items available.

Medicines

- TB medicines are widely available in the country with most of the counties had an average availability of 61% to 80%.
- Two counties, Wajir and Embu had the highest average availability of TB medicines of over 80%.
- Mandera County had the least availability of less than 20%.

Figure 59: Average availability of TB tracer items(left) and TB medicines(right)



Multi Drug Resistant Tuberculosis (MDR TB)

Drug resistance (i.e. resistance to at least one anti-tuberculosis drug) remains a significant public health menace in Kenya. In Kenya, routine surveillance for drug resistant TB is limited to high-risk groups including those previously treated for TB. In 2022, Kenya reported 752 cases of drug-resistant TB. The country has adopted novel TB diagnostic platforms such as Truenat and GeneXpert Ultra that will go a long way to enable timely diagnosis and treatment of DRTB.

Service Availability

The tracer items assessed for Drug Resistant Tuberculosis service readiness are outlined in Table 29 below.

Table 29: Tracer services for Drug Resistant Tuberculosis services

Domain	MDR TB Tracer services
Services	● DR-TB diagnosis and testing ● Treatment for drug resistant TB ● DR-TB Patient clinical follow up ● DR-TB Patient follow-up for adherence ● Refill of individual patient DR-TB drugs ● Facilitate social support for patients with DRTB e.g. counselling, social support groups ● Perform contact tracing for patients with DRTB

Key findings

Figure 60 shows the availability of Multi Drug Resistant Tuberculosis tracer services in the country. It should be noted that this section only applies to the facilities providing TB services (N=7703);

- The average availability of all DRTB services was 34%.
- Only 18% of facilities had all DRTB tracer services available.
- Overall, the availability of MDR tracer services was low, with DRTB contact tracing services being the most available at 38% and DRTB diagnosis and testing being the lowest at 26%.
- DRTB diagnosis and testing services were less available (26) than DRTB treatment (30%).
- Availability of three follow up tracer services was 36% for DRTB clinical follow up, 35% for patient follow up for adherence, 34% for refill of individual patient DRTB drugs.
- Community-facing services such as contact tracing and facilitation of social support for DRTB patients had availability of 38% and 36% respectively.

Figure 60: Percent of facilities that have select DR-TB tracer services (N=7703)

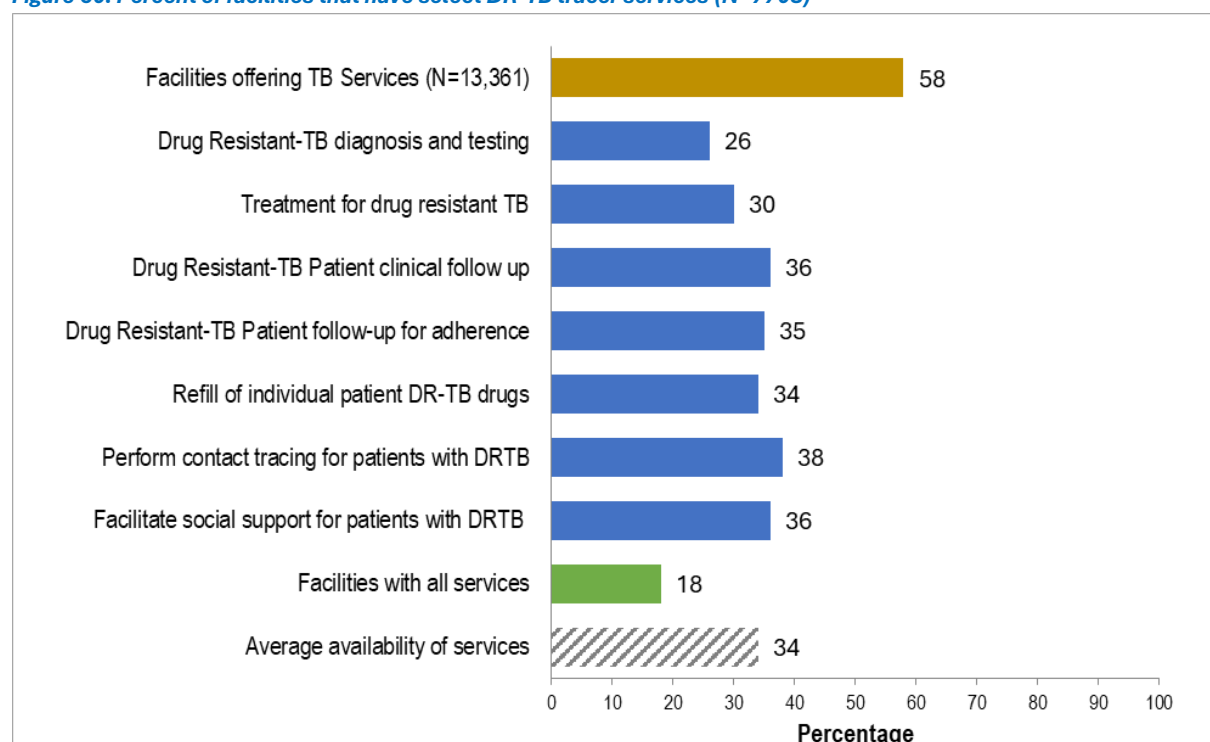
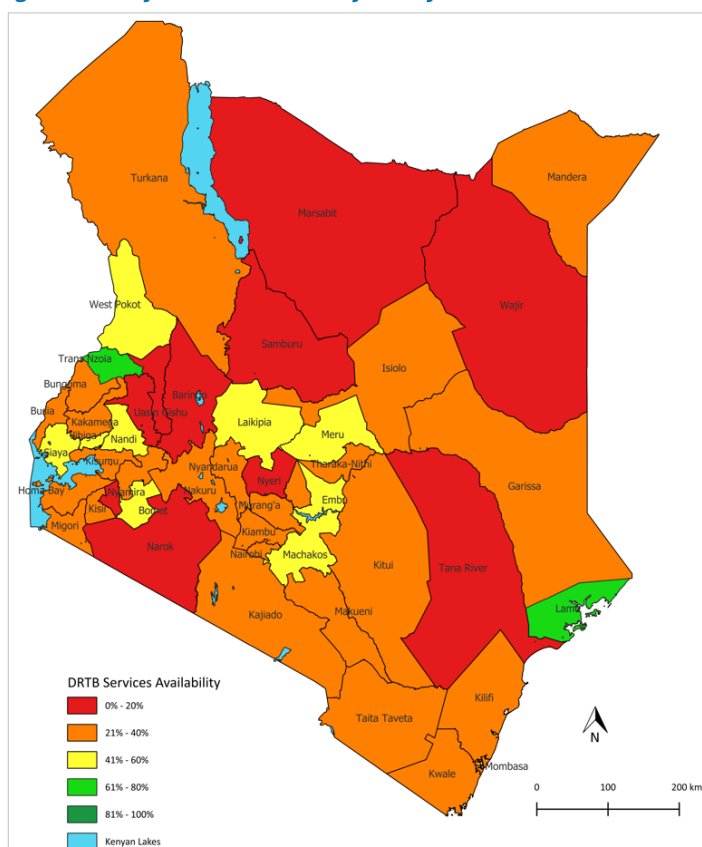


Figure 61 shows average availability of DRTB tracer services distributed by county.

There were variations across the counties in the average percentage availability of DR-TB services in the health facilities.

- Average availability of DRTB tracer services in the country was low with majority of the counties ranging between 21 and 60%.
- Two counties (Lamu and TransNzoia) had a high average availability of DRTB services at 72% and 62% respectively.
- Seven (7) counties (Lamu, Trans Nzoia, Bomet, Siaya, Vihiga, Embu and Laikipia) had a score of at least 50% in the average availability of DR-TB services
- None of the counties had all the DR-TB services available in all their health facilities

Figure 61: Average availability of DRTB Services by county



Service Readiness

Readiness to provide DRTB services was assessed based on the presence of the 6 tracer items found in Table 30.

Table 30: Tracer items for DRTB services

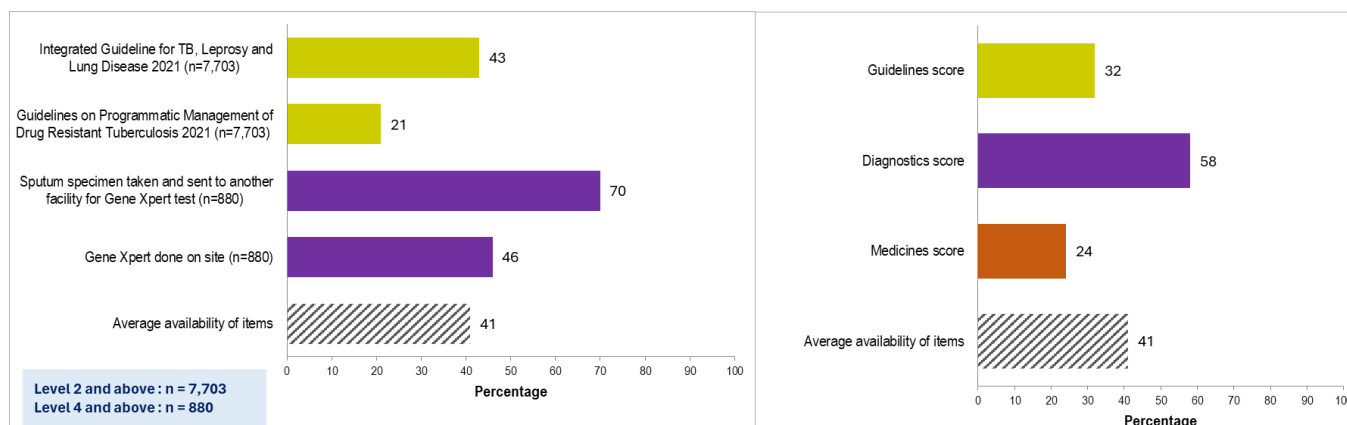
Domain	Tracer items
Guidelines	● Integrated Guideline for TB, Leprosy and Lung Disease 2021 ● Guidelines on Programmatic Management of Drug Resistant Tuberculosis 2021
Diagnostics	● Gene Xpert done on site ● Culture ● Sputum specimen taken and sent to another facility for Gene Xpert test
Medicines	● National treatment medicines for drug resistant TB (Bedaquiline)

Key Findings

Figure 62 below shows the readiness of health facilities in the provision of DR-TB services. Among the health facilities offering TB services.

- Slightly above half of facilities had diagnostic capacity for DR-TB was (58%) while only a third had the relevant guidelines
- Only 1 out of 10 health facilities had DR-TB medicines available on the day of the survey
- Gene expert diagnostic test was available onsite in 46% of hospitals providing DRTB services
- The overall readiness of the health facilities for the provision of DR-TB services was at 41%

Figure 62: Readiness of health facilities to provide DR-TB services



Disaggregation by location, KEPH level and ownership

Annex Table 57 shows availability of DRTB tracer items by location, facility type , ownership and by county.

- Average availability of all DR-TB tracer services was low at 41%.
- Rural facilities generally scored poorer in availability of most tracer items for DRTB compared to urban facilities; However, more rural facilities collected sputum specimen and sent to another facility for Gen Xpert test, signifying low availability of the equipment in rural facilities
- NGO facilities had the lowest availability of Gene Xpert in site while availability was still low but comparable in other ownership categories
- Guidelines were least available in primary health facilities: Private and public facilities equally had low availability of guidelines for DRTB treatment
- Wajir and Garissa are high burden TB counties yet only 7% and 11% of their facilities had Gene Xpert testing onsite.

Medicines

- Overall availability of Bedaquiline, the only DRTB tracer drug assessed, was 10%.
- Level 4 and 5 facilities had availability of 25% and 26% respectively.
- Availability of DRTB tracer medicine by ownership was low; FBO (16%), Public (11%), NGO (10%) and private (4%).

County Distribution

Figure 63 shows readiness of DR-TB tracer services distributed by county.

There were variations across the counties in the average percentage availability of DR-TB tracer items in the health facilities;

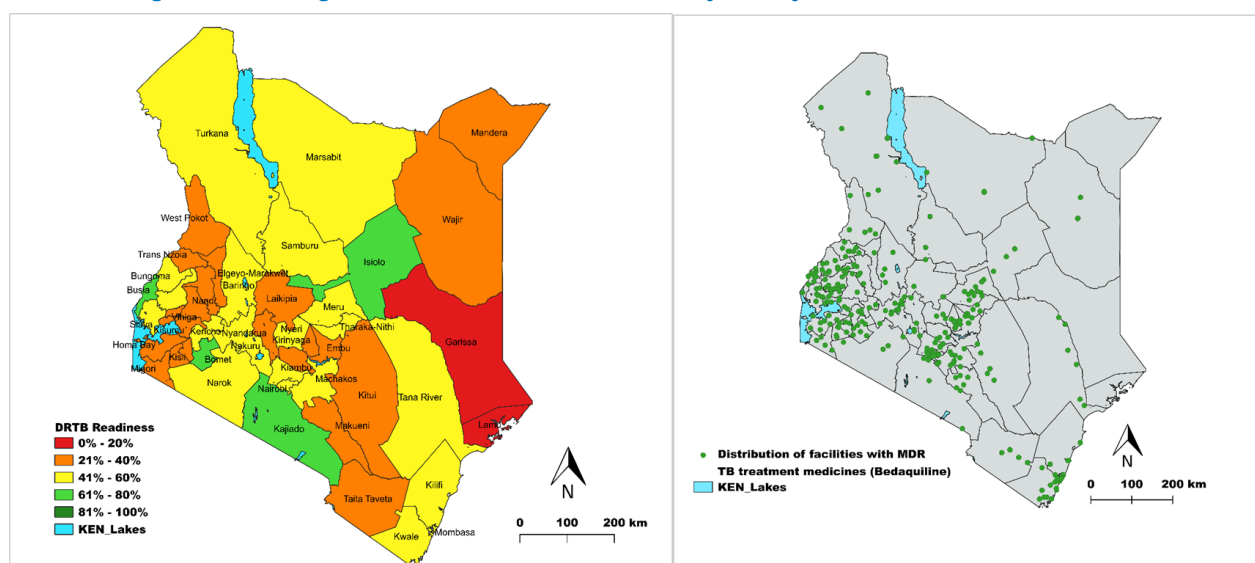
Tracer items

- Most Counties had low availability of Guidelines on Programmatic Management of Drug-Resistant Tuberculosis 2021; Guidelines were generally less available in Garissa, Lamu, Kirinyaga, Kisii, Makueni, Uasin Gishu, Nyamira, Wajir and Tana River.
- Gene Xpert test on site was least available in Garissa, Kisii Lamu, Uasin Gishu, Vihiga and Wajir
- Garissa and Lamu had the least availability of DRTB tracer items at 14% and 9% respectively.

Medicines

- Figure 63 shows the distribution of facilities with DRTB medicines.

Figure 63: Average Readiness of DR-TB services by county

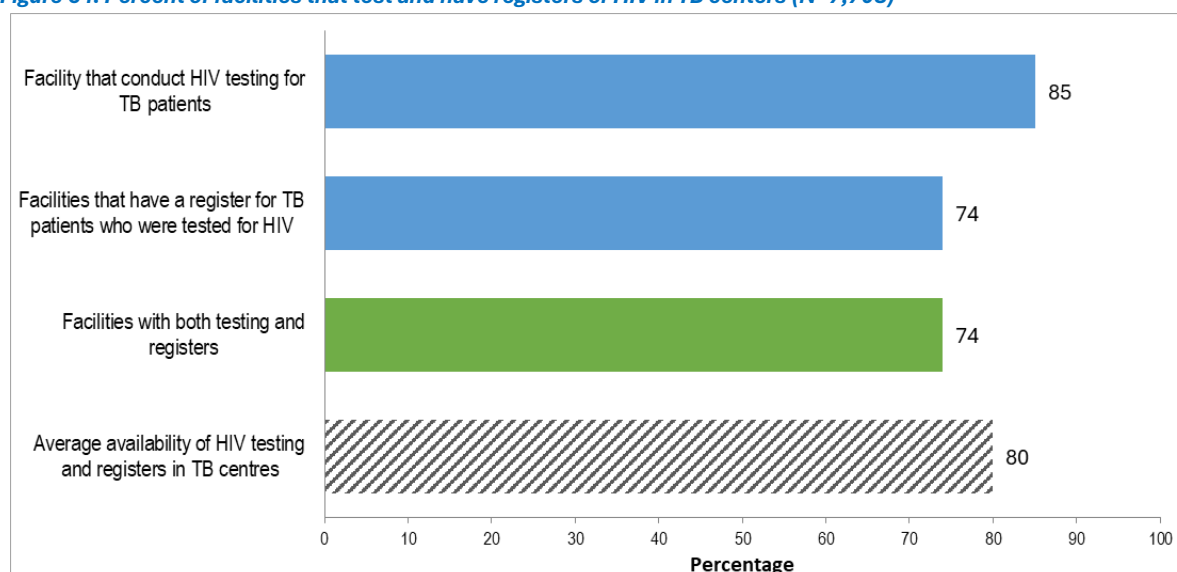


TB/HIV Co-infection

Figure 64 below shows the availability of HIV services among the facilities offering TB services;

- Among the facilities offering TB services, 85% were conducting HIV testing for their TB patients
- About three quarters (74%) of the facilities had registers for TB patients who had been tested for HIV
- The average availability of HIV testing and registers in TB sites was at 80% with about three quarters (74%) of the facilities having both services.

Figure 64: Percent of facilities that test and have registers of HIV in TB centers (N=7,703)



Disaggregation by location, KEPH level and ownership

Annex Table 58 shows availability of DRTB tracer services by location, facility type and ownership

- By location, availability of HIV tracer services was higher in rural facilities compared to urban.
- About 20% of FBO and private facilities that conduct HIV testing for TB patients do not have the respective registers.

Discussion:

The overall average availability of all the six tracer TB services was 79%. This represents an increase in availability of TB services from 42% in 2018 (KHFA, 2018). Although there a change in the analysis approach to ensure that services were assessed only in the level they are offered, Service readiness (availability of any item), remained unchanged at 67%. High availability of Gene Xpert diagnosis tests in hospitals (88%), signifies an improvement in quality of diagnostic services for TB, possibly as a result of investments in Gene expert machine during the COVID pandemic. Chest X-rays, at 23% availability were less common while half of facilities did microscopy. Lack of optimal availability of TB diagnosis services at primary facilities may create inequalities where there no adequate hospitals. TB medicines for children were available only in about half of facilities providing TB services. Primary facilities had less availability of medicines particularly children's doses. Limited guideline availability at 43% is likely to compromise the quality of TB services provided. Six Counties with a high burden of TB had low readiness for TB services, Garissa (41%), Migori (46%), (Kisumu, Homabay, Wajir (each 53%) and Bungoma (54% readiness) This indicates potential limitations in access to TB services in these Counties.

Table 31: TB Recommendations

Key Findings	Recommendation
- Overall, 67% of facilities offering TB services had all the tracer items required to provide the service - Guidelines for both drug susceptible and drug-resistant TB were very limited at 43% and 21% of facilities - Many Counties with a high burden of TB had limited availability of TB services; 2 high burden Counties had very limited availability of Gene Xpert machines in hospitals	- Guidelines for TB treatment should be availed and disseminated widely in all facilities - Counties with a high burden of TB and limited availability of services (Garissa, Migori, Kisumu, Homabay, Wajir, Bungoma); should be prioritized and investments increased to enhance availability of these services
- Only a third of facilities offering TB services had services for DRTB services with facilities with all DRTB tracer items being only 18% of these facilities. - Average readiness for DRTB services was 41%, with medicines' readiness being 24%.	There is need to increase the availability of diagnosis and treatment services for DRTB.

Sexually Transmitted Infections (STI's)

Sexually transmitted infections (STIs) are a public health issue in Kenya, with significant health, social, and economic consequences. They are particularly concerning due to potential complications and their interaction with HIV/AIDS. STIs disproportionately affect the health and social well-being of women and other vulnerable populations, significantly impacting sexual and reproductive health. They can reduce the quality of life, leading to infertility, child health issues, cancer, and severe pregnancy complications.

STIs can be managed through etiological, clinical and syndromic approaches, and in many cases, a combination of all. All STI patients should be provided with provider-initiated testing and counselling services for HIV.

STI (Sexually Transmitted Infection) medicines are vital for the effective treatment and management of infections spread through sexual contact.

Medications are used to eliminate pathogens, alleviate symptoms, prevent complications, and reduce the risk of transmission.

Service Availability

The 2024 QOC assessed availability for STI services as follows. The tracer services and items assessed for STIs service readiness are outlined in Table 32 below.

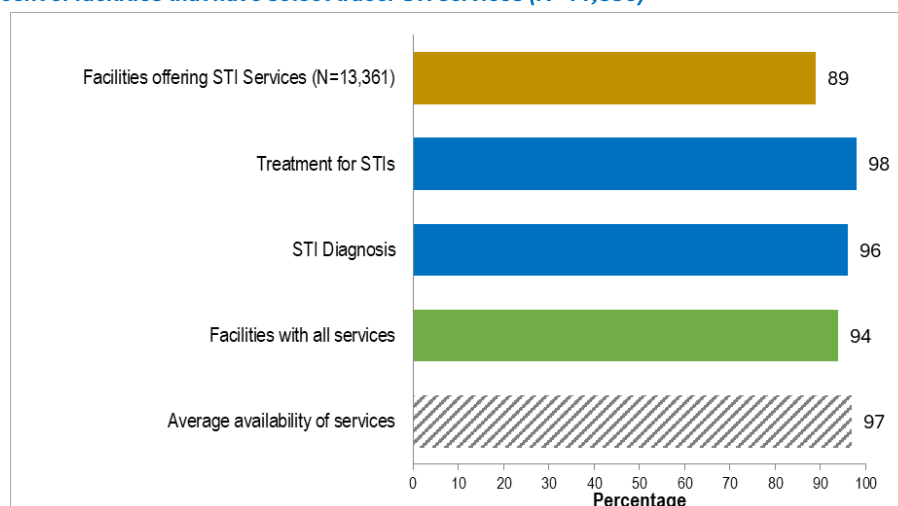
Table 32: Tracer items for STI services

Domain	Tracer items
Services	- STI Diagnosis - Treatment for STIs

Figure 65 below shows the availability of STI services nationally.

- STI diagnosis and treatment services were available in 89% of facilities in Kenya; 96% provide diagnosis services for STIs while almost all (98%) treat
- Average availability of STI services was at 97%.

Figure 65: Percent of facilities that have select tracer STI services (N=11,856)



Disaggregation by location, KEPH level and ownership.

Annex Table 65 shows the average availability of STI tracer services disaggregated by location, KEPH level, ownership and by county.

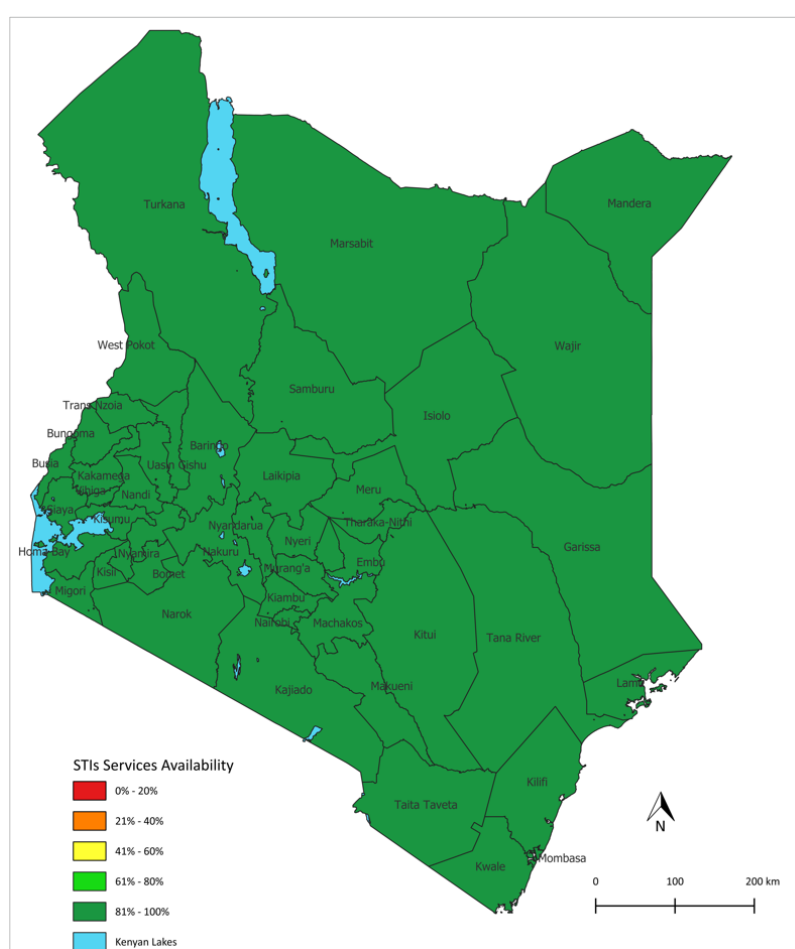
Among the health facilities offering STI services;

- There was no variation by location, KEPH level and ownership in the STI service provision

County Distribution

Overall, there was high availability (81%-100%) of STI services across all counties

Figure 66: Average availability of STI Services by county



Service Readiness

The QOC assessed readiness of facilities providing STI services using select tracer items as summarized in Table 33

Table 33: Tracer items for STI services

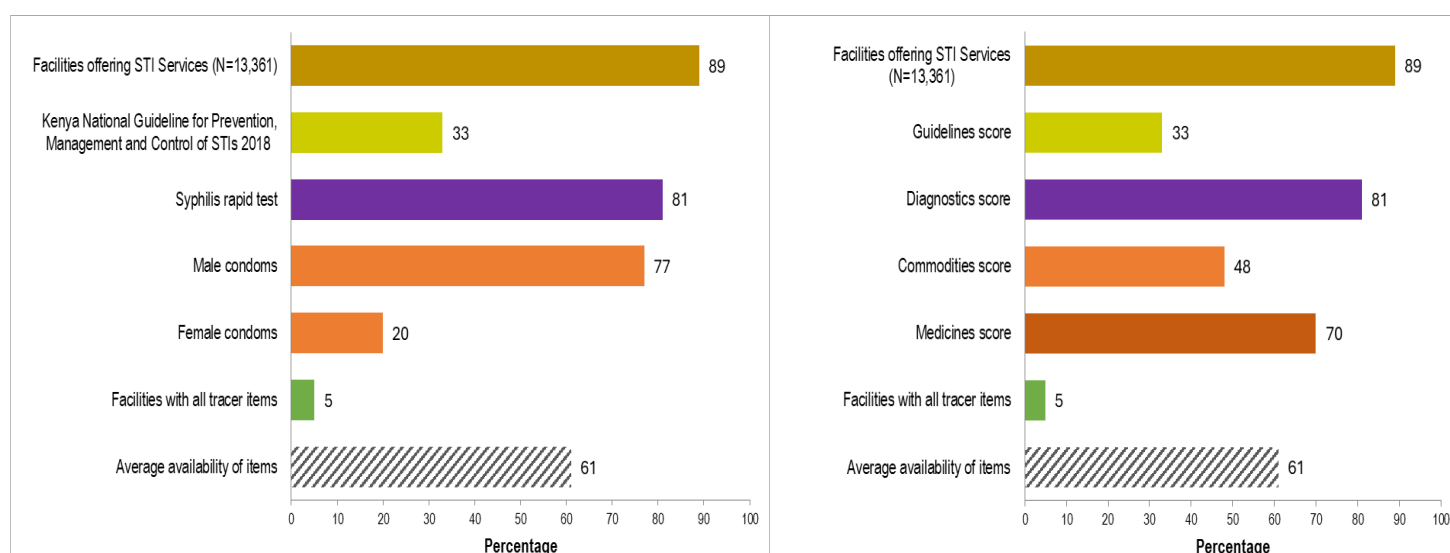
Domain	Tracer items
Guidelines	Kenya National Guideline for Prevention, Management and Control of STIs 2018
Diagnostics	Syphilis rapid test
Commodities	- Male condoms - Female condoms
Medicines	- Metronidazole - Ciprofloxacin - Ceftriaxone injection - Penicillin

Figure 67 below shows the readiness of health facilities in the provision of STI services.

Among the health facilities offering STI services;

- A third of the (33%) had Kenya National Guideline for Prevention, Management and Control of STIs 2018
- 77% and 20% had male and female condoms, respectively, while 81% had Syphilis rapid test services
- The average availability of STI tracer items was 61% with only 5% of the facilities having all the five tracer items

Figure 67: Readiness of health facilities to provide STI services (N=11,856)



Disaggregation by location, KEPH level and ownership.

Annex Table 66 shows the average availability of STI tracer items disaggregated by location, KEPH level, ownership and by county.

Among the health facilities offering STI tracer items;

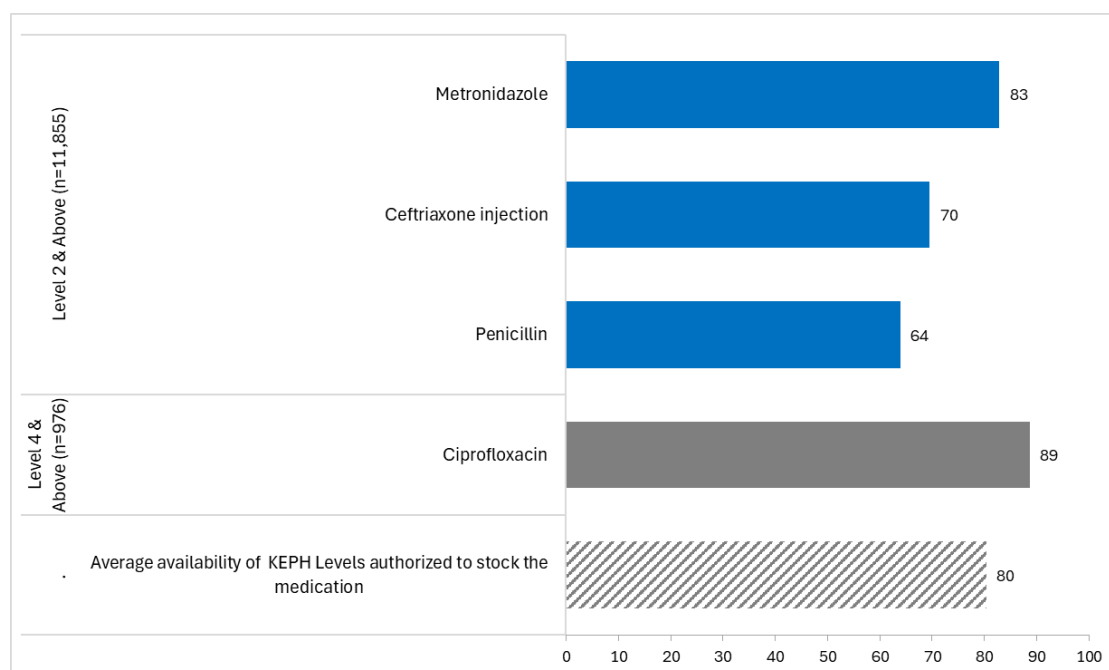
- Urban facilities (68%) had a slightly higher average availability of items compared to rural facilities (55%)
- By facility type, level 2 facilities had the least average availability of items at 58% while level 5 had the highest at 85%
- Level 2 and 3 health facilities had low availability of STI guidelines
- By ownership, public facilities had the least average availability of items at 53%; Male condoms were more available in public facilities (89%) and NGO (88%) and least available at FBO (46%).

Medicines

Among the health facilities offering STI treatment services;

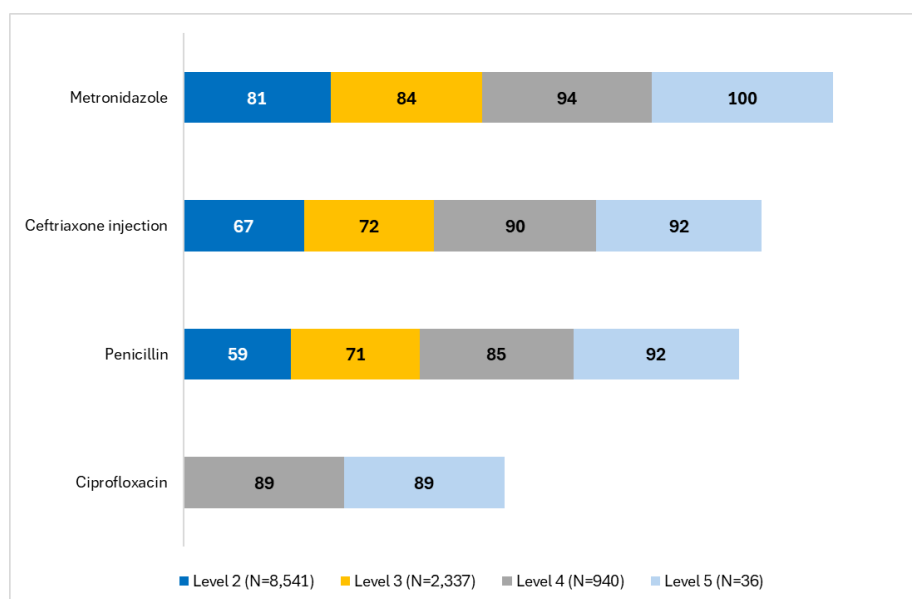
- The average availability of STI tracer medicines was 80%
- Ciprofloxacin was available in 89% of hospitals
- Metronidazole was the most readily available medicine across all levels at 83%

Figure 68: Percent of facilities with select STI tracer medicines



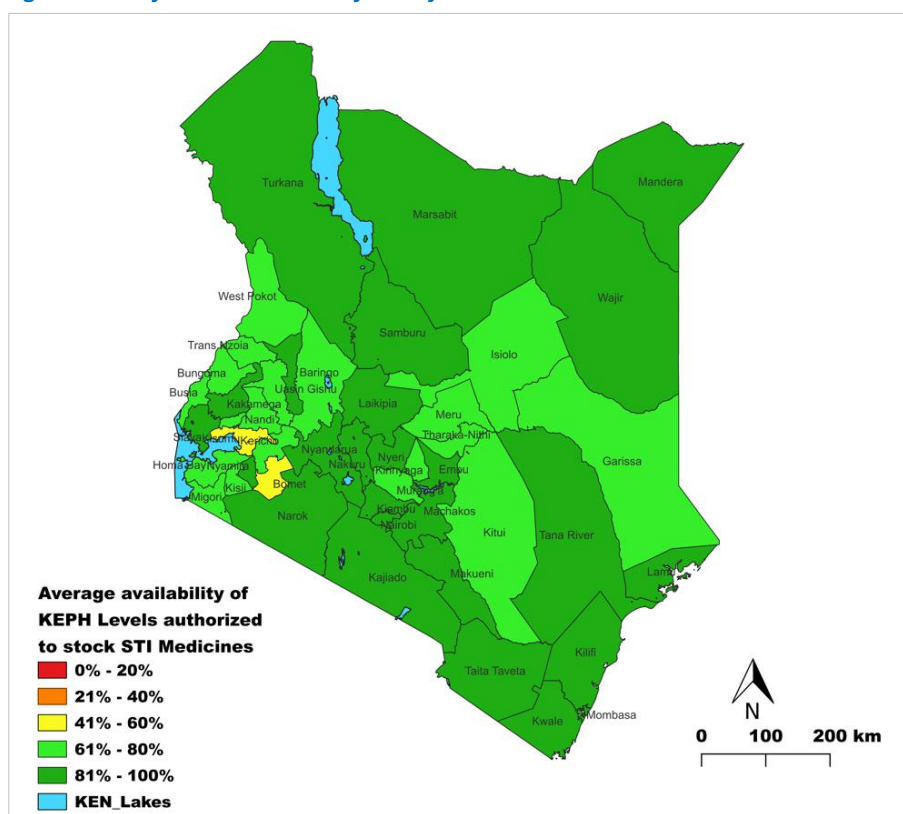
- Metronidazole, ceftriaxone injection and penicillin were more readily available in level 4 and 5 facilities
- There was equal availability of Ciprofloxacin in Level 4 and Level 5 facilities

Figure 69: Percent of facilities with select STI tracer medicines by facility type



- The average availability of the STI medicines in most of the counties ranged between 61% and 100%
- Kajiado County had the least average availability of STI medicines at 95%
- Bomet and Kisumu had the least average availability of STI medicines at 42% and 59% respectively

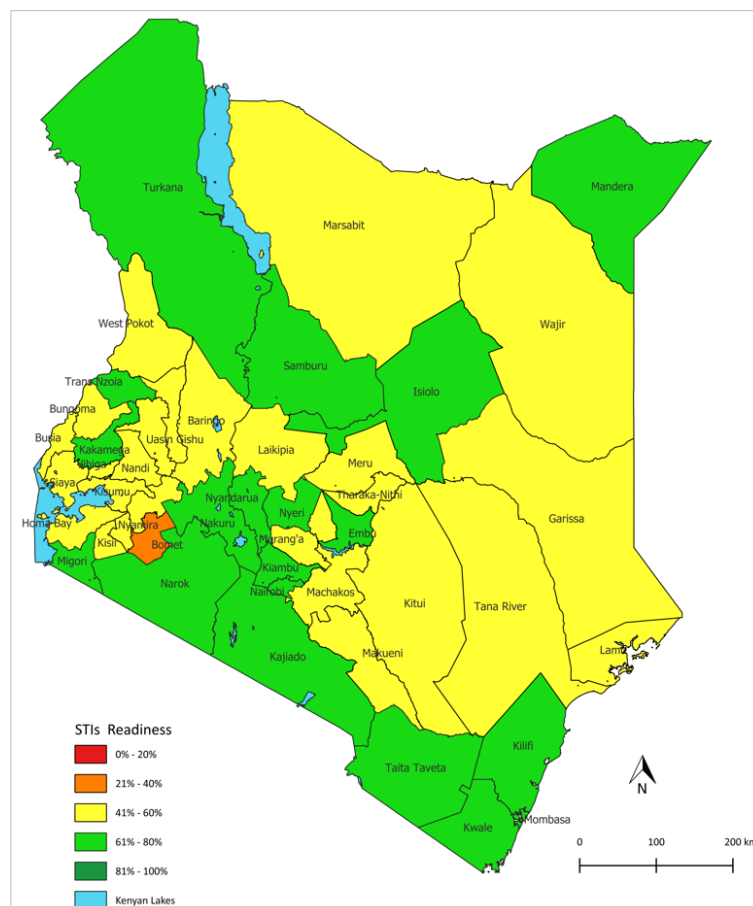
Figure 70: Average availability of STI medicines by county



County Distribution

Figure 71 shows the average availability of STI tracer items disaggregated by county. There were variations across the counties in the average availability of STI tracer items in the health facilities, with Kajiado county having the highest readiness at 75% while Bomet had the lowest at 37%

Figure 71: Average Readiness of STI services by county



Discussion

There was generally high availability of STI services at 97%, which was an increase from 85% in the KHFA 2018. The low availability of STI commodities such as male condoms in FBO facilities and STI guidelines in lower-level facilities is likely to introduce inequalities in STI service provision.

Table 34: STI Recommendations

Finding	Recommendation
Low availability of STI commodities such as male condoms in FBO facilities and STI guidelines in lower-level facilities	Support equitable distribution of commodities and guidelines across all levels of care and ownership.

Neglected Tropical Diseases -NTDs

Neglected tropical diseases (NTDs) are a diverse group of diseases that include bacterial, viral, parasitic, fungal, and noncommunicable conditions with devastating social and economic impact among the poor and marginalized communities.

Case management and treatment of Neglected Tropical Diseases (NTDs) involve diagnosing and treating individuals who are infected with these diseases. The approach is typically tailored to the specific NTDs, focusing on effective treatment, prevention of complications, and in some cases, rehabilitation.

Prevalence of NTDs in Kenya varies by region. A summary of the most prevalent NTDs in Kenya, and the Counties where they contribute a significant burden is outlined in table 35 below;

Table 35: Prevalence of NTDs in Kenya

Diseases	Counties with high burden
Schistosomiasis	Tana River, Mombasa, Taita Taveta, Migori, Siaya, Homabay, Machakos, Kisumu, Busia, Kakamega, Makueni, Kwale, Kirinyaga, and Bungoma
Trachoma	Baringo, West Pokot, Turkana, Narok, Kajiado, Samburu, Laikipia, Marsabit, Isiolo, Kitui, Embu, and Meru
Lymphatic Filariasis	Kwale, Kilifi, Mombasa, Tana River, Lamu, and Taita Taveta
Soil transmitted helminths	Vihiga, Narok, Busia, Bungoma, Kakamega, Homa Bay, Migori, Kisumu, Siaya, Tana River, and Lamu
Visceral leishmaniasis	Baringo, Garissa, Isiolo, Kajiado, Kitui, Marsabit, Mandera, Tharaka Nithi, Turkana, Wajir, and West Pokot
Dengue fever	Mombasa, Kilifi, Kwale, Lamu, and Taita Taveta
Chikungunya	Mombasa, Kilifi, Lamu
Snake bites	Samburu, Kilifi, Kajiado, and Kitui

Service Availability

The 2024 QOC assessed availability for NTD services summarized in Table 36 below.

Table 36: Tracer NTD services

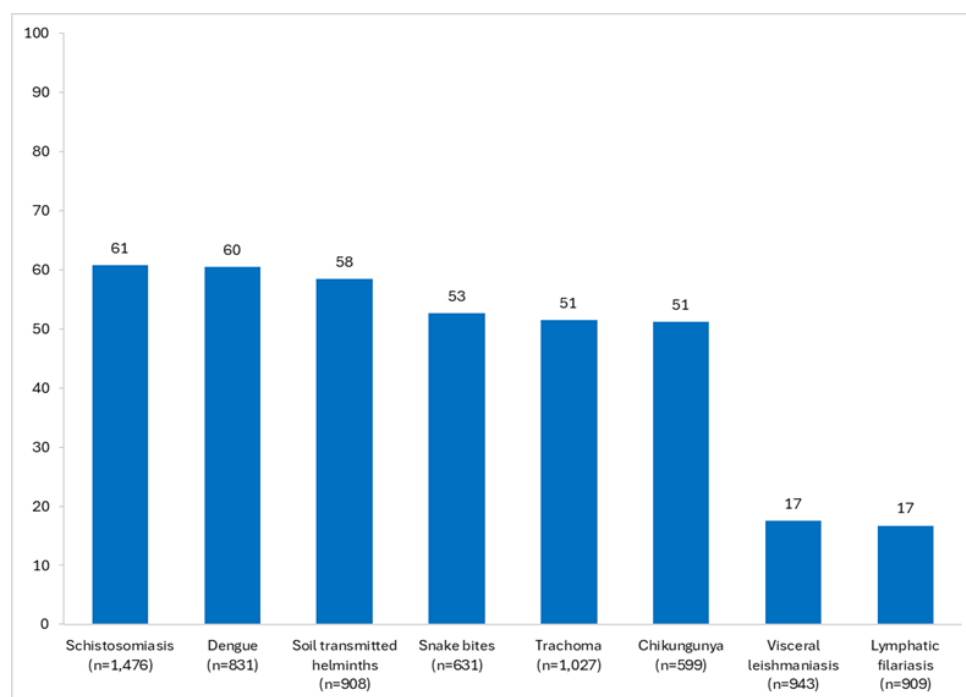
Domain	Tracer items
Services	Diagnosis - Schistosomiasis - Trachoma - Lymphatic filariasis (LF) - Soil transmitted helminths - Visceral leishmaniasis

Domain	Tracer items
	● Dengue ● Chikungunya ● Snake bites Treatment ● Schistosomiasis ● Trachoma ● Lymphatic filariasis (LF) ● Soil transmitted helminths ● visceral leishmaniasis ● Dengue ● Chikungunya ● Snake bites

NTD Diagnostic and treatment services were offered at 34% (n=4521) of all facilities nationally. Among facilities offering NTD Diagnosis and treatment services in Counties where these conditions are endemic;

- The most available services were for Schistosomiasis (61%) and Dengue fever (60%), while the least available services were for Lymphatic Filariasis and Visceral leishmaniasis (both 17%).
- About half of Counties had services for Trachoma, Chikungunya and Snake bites.

Figure 72: Percent of facilities that have select NTD tracer services





Disaggregation by location, KEPH level and ownership.

Annex Table 69 shows the average availability of NTD tracer services disaggregated by location, KEPH level, ownership and by county.

Among the health facilities offering NTD services in endemic Counties;

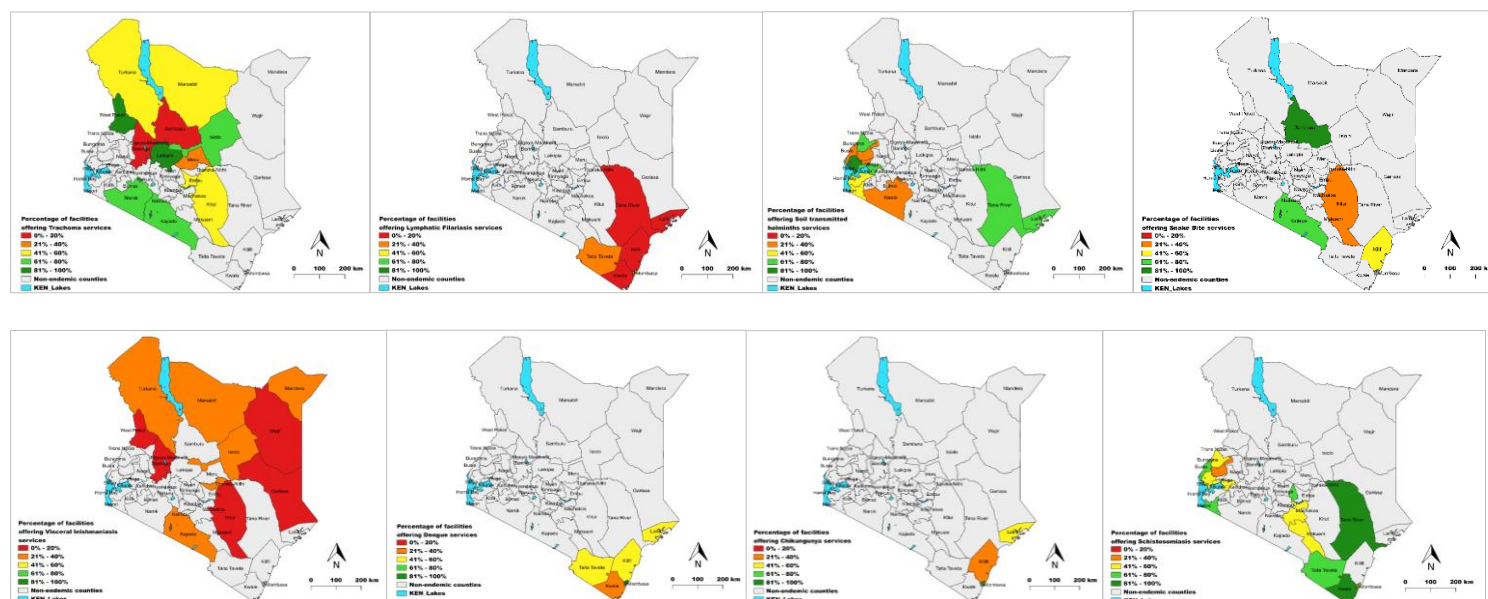
- By level, Trachoma services were available in all level 5 facilities while only 43% of level 3 facilities had the service.
- Similarly, there was wide variation in availability of services for Visceral leishmaniasis in level 5 facilities (75%), compared to only 11% of level 2 facilities; Snake bite services were also more available in level 4 (87%) compared to 47% of level 2 facilities.
- By owner, services for Trachoma, Lymphatic filariasis and Snake bites were less available in private facilities, while services for Dengue and Chikungunya were more available in private facilities
- By location, services for Trachoma were highest in West Pokot and Laikipia (at 92% and 82%) and lowest in Baringo (10%) and Samburu (18%).
- Lymphatic filariasis services were generally not available in endemic Counties: The highest availability was in Mombasa (31%) and Taita Taveta (27%) and lowest availability was in Tana River (7%), Lamu (8%) and Kilifi (9%).
- A wide variation in availability of Soil transmitted helminths services for was recorded with the highest availability in Lamu (71%) and Kisumu (70%) while the vast majority of Counties did not have any Soil transmitted helminths services
- The availability of NTD diagnostic and treatment services did not differ across the facilities by location

County Distribution

Figure 73 shows the average availability of NTD tracer services disaggregated by county.

- Generally, there was low availability of NTD services ranging between 12% and 40%.
- Mombasa County had the highest average availability of NTD services at 50% while Nyeri had the least at 12%
- Only six counties (Mombasa, Taita Taveta, Kisii, Kajiado, Laikipia and Nyandarua) had an average score of more than 40% in the availability of NTD services

Figure 73: Average availability of NTD Services by county



Service Readiness

The tracer items assessed for NTD service readiness are outlined in Table 37 below.

Table 37: Tracer items for NTD services

Domain	Tracer items
Diagnostics	- Stool microscopy - Urine microscopy - Rapid test for dengue - microscopy for dengue - LF Diagnostic capacity: Microscopy (microfilaria), filariasis test strip (FTS) - Visceral leishmaniasis Diagnostic capacity: VL RDT or VL DAT or Microscopy, or molecular test (PCR)
Medicines	- Praziquantel - Albendazole/mebendazole - Ivermectin - Trachoma Treatment: Azithromycin, tetracycline eye ointment - Lymphatic filariasis (LF) Treatment: Diethylcarbamazine (DEC)

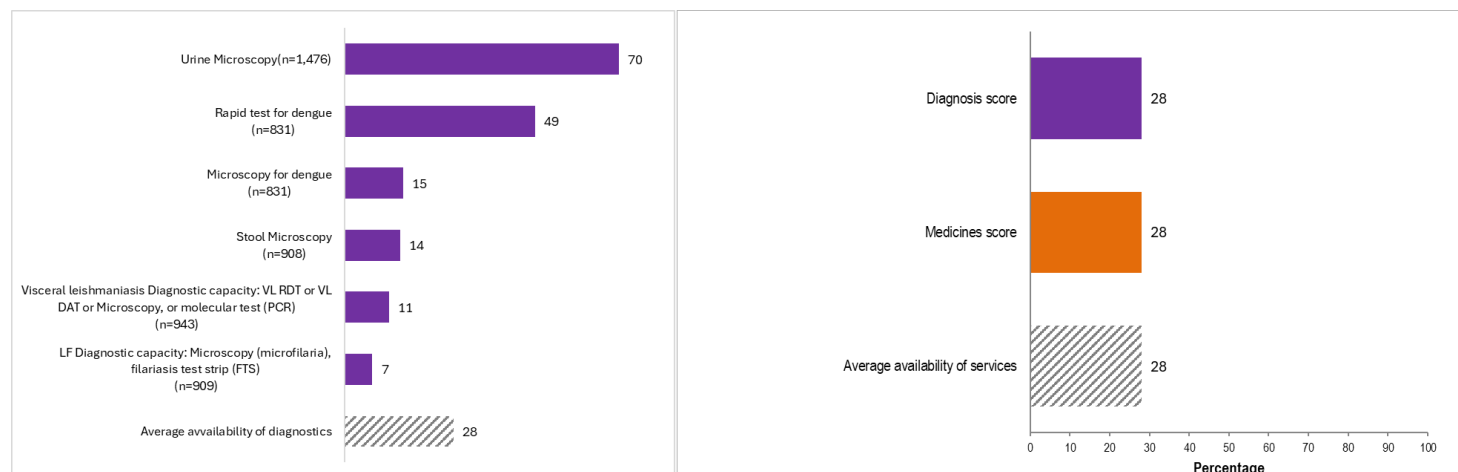
Figure 74 below shows the readiness of health facilities in the provision of NTD services.

Among the health facilities offering NTD services in Counties where they are endemic,

- Urine and Rapid test for dengue diagnostic services were the most available diagnostic services at 70% and 49% respectively.

- Lymphatic filariasis and Visceral leishmaniasis were the least available diagnostic services at 7%, and 11% respectively.

Figure 74: Readiness of health facilities to provide NTD services



Disaggregation by location, KEPH level and ownership.

The table below shows the average availability of NTD tracer items disaggregated by location, KEPH level, ownership and by county.

Among the health facilities offering NTD services in Counties where they are endemic; Though the average availability of all NTD tracer items (diagnostics and medicines) in the health facilities was low,

- Urban facilities had a higher average availability for most diagnostic tests compared to rural facilities.
- By facility type, level 2 facilities had the least average availability of items while level 5 had the highest
- Public facilities had the lowest availability of tracer items across the board
- By Location, Counties with a high burden if NTDs did not have tracer items for these conditions as below;
 - Low readiness for Visceral leishmaniasis in Garissa, Kitui, Wajir and West Pokot
 - Low readiness for Lymphatic filariasis in Tana River, Kilifi, Kwale and Lamu
 - Low availability of Microscopy for Dengue in Kilifi, Taita Taveta, Lamu, Kitui and Mombasa

Table 38: Availability of NTD diagnostics by county

	Stool microscopy (%)	Urine microscopy (%)	Rapid test for dengue (%)	Microscopy for dengue (%)	LF Diagnostic Capacity (%)	VL RDT (%)	Average Availability of diagnostics
By County							
Baringo	NA	NA	NA	NA	NA	10	10
Bomet	NA	NA	NA	NA	NA	NA	NA
Bungoma	100	94	NA	NA	NA	NA	97
Busia	NA	71	NA	NA	NA	NA	71
Elgeyo Marakwet	NA	NA	NA	NA	NA	NA	NA
Embu	NA	NA	NA	NA	NA	NA	NA
Garissa	NA	NA	NA	NA	NA	0	0
Homa Bay	56	NA	NA	NA	NA	NA	56
Isiolo	NA	NA	NA	NA	NA	27	27
Kajiado	NA	NA	NA	NA	NA	22	22
Kakamega	90	90	NA	NA	NA	NA	90
Kericho	NA	NA	NA	NA	NA	NA	NA
Kiambu	NA	NA	NA	NA	NA	NA	NA
Kilifi	NA	NA	31	10	4	NA	NA
Kirinyaga	NA	100	NA	NA	NA	NA	100
Kisii	NA	NA	NA	NA	N	NA	NA
Kisumu	88	88	NA	NA	NA	NA	88
Kitui	NA	NA	NA	NA	NA	5	5
Kwale	NA	60	26	15	6	NA	27
Laikipia	NA	NA	NA	NA	NA	NA	NA
Lamu	59	NA	44	12	0	NA	29
Machakos	NA	60	NA	NA	NA	NA	NA
Makueni	NA	50	NA	NA	NA	NA	50
Mandera	NA	NA	NA	NA	NA	14	14
Marsabit	NA	NA	NA	NA	NA	18	18
Meru	NA	NA	NA	NA	NA	NA	NA
Migori	63	59	NA	NA	NA	NA	61
Mombasa	NA	84	87	21	13	NA	51
Muranga	NA	NA	NA	NA	NA	NA	NA
Nairobi	NA	NA	NA	NA	NA	NA	NA
Nakuru	NA	NA	NA	NA	NA	NA	NA
Nandi	NA	NA	NA	NA	NA	NA	NA
Narok	85	NA	NA	NA	NA	NA	85
Nyamira	NA	NA	NA	NA	NA	NA	NA
Nyandarua	NA	NA	NA	NA	NA	NA	NA
Nyeri	NA	NA	NA	NA	NA	NA	NA

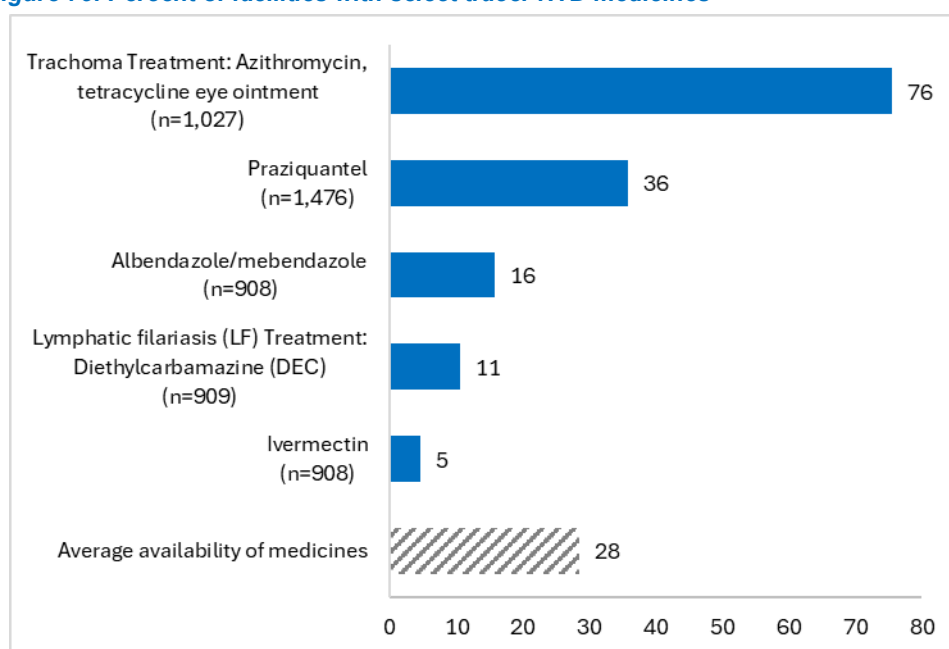
	Stool microscopy (%)	Urine microscopy (%)	Rapid test for dengue (%)	Microscopy for dengue (%)	LF Diagnostic Capacity (%)	VL RDT (%)	Average Availability of diagnostics
Samburu	NA	NA	NA	NA	NA	NA	NA
Siaya	65	65	NA	NA	NA	NA	65
Taita Taveta	NA	88	44	16	18	NA	42
Tana River	55	63	NA	NA	1	NA	40
Tharaka Nithi	NA	NA	NA	NA	NA	22	22
Trans Nzoia	NA	NA	NA	NA	NA	NA	NA
Turkana	NA	NA	NA	NA	NA	22	22
Uasin Gishu	NA	NA	NA	NA	NA	NA	NA
Vihiga	NA	NA	NA	NA	NA	NA	NA
Wajir	NA	NA	NA	NA	NA	7	7
West Pokot	NA	NA	NA	NA	NA	2	2
By Type							
Level 2	11	58	43	9	4	4	21
Level 3	19	90	70	29	9	17	39
Level 4	24	95	79	53	35	29	53
Level 5	13	100	100	100	100	75	81
By Managing Authority							
FBO	20	96	58	14	9	11	35
Government	11	57	25	9	6	11	20
NGO	22	81	62	0	34	14	35
Private	15	77	71	23	7	12	34
By location							
Rural	14	55	20	7	4	9	18
Urban	14	89	72	22	10	14	37
All	14	70	49	15	7	11	28

Medicines

Among facilities that offered NTD services;

- The most available medicine was trachoma treatment
- About a third of facilities had Praziquantel while Albendazole, Ivermectin and Lymphatic filariasis treatment were only available in less than 20% of facilities.

Figure 75: Percent of facilities with select tracer NTD medicines

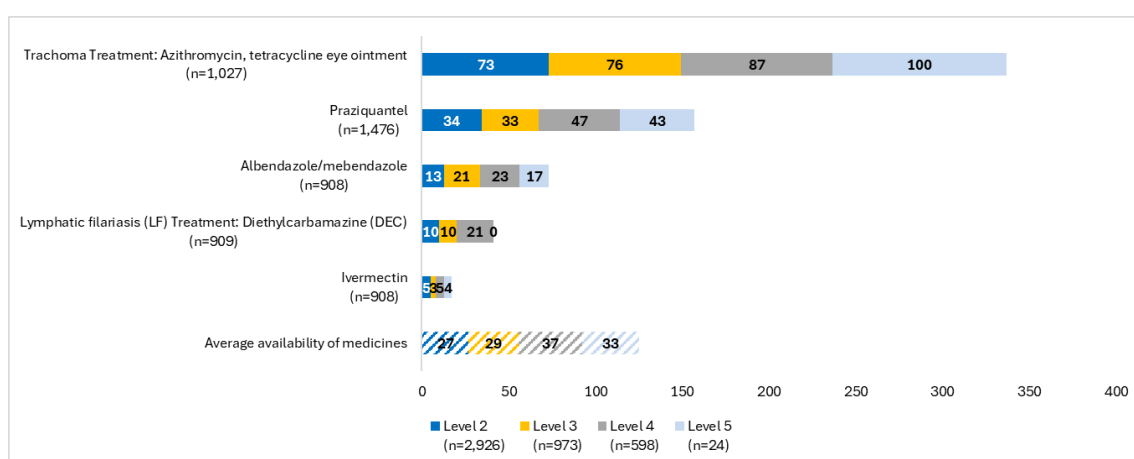


Disaggregation by location, KEPH level and ownership.

Annex Table 170 shows the average availability of NTD medicines disaggregated by location, KEPH level, ownership and by county.

- Availability of NTD medicines was fairly uniform across facility levels and ownership categories
- All the medicines were available across all the levels of facilities, However the availability for all the medicines was higher in level 5 and 4 compared to level 2 and 3.

Figure 76: Percent of facilities with select tracer NTD medicines by facility type



County Distribution

The table below shows the average availability of NTD tracer items and medicines disaggregated by county. Among facilities that offered NTD services,

Medicines

- Praziquantel, for treatment of Schistosomiasis was only available in 7% of facilities in Kisumu. Machakos, Makueni, Siaya, Bungoma and Busia also had low availability of the drug, all below 25% of facilities.
- Albendazole was only available in 9% of facilities in Taita Taveta.
- Ivermectin and Lymphatic filariasis, used to treat river blindness (onchocerciasis) and Lymphatic filariasis respectively was scarcely available in Counties.

Table 39: Availability of NTD medicines by County

	Praziquantel (%)	Albendazole (%)	Ivermectin (%)	Trachoma Treatment (%)	LF Treatment (%)	Average availability of medicines
By county						
Baringo	NA	NA	NA	87	NA	87
Bomet	NA	NA	NA	NA	NA	NA
Bungoma	18	74	NA	NA	NA	46
Busia	25	89	NA	NA	NA	57
Elgeyo Marakwet	NA	NA	NA	NA	NA	NA
Embu	NA	NA	NA	74	NA	74
Garissa	NA	NA	NA	NA	NA	NA
Homa Bay	NA	74	NA	NA	NA	74
Isiolo	NA	NA	NA	61	NA	61
Kajiado	NA	NA	NA	61	NA	61
Kakamega	31	61	NA	NA	NA	46
Kericho	NA	NA	NA	NA	NA	NA
Kiambu	NA	NA	NA	NA	NA	NA
Kilifi	NA	NA	18	NA	14	16
Kirinyaga	45	NA	NA	NA	NA	45
Kisii	NA	NA	NA	NA	NA	NA
Kisumu	7	64	NA	NA	NA	35
Kitui	NA	NA	NA	88	NA	88
Kwale	61	NA	17	NA	4	28
Laikipia	NA	NA	NA	89	NA	89
Lamu	NA	73	24	NA	9	35
Machakos	18	NA	NA	NA	NA	18
Makueni	16	NA	NA	NA	NA	16
Mandera	NA	NA	NA	NA	NA	NA
Marsabit	NA	NA	NA	83	NA	83
Meru	NA	NA	NA	67	NA	67
Migori	53	82	NA	NA	NA	67

	Praziquantel (%)	Albendazole (%)	Ivermectin (%)	Trachoma Treatment (%)	LF Treatment (%)	Average availability of medicines
Mombasa	42	NA	33	NA	10	28
Muranga	NA	NA	NA	NA	NA	NA
Nairobi	NA	NA	NA	NA	NA	NA
Nakuru	NA	NA	NA	NA	NA	NA
Nandi	NA	NA	NA	NA	NA	NA
Narok	NA	83	NA	82	NA	82
Nyamira	NA	NA	NA	NA	NA	NA
Nyandarua	NA	NA	NA	NA	NA	NA
Nyeri	NA	NA	NA	NA	NA	NA
Samburu	NA	NA	NA	75	NA	75
Siaya	20	85	NA	NA	NA	52
Taita Taveta	46	0	19	NA	8	18
Tana River	80	92	20	NA	20	53
Tharaka Nithi	NA	NA	NA	NA	NA	NA
Trans Nzoia	NA	NA	NA	NA	NA	NA
Turkana	NA	NA	NA	62	NA	62
Uasin Gishu	NA	NA	NA	NA	NA	NA
Vihiga	NA	66	NA	NA	NA	66
Wajir	NA	NA	NA	NA	NA	NA
West Pokot	NA	NA	NA	100	NA	100
By type						
Level 2	34	13	5	73	10	27
Level 3	33	21	3	76	10	29
Level 4	47	23	5	87	21	37
Level 5	43	17	4	100	0	33
By managing authority						
FBO	35	22	4	80	14	31
Government	39	15	1	69	11	27
NGO	32	29	10	62	10	28
Private	33	13	9	84	9	30
By location						
Rural	33	19	1	72	9	27
Urban	39	12	9	82	12	31
All	36	16	5	76	11	28

Discussion

Although availability of NTD services is moderate, readiness to provide these services is very low in the counties where these conditions are endemic. However, there was a slight increase in the overall proportion of facilities that offered NTD services from 31% (KHFA 2018) to 34%.

The least available services were Lymphatic filariasis, Soil transmitted helminths and Visceral leishmaniasis services. The average readiness was also low with an average availability of the tracer items at 34%. This is comparable to readiness of 35% in 2018. This highlights a gap in the access to services for the NTDs, and limited availability of diagnostics and medicines. NTDs mostly affect the poor and can have adverse non-fatal work outcomes, including chronic disability, mental health issues due to isolation among others, this low availability of services and the tracers required to provide these services is likely to lead to inequalities among affected communities, including widening poverty gaps.

Conclusions

- The average availability and readiness to offer NTD services is very low across the country

Table 40: NTD Recommendations

Findings	Recommendation
• The overall availability of NTDs is critically low, highlighting gaps in healthcare provision for NTDs • There is significant regional disparities in NTD medicines availability by country wide, with many endemic counties having very few facilities with the required drugs • There was slight variability by facility ownership and levels of care, with FBO facilities having higher availability of NTD services while public facilities had low readiness	Accelerate the programmatic investments to scale up prevention, control, and elimination of neglected tropical diseases prevalent in Kenya through investment in the necessary tracer items and services across all the counties.

Table 41: Communicable diseases conclusions and recommendations

SECTION	CONCLUSION	RECOMMENDATION
COMMUNICABLE DISEASES	There are significant differences in the availability of communicable disease services across counties, with some counties offering high service availability while others, like Marsabit	Allocation of resources and support to counties with low service availability, like Marsabit and Mandera, to ensure more equitable access to communicable disease services, particularly for TB and NTDs.



SECTION	CONCLUSION	RECOMMENDATION
	and Mandera, have much low service availability. Readiness for services related to neglected tropical diseases (NTDs) and tuberculosis (TB) is notably low, requiring targeted efforts to improve capacity, especially in private facilities.	Mobilization of training, infrastructure, and diagnostic tools for neglected tropical diseases (NTDs) and tuberculosis (TB), especially in private health facilities where availability is lower, to improve service readiness. Promote the integration of all five communicable disease services across health facilities to ensure comprehensive service provision, aiming for higher percentages of facilities offering the full range of services.
MALARIA	Malaria diagnostic and treatment services have greatly improved, with availability rising significantly from 2018 to 2024. However, services such as IPT for pregnant mothers and malaria vaccinations remain limited, with availability still low. There is a notable disparity in malaria service availability across counties, with Homa Bay and Siaya having strong service provision, while Nyandarua and Marsabit lag behind. Urban areas generally have better access than rural ones. Despite an increase in service availability, there has been a decline in overall readiness, particularly in diagnostic capacity and the availability of essential malaria commodities.	Focus efforts on counties and regions with low malaria service availability, particularly Nyandarua, Marsabit, and Tharaka Nithi. Tailored interventions, including staff training and resource allocation, can help improve service provision, especially for IPT and malaria vaccinations. Decline in service readiness can be addressed by ensuring consistent availability of essential malaria commodities like insecticide-treated nets (ITNs), diagnostic tools, and treatment supplies. Strengthening efforts to expand malaria vaccination programs and improving the provision of intermittent preventive treatment (IPT) for pregnant women,



SECTION	CONCLUSION	RECOMMENDATION
		particularly in rural and underserved areas will help address gaps in malaria prevention and treatment coverage.
TB	Moderate availability of TB services across different health facilities, critical gap in guideline availability Many Counties with a high burden of TB had limited availability of TB services	To improve the quality and consistency of TB services, there should be targeted efforts to increase the availability of essential resources, such as TB diagnostic tools, medicines, and guidelines, particularly in high burden counties where availability is lower. It is important to invest in strengthening diagnostic capacity and infrastructure in rural health facilities, ensuring that all essential TB services are provided consistently. Focused interventions should be implemented in counties with lower service availability, like Garissa and Mandera, to increase the access to TB services. Special attention should be given to improving the supply of TB medications and ensuring the availability of all tracer items, especially in facilities with the least resources.
Multi Drug Resistant TB	The availability and readiness of DR-TB services across health facilities is generally low Low for DTRB services Hospitals (Level 4 & 5) generally had higher availability of DR-TB services compared to primary facilities (Level 2	Efforts should be made to increase the availability of DR-TB diagnostic services such as Gene Xpert and Culture testing, especially in rural and primary health facilities. Strengthening the infrastructure and providing adequate training for healthcare staff will help improve diagnostic capabilities across all regions.



SECTION	CONCLUSION	RECOMMENDATION
	& 3), and private facilities had the lowest availability of DR-TB services.	Strategies should be developed to bridge the gap between rural and urban facilities, ensuring that all areas have access to essential DR-TB services, including contact tracing and social support. Special attention should be given to counties with particularly low service availability, such as Nyamira and Tana River. Private facilities and lower-level healthcare centers (Level 2 & 3) should require support to improve DR-TB service delivery. This could include the provision of necessary equipment, training on treatment protocols, and enhanced funding to ensure that all health facilities, regardless of type or managing authority, can effectively manage DR-TB cases.
TB/ HIV CO INFECTION	There is an overall low readiness index for TB services in the country and very low diagnostic capacity which highlights the health system challenges in the fight against TB. These differences can increase TB transmission in underserved areas, calling for prioritized resource allocation and support for regions with lower service availability	Focus on reallocating resources to ensure equitable access to TB services, especially in counties that show significant gaps in service availability. This may involve increasing budget allocations for TB control initiatives and ensuring facilities are well-stocked with essential items.
HIV	There is a considerable disparity in the availability of HIV services across different counties, with some areas such as Taita Taveta, Siaya, and Bungoma having higher service	To address the disparities in HIV service availability, especially in counties like Wajir, Mandera, and Garissa, resources should be prioritized for these regions. This could include increased funding,



SECTION	CONCLUSION	RECOMMENDATION
	availability, while others like Wajir, Mandera, and Garissa lag behind. This highlights the need for targeted interventions to improve HIV service coverage in counties with lower service availability. HIV testing and counselling services were widely available ,however, other HIV services, such as ART, PEP, and E/PMTCT, had lower availability, particularly in private and lower-level facilities. This suggests that while there is good infrastructure for basic HIV services, more comprehensive HIV treatment and prevention services still face challenges in terms of availability. A significant gap in the availability of HIV medicines and tracer items was noted across many counties. Private facilities showed the least access to these essential medicines, emphasizing the need to improve infrastructure, training, and resource allocation in these areas to ensure comprehensive HIV care.	staffing, and the provision of essential HIV medicines and services to ensure that all counties meet minimum service standards. While HIV testing and counselling services are widely available, the provision of more comprehensive HIV services, such as ART, PEP, and E/PMTCT, should be enhanced, particularly in private and lower-level facilities. Efforts should focus on improving training, infrastructure, and supply chains to increase access to these critical services. A concerted effort should be made to ensure that all counties, particularly those with low availability of HIV medicines and tracer items, have consistent access to essential HIV drugs. This includes expanding the supply of key medicines like ART, PrEP, and Nevirapine syrup, especially in rural and private health facilities. A more reliable and sustainable supply chain system should be established to ensure these medicines are available when needed.



SECTION	CONCLUSION	RECOMMENDATION
HIV/TB CO INFECTION	Most of the tracer items in HIV service provision were available. However, this availability was affected by a number of missing tracing items as part of service package. For instance, infrastructure was available but with inadequate staffing or lack of skills to offer HIV services. •Generally, readiness to offer HIV services was low. •Inequalities were witnessed across the counties in the general service availability distribution, with the contributory factor being health workforce.	•Increase investment in health to improve availability and readiness of the health facilities to deliver quality health services at each level. •Promote equitable distribution of health services especially in relation to health workforce and infrastructure to address HIV service inequalities. •Deliberate efforts should be made to capacity build all health care workers to enable them provide HIV services across all facilities
STI's	There are widespread inequalities across the counties with regard to general service availability distribution, with the contributory factor being STI drugs commodities. Despite the tracer items being ready to offer services, health facilities are not maintaining all the tracers items as a package, as witnessed by extremely low proportions of the health facilities with all the tracer items under respective service areas.	There is need to ensure all tracer items are made available in all facilities especially in service areas where they meet the standards. Provide continuous support to facilities providing STI services for sustainability and continuous improvement
NTDs	The overall availability of NTD services is critically low, highlighting gaps in healthcare provision for NTDs There is significant regional disparities in NTD diagnostics and medicines availability by country There was little variability by facility ownership and levels of care.	Accelerate the investments in NTDs to scale up prevention, control, and elimination of neglected tropical diseases prevalent in Kenya Requisite services and tracer items should be availed in all endemic counties.



NON-COMMUNICABLE DISEASES

Kenya is facing a triple burden of disease with communicable diseases, non-communicable diseases (NCDs), and injuries all contributing to a significant burden of morbidity and mortality. The probability of dying from a non-communicable condition and road traffic accident in Kenya is 21% and 28.2% respectively.⁶ By 2030, NCD deaths are projected to increase by 55% while deaths due to injuries will rise by 25% (MOH,2015). NCDs have a big economic impact on households and the country due to their chronic nature and high cost of care.

The assessment sought to seek the availability and readiness of the health facilities to provide non-communicable disease services. The main areas of focus were;

- ❖ Diabetes
- ❖ Cardiovascular diseases
- ❖ Chronic Respiratory Diseases
- ❖ Cancer Care Services
- ❖ Mental Health

Key Findings

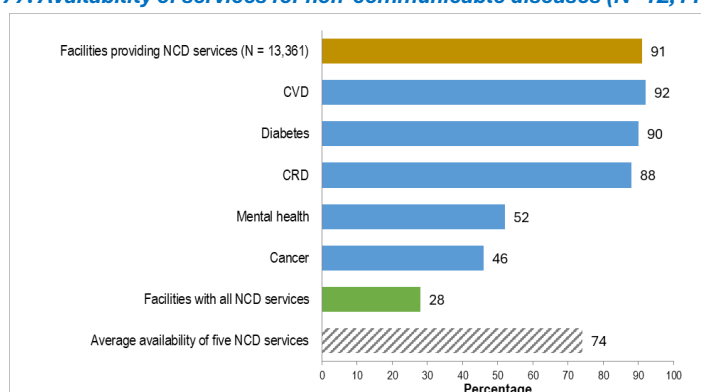
Overall Service Availability

The overall availability of services for non-communicable diseases in Kenya can be seen in Figure 77 below;

- Almost all (91%) of facilities offered services for non-communicable diseases.
- The most commonly available non-communicable services were cardiovascular disease at 92%, diabetes at 90% and chronic respiratory diseases at 88%.
- Slightly more than half (52%) of facilities offered mental health services.
- Cancer services were the least available non-communicable disease at 46%.
- The average availability of the five non-communicable diseases was 74% with only 28% of the health facilities having all the five tracer services.

⁶ Global Health Observatory 2019

Figure 77: Availability of services for non-communicable diseases (N=12,113)



Annex Table 18 shows the availability of non-communicable disease tracer services by location, facility type and managing authority.

- There was a minimal variation in the availability of non-communicable diseases by location
- All level 5 health facilities had diabetes, cardiovascular, and chronic respiratory disease services available
- Other than cancer, NGOs had the lowest availability of all other NCD services.
- Mental health services were available in about half of the health facilities regardless of the managing authority
- Availability of palliative care services was generally low.

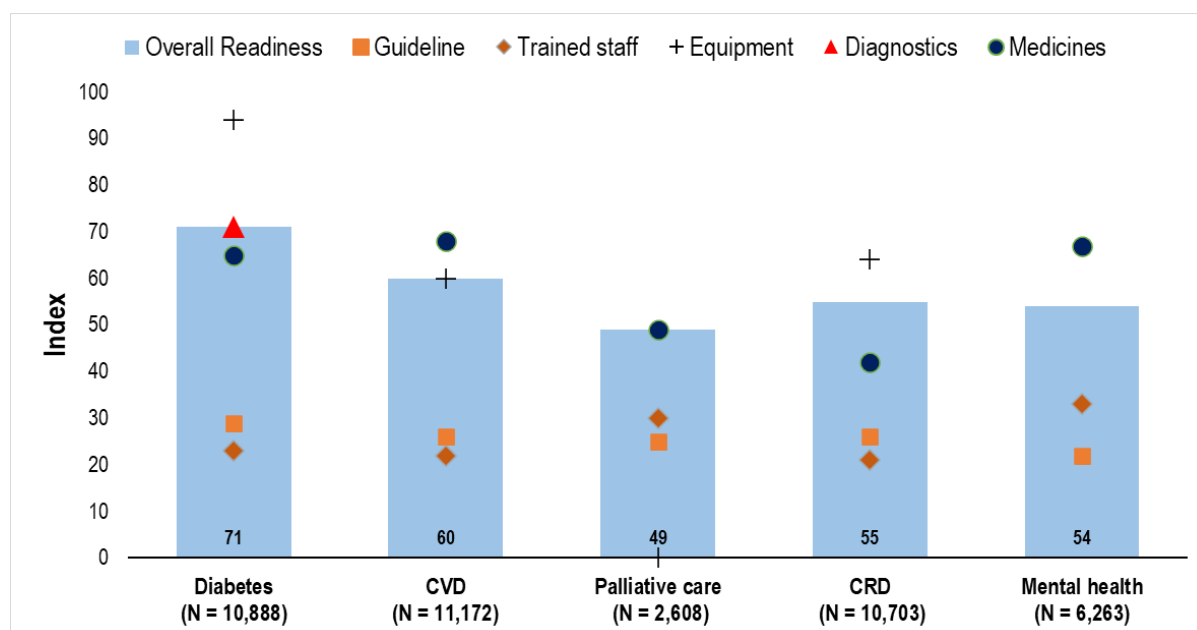
Overall Service Readiness

Readiness to provide NCD services was assessed based on the availability of tracer items including guidelines, diagnostic, medicines, commodities, equipment, infrastructure and trained staff.

Figure 78 depicts the readiness for services for non-communicable diseases for each type of service and domain.

- Service readiness index was highest for Diabetes at 71% while CVD and CRD were 60% and 55% respectively. Across the three services, equipment had the highest score while trained staff and guidelines were the weakest points.
- Slightly more than half of the health facilities were ready to provide mental health services.

Figure 78: Readiness to provide select non-communicable diseases services (N=12,113)



Diabetes

Introduction

In Kenya, the prevalence of diabetes was estimated at 4.0% in 2021 and is projected to rise to 4.4% by 2035 (Global Diabetes Atlas 2022). With the rising prevalence of diabetes mellitus, patients face a significant increase in the risk of severe long-term complications including diabetes neuropathy, retinopathy, and chronic kidney diseases.

Definition:

The 2024 QOC assessed availability of diabetes service based on five tracers across all the facilities that offered NCD services (N=12,113) as summarized in Table 42.

Table 42: Tracer items for diabetes services

Domain	Tracer items
Diabetes services	- Screening for diabetes - Diagnosis for diabetes - Treatment for diabetes - Clinical follow-up services for diabetes patients e.g. drug adherence, monitoring of complications - Counseling for diabetes self-management including dietary advice, footcare, and follow-up

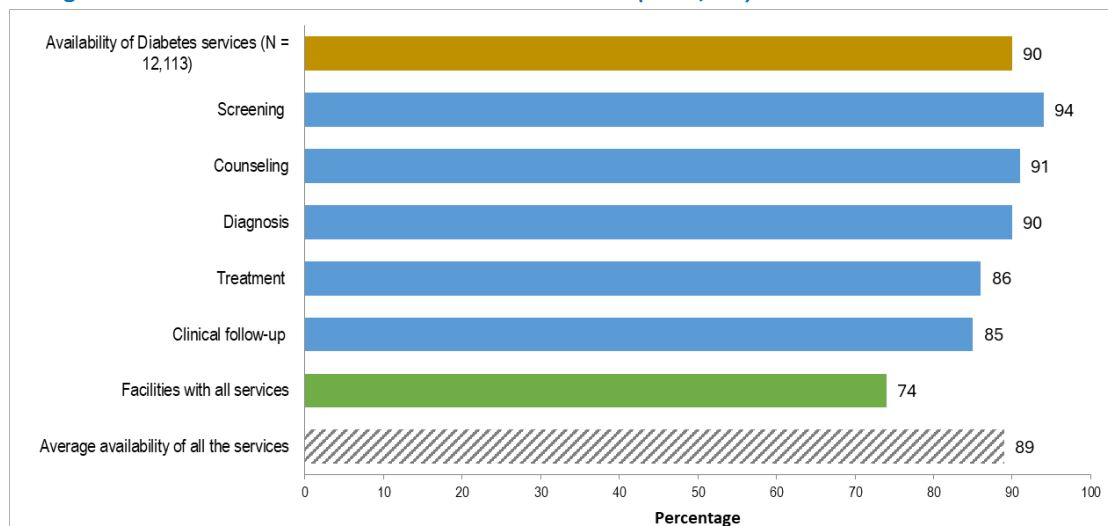
Key findings

Service Availability

- Of all facilities offering NCD services 90% provided diabetes services.

- Among the facilities offering diabetes services, 94% conducted screening, 91% offered counseling, 90% performed diagnosis, 86% provided treatment, 85% did follow-up.
- The average availability of all five diabetes tracer services was 89%.

Figure 79: Percent of facilities that have diabetes services (N=10,888)



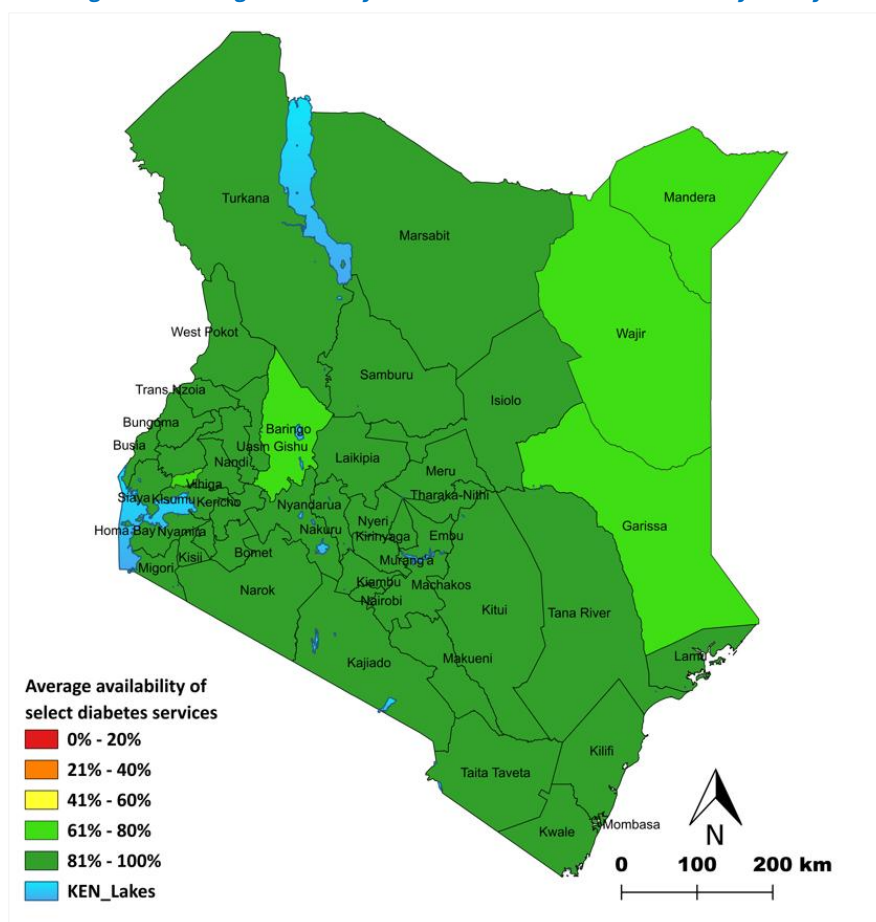
Annex Table 38 provides the proportion of health facilities providing diabetes services by location, facility type, management authority and county.

- There was generally high availability of diabetes services across all facility locations, levels and ownership.
- All level 5 health facilities had all the tracer diabetes services.
- Less than two thirds (63%) of public facilities had all the diabetes tracer services.
- The average availability of tracer diabetes services was lowest in public health facilities at 84%

County Distribution

- The average availability of diabetes services was at least 81% in the health facilities in 43 counties.
- Only four counties, Baringo (79%), Garissa (74%), Wajir (78%) and Mandera (76%) had an average availability of less than 80%.
- Trans Nzoia County had the highest average availability of diabetes services at 100% while Garissa had the least at 74%.

Figure 80: Average availability of select Diabetes tracer services by county



Service Readiness

Definition

The 2024 QOC assessed readiness for health facilities to offer diabetes services based on availability of select tracer items as summarized in Table 43. Below.

Table 43: Tracer items for diabetes services

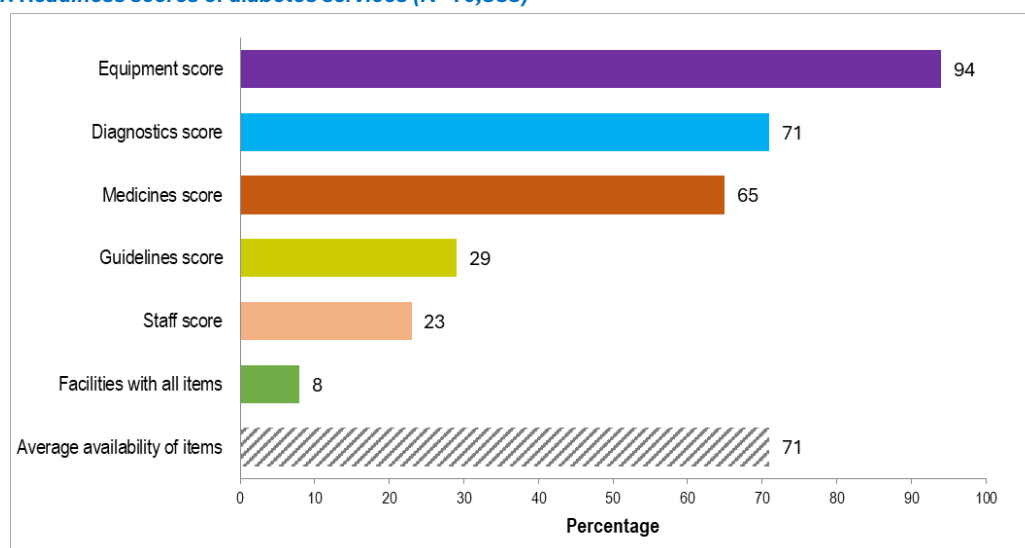
Domain	Tracer items
Guidelines	Kenya National Clinical Guideline for the Management of Diabetes 2018
Equipment	- Blood pressure machine - Stethoscope - Adult weighing scale
Diagnostics	- Glucometer - Glucose Strips - Glycated Hemoglobin (HBA1C) test kits - Urine dipstick – protein

Domain	Tracer items
	Urine dipstick – ketones
Training	Healthcare workers trained on the Ministry of Health / Kenya Diabetes Study Group or equivalent diabetes care package in the last two years
Medicines and Commodities	- Metformin - Insulin regular injectable - Insulin syringe - Gliclazide or glipizide tablet or glibenclamide - Normal saline

Among the health facilities offering diabetes services,

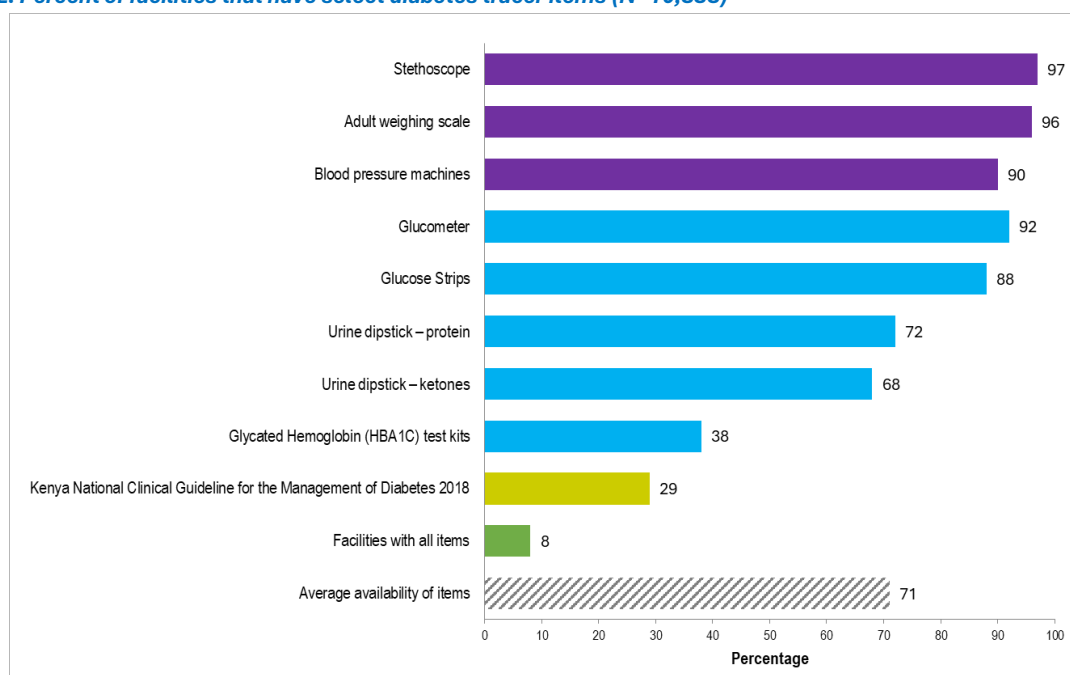
- The average availability of the select tracer items was 71% with only 8% of the health facilities having all the tracer items.
- Equipment had the highest score at 94%, diagnostics at 71%, and medicines at 65% while the lowest was trained staff at 23%.

Figure 81: Readiness scores of diabetes services (N=10,888)



- Glucometers were available at 92%, and glucose strips were at 88%.
- The diagnostic kits HBA1C were only available in 38% of the facilities
- Only 29% of the facilities had the Kenya National Clinical Guideline for the Management of Diabetes 2018

Figure 82: Percent of facilities that have select diabetes tracer items (N=10,888)



Annex Table 39 & 40 show the disaggregation of diabetes tracer items by location, KEPH level, ownership and by county.

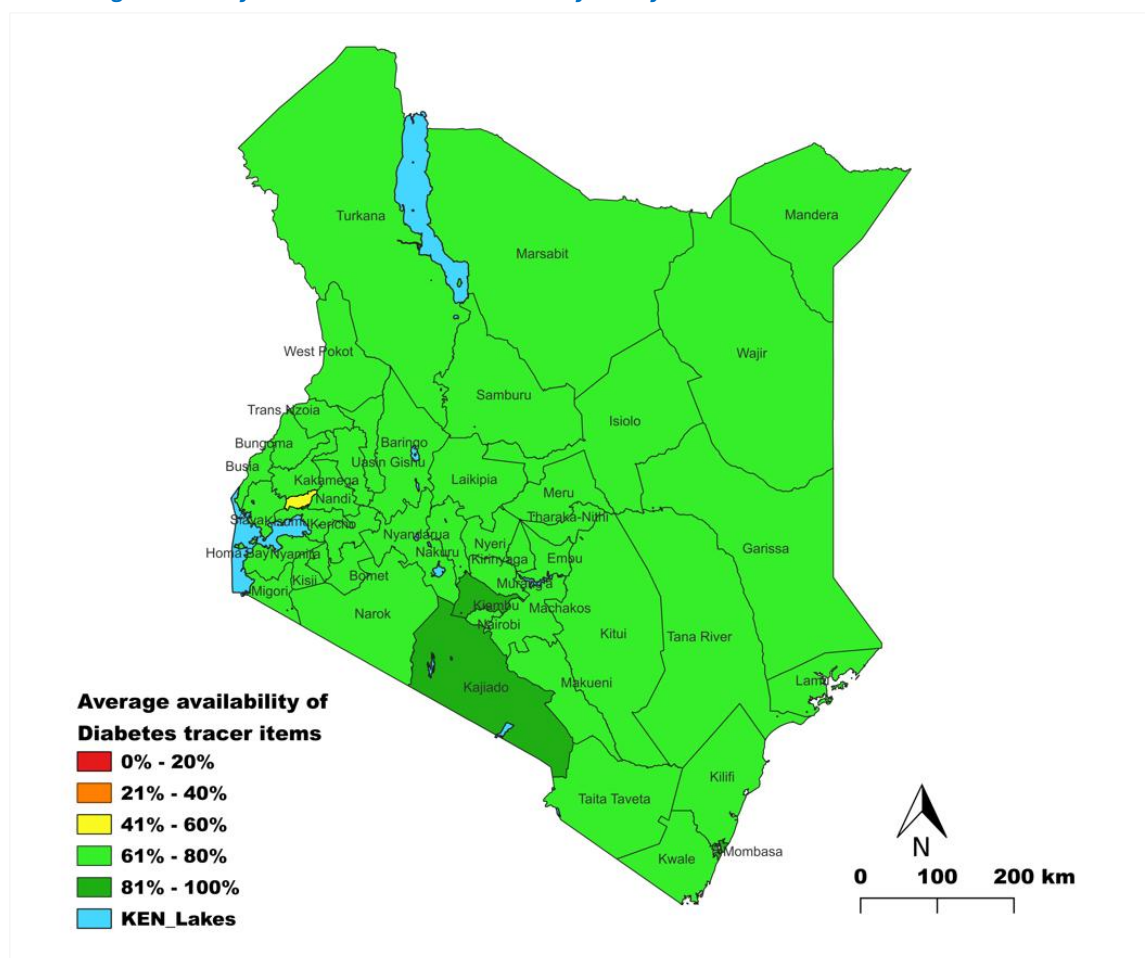
- Average availability of diabetes tracer items was 64% in rural facilities and 78% in urban health facilities.
- By ownership, glucometers were readily available in all facilities; glucose strips were least readily available in public facilities at 77%.
- The availability of HbA1C at level 4 and 5 facilities was 69% and 86% respectively.
- Slightly more than half (55%) of the health facilities in the rural areas had diabetes medicines available on the day of the survey, while 73% of urban areas and the medicines.
- Availability of the Kenya National Clinical Guideline for the Management of Diabetes 2018 was generally low.
- Trained staff on diabetes management was highest in level 5 at 70% and least in level 2 at 18%.

County Distribution

Amongst facilities offering NCD services,

- Majority of the health facilities across the 47 counties had 61-80% average availability of the select diabetes tracer items.
- Two counties, Kajiado and Kiambu had the highest average availability of the select diabetes tracer items at 86% and 82% respectively while Vihiga had the least at 55%

Figure 83: Average availability of select diabetes tracer items by county

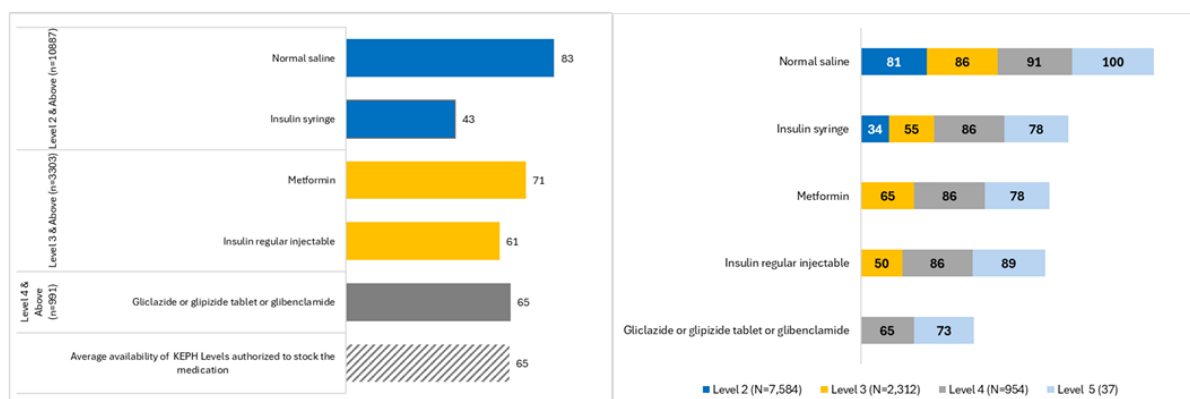


Diabetes Medicines

Amongst facilities providing diabetes services,

- Average availability of diabetes tracer medicines and commodities at KEPH levels authorized to stock them was 65%.
- The most available tracer commodity/ medicine was normal saline at 83% and Metformin 71%.
- While insulin regular injectable was moderately available at 61%, the insulin syringe required to administer had 43% availability.

Figure 84: Average availability of diabetes medicines



Annex Table 155 shows the disaggregation of diabetes tracer items by location, KEPH level and ownership.

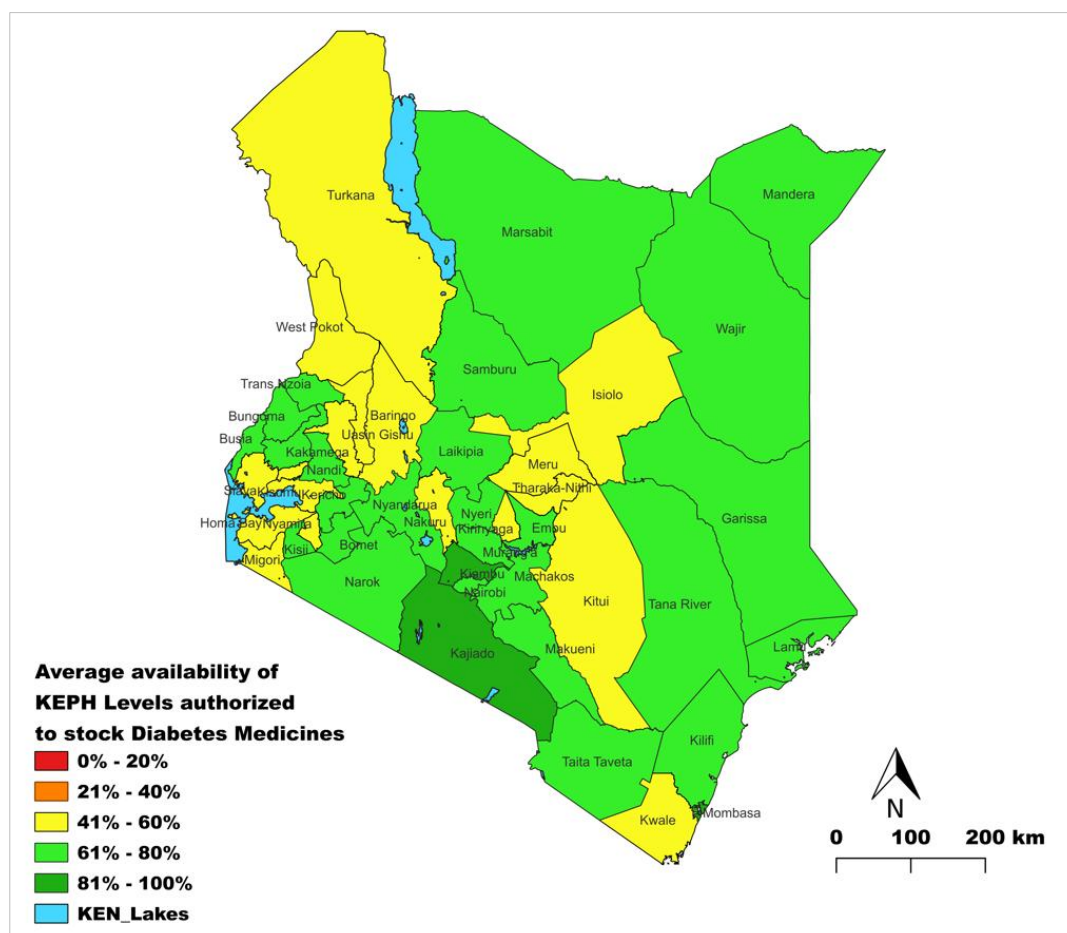
- By location, diabetes medicines and commodities are more available in urban areas as compared to rural areas; for instance, availability of insulin regular injectable in rural areas was 45% while urban areas had 76% availability.
- By ownership, availability of oral diabetes medication was low in public facilities compared to other. Glibenclamide availability was lowest in public facilities at 47% and highest in NGO at 90%. Similarly, Metformin availability was least in public facilities at 53% and highest in FBO at 89%.
- Insulin regular injectable had low availability in NGO and public facilities at 43% and 45% respectively and were more available in FBO and private at 75 and 76% respectively.

County Distribution:

Figure 85 shows the disaggregation of diabetes tracer medicines by county

- The three counties with the highest availability of diabetes medicine were Kajiado at 82%, Kiambu at 81% and Mombasa at 80%.
- Turkana county had the least availability of diabetes medicines at 48%.

Figure 85: Average availability of diabetes medicines by county



Discussion:

The findings regarding diabetes service availability and readiness across Kenya highlight a critical aspect of healthcare delivery, particularly within the broader framework of non-communicable disease (NCD) management. Nationally, 89% of facilities offering NCD services also provide diabetes care, reflecting a significant level of commitment to addressing this widespread health challenge.

Urban facilities exhibit greater readiness for diabetes care, with screening rates at 96%, compared to 93% in rural areas. This urban-rural disparity extends beyond screening, encompassing essential services such as counselling (92% in urban areas versus 90% in rural regions) and follow-up care (87% in urban centres versus 80% in rural settings). These differences underscore the need to address inequities, the urban-rural divide, in service provision, ensuring a more balanced approach to diabetes care across both urban and rural healthcare facilities.

An in-depth analysis of the distribution of service provision across the Kenya Essential Package for Health (KEPH) levels indicates that higher-tier facilities (Levels 4 and 5) achieve near-universal service delivery, encompassing screening, diagnosis, treatment, and follow-up care.

Conversely, Level 2 facilities fall short, with only 82% offering treatment and follow-up services. Additionally, faith-based organizations (FBOs) outperform public health facilities in several key areas, particularly in diagnosis (97% compared to 83%) and treatment provision (94% compared to 76%). These findings suggest that the practices employed by FBOs could serve as a model for improving service quality within the public healthcare sector.

Despite these encouraging findings, significant challenges persist, particularly regarding the availability of essential resources for diabetes management. The limited accessibility of the Kenya National Clinical Guideline for the Management of Diabetes, with an average availability of just 29%, underscores a critical gap in the standardisation of care. This is further compounded by the insufficient provision of diagnostic tools such as HBA1C kits, which are available in only 38% of healthcare facilities.

Training represents another pressing issue, with merely 23% of facilities reporting trained staff, and a marked disparity between urban (29%) and rural (17%) settings. This highlights the urgent necessity for targeted training programmes, particularly in rural and lower-tier facilities, to enhance the delivery of care and improve health outcomes for patients with diabetes nationwide.

While a foundational framework for diabetes care has been established, concerted and sustained efforts are required to bolster service readiness and resource availability, especially in underserved regions. Addressing these deficiencies will be pivotal in ensuring equitable and effective diabetes care across the country.

Kenya demonstrates a significant commitment to tackling diabetes as part of its broader NCD management strategy based on the national service availability and readiness.

Table 44: Diabetes recommendations

Key Finding	Recommendation
Urban facilities show higher readiness and service coverage compared to rural facilities, particularly in screening, counselling, and follow-up care.	Leverage on the existing platforms for example the MOH website and access through the MOH Virtual academy to increase accessibility, especially in lower-level facilities and remote areas
Levels 4 and 5 facilities achieve near-universal service delivery, while Level 2 facilities lag behind. Faith-based organizations outperform public facilities in diagnosis and treatment, suggesting potential models for improving public healthcare delivery.	- Advocate for decentralization of essential diabetes drugs to lower-level facilities. Ensure availability of essential diabetes drugs at lower-level facilities through expansion of the essential drug list and actively involve county leadership in implementation. - Improve referral networks across all levels of care. Strengthen/develop referral systems to

Key Finding	Recommendation
	streamline patient management and ensure continuity care.
• Key resource gaps and standardization challenges include the low availability of essential resources like the Kenya National Clinical Guideline for Diabetes Management (29%) and diagnostic tools such as HBA1C kits (38%). • Disparities in the availability of diabetes medicines in counties ranging from 48% to 82%.	• Enhance dissemination of standardized diabetes clinical management guidelines by the Division of Cancer and Non-Communicable diseases and county health departments. • Advocate to the county health department to ensure adequate provision of essential and diagnostic equipment, at primary health care level facilities and the underserved locations to enhance diagnosis and management
• With only 23% of facilities reporting trained staff, and a stark disparity between urban (29%) and rural (17%) facilities, targeted training initiatives, particularly for rural and lower-level facilities.	Strengthen capacity building of healthcare workforce on diabetes care across all counties by prioritizing lower-level facilities to improve the ability of healthcare workers to diagnosis and manage diabetes effectively.

Cancer

Introduction

Cancer is the third leading cause of death both globally and in Kenya and the second leading cause of NCD deaths after cardiovascular diseases. According to GLOBOCAN 2022, the annual incidence of cancer was 44,726 with 29,317 deaths. The five most common cancers in Kenya are breast, cervical, prostate, esophageal, and colorectal.

Overall Service Availability

The 2024 QOC assessed availability of screening, diagnostic and treatment for 5 top cancers among facilities providing NCD services (N=12,113). The cancers are listed in Table 45.

Table 45: Cancer tracer services

Domain	Tracer services
Screening, diagnosis and treatment	• Cervical cancer • Breast cancer • Oesophageal cancer • Colorectal cancer • Prostate cancer

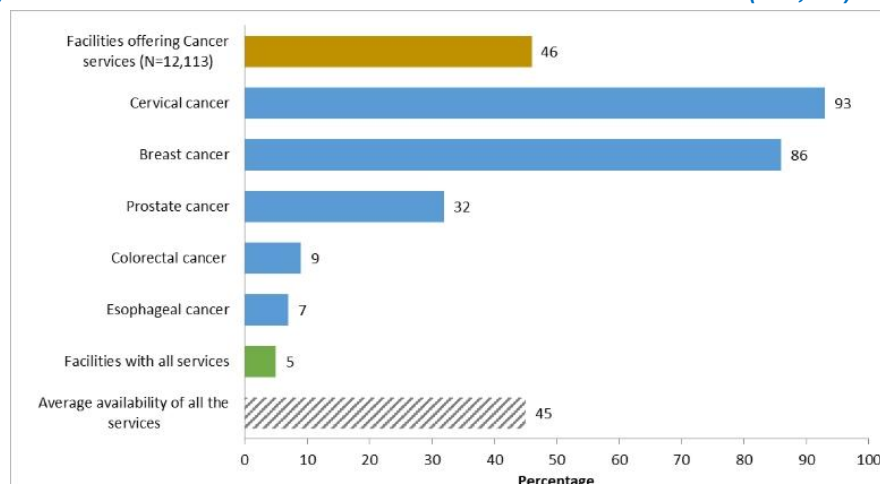
KEY FINDINGS

Service Availability

Among the health facilities offering cancer services;

- The average availability of cancer services was at 46% and only 5% of health facilities had all the select tracer cancer services.
- Cervical cancer services had the highest availability at 93% followed by breast cancer services at 86%.
- Prostate cancer services were available in about a third (32%) of the health facilities
- Colorectal and esophageal cancer services were the least available at 9% and 7% respectively

Figure 86: Percent of health facilities that have select tracer cancer services (N=5,577)



Annex Table 177 provides proportion of health facilities providing cancer services by location, facility type, management authority and county.

- Regardless of KEPH level, location or ownership, breast and cervical cancer services were most readily available, whereas colorectal and oesophageal services were least available.

Overall Service Readiness

The 2024 QOC assessed readiness for health facilities to offer cancer services based on availability of 2 tracer items across all the facilities that offered cancer services (N=5,577).

The tracer items assessed is summarized as follows.

Table 46: Tracer items for cancer services

Domain	Tracer items
Guidelines	• Kenya National Cancer Screening Guidelines in Kenya 2018 • Kenya National Cancer Treatment Protocols 2019 • Other guidelines
Training	Health workers trained on cancer screening, diagnosis and/or management in the last two years

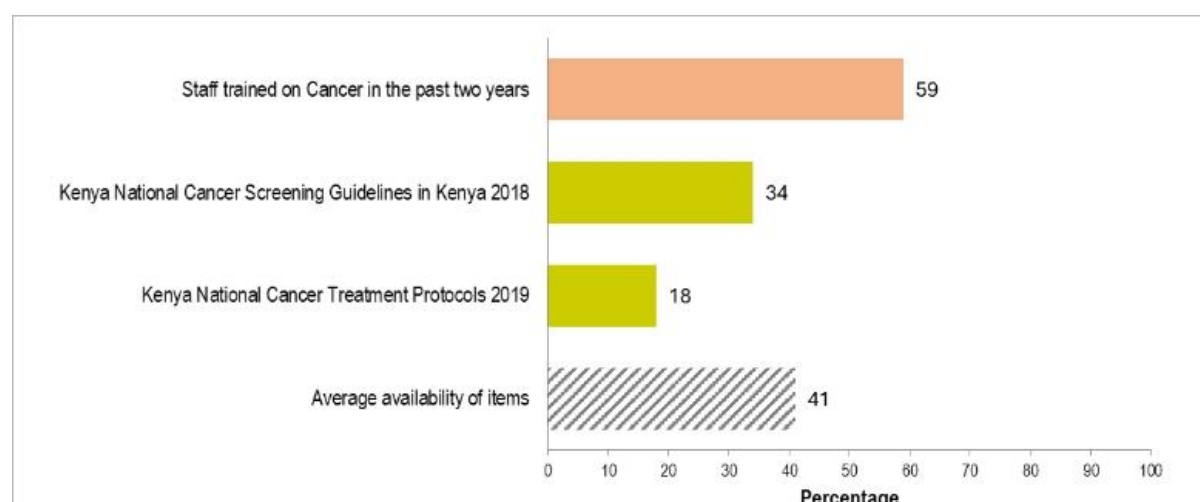
Key Findings

All cancers:

Among the health facilities offering cancer services;

- Kenya National Cancer Screening Guidelines 2018 were available in 34% of facilities while Kenya National Cancer Treatment Protocols 2019 were available in 18% of facilities.
- Average availability of general cancer tracer items was 41%.

Figure 87: availability of general cancer tracer items(N=5577)





Discussion

The findings outlined in the report highlight significant challenges in the provision of quality cancer care in Kenya. Cancer remains the third leading cause of mortality globally and the second among non-communicable diseases (NCDs) within the country. Notably, over 70% of cancer cases are diagnosed at advanced stages, a statistic indicative of critical deficiencies in early detection measures. These gaps are largely attributed to insufficient screening programmes and inadequate public awareness campaigns (GLOBOCAN, 2022).

The inequity in service provision between urban and rural healthcare facilities further highlights systemic disparities. For example, cancer service availability averages only 39% in rural areas, compared to 52% in urban settings. This disparity suggests that rural populations encounter more pronounced barriers to accessing timely cancer care, likely contributing to poorer health outcomes (WHO, 2023). Furthermore, the report reveals that merely 4% of healthcare facilities are equipped to offer comprehensive cancer services, indicating a pervasive lack of capacity to deliver end-to-end cancer care.

The low readiness scores for cancer services are similarly concerning, with just 36% of essential tracer items available across facilities. This points to insufficient training and resources among healthcare providers. Compounding these challenges, the limited availability of clinical guidelines and inadequately trained staff pose further obstacles to delivering quality care. These findings are consistent with prior research emphasizing the urgent need to strengthen healthcare infrastructure and expand training programmes to improve service delivery (KHFA, 2018).

Conclusion

The findings of this report call for an urgent need for comprehensive reforms in cancer care services across Kenya. The low indicators of service availability and readiness highlight systemic deficiencies that impede effective cancer management. To address these challenges, it is imperative to implement targeted measures that strengthen screening processes, expand service capacity, and ensure the availability of adequately trained healthcare professionals. A holistic approach encompassing policy reforms, strategic resource allocation, and robust community engagement is crucial to enhancing the quality of care for cancer patients in Kenya.

Table 47: Cancer recommendations

Key Finding	Recommendation
Low indicators of service availability and readiness highlight systemic deficiencies that impede effective cancer management. There is a	• Enhance Screening and Awareness Programmes: Implement nationwide cancer screening initiatives and public awareness campaigns, with a particular focus on rural communities. These efforts should aim to promote early detection and facilitate timely access to treatment.

Key Finding	Recommendation
need to implement targeted measures that strengthen screening processes, expand service capacity, and ensure the availability of adequately trained healthcare professionals.	• Strengthen Healthcare Infrastructure: Invest strategically in healthcare facilities, especially in under-served rural areas, to ensure they are adequately equipped with the resources and technology required to provide comprehensive cancer care. • Increase Training for Healthcare Professionals: Design and deliver specialized training programmes for healthcare providers, focusing on the latest protocols for cancer screening, diagnosis, and treatment. This will ensure healthcare workers are well-prepared to deliver high-quality, patient-centered care.

References

1. World Health Organization. (2022). Cancer Country Profile: Kenya.
2. Kenya Health Facility Assessment. (2018). Health Facility Assessment Report.
3. National Cancer Taskforce Report 2022

Breast Cancer

Breast cancer is the most prevalent cancer among women, with a global incidence of 2.2 million cases reported in 2022. In Kenya, it is the most commonly diagnosed cancer, accounting for 7,243 new cases and 3,398 deaths annually. Notably, breast cancer tends to occur in younger women in Kenya (aged 35–50) compared to higher-income countries. On average, nine women lose their lives to breast cancer every day in Kenya.

Efforts to control breast cancer face significant challenges, including limited access to preventive, diagnostic, treatment, and rehabilitative services. Early detection, which includes screening and early diagnosis is one of Kenya's strategies to achieve better treatment outcomes. Barriers to early diagnosis and treatment include low awareness of breast cancer symptoms and inadequate recognition of early-stage disease.

Although mammography remains the preferred screening method, the "triple assessment" method comprising a clinical breast examination (CBE), imaging (such as ultrasound or mammography), and a biopsy for histopathological evaluation, is recommended.

Breast cancer treatment in Kenya employs a multimodal approach, including surgery, chemotherapy, and radiotherapy, as outlined in the Kenya National Cancer Treatment Protocols. These specialized services are primarily available in Level 5 and 6 hospitals, which possess the requisite infrastructure and skilled personnel to manage complex cancer therapies. Breast cancer medicines, such as hormone blockers (e.g., tamoxifen, aromatase inhibitors),

chemotherapy drugs, and targeted therapies like HER2 inhibitors, are essential in treating the disease.

Service Availability for breast cancer

The 2024 QOC assessed service availability for breast cancer based on the availability of 10 tracer services among facilities that offered cancer services. Clinical breast examination was assessed in all levels of care while breast ultrasound and mammography were assessed in levels 4 and 5. All diagnostic services (FNAC and core needle biopsy) were assessed in levels 4 and 5 facilities. Surgical treatment option (lumpectomy and mastectomy) was assessed in both level 4 and 5 facilities while chemotherapy, hormonal therapy and radiation therapy were assessed in level 5 health facilities only.

The tracer breast cancer services and items assessed are summarized in Table 48.

Table 48: Breast cancer services and items

Screening	Diagnosis	Treatment
- Clinical breast examination (all levels of care) - Breast ultrasound (levels 4 and 5 facilities) - Mammography (levels 4 and 5)	- Fine needle aspiration cytology (FNAC-levels 4 and 5) - Core needle biopsy of lump specimen (levels 4 and 5)	- Chemotherapy (level5) - Hormonal therapy (level5) - Radiation therapy (level 5) - Lumpectomy (level 4 and 5) - Mastectomy (level 4 and 5)

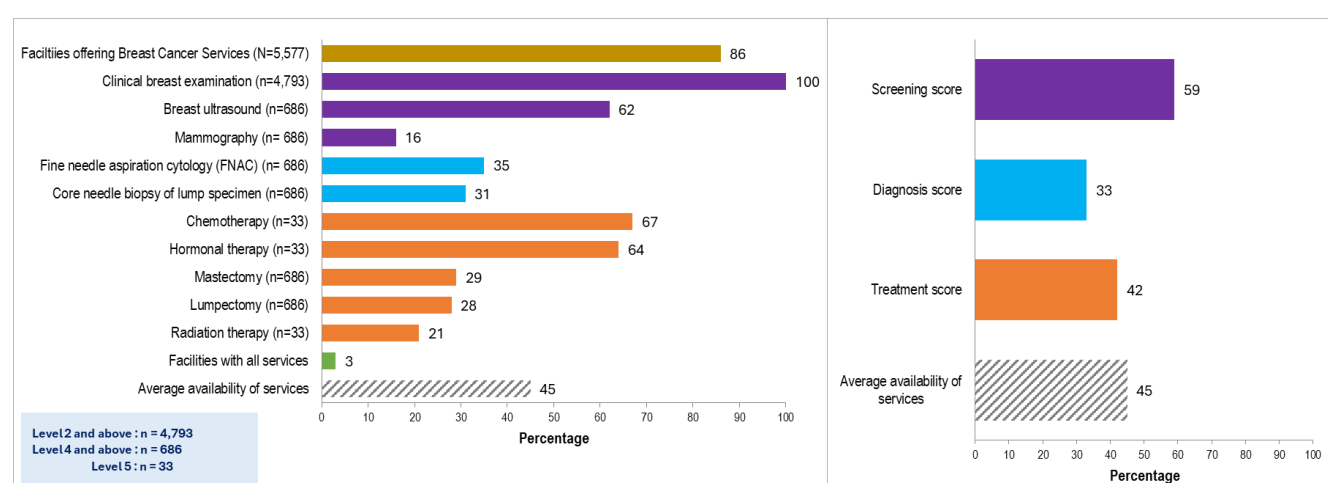
Findings

National

- The majority (86%) of the facilities providing cancer services were offering breast cancer services. (N=5,577).
- The average availability of all breast cancer services was 45%.
- Mammography was the least available screening service at 16% while all facilities offered clinical breast examination.
- Diagnostic services for breast cancer i.e fine needle aspirate cytology and core needle biopsy had low availability at 35% and 31% respectively.

- The most available treatment option was chemotherapy (67%) while the least available was radiotherapy (21%). Surgical treatment options were available in about three in every ten facilities (29% and 28% for mastectomy and lumpectomy respectively).
- The average availability of breast cancer services was 59% for screening services, 33% for diagnostic services and 42% for treatment services.
- A few facilities offered all breast cancer services (3%)

Figure 88: Percent of health facilities that have select breast cancer tracer services



Disaggregation by location, KEPH level and ownership

Annex Table 25 shows disaggregation by location, KEPH level, ownership and by county.

- Other than clinical breast examination, services for breast cancer were less available in rural facilities compared to urban facilities. For instance, breast ultrasound was available in 72% of urban facilities compared to 39% of rural facilities. None of the rural facilities offered radiation therapy.
- Breast cancer services were more available in level 5 facilities compared to level 4; e.g. mammography was available in 61% of level 5 compared to 14% of level 4 facilities; mastectomy was available in 76% of level 5 compared to 27% of level 4 facilities.
- None of the NGO facilities offered any of the treatment modalities for breast cancer (chemotherapy, radiotherapy or surgery).
- Chemotherapy was available in 76% of public level 5 facilities compared to 64% of private and 40% of FBO facilities.

County Distribution

There was varied availability of breast cancer screening, diagnostic and treatment services in the counties.

Screening services:

- Diagnostic score for breast cancer was highest in Mandera county (89%) and lowest in Tana River and Homa Bay counties with scores of 33% and 37% respectively.
- Mammography was available in 67% of health facilities in Mandera and none of facilities in Baringo, Marsabit, Tana River, West Pokot and Vihiga counties.

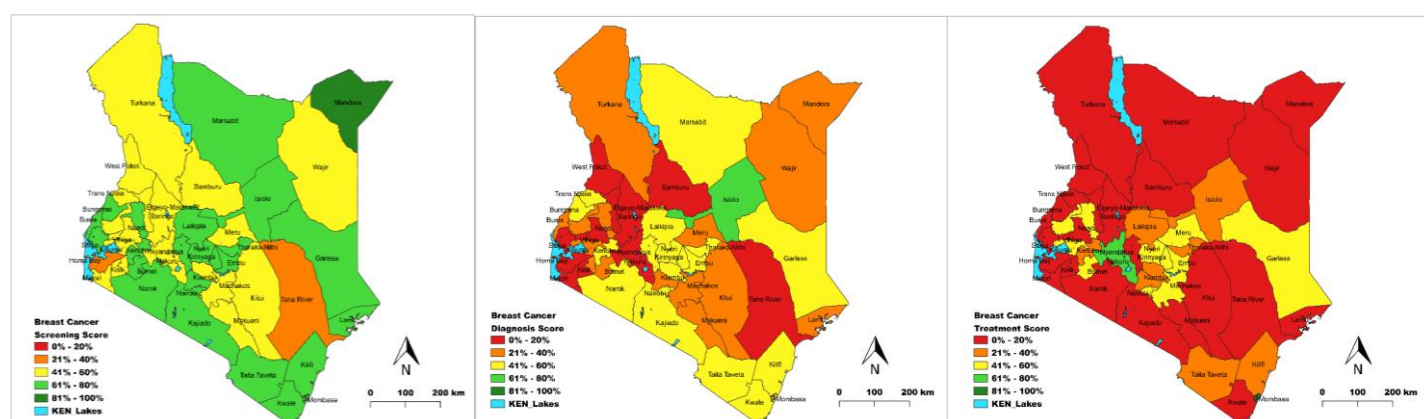
Diagnostic services:

- The highest diagnostic score was in Isiolo county at 67%. None of the health facilities in West Pokot, Elgeyo Marakwet, Vihiga and Tana River counties offered breast cancer diagnosis services.

Treatment services:

- The highest treatment score was in Mombasa County at 88% while none of the facilities in Elgeyo Marakwet, Lamu, Marsabit, Vihiga and West Pokot offered breast cancer treatment services.

Figure 89: Average availability of breast cancer screening, diagnostic and treatment services by county



Services Readiness

The 2024 QOC assessed the readiness of health facilities to provide breast cancer services based on the availability of tracer items used for breast cancer screening, diagnosis, treatment and training of healthcare workers across all facilities offering cancer care (N=5577). The tracer items assessed are summarized below.

Table 49: Tracer items for breast cancer services

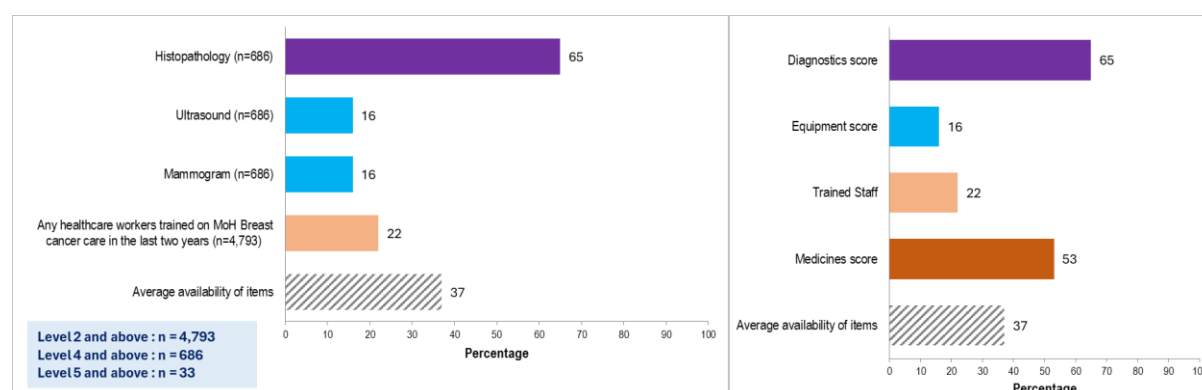
Domain	Tracer Items
Equipment	• Mammogram (levels 4 and 5 facilities) • Ultrasound (levels 4 and 5)
Diagnostics	• Histopathology (levels 4 and 5)
Training	• Healthcare workers trained on MoH Breast cancer care in the last two years (all levels)

Medicines	- Tamoxifen (level 5) - Cyclophosphamide (level 5)

Key Findings

- The average availability of the select breast cancer tracer items was 37%.
- The least available tracer items were an ultrasound and mammogram (16%) while the most available was histopathology (65%)
- The average availability of medicines was 53%

Figure 90: Percent of facilities that have select breast cancer tracer items



Disaggregation by location, KEPH level and ownership

Annex table 163 shows the availability of tracer items for breast cancer tracer disaggregation by location, KEPH level, ownership and by county

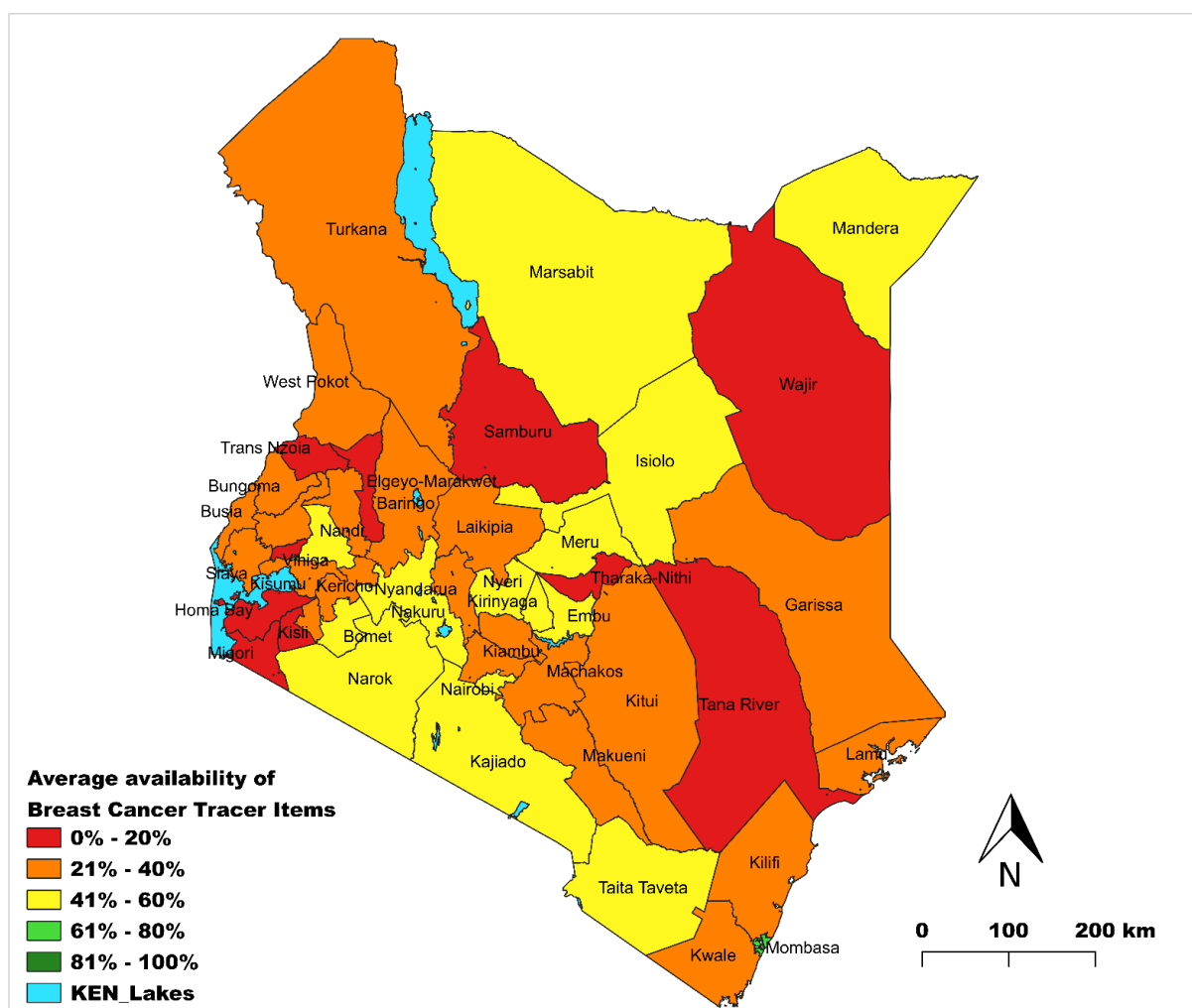
- The average availability of the select breast cancer tracer items was higher in urban health facilities (41%) compared to rural health facilities (29%).
- All level 5 facilities had histopathology facilities compared to 63% of level 4.
- None of the NGO facilities had a mammogram or an ultrasound. These items were most available in private facilities (28% and 21% respectively)
- Tamoxifen was most available in public facilities (65%) while none of the NGO facilities had it.

County Distribution

- The average availability of the breast cancer tracer items was highest in Mombasa County at 65%. None of the facilities in Tana River County had any of the tracer items.
- All level 5 health facilities that offered breast cancer treatment in Bomet, Kirinyaga, Meru, Mombasa, Nakuru and Nandi counties had both tamoxifen and cyclophosphamide.

- None of the health facilities in Tana River County had any of the breast items available

Figure 91: Average availability of select breast cancer tracer items by county



Discussion

Findings from this survey highlight notable gaps in service availability and service readiness, which are consistent with previous studies and reports on cancer care in Kenya. The survey found that all health facilities provided Clinical Breast Examination (CBE), but only 62% offered ultrasound, and a mere 16% had mammography services. This aligns with findings from the Kenya Health Facility Assessment (KHFA) 2018, which reported limited access to advanced breast cancer screening technologies, particularly in rural areas. WHO guidelines emphasize mammography as the gold standard for early detection, yet its availability in Kenya remains critically low. The Kenya National Cancer Screening Guidelines also recommend CBE as an alternative where mammography is unavailable, which explains the widespread use of CBE in Kenya.

The triple assessment approach, which includes CBE, imaging (ultrasound/mammography), and histopathology (biopsy), is the global standard for breast cancer diagnosis. This survey

found that 65% of level 4 and 5 facilities had histopathology capabilities, reflecting shortage of histopathology services, which aligns with reports from the Ministry of Health and the National Cancer Control Strategy (NCCS) 2017-2022, emphasizing that pathology services remain underdeveloped in Kenya. Geographical disparities were also evident, with most diagnostic services concentrated urban facilities.

The proportion of health facilities that offered treatment services (chemotherapy, surgery, or radiotherapy) was low. This is consistent with the Global Cancer Observatory (GLOBOCAN) Kenya report, which highlights that most cancer treatment services are centralized in Level 5 and 6 hospitals, creating significant geographical and financial barriers to access. A majority of counties lack radiotherapy services, and chemotherapy services remain limited to urban centres, which reflects the historical concentration of cancer care in Kenya's private and tertiary hospitals.

Readiness to offer breast cancer services was alarmingly low, with only 22% of facilities having health personnel trained on breast cancer care, 16% having necessary equipment (mammogram and ultrasound), and 65% having histopathology capability. This is in line with findings from the Kenya National Cancer Control Strategy, which noted that lack of trained personnel and inadequate infrastructure are key barriers to cancer care. Availability of tamoxifen and cyclophosphamide, first line medicines for breast cancer treatment, was noted to be low in most counties. This is concerning given that the WHO Model List of Essential Medicines recommends these drugs as first-line treatments.

Conclusion

While notable improvements have been made in screening services, major gaps in diagnostics, treatment access, and service readiness persist. Addressing these challenges requires coordinated efforts from the government, private sector, and development partners to ensure comprehensive, equitable, and affordable breast cancer care for all women in Kenya.

Table 50: Breast cancer recommendations

Key Findings	Recommendations
Major gaps in the screening, diagnostics, treatment access and readiness in the provision of breast cancer services	• Increase mammography and ultrasound equipment in health facilities, particularly in Level 4 and 5 facilities, to scale up access to breast cancer screening.
	• Establish regional pathology laboratories at least one in each county to reduce turnaround time for biopsies and histopathology tests.
	• Increase training of healthcare workers at all levels of care on breast cancer care



Key Findings	Recommendations
	Decentralize chemotherapy, radiotherapy, and surgical services to more counties by investing in regional cancer centres.
	Strengthen supply chain mechanisms through KEMSA and National Cancer Control Program to ensure consistent availability of chemotherapy drugs.

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Cervical Cancer

GLOBOCAN (2022) estimates Kenya has an incidence of 5,845 cancer cases and 3,591 deaths annually. It also approximates 12% of all cancer cases diagnosed in Kenya and is the leading cause of cancer deaths.

Regional differences in the cervical cancer burden are related to inequalities in access to vaccination, screening and treatment services. The risk factors include HIV prevalence, and social and economic determinants. Women living with HIV are 6 times more likely to develop cervical cancer compared to the general population, and an estimated 5% of all cervical cancer cases are attributable to HIV (KHHFA, 2018). Cervical cancer disproportionately affects younger women, and as a result, 20% of children who lose their mother to cancer do so due to cervical cancer (2). It is essential to address disparities, promote awareness, and implement effective strategies for prevention and early detection to improve cervical cancer outcomes.

The cervical screening methods available range from simple visual techniques using iodine or acetic acid to complex ones through the HPV gene test. In case of detection of any precancerous lesions, these should be treated immediately using cryotherapy, thermal ablation, and LEETZ (large loop excision of the transformation zone).

Cervical cancer diagnosis is a highly specialized service that involves a core biopsy of the cervix and pathology examination.

Cervical cancer treatment is multimodal involving chemotherapy, radiotherapy, and surgery. These services are only designated for level 5 and 6 hospitals with the required human resources and infrastructure.

Service Availability

The 2024 QOC assessed readiness for health facilities to offer cervical cancer services based on availability of the following services:

The tracer cervical cancer services and items assessed are summarized as follows;

Table 51: Cervical cancer tracer services and items

Screening	Diagnosis	Treatment
- Collect PAP smear specimen - Visual inspection with acetic acid (VIA) -all levels of care - VIA and Visual inspection with Lugol's iodine (VILI)-all levels - Examine and report on Pap smear specimen-level 4 and 5 - Collect sample for Human papilloma virus (HPV) testing-level 4 and 5 - Analyse and report on HPV samples-level 4 and 5 - Colposcopy-levels 4 and 5	- Cervical biopsy-level 4 and 5 - Perform digital cervicography (levels 4 and 5)	- Treatment of pre-invasive cervical cancer lesions (e.g. cryotherapy, thermal/cold coagulation or loop electrosurgical excision procedure [LEEP]-level 4 and 5 - Surgery – hysterectomy-levels 4 and 5 - Chemotherapy-level 5 - Radiation-level 5

Findings

The availability of cervical cancer services was 93% among the health facilities that were offering cancer services (N=5577).

Among the facilities providing cervical cancer services;

- The average availability of the services was 37%
- The most available screening service was visual inspection with acetic acid (81%) while the least available was colposcopy (16%)
- For diagnosis services, cervical biopsy was done in about a third of the facilities (36%) while digital cervicography was available in 14% of the facilities.
- Surgical treatment was offered in 32% of level 4 and 5 health facilities while 63% and 20% of level 5 facilities provided chemotherapy and radiotherapy respectively.

- The average availability of services was 49% for screening services, 38% for treatment services and 24% of diagnostic services

Figure 92:Percent of health facilities that offered select cervical cancer services

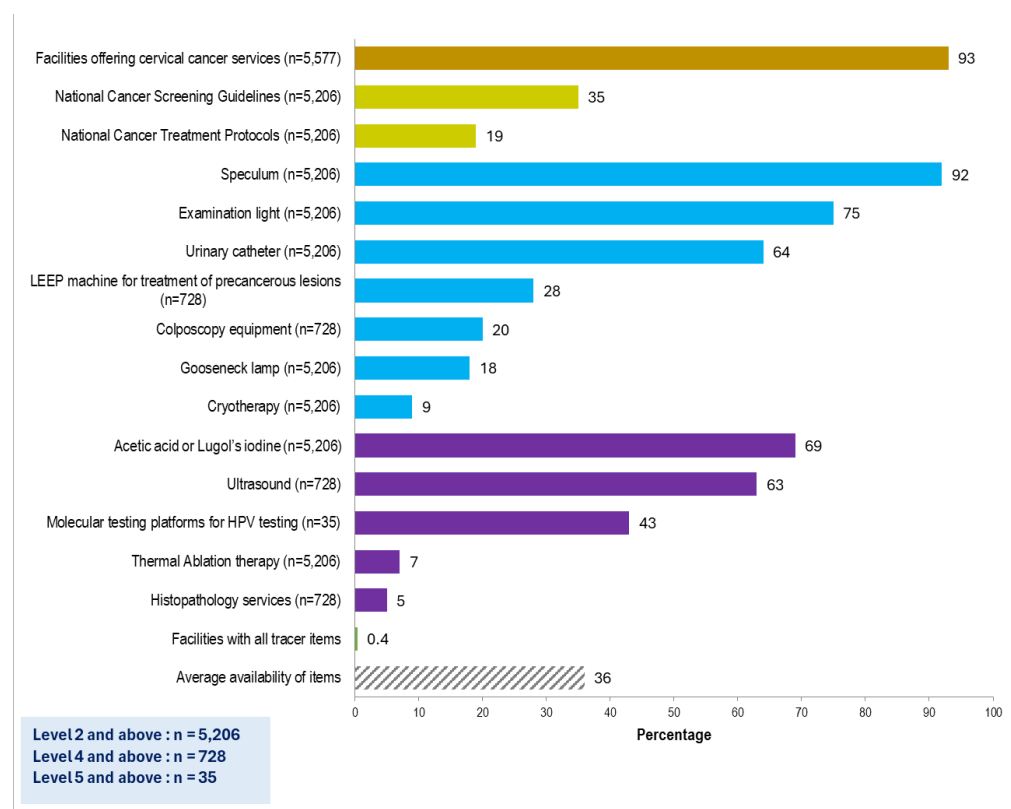
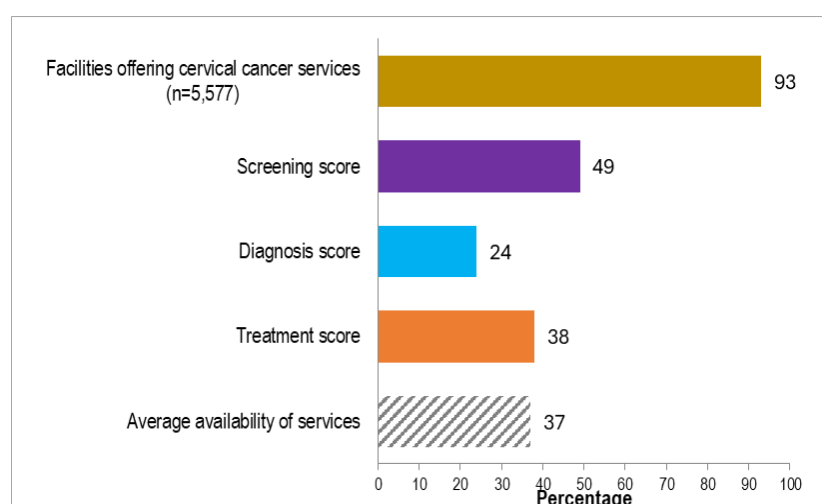


Figure 93: Scores for select cervical cancer services(N=5,206)



Disaggregation of cervical cancer services by location, KEPH level and ownership.

Annex table 27 shows the availability of tracer services for cervical cancer tracer disaggregation by location, KEPH level, ownership and by county

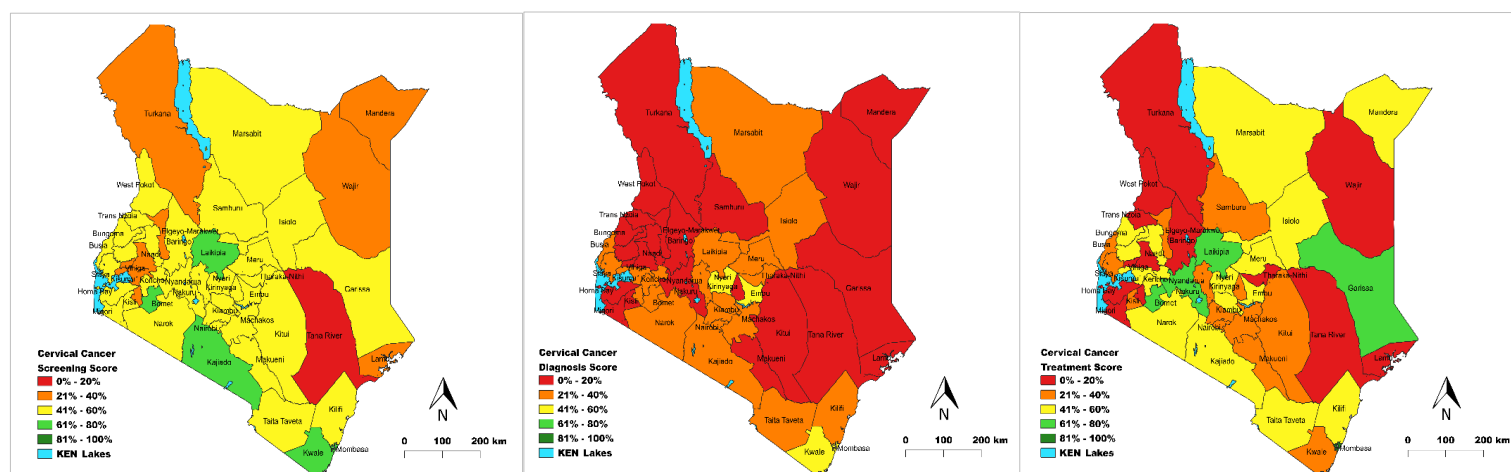
- The availability of cervical cancer services was higher in urban facilities compared to rural facilities; for instance, the average availability of screening services was 54% for urban facilities and 37% in rural facilities.
- Screening services were most available in NGO facilities (average availability of 69%) and least available in public facilities (43%)
- Visual inspection with both acetic acid and Lugol's iodine were more available in higher level facilities compared to primary care facilities
- Cervical biopsy for diagnosis was least done in public facilities (22%) compared to 60% of private facilities
- Availability of surgical treatment (hysterectomy) was minimal in level 4 facilities (29%) compared to 86% of level 5 facilities
- Both chemotherapy and radiation services were most available in public facilities (76% and 25% respectively. None of the NGO facilities offered these services.

County Distribution

Figure 94 shows the availability of cervical cancer screening, diagnostic and treatment distributed by county

- The average availability of cervical cancer screening services was highest in Mombasa County (75%) and lowest in Tana River County (17%)
- All health facilities in Lamu county offered cancer screening using visual inspection with acetic acid. This service was available in 40% of facilities in Isiolo county.
- About 6 in every 10 health facilities (62%) in Mombasa County screened for cervical cancer using colposcopy while none of the facilities had the same service in 13 counties.
- All level 4 and 5 health facilities in Isiolo county offered cervical biopsy for cancer diagnosis while none of the facilities had the same in West Pokot, Tana River and Lamu counties.
- About 8 in every 10 health facilities (81%) in Mombasa County offered surgical treatment for cervical cancer while none of the facilities offered the same in 5 counties namely West Pokot, Tana River, Lamu, Homa Bay and Baringo.

Figure 94: Cervical cancer screening, diagnosis and treatment by county



Service Readiness

The 2024 QOC assessed readiness to offer cervical cancer services based on availability of tracer items used for cervical cancer screening, diagnosis and treatment, among all health facilities that offered cancer services (N=5577). The tracer items assessed are summarized as follows;

Table 52: Tracer items for cervical cancer service readiness

Guidelines	Equipment	Diagnostics
- National Cancer Screening Guidelines (all levels of care) - National Cancer Treatment Protocols (all levels of care)	- Speculum (all levels of care) - Examination light (all levels of care) - LEEP machine for treatment of precancerous lesions (levels 4 and 5) - Gooseneck lamp (all levels of care) - Cryotherapy (all levels of care) - Urinary catheter (all levels of care) - Colposcopy equipment (levels 4 and 5)	- Acetic acid or Lugol's iodine (all levels of care) - Histopathology services (levels 4 and 5) - Molecular testing platforms for HPV testing 6319 (level 5) - Ultrasound (levels 4 and 5) - Thermal Ablation therapy (all levels of care)

Key Findings

Figure 95 shows the availability of cervical cancer screening, diagnostic and treatment tracer items.

Among facilities that offer cervical cancer screening, diagnostic and treatment services;

- The average availability of the select cervical cancer tracer items was 36%.
- Availability of guidelines was quite low, with about a third of the facilities (35%) having the cancer screening guidelines and 19% having the national cancer treatment protocols
- The most available screening item was a speculum (92%) while the least available was colposcope (20%)
- Availability of histopathology items for diagnosis of cervical cancer was extremely low at 5% of level 4 and 5 facilities.
- The highest average availability of the tracer items was for equipment (44%) followed by diagnostic items (37%) and guidelines (27%).

Figure 95: Readiness score of select cervical cancer tracer items (N=5,206)

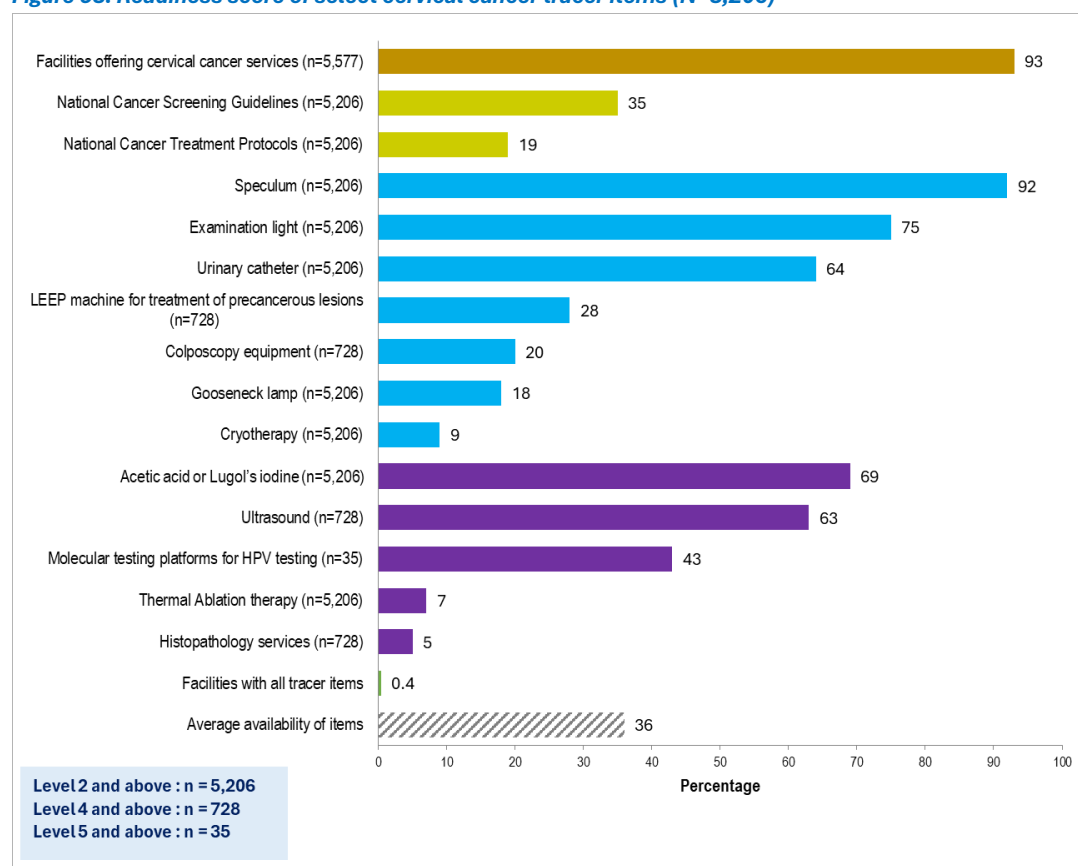
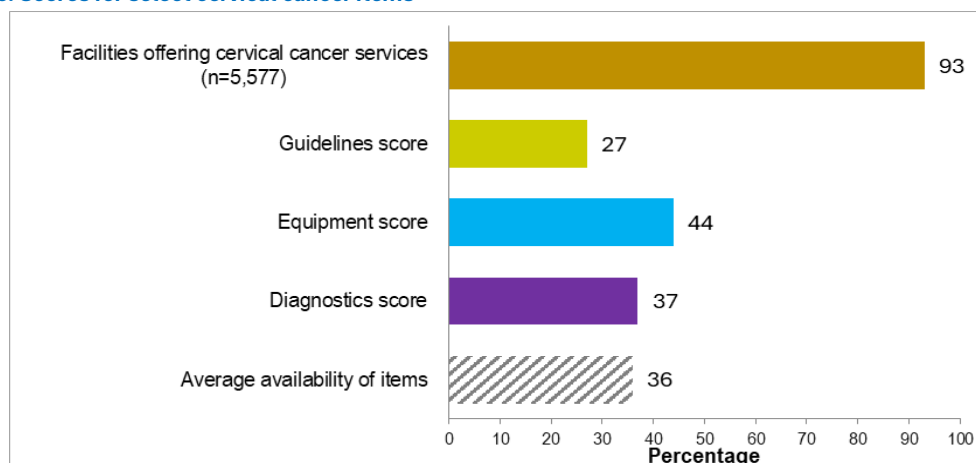


Figure 96: Scores for select cervical cancer items



Disaggregation by location, KEPH level and ownership.

Annex table 28 shows the availability of tracer items for cervical cancer tracer disaggregation by location, KEPH level, ownership and by county

- The average availability of the select cervical cancer tracer items was 41% for urban and 31% for rural health facilities
- Level 5 health facilities had the highest average availability of the select cervical cancer tracer items at 69% while Level 2 had the lowest at 31%

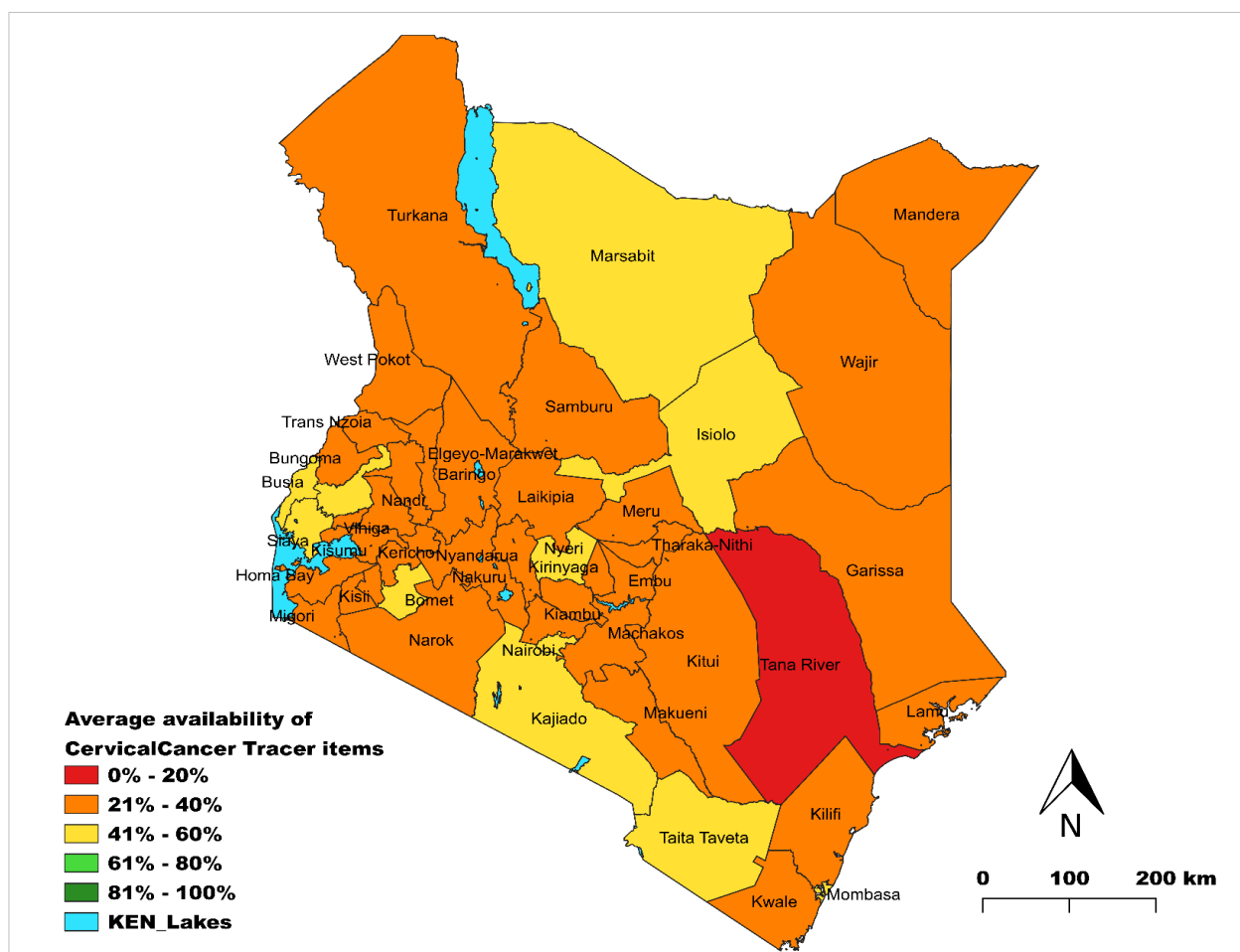
- The average availability of the select cervical cancer tracer items was highest in NGO facilities (46%) followed by private and FBO (39%) and public facilities (33%)

County Distribution

Figure 97 the availability of cervical cancer screening, diagnostic and treatment tracer items distributed by county.

- The average availability of the select cervical cancer tracer items varied across counties, being highest in Kajiado county at 56% and lowest in Tana River County at 16%.
- Three quarters of health facilities (75%) in Isiolo county had the national cancer screening guidelines. None of the facilities in Tana River County had any of the two guidelines assessed.
- Histopathology items were available in close to a quarter of health facilities in Kajiado county (23%) while none of the facilities in Homa Bay, Lamu, Marsabit, Nandi, Samburu, Siaya, Tana River, Turkana, Vihiga, Wajir and West Pokot offered the same.

Figure 97: Average availability of the select cervical cancer tracer items by County





Discussion:

The target population for cervical cancer screening is women aged between 25 to 49 years. Testing for the human papilloma virus (HPV) is recommended as the primary screening method. Visual inspection with acetic acid (VIA) alone or combined with visual inspection with Lugol's iodine (VILI) can also be used as primary screening method where facilities for HPV testing are not available. KHFA 2018 survey availability of cervical cancer prevention and control services was at 22% (Collect PAP smear specimen, read PAP smear and HPV test results, colposcopy and biopsy, perform digital cervicography, treatment of preinvasive cervical cancer lesion). In the QoC 2024 survey, these services are reflected in the screening and diagnostic scores at 49% and 24% respectively.

A key concern is the limited availability of HPV testing, which is the gold standard for cervical cancer screening according to WHO guidelines. Despite its importance, only 47% of facilities collect HPV samples, and 43% can process them. This aligns with findings from the Kenya National Cancer Control Strategy 2017-2022, which identified low investment in molecular testing platforms as a major constraint in the fight against cervical cancer.

Access to cervical cancer diagnosis remains poor, with only 5% of facilities offering diagnostic services. This gap highlights a critical weakness in early detection and case confirmation, which is essential for timely treatment and improved survival rates. County-level disparities further exacerbate the situation. These findings are consistent with the Kenya Health Facility Assessment (KHFA) 2018, which highlighted inadequate pathology services as a major bottleneck in cancer care. Additionally, diagnostic services are concentrated in private hospitals, making them inaccessible to many low-income patients, a trend that was also noted in the Kenya Cancer Report (2021).

The survey also showed a limited access to cervical cancer treatment. The Global Cancer Observatory (GLOBOCAN) 2021 report previously noted that Kenya had just four public radiotherapy centres, resulting in long waiting times for treatment. The current assessment confirms this gap, showing that 20% of level 5 facilities offer radiotherapy services, which is crucial for advanced cervical cancer cases.

Conclusion

While the availability of screening services has significantly improved, the availability of diagnostic and treatment services remains inadequate. Disparities at regional and facility levels continue to limit access and worsen outcomes for cervical cancer patients. Strategic investments in HPV testing, diagnostics, and expanded treatment services are critical for reducing cervical cancer mortality in Kenya.

Table 53: Cervical Cancer recommendations

Key Findings	Recommendations
The availability of screening, diagnostic and treatment services remain inadequate	Expand HPV testing capabilities by investing in molecular testing platforms in higher level health facilities so as to enhance early detection of cervical cancer.
	Increase the availability of treatment for precancerous lesions by procuring and distributing LEEP and cryotherapy machines to county health facilities.
	Expand histopathology services by establishing regional pathology centres to ensure timely cervical cancer diagnosis for optimal patient outcomes.
	Expand chemotherapy and radiotherapy centers by upgrading Level 5 hospitals to provide specialized cancer treatment.
	Increase the availability of essential equipment, such as colposcopy machines to enhance access to cervical cancer screening.
	Distribute national guidelines and protocols to all facilities offering screening and treatment services to improve standardization and adherence.

Cervical Cancer References

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- Ministry of Health, Kenya. (2018). Kenya Health Service Delivery Indicator Survey 2018 Report.
- Ministry of Health, Kenya. (2023). National Cancer Control Strategy 2023–2027.
- Manduku, V., Akhavan, M., Asiki, G., Brand, N. R., Cira, M. K., Gura, Z., Kadengye, D. T., Karagu, A., Livinski, A. A., Meme, H., & Kyobutungi, C. (2020). Moving Toward an Evidence-Informed Cancer Control Strategy: A Scoping Review of Oncology Research in Kenya. *JCO Global Oncology*, 6, 1148–1157. <https://doi.org/10.1200/GO.20.48000>

Esophageal Cancer

Esophageal cancer ranks as the ninth most common cancer globally and is the sixth leading cause of cancer-related deaths, accounting for approximately 500,000 deaths each year (Sheikh et al., 2023). In Kenya, the burden of esophageal cancer is particularly high, as it is the leading cancer among men and the third most common among women. GLOBOCAN 2022 reported an annual incidence of 3,340 cases, and 3,132 deaths. While early detection significantly improves prognosis, the rates of early-stage diagnosis remain low due to the absence of prominent clinical symptoms, highlighting the need for enhanced screening and awareness programs (Mbugua et al., 2020; James et al., 2024), (Wang et al, 2023).

Early detection tests include white light endoscopy and Lugol's chromoendoscopy.

Depending on the stage and type of esophageal cancer, treatment often involves a combination of therapies, including surgery, radiation, and chemotherapy. Esophageal cancer medicines are crucial in the treatment and management of cancer that develops in the esophagus. These medicines are essential in controlling the spread of cancer, shrinking tumors, and improving survival rates, often in combination with other treatment modalities.

Service Availability

The 2024 QOC survey defined the service availability of oesophageal cancer services as availability of the screening and diagnosis services (in levels 4 and 5 facilities) as well as treatment services (in level 5 facilities).

Table 54: Esophageal cancer tracer services

Screening and Diagnosis	Treatment
- White light endoscopy (level 4 and 5 facilities) - Lugol's chrome endoscopy (level 4 and 5 facilities) - Narrow band endoscopy (level 4 and 5 facilities) - Barium swallow radiography (level 4 and 5 facilities)	- Surgery (level 5 health facilities) - Chemotherapy (level 5 health facilities) - Radiotherapy (level 5 health facilities)

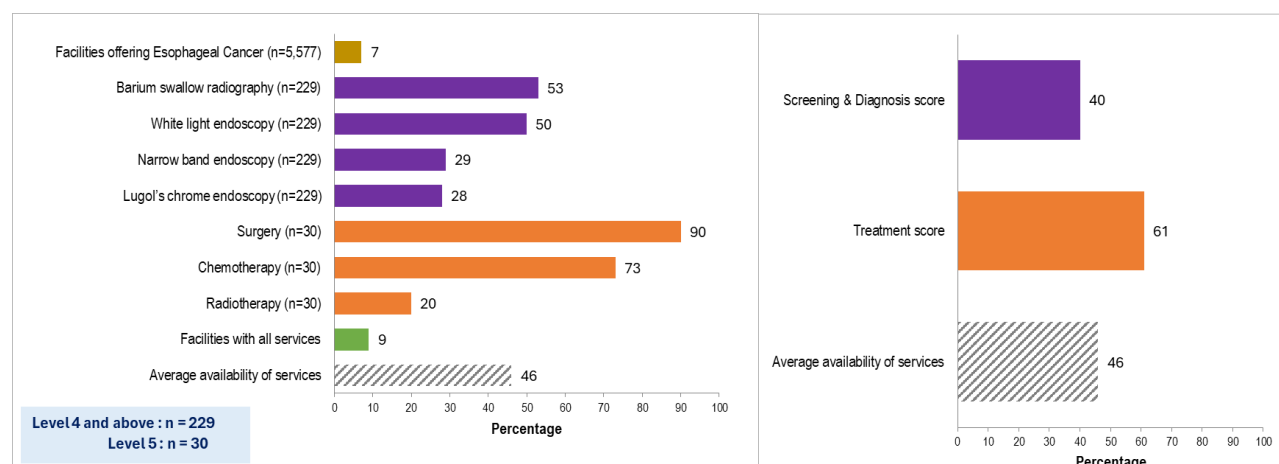
Key Findings

- Oesophageal cancer services were offered in 7% (259) of the health facilities that provided cancer services.

Among the health facilities offering oesophageal cancer services;

- The average availability for oesophageal cancer screening, diagnosis and treatment services was 46%
- More than half of the facilities offered barium swallow radiography (53%) while half of the facilities (50%) had white light endoscopy. The least available screening and diagnostic service was Lugol's chrome endoscopy at 29%.
- Surgery was the most available treatment option (90%), followed by chemotherapy (73%) and radiotherapy (20%).
- The average availability of screening and diagnostic services was 40% while for treatment services was 61%.

Figure 98: Availability of esophageal cancer services



Disaggregation by location, KEPH level and ownership.

Annex table 178 shows the availability of tracer services for oesophageal cancer disaggregation by location, KEPH level, ownership and by county

- There was a variation in availability of oesophageal cancer services between rural and urban facilities. The average availability was 50% for urban facilities and 43% for rural facilities.
- Screening and diagnosis services were more available in FBO facilities (46% on average) and least available in NGO facilities (25%). However, all NGO facilities had barium swallow radiography which was available in 49% of public facilities.
- Availability of screening and diagnosis services was higher in level 5 facilities compared to level 4 facilities e.g Narrow band endoscopy was available in half of level 5 facilities (50%) compared to 26% of level 4.

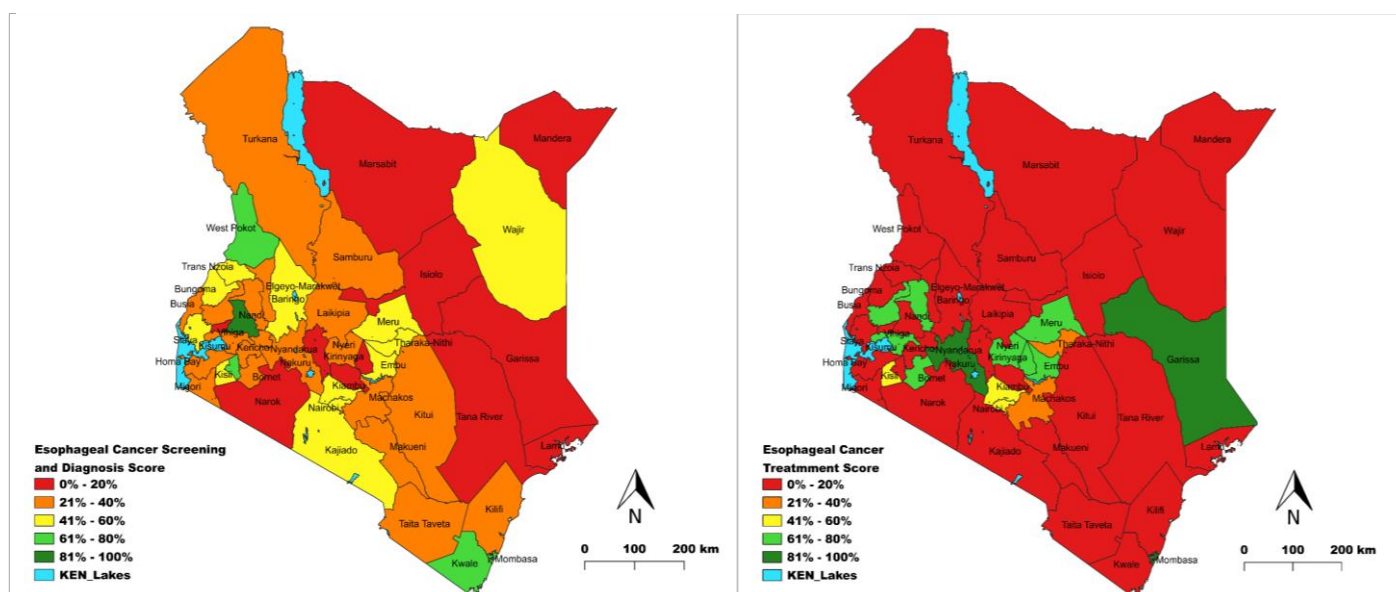
County Distribution:

Figure 99 shows the availability of oesophageal cancer screening, diagnostic and treatment tracer items distributed by county.

Among facilities offering oesophageal cancer services

- Nandi county had all (100%) the tracer oesophageal cancer screening and diagnostic services. None of the facilities in Isiolo, Narok and Vihiga counties offered any of these services.
- All oesophageal cancer treatment options were available in all level 5 facilities across three counties; Garissa, Mombasa and Nakuru. Most counties did not have level 5 facilities and therefore were not assessed for oesophageal cancer treatment.

Figure 99: Esophageal Cancer screening and diagnosis score & treatment score



Service Readiness

The 2024 QOC survey defined the service readiness for oesophageal cancer care as the availability of the tracer items summarized below.

Table 55: Tracer items for readiness for esophageal cancer care

Domain	Tracer Items
Equipment	Endoscopy machine
Diagnostics	- Lugol's iodine - Barium swallow - Histopathology
Training	Any healthcare workers trained in oesophageal cancer care
Medicines	- Capecitabine - Nivolumab - Ipilimumab

Key Findings

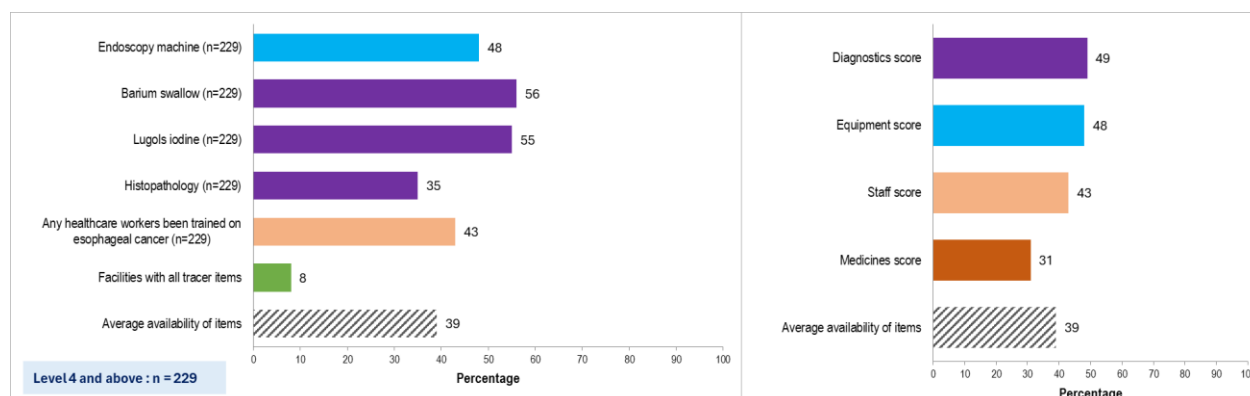
National Readiness

Among the health facilities offering oesophageal cancer services;

- The average availability of the select oesophageal cancer tracer items was 39%
- Endoscopy machine was available in less than half of the facilities (48%) while the least available diagnostic item was histopathology at 35%.
- Less than half of the facilities (43%) had health care workers trained in oesophageal cancer care

- The average availability of oesophageal cancer treatment tracer medicines was 31%

Figure 100: Readiness for esophageal cancer services



Disaggregation by location, KEPH level and ownership.

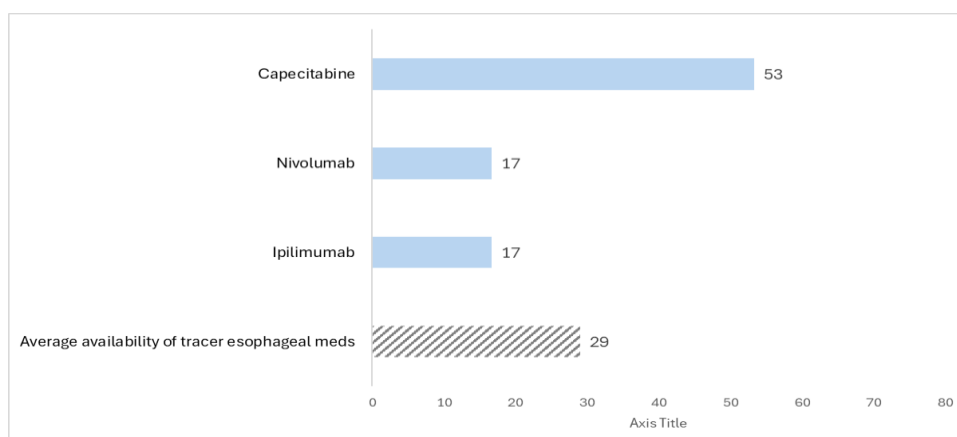
Annex table 37 shows the availability of tracer items for oesophageal cancer disaggregated by location, KEPH level, ownership and by county

- The average availability of the select oesophageal cancer tracer items was 39% for urban and 34% for rural health facilities.
- Level 5 health facilities had the highest average availability of the select oesophageal cancer tracer items at 51% compared to 30% of level 4 facilities.
- Average availability of oesophageal cancer tracer items was 44% for private, 37% for FBO, 32% for public and 14% for NGO.
- Annex table 159 shows the availability of tracer medicines for oesophageal cancer disaggregated by location, KEPH level, ownership and by county

Tracer Medicines

- Overall average availability of esophageal cancer treatment drugs at KEPH levels authorized to stock was 29%.
- Capecitabine was the most available medicine at more than half of the facilities (53%)

Figure 101: Availability of esophageal cancer tracer medicines

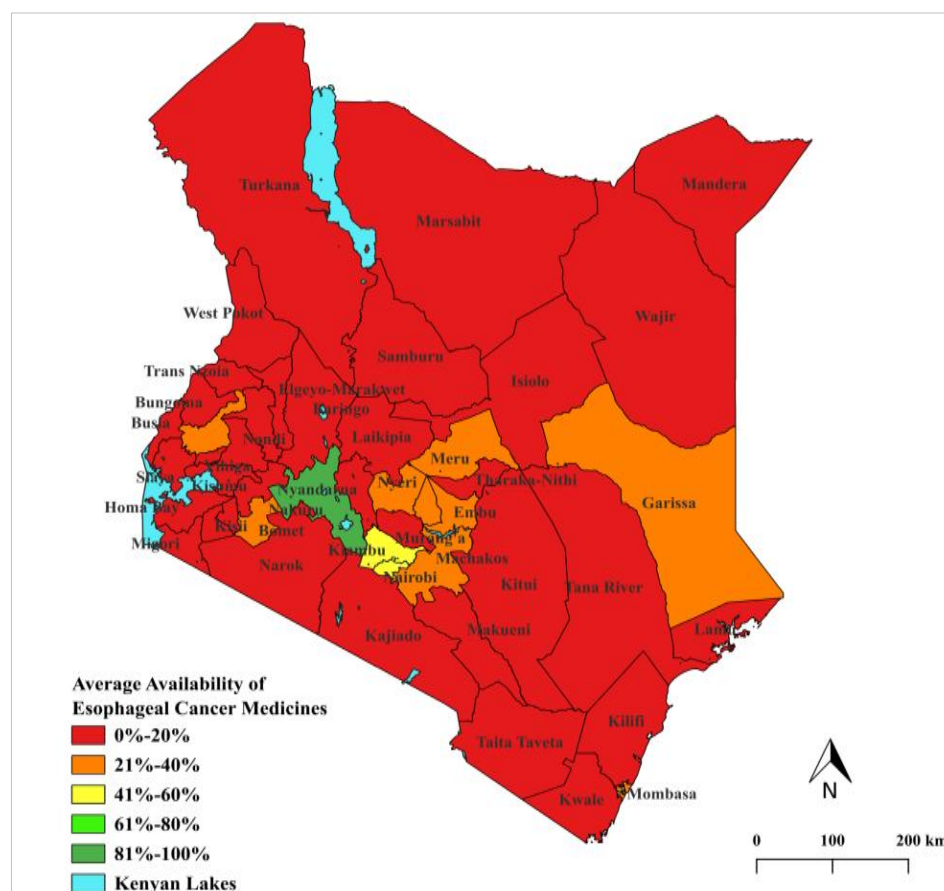


County Distribution

Figure 102 shows the average availability of esophageal cancer tracer medicines by county.

- All health facilities in Nakuru county stocked the three esophageal cancer tracer medicines
- The average availability of the tracer medicines in counties that stocked them was as follows; Nairobi (44%), Kiambu (44%), Bomet (33%), Embu (33%), Garissa (33%), Kakamega (33%), Kirinyaga (33%), Machakos (33%), Mombasa (33%) and Nyeri (33%)

Figure 102: Average availability of esophageal cancer tracer medicines by county.



Discussion

The findings reveal significant gaps in esophageal cancer care services across Kenya. The average availability of esophageal cancer services was low at 34% and even lower treatment availability (30%). These gaps align with findings from the World Health Organization (2022) and the Kenya Health Facility Assessment (2018), both of which highlighted poor infrastructure and limited resources for cancer management in Kenya.

Screening and early detection remain inadequate, with only 36% of facilities providing these services. Diagnosed at later stages leads to poor survival outcomes which is consistent with

Mbugua et al. (2020), in which late diagnosis was reported as a major barrier to esophageal cancer control in Kenya.

Treatment accessibility remains a major issue, with only 110 facilities providing treatment services. This survey confirms that patients must travel long distances to access treatment.

Service readiness is a major concern, with only 1% of facilities having all essential tracer items, and overall medicine readiness at 31%. This aligns with Kenya's National Cancer Control Strategy 2017-2022, which highlighted that procurement challenges and inadequate supply chains have limited the availability of essential cancer medicines. The low availability of chemotherapy drugs (31%) at KEPH levels allowed to stock the drugs is a major limitation, as chemotherapy remains a cornerstone of esophageal cancer treatment. The limited availability of targeted therapies such as nivolumab (11%) and ipilimumab (9%) suggests that advanced treatment options remain inaccessible to most patients, consistent with previous reports by WHO (2022).

Conclusion

Esophageal cancer represents a growing public health concern in Kenya, exacerbated by inadequate service availability, low levels of early detection, and significant disparities between urban and rural access to care. The findings underscore the urgent need for a comprehensive approach to improve the quality of care for esophageal cancer, focusing on enhancing screening, diagnosis, and treatment capacities. Addressing these gaps is essential for improving patient outcomes and reducing mortality associated with this disease.

Table 56: Esophageal Cancer Recommendations

Key Findings	Recommendations
Urgent need for a comprehensive approach to improve the quality of care for esophageal cancer, focusing on enhancing screening, diagnosis, and treatment capacities.	Enhance screening and early diagnosis programs: Develop and implement targeted screening and early diagnosis initiatives, in all health levels, to improve access to early detection services. Collaborate with counties to ensure community engagement and awareness (World Health Organization, 2022).
	Invest in Infrastructure: Allocate resources to improve the availability of diagnostic and treatment facilities across all levels of care, particularly in underserved counties. This includes ensuring that essential equipment and medications are accessible (Mbugua et al., 2020).
	Train Healthcare Providers: Establish training programs for healthcare workers on the management of esophageal cancer, emphasizing early detection

Key Findings	Recommendations
	and treatment protocols. Ensuring that healthcare professionals are well-equipped to handle esophageal cancer cases is crucial for improving service delivery (James et al., 2024).
	• Policy Advocacy: Advocate implementation of national health policies that prioritize esophageal cancer as per the National Cancer Control Strategy within the broader cancer control framework. This includes securing funding for research, screening and early detection programs, and public health initiatives aimed at reducing the burden of the disease (Kenya Health Facility Assessment, 2018).
	• Monitor and Evaluate Services: Implement a robust monitoring and evaluation framework to track the effectiveness of esophageal cancer care services continuously. This will help identify areas for improvement and ensure that interventions are responsive to the needs of patients (World Health Organization, 2022).

Prostate Cancer

GLOBOCAN 2022 ranked prostate cancer as the third most common in Kenya. The annual incidence was 3,582 while mortality was 2,029. This has been attributed to limitations in seeking early diagnosis and treatment (Mbugua et al., 2020). Late diagnosis of prostate cancer remains a global health challenge especially in LMICs such as Kenya. Early diagnosis systems are required to mitigate the rising burden of prostate cancer (James et al., 2024).

Screening is indicated in men aged 40-70 years. The only evidence-based screening test for prostate cancer is quantitative Serum PSA, a standard screening method for early detection of prostate cancer.

Prostate cancer diagnosis involves a combination of clinical evaluation, laboratory tests, imaging, and histopathological examination, with a biopsy performed to confirm the diagnosis when PSA levels are high or abnormal findings are detected. Diagnosis of prostate cancer is expected to be done at level 4 and level 5.

Prostate cancer treatment is based on cancer stage, including surgery, radiation therapy, hormone therapy, and sometimes chemotherapy or immunotherapy for advanced cases. Cancer Treatment is expected to be done in level 4 and 5.

Service Availability

The QoC Kenya Survey 2024 defined the services available for prostate cancer such as screening, diagnosis and treatment tracer services as shown in table 57 below.

Table 57: Tracer services for prostate cancer.

Screening	Diagnosis	Treatment
- Digital rectal examination (All levels) - Prostate specific antigen (PSA) testing (Level 4 and 5)	Prostate biopsy (level 4 and 5)	- Surgical interventions (level 4 and 5) - Radiation therapy (level 5) - Hormonal therapy (level5)

***Medicines were not assessed for prostate cancer treatment services.**

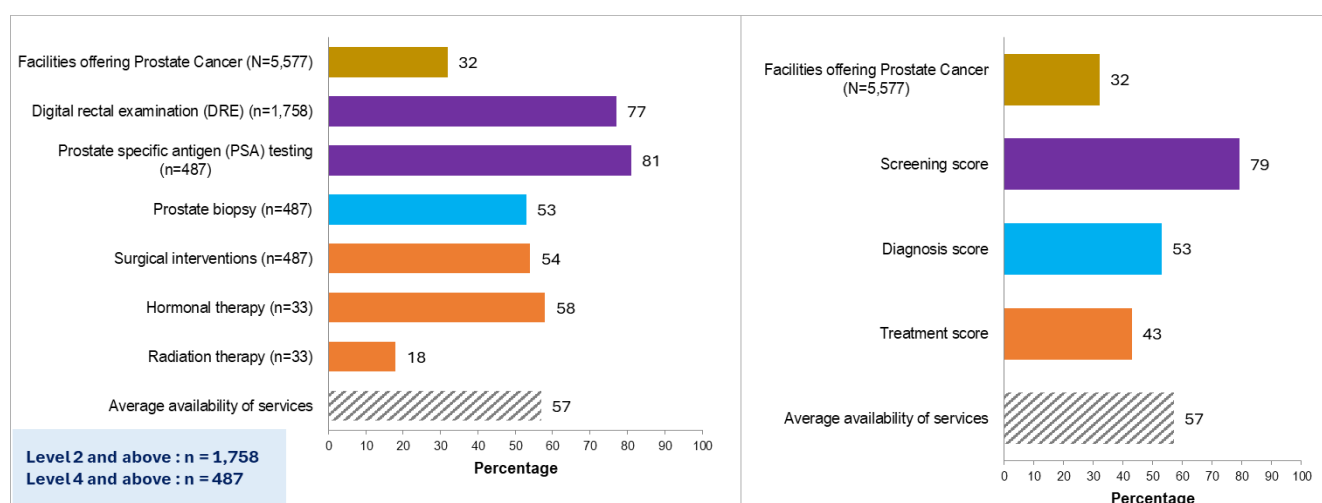
Key Findings

The prostate cancer services were available in 32% (n=1758) of health facilities offering cancer services.

Among the health facilities offering prostate cancer services;

- The average availability of prostate cancer services was 57%
- PSA testing was the most available screening test (81% of the facilities) prostate biopsy was available in 53% of the facilities
- Surgical treatment was offered in more than half of level 4 and 5 health facilities (54%) while radiation and hormonal therapies were provided in 18% and 58% of level 5 facilities.
- The average availability of screening and treatment services was 79% and 43% respectively.

Figure 103: Percentage of health services with select prostate cancer services



Disaggregation by location, KEPH and ownership.

Annex table 33 shows the availability of prostate cancer services distributed by disaggregation by location, KEPH , ownership and by county

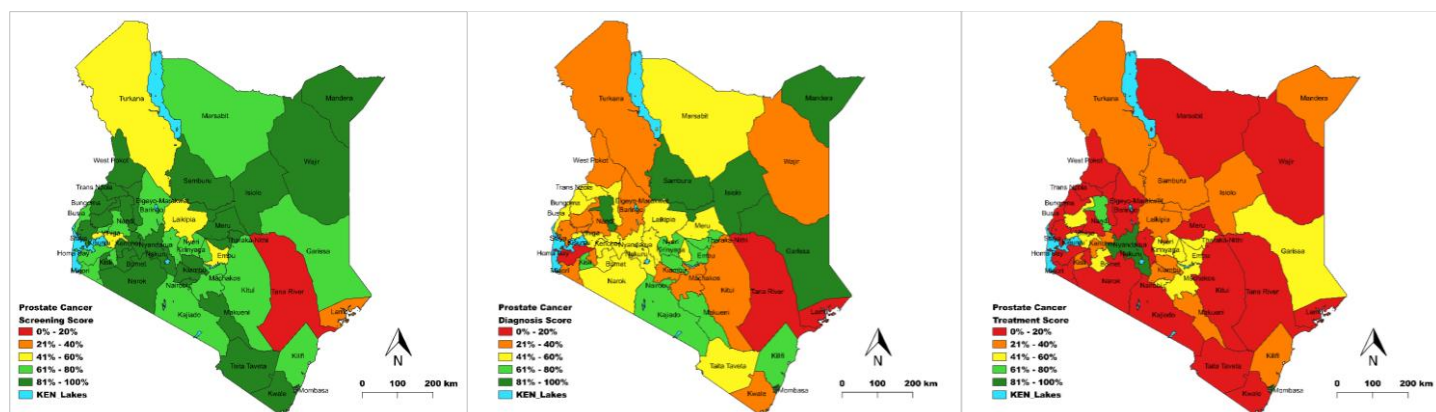
- The average availability of prostate cancer services was higher in urban facilities (61%) compared to rural facilities (40%)
- Screening through digital rectal examination was lowest in level 2 facilities (72%) and highest in level 4 facilities (86%)
- Prostate biopsy was done in 76% of level 5 facilities compared to about half of level 4 facilities (51%)
- All NGO facilities offered PSA testing and prostate biopsy, which were available in 68% and 29% of public facilities respectively
- Level 5 health facilities had the highest availability surgical treatment for prostate cancer at 85% compared to 51% of level 4 facilities.

County Distribution

Figure 104 the availability of prostate cancer services distributed by county.

- Both prostate cancer screening services were offered in all health facilities across 5 counties namely Elgeyo Marakwet, Isiolo, Mandera, Samburu and Wajir.
- None of the health facilities in Tana River County offered prostate cancer screening services
- All health facilities in Garissa, Isiolo, Mandera, Mombasa and Samburu counties provided prostate biopsy services while none of facilities in Lamu and Tana River counties offered the same.
- Surgical treatment for prostate cancer was available in all facilities in Isiolo, Mandera, Mombasa and Samburu counties while none of facilities in Tana River County offered this service.

Figure 104: Availability of prostate cancer services





Service Readiness

The 2024 QOC assessed the readiness for health facilities to offer prostate cancer services based on the availability of tracer items used for diagnosis (Histopathology) across all level 4 and 5 facilities that offered the services (N=229).

Key Findings

Among the health facilities that offered prostate cancer services;

- The availability of the Histopathology diagnostic facilities was at 35%
- The availability of Histopathology diagnostic facilities was 36% for urban and 34% for rural health facilities
- Level 5 health facilities had the highest availability of Histopathology diagnostic facilities at 57% compared to 32% of level 4 facilities.
- The availability of Histopathology diagnostic facilities was highest in private facilities (47%) compared to public facilities (29%), and FBO facilities (19%).
- None of the NGO facilities had histopathology diagnostic facilities

County Distribution

The availability of Histopathology diagnostic facilities varied across counties;

- All health facilities in Isiolo, Kajiado, Narok, Nyamira and Trans Nzoia counties had histopathology diagnostic facilities for diagnosis of prostate cancer
- Fifteen counties namely West Pokot, Vihiga, Turkana, Taita Taveta, Samburu, Nyandarua, Nandi, Migori, Mandera, Laikipia, Kilifi, Homa Bay, Garissa, Baringo and Elgeyo Marakwet had none of their facilities having histopathology diagnostic facilities.

Discussion

Prostate cancer is a leading cause of morbidity and mortality among men in Kenya yet significant disparities exist in access to screening, diagnosis, and treatment services. While the availability of screening services is relatively high (79%), there remains a significant urban-rural as well as county variations. These findings are consistent with previous reports such as Mbugua et al. (2020), which highlighted geographic disparities in cancer care in Kenya.

Prostate cancer diagnosis services were moderately available in Level 4 and Level 5 facilities. This low availability is concerning as early diagnosis is critical for improving treatment outcomes. The World Health Organization (2022) Cancer Country Profile for Kenya also identified poor diagnostic capacity as a major barrier to effective cancer management in the country.

Prostate cancer treatment services' availability remains inadequate as was found in the study by James et al. (2024), which emphasized the lack of comprehensive cancer treatment services in Kenya.

The low availability of diagnostic and treatment services in public facilities suggests that patients must rely on expensive private healthcare providers, which further exacerbates health inequities eased government investment in prostate cancer care. The complete lack of screening and diagnostic services in Tana River County and Lamu County demonstrates the urgent need for targeted interventions in underserved regions.

Conclusion

The findings of this survey highlight significant disparities in prostate cancer care services in Kenya, particularly in rural areas and in some of the counties. While screening services are widely available, diagnostic and treatment services remain inadequate, leading to delays in diagnosis and poorer patient outcomes. Prostate cancer care is largely concentrated in urban and private facilities, creating financial and geographic barriers for many patients. Counties such as Tana River and Lamu lack essential services, demonstrating the need for urgent interventions. To improve prostate cancer outcomes, increased investment in screening, diagnostic, and treatment infrastructure is essential. Government-led initiatives, policy reforms, and public-private partnerships will be key to ensuring equitable access to prostate cancer care across Kenya.

Table 58: Prostate Cancer recommendations

Key Findings	Recommendations
Screening services are widely available, diagnostic and treatment services remain inadequate, leading to delays in diagnosis and poorer patient outcomes.	Enhance Screening Programs: Implement targeted awareness and screening initiatives in rural areas to encourage early diagnosis of prostate cancer. Collaborate with local health authorities to ensure accessibility and affordability.
	Increase health facility capacity: Invest in healthcare facilities to provide essential diagnostic and treatment services, including biopsy and surgical options. This will ensure that patients in all regions have access to comprehensive care.
	Train Healthcare Providers: Develop training programs for healthcare workers on prostate cancer management, focusing on early detection and referral processes. Ensuring that staff are well-equipped to handle prostate cancer cases is vital for improving outcomes.

Key Findings	Recommendations
	Policy Advocacy: Advocate for national policies that prioritize prostate cancer within the broader health agenda, including funding for screening programs and infrastructure development in underserved regions.
	Monitor and Evaluate Services: Establish a monitoring framework to assess the effectiveness of prostate cancer care services regularly. This will help identify gaps and areas for improvement, ensuring that interventions are responsive to the needs of the population.

Colorectal Cancer

Colorectal cancer is the third most common cancer worldwide, accounting for approximately 10% of all cancer cases, and is the second leading cause of cancer-related deaths worldwide. In Kenya, it is ranked fifth of all cancers affecting both men and women. The number of new cases estimated at 3,091 and deaths at 2,116 (GLOBOCAN, 2022). Colorectal cancer is often diagnosed at advanced stages when treatment options are limited. The incidence and impact of colorectal cancer can be significantly reduced by implementing primary prevention strategies such as adopting a healthy lifestyle, avoiding risk factors, and practicing early detection through screening.

In Kenya, colorectal cancer (CRC) screening is recommended for individuals starting at age 45. For those at average risk, an annual fecal occult blood test (FOBT) is advised. Early detection of any abnormalities should lead to prompt diagnostic evaluations, including biopsy, if necessary, followed by appropriate management. These guidelines aim to facilitate early detection and treatment of colorectal cancer, thereby improving survival rates among Kenyans.

Colorectal cancer diagnosis in Kenya employs a comprehensive approach to ensure accurate and timely detection. Colonoscopy is the preferred method for visualizing the colon and rectum, allowing for the identification and biopsy of suspicious lesions. Histopathological evaluation of biopsy samples is essential to confirm malignancy. Early detection through this thorough diagnostic approach is crucial, as delays can negatively impact treatment outcomes.

Treatment of colorectal cancer involves a multimodal approach that integrates surgery, chemotherapy, radiotherapy, and targeted therapies, depending on the stage and progression of the disease. Surgical intervention remains the primary curative option for early-stage colorectal cancer. Adjuvant and neoadjuvant chemotherapy, using agents like capecitabine, fluorouracil, oxaliplatin, and irinotecan, is essential for managing advanced and metastatic cases. Radiotherapy, particularly for rectal cancer, is employed to shrink tumors before surgery or as a palliative measure in late-stage disease.

Service Availability

Definition

The 2024 QOC assessed service availability for colorectal cancer services based on the availability of 6 tracer services across all the health facilities that offered cancer services (N=5,577). The tracer services assessed are summarized as follows;

Table 59: Tracer Services for Colorectal cancer

Screening	Diagnosis	Treatment
- Stool guaiac test/faecal immunochemical test (Levels 3- 5) - Colonoscopy (levels 4 and 5)	Biopsy of colon polyp (levels 4 and 5)	- Surgery (levels 4 and 5) - Chemotherapy (level 5) - Radiation therapy (level 5)

Key Findings:

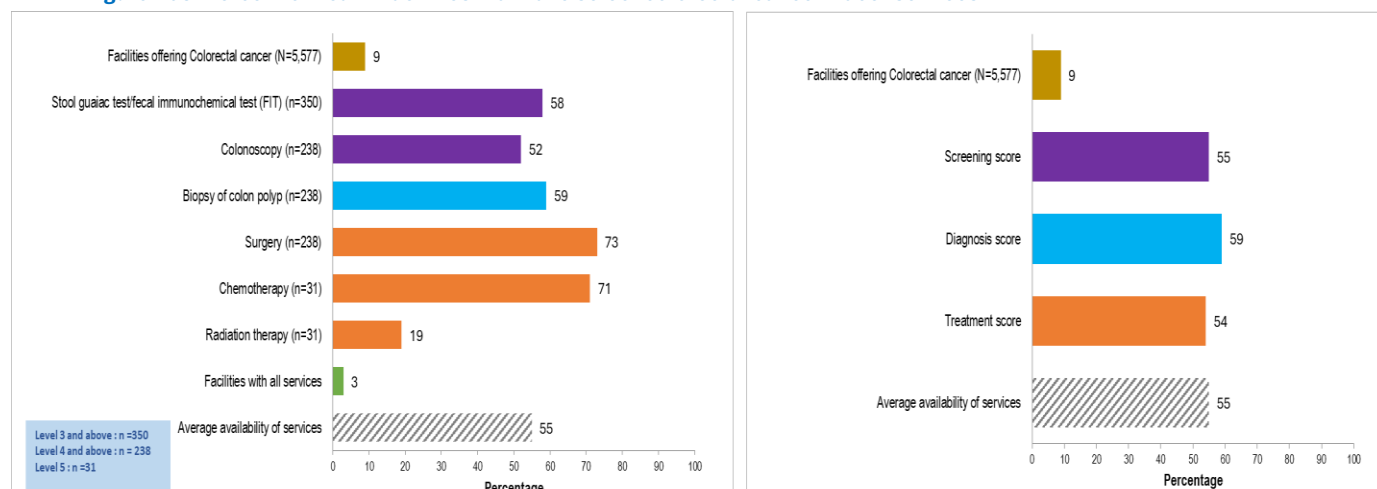
National Distribution

The availability of colorectal cancer services was 9% (n=498) among the health facilities that were offering cancer services.

Among the health facilities offering colorectal cancer services

- The average availability of the services was 55%
- The average availability of screening services was 50%, with the stool guaiac test/faecal immunochemical test (FIT) being the most common at 58%.
- Biopsy of colon polyp was available in 59% of health facilities while colonoscopy was in about half of them (52%)
- Surgery was the most available treatment option (73%), followed by chemotherapy (71%) and radiation therapy (19%). On average, the availability of all treatment options was 54%

Figure 105: Percent of health facilities that have select colorectal cancer tracer services



Disaggregation by location, KEPH level and ownership

Annex table 30 shows the availability of colorectal cancer services disaggregation by location, KEPH level, ownership and by county.

Among the health facilities offering colorectal cancer services;

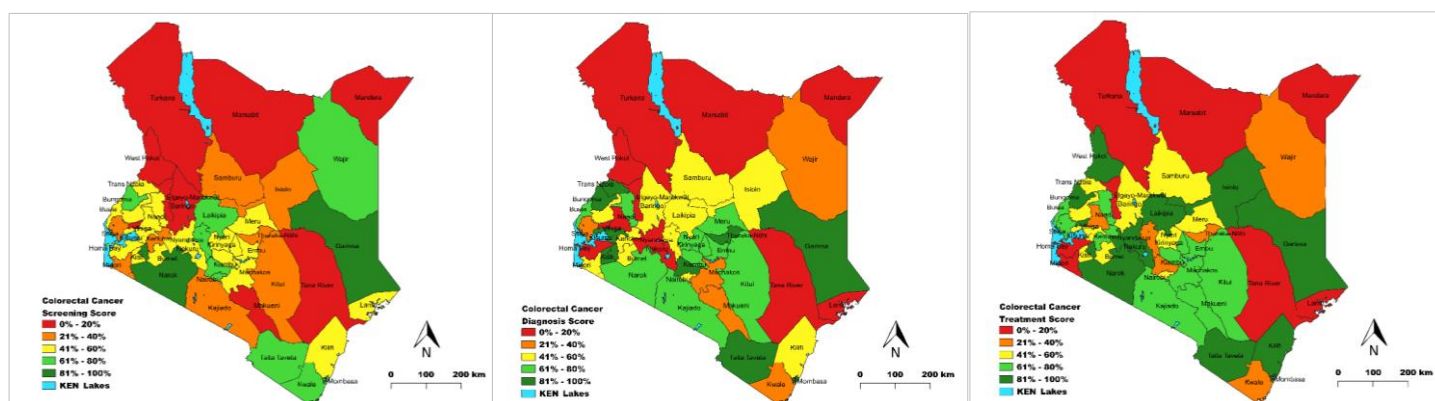
- The availability of colorectal services varies widely between urban and rural facilities with the average availability of 57% for urban facilities and 44% for rural facilities.
- Level 5 health facilities had most of the services compared to level 4 facilities; e.g. 71% of level 5 had colposcopy compared to 49% of level 4
- Nine in every ten level 5 facilities (90%) offered surgery for colorectal cancer compared to seven in every ten level 4 facilities (70%)
- Colposcopy was most available in FBO facilities (66%). None of the NGO facilities had this service.
- The average availability of all treatment options was highest in public facilities (58%), followed by private facilities (52%), FBO facilities (43%) and NGO facilities (0%)

County Distribution

Figure 106 the availability of colorectal cancer services distributed by county.

- There was disparity in the availability of select Colorectal cancer services in the counties
- In Garissa and Nyamira counties, both colorectal cancer screening services were available in all facilities
- Seven counties namely Baringo, Elgeyo Marakwet, Marsabit, Tana River, Turkana, Vihiga, and West Pokot had none of their health facilities having the select colorectal cancer screening services
- Biopsy of colon polyp was available in all health facilities that offered colorectal cancer services in 4 counties (Garissa, Nyamira, Trans Nzoia, and Tharaka Nithi).
- Turkana, had none of their health facilities having the select Colorectal cancer treatment services available

Figure 106: Availability of colorectal cancer services



Service Readiness

Definition

The 2024 Kenya QoC Survey defined the service readiness for colorectal cancer care as the availability of select tracer items as show in table below.

Table 60: Tracer items for colorectal cancer services

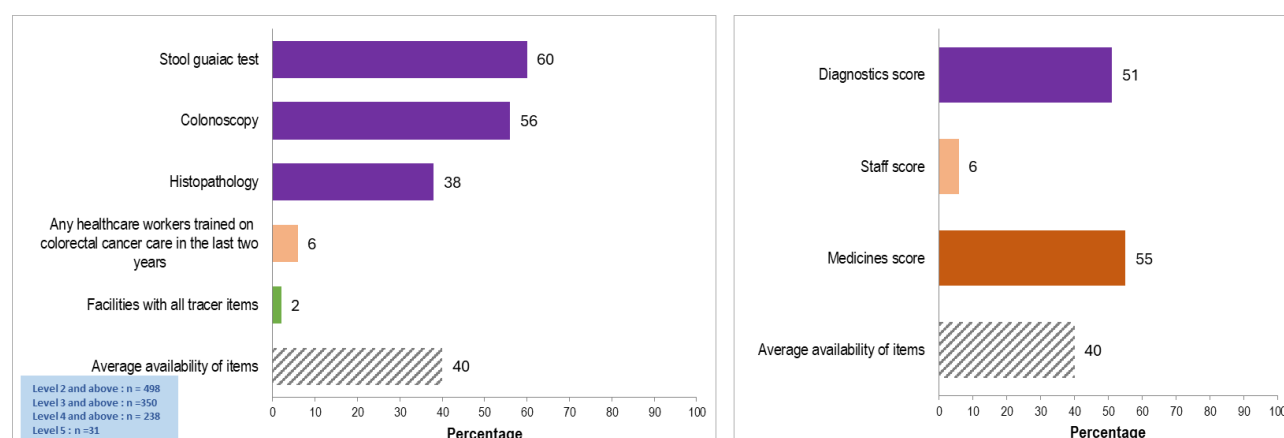
Domain	Tracer Items
Diagnostics	- Stool guaiac test (level 3 to 5) - Colonoscopy (level 4 and 5) - Histopathology (level 4 and 5)
Training	Any healthcare workers trained on colorectal cancer care in the last two years (all levels)
Medicines	5-Fluorouracil (level 5) - Alkylating agents (e.g., Cisplatin, Carboplatin)-assessed in level 5

KEY FINDINGS

National Distribution

- The average availability of colorectal cancer items was 40%
- Stool guaiac test was the most available tracer item at 60%, while the least tracer item was training of health care workers on colorectal cancer care at 6%
- Histopathology items were available in slightly more than a third of the facilities (38%)
- The average availability of colorectal cancer medicines was 55%

Figure 107: Readiness of colorectal cancer services



Disaggregation by location, KEPH level and ownership

Annex Table 31 shows disaggregation of colorectal cancer services readiness by location, KEPH level, ownership and by county

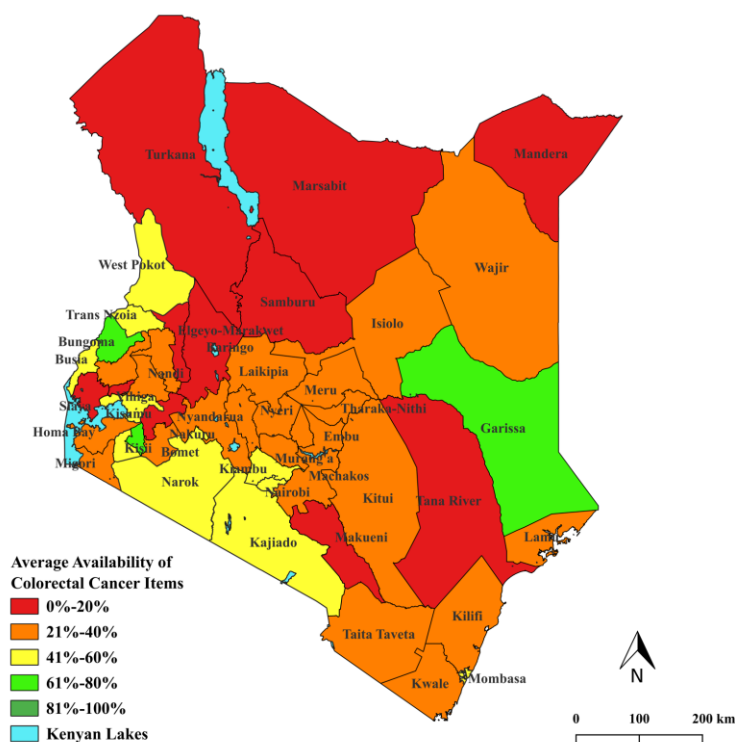
- The average availability of select colorectal cancer tracer items was 41% for urban and 32% for rural health facilities.
- The diagnostic score for colorectal cancer was comparable between hospitals with level 5 having (59%) and level 4 facilities (48%)
- Public health facilities had the highest average availability of colorectal cancer medicines at 59% compared to 53% of NGO and 50% of FBO facilities. None of the private facilities had these medicines.

County Distribution

Annex table 31(items), 160(medicines) and Figure 108 shows the availability of colorectal cancer tracer items distributed by county.

- Nyamira and Garissa counties had the highest average availability of colorectal cancer tracer items at 75%. However, only one health facility in Garissa County offered colorectal cancer services. None of the drugs was available in the facility.
- All health facilities in Bomet, Kirinyaga, Machakos, Nakuru and Nandi had all the colorectal cancer treatment drugs

Figure 108: Average availability of colorectal cancer tracer items





Discussion:

Colorectal cancer is a major public health concern in Kenya, yet screening, diagnostic, and treatment services remain inadequate, particularly in rural areas. These findings align with the Kenya Health Facility Assessment (KHFA) 2018, which identified limited availability of cancer care services outside major urban centers.

Geographical disparities in colorectal cancer care are evident. For example, seven counties have no screening facilities, ten counties lack diagnostic services, and eight counties do not have any treatment facilities. This reflects similar patterns reported in the Kenya National Cancer Control Strategy 2017-2022, which highlighted regional inequalities in cancer care access.

With colorectal cancer services being mostly available in private facilities, patients are likely to face significant financial barriers to accessing care. This is consistent with findings from GLOBOCAN 2022, which emphasized that financial constraints and inadequate government investment contribute to poor cancer care access in low- and middle-income countries (LMICs).

Service readiness remains a major challenge, with only a third of facilities meeting key preparedness standards. Low availability of trained health workers (6%) further limits effective colorectal cancer management.

The overall average medicine availability (55%) reflects a moderate level of preparedness in addressing colorectal cancer treatment, with room for improvement, especially in counties where availability is below average.

Inadequate availability of colorectal cancer medicines in most counties suggests logistical barriers, insufficient procurement mechanisms, or inadequate prioritization of cancer treatments within the broader healthcare system. Counties with low or no availability may also face challenges such as limited healthcare infrastructure, lack of trained personnel, or financial constraints affecting medicine supply chains.

Conclusion

Colorectal cancer remains a critical public health issue in Kenya, with limited access to screening, diagnostic, and treatment services. While screening availability has significantly improved compared to KHFA 2018, major gaps remain in diagnostic and treatment access, particularly in rural counties. The reliance on private and faith-based facilities, coupled with low public sector investment, limits affordability and accessibility for many patients. Additionally, poor service readiness, low staff training coverage, and medicine shortages further hinder effective colorectal cancer management. To improve patient outcomes, targeted investments in screening expansion, diagnostic infrastructure, treatment access, and workforce training are essential. Strengthening public sector participation, decentralizing cancer services, and

integrating colorectal cancer care into Kenya's Universal Health Coverage (UHC) framework will be key steps in addressing these disparities and improving survival rates.

Table 61: Colorectal Cancer recommendations

Key Findings	Recommendations
Colorectal cancer remains a critical public health issue in Kenya, with limited access to screening, diagnostic, and treatment services. Poor service readiness, low staff training coverage, and medicine shortages further hinder effective colorectal cancer management.	Expand colorectal cancer screening services in all health facilities hospitals, particularly in Level 3 and Level 4 facilities.
	Increase the number of diagnostic facilities in underserved counties, ensuring that at least 50% of Level 4 hospitals offer colonoscopy and biopsy services.
	Train more healthcare workers on colorectal cancer care
	Increase government investment in public cancer treatment centres, ensuring that each county has at least one treatment facility.
	Improve access to chemotherapy and radiotherapy by equipping more Level 4 and Level 5 hospitals.
	Expand medicine procurement, ensuring that key chemotherapy drugs are available in at least 75% of facilities.

Cardiovascular disease (CVD)

Cardiovascular disease (CVD) is any disease involving the heart or blood vessels⁷. CVDs are the leading cause of death globally, with an estimated 17.9 million deaths that account for over 32% of the global deaths. In Africa, the prevalence of CVDs has increased by almost 50% in the last three decades. CVDs are the leading cause of non-communicable disease (NCD) deaths, accounting for 43% of total NCD deaths⁸. In Kenya 28% of all the deaths are due to CVDs. Further, it is estimated that 25% of hospital admissions are due to CVDs, and 13% of autopsies revealed CVDs as the cause of death. CVDs have a significant impact on public health, healthcare systems, and the economy in Kenya.

Service Availability

Definition:

The QOC assessed service availability in health facilities for CVD services based on availability of the following five tracer services:

Table 62: CVD Tracer services

	CVD Tracer Services
CVD Services	• Screening • Diagnosis • Treatment • Clinical follow-up services e.g. drugs, monitoring of compliance • Counselling for CVD and self-management

Key findings

National

CVD services were offered at 92% (n=11,172) of all the facilities offering NCD services.

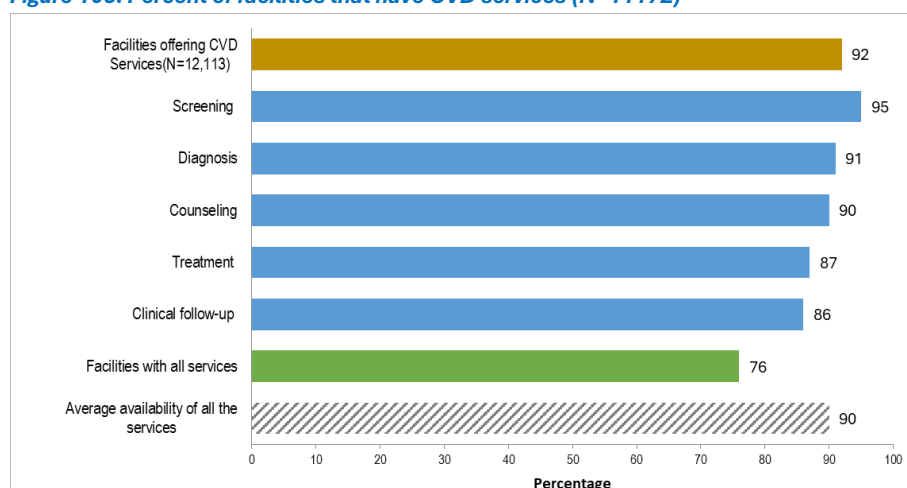
Among the health facilities offering CVD services,

- Generally, the availability of CVD services was high ranging from clinical follow-up at 86% to screening at 95%.
- All the 5 tracer services (screening, diagnosis, treatment clinical follow-up and counselling) were available at 76% of the facilities offering CVD services.
- Average availability of tracer services was 90%.

⁷ Shanthi M, Pekka P, Norrving B (2011). Global Atlas on Cardiovascular Disease Prevention and Control (PDF). World Health Organization in collaboration with the World Heart Federation and the World Stroke Organization. pp. 3–18. ISBN 978-92-4-156437-3. Archived (PDF) from the original on 2014-08-17.

⁸ Institute for Health Metrics and Evaluation. Global Burden of Diseases 2024

Figure 109: Percent of facilities that have CVD services (N=11172)



Disaggregation by location, KEPH level and ownership

Annex table 43 shows the average availability of CVD services disaggregation by location, KEPH level, ownership and by county.

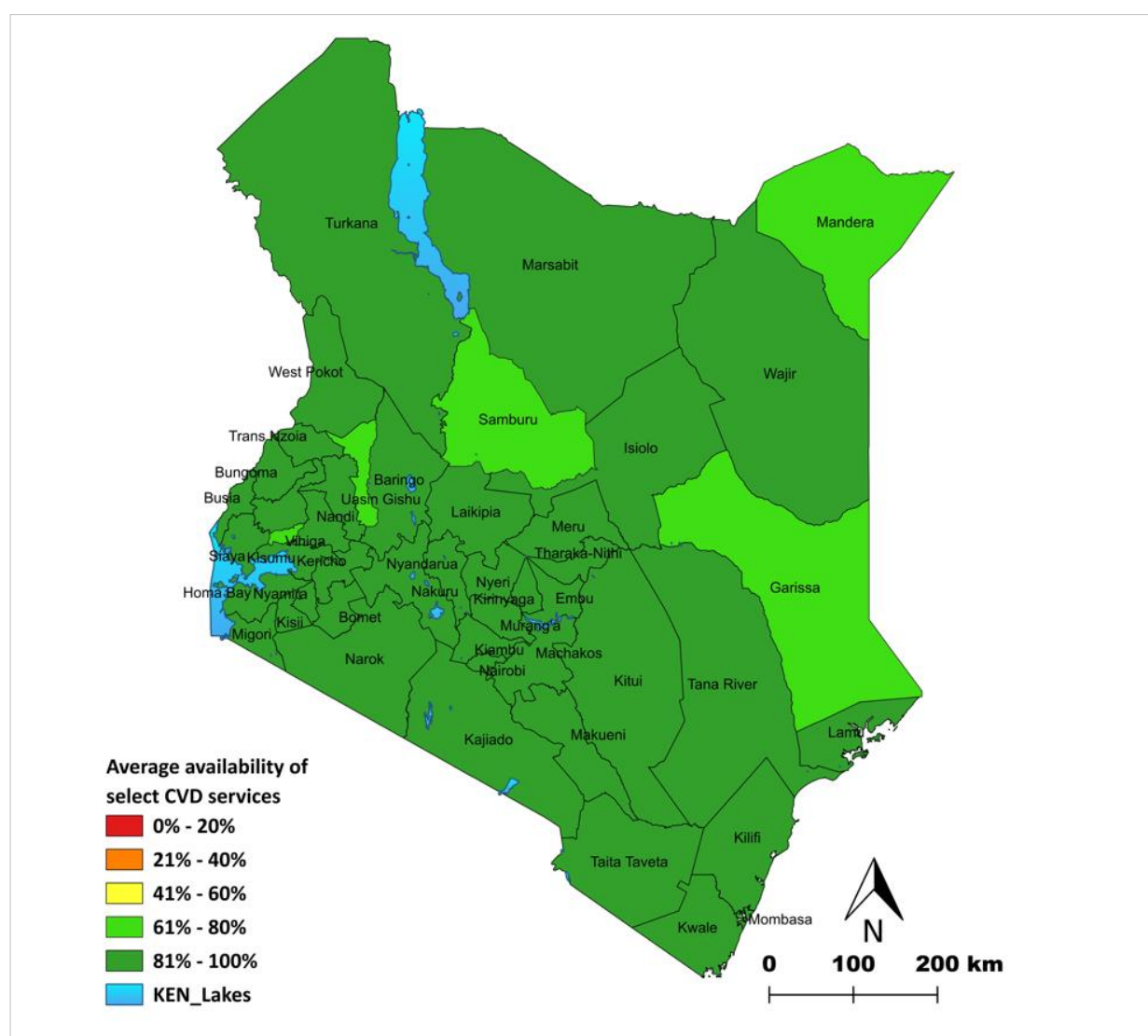
- All level 5 facilities had 100% availability of all the 5 tracer CVD services.
- Public facilities had the lowest availability of all CVD services at 68% while FBO, and private, NGO were at 89%, 81 %, 78%, respectively.
- Nine out of ten FBO facilities had of all CVD services available.

County Distribution

Figure 110 shows the average availability of CVD services distributed by county.

- Majority of the counties had 81-100% availability of select CVD services except Mandera, Garissa, Samburu, Vihiga and Elgeyo Marakwet offering 61-80%.
- A fifth of counties offered 100% of CVD screening services (Machakos, Nyandarua, Murang'a, Trans Nzoia, Elgeyo Marakwet, Laikipia, Kajiado, Bungoma, Homa bay and Nyamira). Isiolo had the lowest availability of screening at 76%.
- For CVD diagnostic services, 3 counties (Marsabit, Trans-Nzoia and Kajiado) provided 100% services whereas Bomet county had the lowest availability of diagnostic services at 63%.
- With regard to CVD treatment services, Kajiado had the highest availability at 99.1% whereas West Pokot had the lowest at 53%.

Figure 110: Average availability of CVD services by county



Service readiness

The 2024 QOC assessed readiness for health facilities to offer cardiovascular services based on availability of the following tracer items:

Table 63: Tracer items for CVD services

Domain	Tracer items
Guidelines	Kenya National Guideline for Cardiovascular Disease Management
Equipment	- Blood pressure machine - Stethoscope - Weighing scale - Height meter/Stadiometer - Oxygen cylinder with gas and accessories

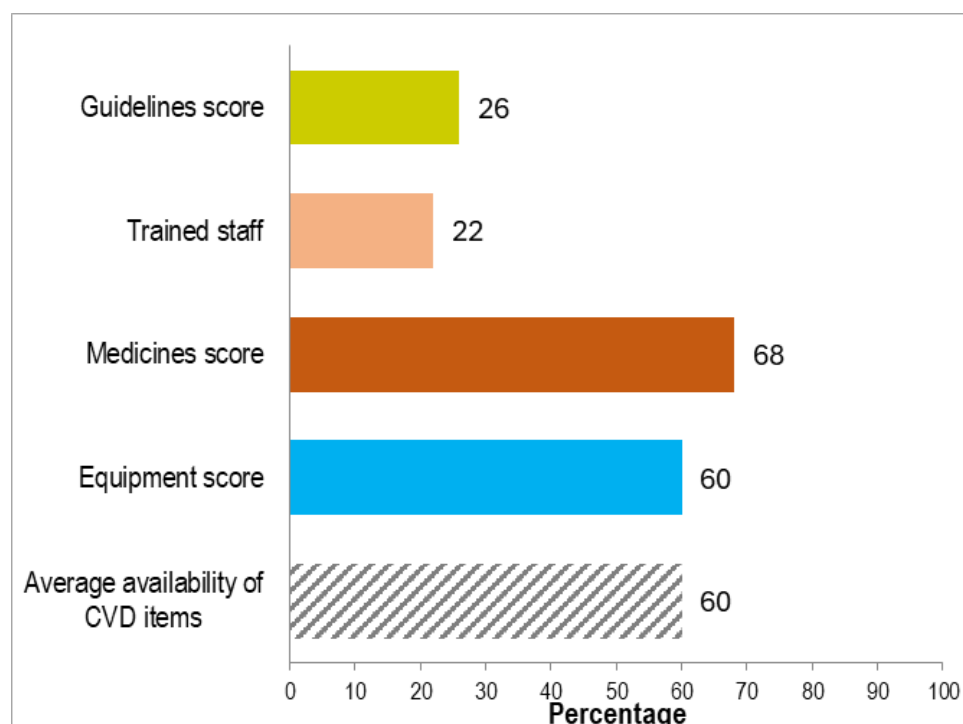
Domain	Tracer items
	• Tape measure • Electrocardiogram (ECG) • Echocardiogram (Echo)
Trained Staff	• Health workers trained on recommended MoH or equivalent on cardiovascular disease care in the last two years
Medicines	• Angiotensin Converting Enzyme (ACE) inhibitors e.g. Enalapril • Angiotensin Receptor blockers e.g. Losartan • Hydrochlorothiazide tablet or other combination thiazide diuretic tablet • Beta blockers e.g. labetalol, carvedilol • Calcium channel blockers e.g. nifedipine, amlodipine • Aspirin 75mg • Statins e.g. atorvastatin, simvastatin

Findings

Figure 111&112 shows the average availability of CVD tracer items

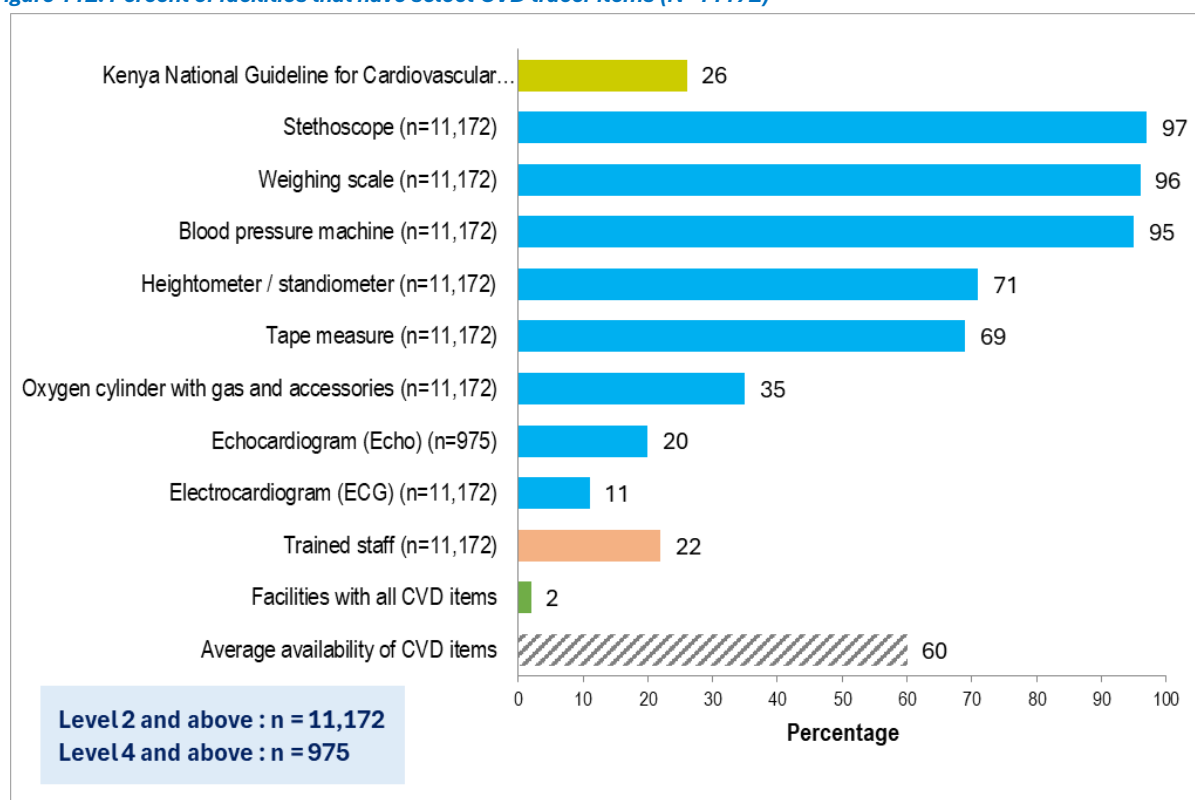
The average availability of tracer items for CVD management across the country was 60%. Medicine and equipment scores were highest at 68% and 60% respectively

Figure 111: Readiness score



Generally, equipment used for clinical examination had the highest availability; stethoscope (97%), weighing scale (96%), BP machine (95%), heightometer (71%) and tape measure (69%). Life-saving and diagnostic equipment was less available with oxygen cylinder with gas and accessories ECG, echo at 35%, 11% and 20% respectively.

Figure 112: Percent of facilities that have select CVD tracer items (N=11,172)



Disaggregation by location, KEPH level and ownership

Annex Table 41 shows the average availability of CVD tracer items disaggregated by location, KEPH level, ownership and by county.

Tracer Items.

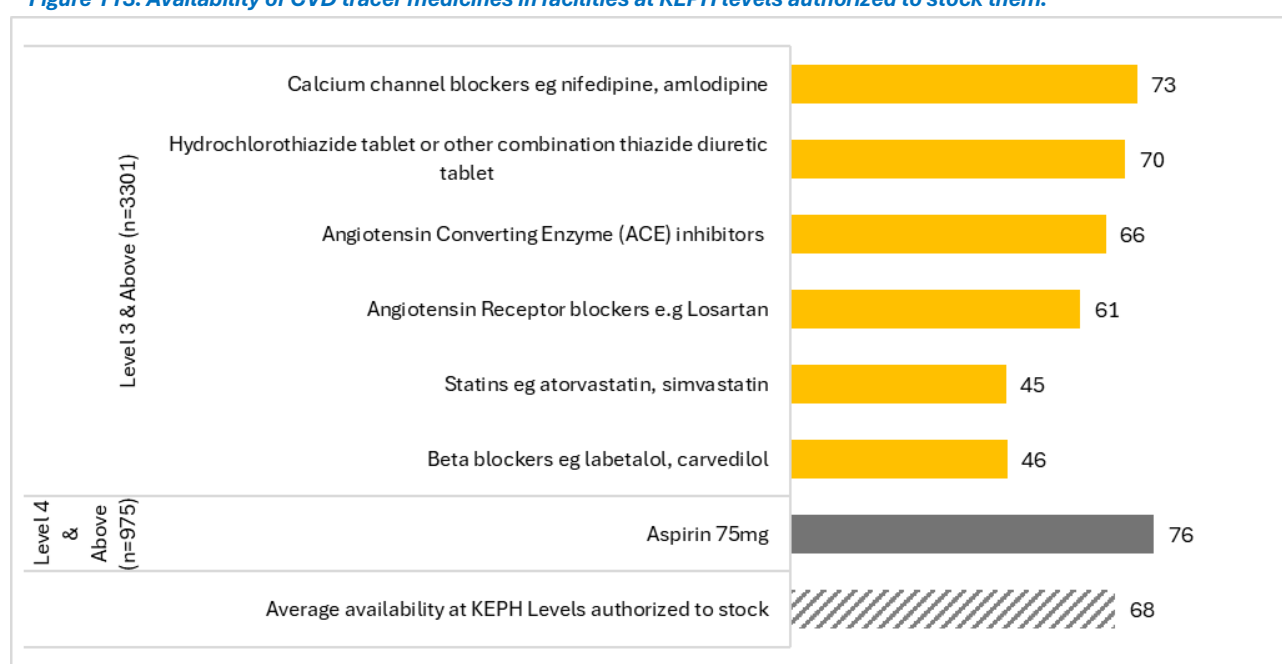
Among facilities providing CVD services.

- Availability of Kenya National Guideline for Cardiovascular Disease Management guidelines was very low across KEPH levels. Availability at level 5 was highest at 54%.
- Lifesaving (Oxygen gas cylinder with gas accessories) and testing equipment (ECG and EKG) was more available in urban facilities compared to rural ones.
- Oxygen gas cylinder with gas accessories were least available in public facilities at 23% while NGO, FBO and private were above 40% (49%, 47% and 42% respectively.)
- Availability of diagnostic equipment like ECG (3%) and echo(8%) was very low in public facilities, while the other facility types had above 15% availability

CVD Medicines

- The overall average availability of CVD tracer medications at facilities of KEPH levels authorized to stock them was 68%.
- The highest availability is for Hydrochlorothiazide or other combination thiazide diuretic tablets (70%) and the lowest for Beta blockers (47%).
- Aspirin 75mg is the Most widely available medication. (76%) while Beta Blockers (e.g., labetalol, carvedilol) are the least available at 46%

Figure 113: Availability of CVD tracer medicines in facilities at KEPH levels authorized to stock them.



Disaggregation by location, KEPH level and ownership

Annex Table 156 and Figure 114 show the average availability of CVD medicines disaggregated by location, KEPH level and ownership

By Location,

- The average availability of CVD medications is significantly higher in urban areas (77%) compared to rural areas (58%). For example, ACE inhibitors are available in 76% of urban facilities compared to 56% in rural facilities.

By Ownership,

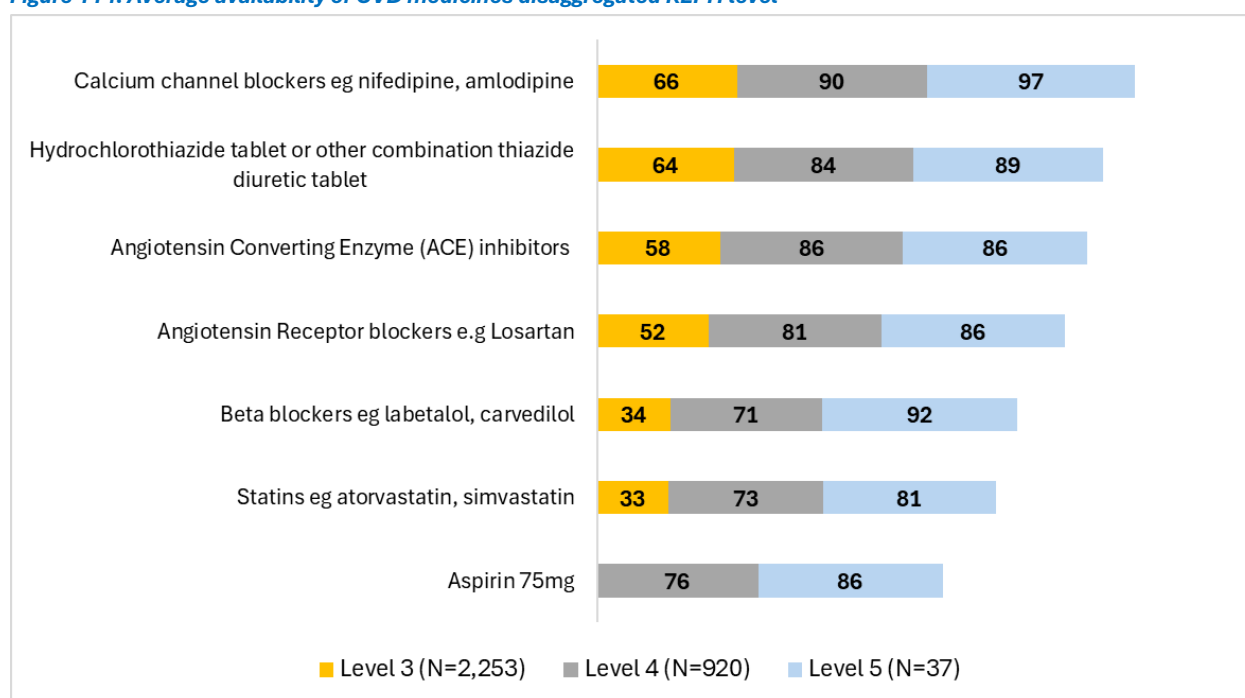
- FBO facilities have the highest average availability of tracer CVD medications (83%), followed by Private (80%), NGO (73%), and Public (56%).

- Public facilities have the lowest availability for most medications, particularly Beta blockers (29%) and Statins (30%).

KEPH level

- Overall, CVD medications were most available at level 4 and 5 facilities but less stocked at level 3 facilities.

Figure 114: Average availability of CVD medicines disaggregated KEPH level



County Distribution

Figure 115 shows average availability of CVD tracer items and medicines disaggregation by county.

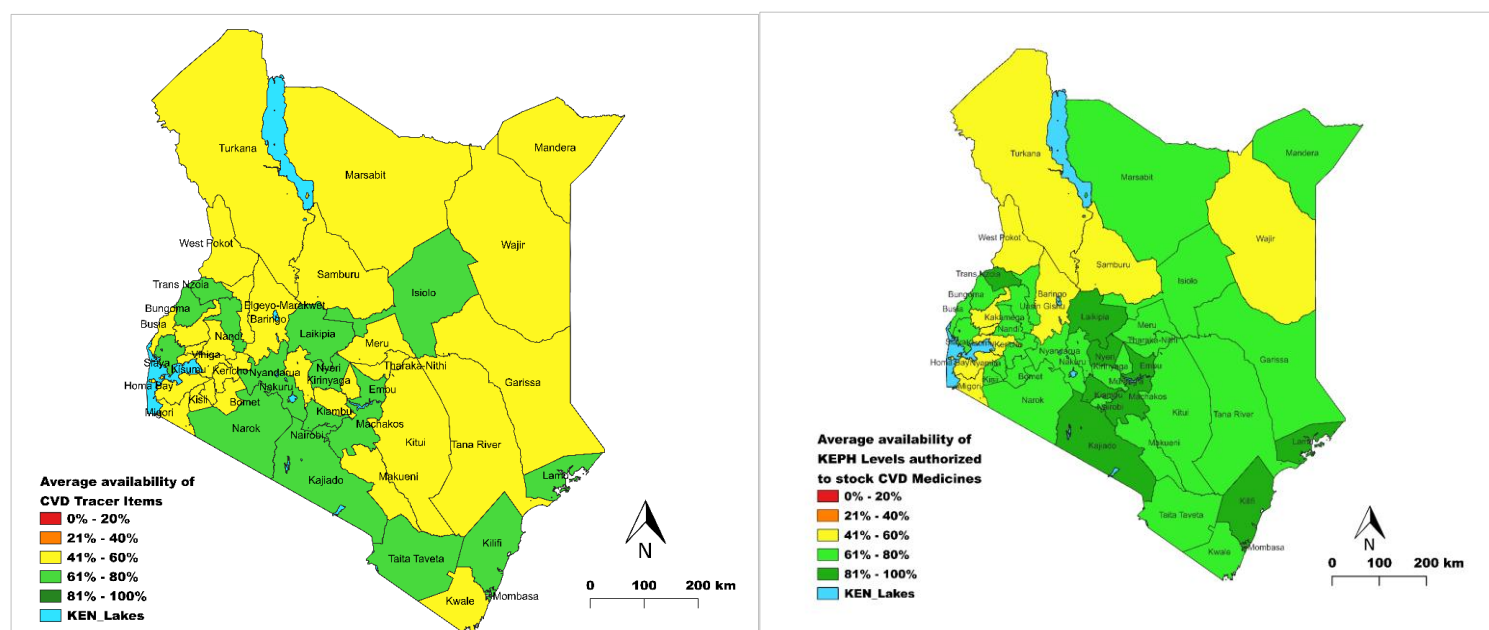
Tracer Items

- All of the counties had average availability of above 41% of CVD tracer items.
- Three counties with the highest average availability of CVD tracer items were Kajiado (78%), Kiambu (73%), Mombasa (72%) and Nyeri and Embu 71% each. Counties with the lowest availability were Mandera (46%), Homa Bay (45%) and Kisumu (49%).

Medicines

- Nyeri county had the highest availability of CVD medicines at 92% while Kisumu had the lowest at 46%.

Figure 115: Country distributions of CVD tracer items(left) and medications(right) by county



Discussion:

The findings from the Kenya Quality of Care Survey underscore both advancements and ongoing challenges in providing cardiovascular services across the country. Currently, 90% of facilities offering non-communicable disease (NCD) services deliver comprehensive cardiovascular disease (CVD) care, encompassing diagnosis, counselling, treatment, and clinical follow-up. This marks a significant improvement from the 2019 Kenya Health Facility Assessment Survey, where the availability of CVD diagnosis and treatment services averaged 62%⁹. These achievements demonstrate Kenya's dedication to enhancing CVD care and tackling the rising burden of non-communicable diseases.

However, disparities remain; Public facilities, which serve a large portion of the population, especially in rural areas, have lower availability of CVD services at 68%, compared to 89% in faith-based organizations (FBOs) and 81% in private facilities. This gap affects timely diagnosis and continuity of care, particularly where patients pay out of pocket to access healthcare.

Service readiness remains a significant challenge, with essential equipment availability severely constrained. Currently, only 57% of facilities offering CVD services have the recommended tracer items, and just 2% are fully equipped with all the necessary tools. Oxygen cylinders and echocardiograms are particularly scarce, found in only 35% and 20% of facilities, respectively, which limits specialized care, especially in rural and lower-level facilities. The limited availability of echocardiograms is especially concerning, as it restricts the screening and

1. ⁹ KHFA 2018-19 Main Report pg 155



accurate diagnosis of cardiovascular conditions, directly impacting patient care quality. Further, although higher-level facilities, such as Levels 4 and 5, demonstrate a higher level of readiness and can offer a broader range of CVD services, lower-level facilities (Levels 2 and 3) are disadvantaged, with only 45-48% equipped with basic equipment. This disparity is troubling more so with the governments approach of achieving UHC through primary health care. Secondly, lower-level facilities often serve as the primary care points for rural populations, and their limited readiness hampers quality CVD care, leading to delayed diagnoses and potentially poorer outcomes.

A significant gap in cardiovascular care quality is the limited availability of the Kenya National Guidelines for Cardiovascular Disease Management, found in only 26% of facilities [5]. This absence undermines consistency in quality care, potentially resulting in variations in screening, diagnosis and management of CVDs. The lack of standardized guidance also restricts effective training and capacity-building of healthcare workers, which may hinder quality improvement efforts across the health system and negatively impact patient safety and outcomes.

The overall availability of CVD medication at 68% at KEPH levels authorized to stock it leaves a lot to be desired in terms of service readiness across the country. There is a high Availability of Aspirin and Calcium Channel Blockers reflecting their essential role in managing CVD, and a possible reflection of the fact that most patients are not on these medications and thus are slow-moving in the pharmacies. ACE Inhibitors and Angiotensin Receptor Blockers are available in most facilities but not as widely as aspirin and calcium channel blockers, indicating some accessibility challenges, as well as the fact that they are alternatives and not widely prescribed in the Kenyan Population.

The relatively lower availability of Statins and Beta Blockers these medications may suggest barriers such as higher costs, supply chain issues, or less frequent prescriptions compared to other CVD medications. Medication availability consistently improves as facility levels increase, indicating better stocking and resources at higher-level healthcare facilities. Patients at Level 3 facilities face limited access to essential cardiovascular medications, potentially compromising their treatment outcomes. The disparity in access highlights systemic inequities that need urgent attention to improve healthcare delivery at all facility levels. The variability in availability between rural and urban based facilities also points towards broader issues of healthcare inequality, particularly in under-resourced areas.

Table 64: CVD Recommendations

KEY FINDINGS	RECOMMENDATION
The study noted gaps in supply of essential tracer elements, particularly in rural and lower-level facilities	Increase and sustain the supply of essential tracer elements, particularly in rural and lower-level facilities.



KEY FINDINGS	RECOMMENDATION
In some counties it was noted that there is acute shortage of Standardized Guidelines and health worker capacity.	Promote Access to Standardized Guidelines: Enhance countrywide dissemination of the Kenya National Guidelines for Cardiovascular Disease Management, 2024. Regular training through facility-based CMEs and virtual resources like the Ministry of Health's virtual academy, along with dissemination, should be conducted to strengthen healthcare worker capacity, especially in remote, underserved locations.
Some inadequacies were identified in implementation of Digital Health Solutions.	Expand Digital Health Solutions: Leverage telemedicine to bridge the gap in healthcare access between rural and urban areas. This enables lower-level facilities to consult specialists on complex cases, facilitating timely diagnosis and management for patients in remote locations.
Gaps were found in health worker shortages especially in ASAL Regions.	Address Workforce Shortages in ASAL Regions: Targeted strategies are needed to retain healthcare workers in remote and arid regions (ASAL). This can be achieved through incentives, housing, and transportation support as well as providing opportunities for career growth.
Challenges were identified in Referral Systems across all levels of healthcare service provision as well as between rural and urban facilities.	Strengthen referral systems across all levels of healthcare service provision as well as between rural and urban facilities.
It was noted that in resource allocation and especially CVD medication, priority is given to higher level facilities (level 4 and 5) compared to lower (levels 3 and 2) level facilities.	Prioritize resource allocation to lower-level facilities (Level 3) to address medication shortages and availability of essential CVD medication.



Mental Health

The World Health Organization (WHO) defines mental health as a state of well-being in which individuals can cope with the normal stresses of life, realize their abilities, work productively, and contribute to their communities. It is a fundamental human right essential for personal, community, and socio-economic development. Mental health encompasses more than the absence of mental disorders; it exists on a continuum influenced by various factors, leading to diverse experiences and outcomes.

Globally, approximately one in every eight individuals lives with a mental disorder, with anxiety and depressive disorders being the most prevalent. In Kenya, mental health challenges are significant. The Kenya Mental Health Policy 2015–2030 indicates that up to 25% of outpatients and 40% of inpatients in health facilities experience mental health conditions. Common mental illnesses in Kenya include depression, substance use disorders, bipolar disorder, schizophrenia, and other psychoses. Notably, the prevalence of psychosis is estimated at 1% of the general population.

Adolescents in Kenya are particularly affected. The Kenya National Adolescent Mental Health Survey (K-NAMHS, 2022) reported a 12.1% prevalence of any mental disorder among adolescents aged 10–17 years within a 12-month period. Additionally, 4.6% of adolescents experienced suicidal ideation, 2.4% had suicide plans, and 1.0% attempted suicide within the same timeframe.

The Kenya Mental Health Policy 2015–2030 provides a framework for mental health system reforms, aiming to align with the Constitution of Kenya 2010, Vision 2030, and global commitments. The Kenya Mental Health Action Plan 2021–2025 outlines strategies to implement the policy's objectives, focusing on prevention, management, and control of mental disorders.

Service Availability

The 2024 QoC Survey assessed the availability of mental health services as the availability of 5 tracer services (screening, diagnosis, treatment, counselling, and referral) for the following mental health disorders:

Table 65: Mental Health tracer services

Tracer Services for 6 select conditions
• Mood disorders (e.g. depression, bipolar disorder) • Schizophrenia • Disorders due to substance use or addictive behaviors • Anxiety-related disorders • Epilepsy/seizures • Dementia

Key Findings

National

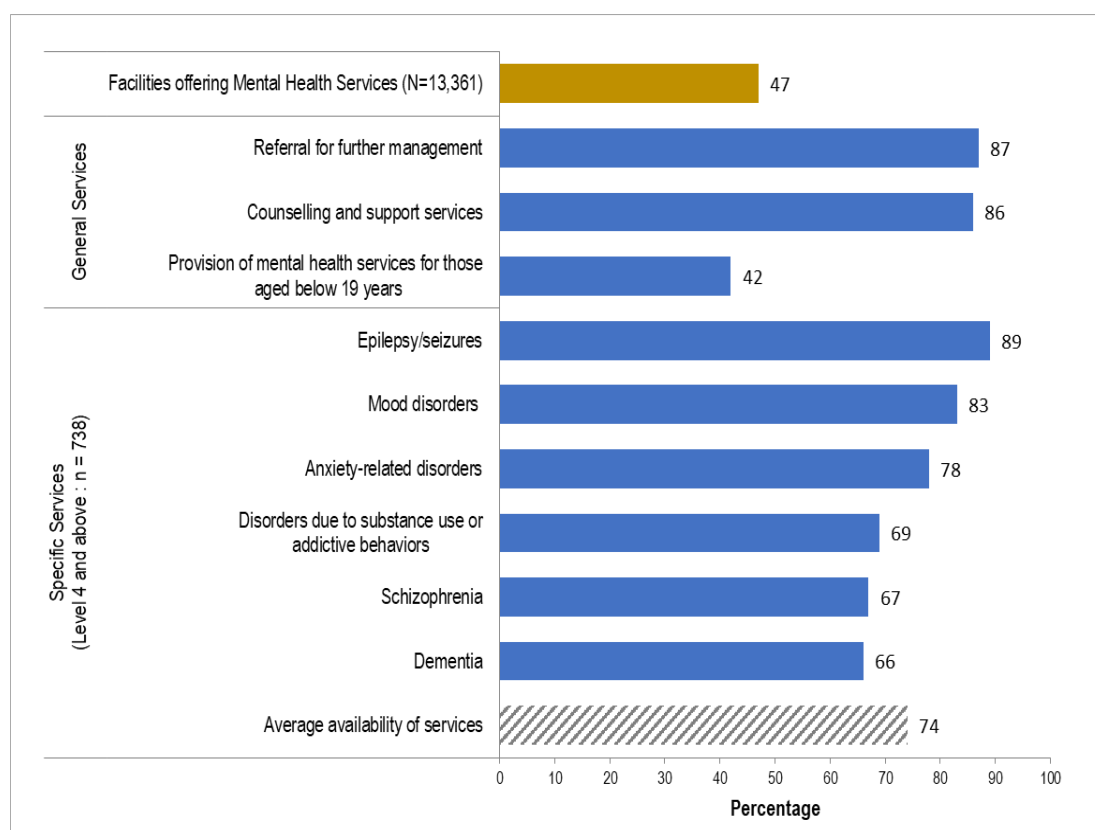
Mental health services were offered at 47% (n=6,263) of all the facilities assessed.

Among the health facilities offering mental health services;

Availability of component services

- The average availability of mental health services was 74%
- Among all facilities, referral for further management and counselling and support services were the most readily available services at 87% and 86% respectively. Mental health services for those aged below 19 years were least readily available at 42%
- Availability of specialized services in level 4 and 5 facilities ranged between 66% (dementia) to 89% (epilepsy/seizures)

Figure 116: Percent of facilities that have select mental health services (N=6263)



Disaggregation by location, KEPH level and ownership

Annex Table 49 shows the average availability of mental health services disaggregated by location, KEPH level, ownership and by county.

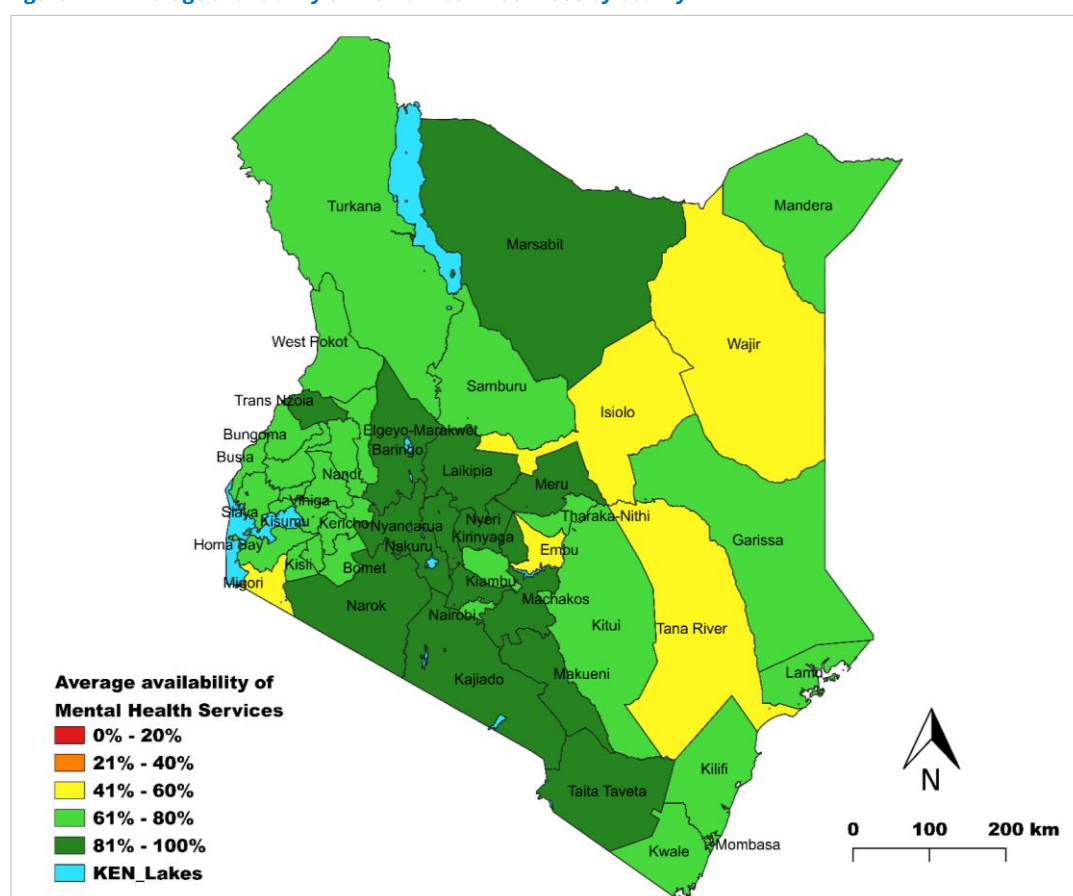
- There were more urban-based facilities (76%) compared to rural based facilities (71%) offering mental health services
- Mental health services had higher availability in higher level facilities (level 4 & 5) compared to level 2 and 3 facilities

County Distribution

Figure 117 shows average availability of mental health services disaggregated by county.

- Almost all (99%) of facilities in Nyandarua county provided mental health services
- The average availability of mental health services in sixteen counties was 80% and above
- Only 5 counties, Isiolo, Tana River, Wajir, Embu and Migori had an average availability of less than 60%

Figure 117: Average availability of mental health services by county



Service Readiness

The service readiness of health facilities to offer mental health services was based on availability of 3 tracer items summarized in table 66. Availability of these tracer items is presented in

Table 66: Tracer items for mental health services

Domain	Tracers Items
Guidelines	Mental Health Guidelines
Staff Training	Healthcare workers trained on mental health

Domain	Tracers Items
Medicines	- Medicines used in depression (Amitriptyline, Fluoxetine) - Medicines used in bipolar disorders: (Carbamazepine, Lithium, Sodium valproate, Clozapine) - Medicines used in psychosis: (Chlorpromazine, Clozapine, Fluphenazine, Haloperidol, Risperidone) - Medicines used as Antiepileptics: (Carbamazepine, Diazepam, Lamotrigine, Lorazepam, Midazolam, Phenobarbital, Phenytoin, Sodium valproate)

Key findings

National Distribution:

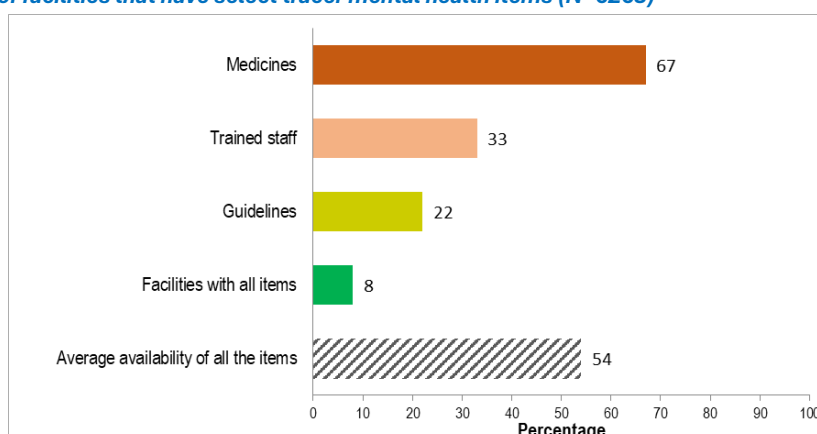
Mental health services were offered at 47% (n=6,263) of all the facilities assessed.

Among the health facilities offering mental health services;

Mental Health Tracer Items

- On average, availability of all tracer items for mental health services was 54% among all health facilities that offered mental health services.
- Only 8% of the health facilities that offered mental health services had all tracer items.
- The availability of guidelines for mental health was 22% of the facilities assessed while staff trained on mental health accounted for 33%
- Mental health drugs were available in 67 % of the facilities

Figure 118: Percent of facilities that have select tracer mental health items (N=6263)



Annex Table 50 shows the average availability of mental health tracer items disaggregated by location, KEPH level and ownership.

- All the 3 tracer items were available in 3% of rural facilities and 13% for urban facilities.
- Across the levels there is a gradual increase in availability of each of the 3 tracers from level 2 to level 5

- Only 4% of public facilities had all three tracer items with the NGO having the highest availability at 14%.

Mental Health Tracer Medicines.

Mental health medicines help to stabilize mood, alleviate symptoms, and improve overall functioning, allowing individuals to lead more balanced and fulfilling lives. Mental health medicines include antidepressants (e.g., selective serotonin reuptake inhibitors [SSRIs] like fluoxetine), which help regulate mood and reduce symptoms of depression; anxiolytics (e.g., benzodiazepines like diazepam), used to relieve anxiety; antipsychotics (e.g., risperidone or olanzapine), which manage symptoms of psychosis such as delusions and hallucinations; and mood stabilizers (e.g., lithium), often used in bipolar disorder to prevent extreme mood swings.

Table 67: Tracer medicines for mental health

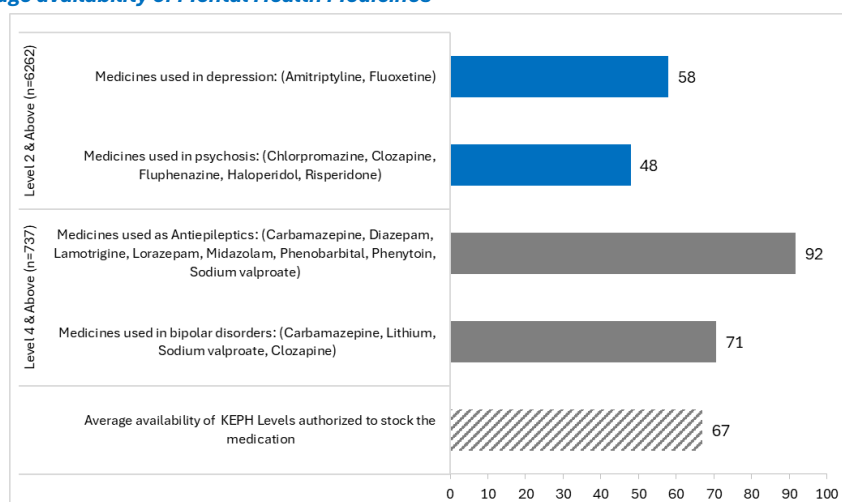
Domain	Tracer Medicines
Medicines used in depression	Amitriptyline, Fluoxetine
Medicines used in bipolar disorders	Carbamazepine, Lithium, Sodium valproate, Clozapine
Medicines used in psychosis	Chlorpromazine, Clozapine, Fluphenazine, Haloperidol, Risperidone
Medicines used as Antiepileptics	Carbamazepine, Diazepam, Lamotrigine, Lorazepam, Midazolam, Phenobarbital, Phenytoin, Sodium valproate

Key Findings

National Distribution

- Average availability of tracer mental health medicines in facilities offering mental health services is at 67%
- The availability of antiepileptic medications is the highest at 92%, bipolar disorders medications at 71%, depression medications is at 58% and psychosis medication at 48%.

Figure 119: Average availability of Mental Health Medicines



Annex Table 162 shows the average availability of mental health tracer medicines disaggregated by location, KEPH level , ownership and by county.

By location,

- Urban areas have higher availability (72%) compared to rural areas (61%).
- Generally, across all categories of medicines, urban areas have higher availability compared to rural areas.

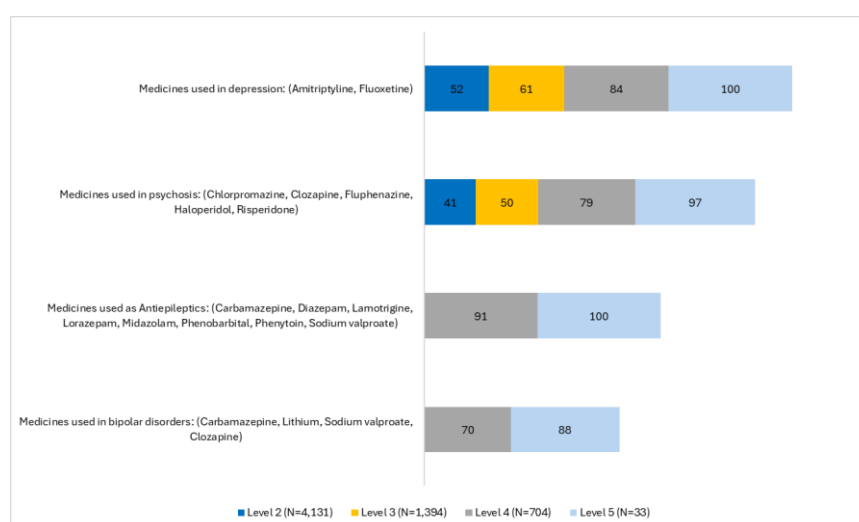
By ownership

- FBO facilities have the highest average availability of tracer mental health medications at 77% while public facilities have the lowest availability at 58%.

By Level of Use,

- Level 5 facilities have the highest availability of all types of medicines (100% for depression, 97% for psychosis, 88%for bipolar disorders, 100% for antiepileptics).
- Level 2 facilities have the lowest availability, particularly for antiepileptics (46.8%).

Figure 120: availability of mental health tracer medicines disaggregated by KEPH level.



County Distribution

Figure 121 shows average availability of mental health tracer items and medicines disaggregated by county.

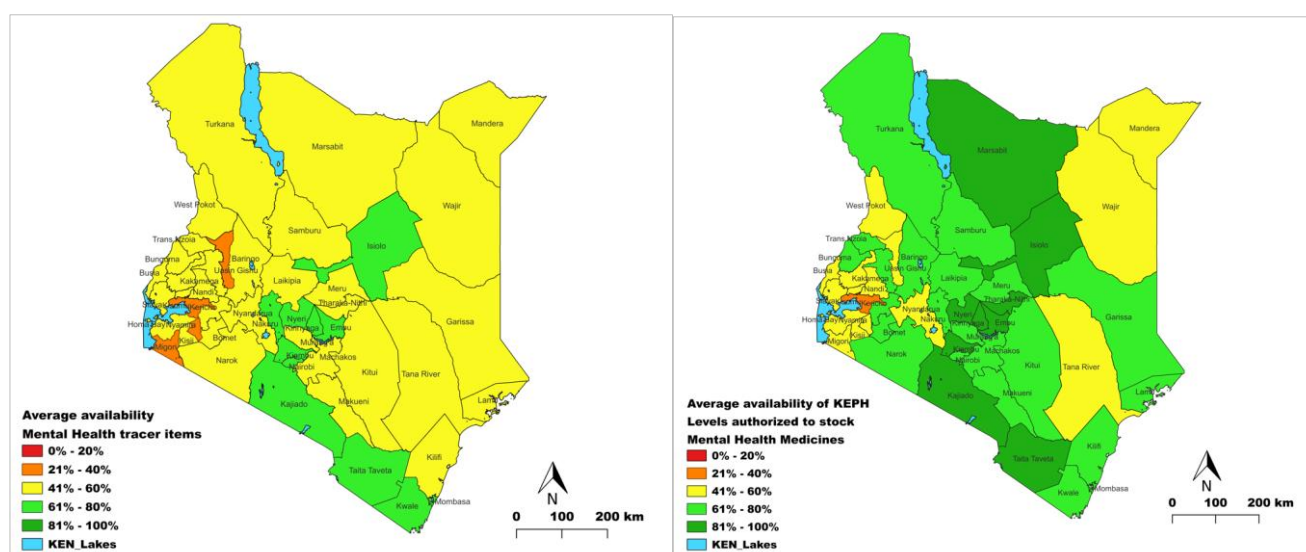
Tracer items

- Taita Taveta had the highest availability (80%) of mental health tracer items while the least availability was in Nyamira at 33%.
- Majority of the counties had average availability tracer items for mental health ranging between 41% to 60%.

Medicines

- Taita Taveta county had the highest availability of mental health tracer medicines at 93% while Kisumu had the lowest availability at 34%

Figure 121: Average availability of mental health items and medicines by county



Discussion

Mental health has been overlooked over the years, and this has led to increased stigma and discrimination among patients. However, from this survey, mental health awareness in the country has improved with close to half of the facilities with NCD services offering mental health services. More than 80% of services offered in the facilities included counselling and referral for expert review. The taskforce on mental health 2020 engaged Kenyans across the country on mental health and some of the key findings highlighted was the need for increased awareness on mental health and the need for improved access and availability of mental health services.

The results reflect incremental progress in mental health service delivery but also highlight persistent gaps. Increased awareness campaigns and policy reforms such as the Kenya Mental Health Policy 2015–2030 have driven improvements in the availability of mental health services. Additionally, the Taskforce on Mental Health (2020) emphasized addressing stigma and increasing access, which may explain the rise in facilities offering mental health services. However, challenges such as inadequate funding, workforce shortages, and logistical barriers likely contribute to the low readiness in facilities, especially in rural areas.

The availability of mental health services aligns moderately with WHO recommendations for comprehensive healthcare systems, which prioritize accessibility, equity, and quality. However, the readiness of facilities, marked by limited access to tracer items (e.g., guidelines, medicines, and trained staff), falls short of these global standards. Notably, these services were available in both rural and urban areas at approximately 50% for both however the average service readiness was reported at 54% a decrease from 70% in KHFA 2018. Only 3% of rural facilities and 13% of urban facilities had all the three tracer items of medicines, trained staff, and guidelines. This is an improvement from the KHFA 2018 which reported 13% availability, and 17% for KHFC 2023. The average medicines availability was reported at 67% (N=6263) across

the country. This is a slight decline from the KHFA 2018 that reported an availability of 70% (N=429). 42% of facilities provided mental health services to persons under 19years.

There were significant differences in availability of mental health services by managing authority with NGO facilities having an availability of 83% while public, private and FBO facilities having 70% availability. This shows the access to these services has been improved on all fronts. However, in terms of readiness, there was poor availability of the 3 tracer items with a range of 33-80%. In the KHFA 2018, Nyeri county reported the highest number of facilities offering mental health services at 47% while in 2024, Nyandarau was leading with almost all facilities (99%) in the county providing the service.

The results show mixed trends when compared to earlier surveys. While the availability of services increased from 13% (KHFA 2018) to 59% in the 2024 QoC survey, readiness has declined. Medicines availability dropped from 70% (KHFA 2018) to 54%, indicating a regressive trend in the pharmaceutical component of mental health care. The focus on rural and urban disparities also echoes findings from the Kenya Census 2023, which identified inequities in resource allocation and service provision.

The findings of this survey underscore the need for a multidimensional approach to mental health service improvement. While increased service availability is promising, the inadequate readiness poses risks to treatment quality and outcomes. This could perpetuate poor mental health indicators, such as high prevalence rates of mood disorders and epilepsy, especially in underserved areas. Moreover, the lack of a fully equipped workforce undermines long-term sustainability, leaving patients vulnerable to fragmented care.

Table 68: Mental Health recommendations

KEY FINDINGS	RECOMMENDATION
It is noted that there are inadequate Tracer items such as medicines and guidelines.	The Ministry of Health and county governments should increase budget allocations for equipping mental health facilities with necessary tracer items, including medicines and guidelines.
Gaps were found in Staff training on mental health.	Scale up mental health training programs for healthcare workers at all KEPH levels, prioritizing rural and low-performing counties to bridge competency gaps.
It was noted that urban-rural disparities persist, with urban facilities having higher availability and readiness than their rural counterparts.	Collaboration between public institutions, private entities, and NGOs should be bolstered to expand service coverage and enhance resource mobilization, particularly in underserved counties.
Gaps were found in supply chain mechanisms for mental health medicine.	Establish robust supply chain mechanisms to ensure consistent availability of essential mental health medications across all regions, with a focus on antipsychotics and antidepressants.



Chronic Respiratory Diseases

Chronic respiratory disease (CRD) is an umbrella term describing conditions affecting the lungs and airways, including Chronic Obstructive Pulmonary Disease (COPD), pneumoconiosis, asthma, interstitial lung disease (ILD), and pulmonary sarcoidosis. The primary cause of COPD is exposure to tobacco smoke and other risk factors that include exposure to indoor and outdoor air pollution and occupational dusts and fumes. CRD is the third leading cause of death as per Global Burden of Disease and globally, it accounts for 5% of deaths with more than 90% of COPD deaths occurring in low- and middle-income countries. (Joan Soriano, 2020)

In Kenya, the burden of CRDs is substantial. COPD accounts for 1.7% of deaths nationwide (MOH). A study focusing on chronic respiratory diseases in adult outpatients across three African countries found that in Kenya, the predominant lung function abnormality was obstruction, suggesting a higher prevalence of conditions like COPD and asthma. Furthermore, research on COPD in East Africa reveals a notably high prevalence, with approximately one in every seven individuals affected, underscoring the need for enhanced preventive measures and healthcare strategies in the region. ((Woldesemayat et al., 2023).)

The Kenyan government has recognized the significance of non-communicable lung diseases, identifying asthma and COPD as national health priorities. This acknowledgment is crucial, given that low- and middle-income countries, including Kenya, bear a disproportionate burden of these diseases, which adversely affect individuals' quality of life and impede national.

Addressing the challenges posed by CRDs in Kenya requires a comprehensive approach, including strengthening healthcare infrastructure, improving access to diagnostic and treatment services, and implementing effective public health policies to reduce exposure to risk factors such as tobacco smoke and environmental pollutants.

Tracer medicines play a crucial role in evaluating the availability and readiness of healthcare systems to address chronic respiratory diseases (CRDs). These medicines serve as indicators to assess whether essential pharmacological interventions for conditions such as asthma, chronic obstructive pulmonary disease (COPD), and other CRDs are accessible across healthcare facilities. The availability of these tracer medicines is vital for ensuring effective diagnosis, treatment, and long-term management of CRDs, which significantly contribute to the global burden of disease.

Service Availability

The 2024 QoC survey defined the service availability of CRD services as the provision of diagnosis, treatment, counseling on self-care, and/or referral services for the following CRDs:

Table 69: Tracer services for CRD

Domain	Tracer CRD services
Services	• Asthma • Bronchitis

Domain	Tracer CRD services
	• Bronchiectasis • Cystic Fibrosis

Key findings

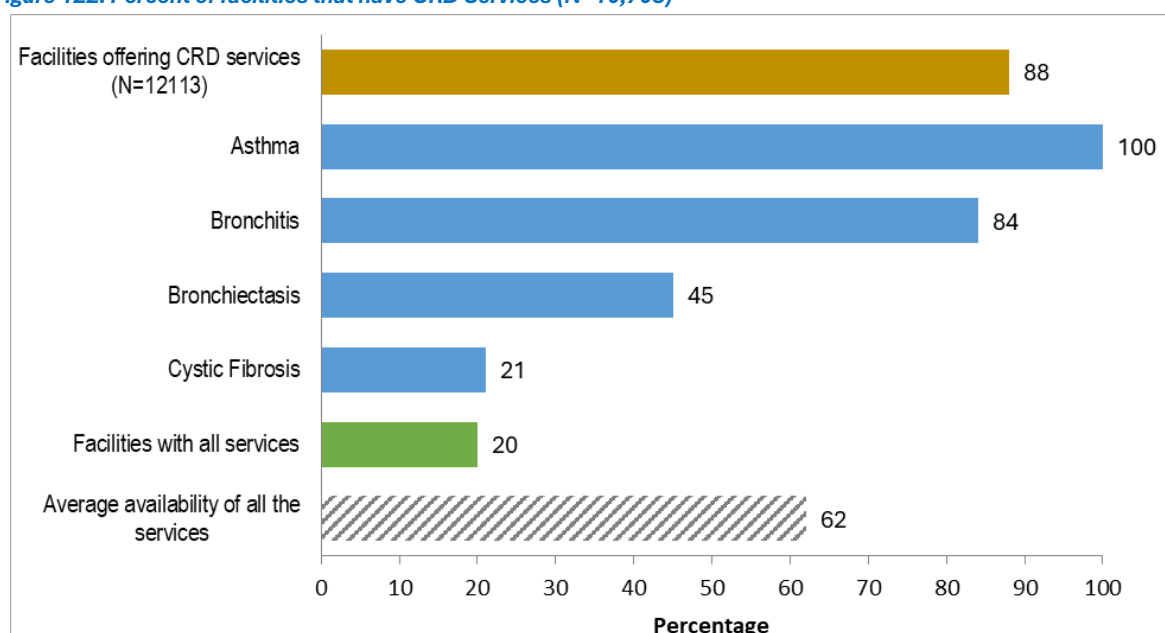
CRD services were offered at 88% (n=10,703) of all the facilities offering NCD services (N=12,113)

Among the health facilities offering screening, diagnosis and management of CRD:

Availability of component services

- Out of the CRD, the average service availability for the diseases was 62% across asthma, bronchitis, bronchiectasis, and cystic fibrosis
- All the facilities provided services for asthma management across the continuum of care while only 21% provided services for cystic fibrosis.

Figure 122: Percent of facilities that have CRD Services (N=10,703)



Disaggregation by location, KEPH level and ownership

Annex Table 46 shows the average availability of CRD services disaggregated by location, KEPH level, ownership and by county.

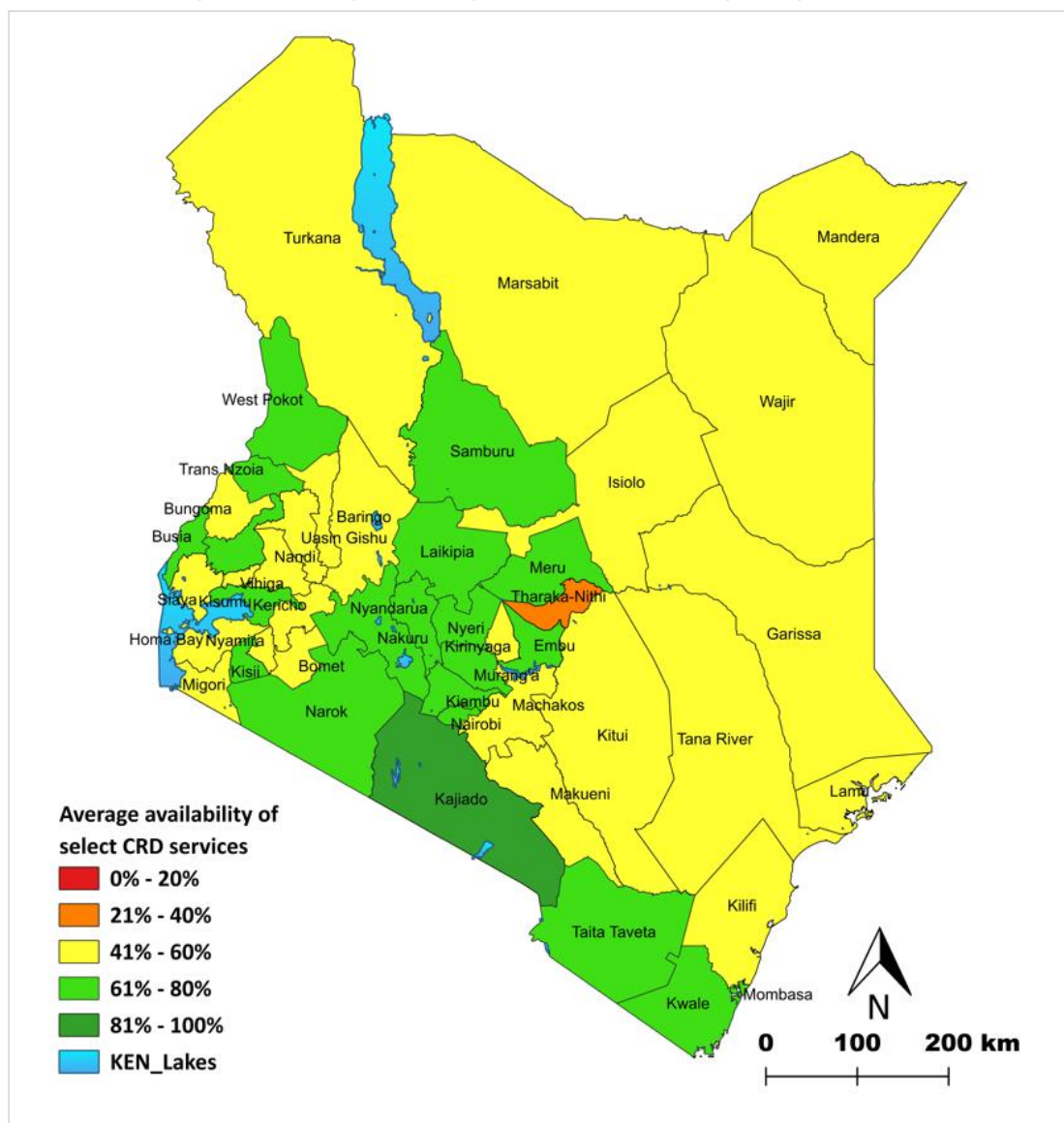
- Asthma services are highly available in almost all facilities regardless of location, KEPH level or ownership.
- Generally, the availability of cystic fibrosis services was low, except in level 4 and 5 facilities at 46 % and 68% respectively.

County Distribution

Figure 123 show the average availability of CRD service disaggregated by county.

- Majority of the counties had average availability of CRD services ranging 41% to 60%.
- Kajiado County had the highest availability of CRD services at 83% while Tharaka Nithi county had the lowest at 40%.

Figure 123: Average availability of CRD tracer services by county



Service Readiness

The service readiness of health facilities to offer CRD was based on availability of the tracer items in four domains summarized in table 70.

Table 70: Tracer items for CRD Services

Domain	Tracer items
Equipment	• Stethoscope • Peak flow meter • Spacers for inhalers

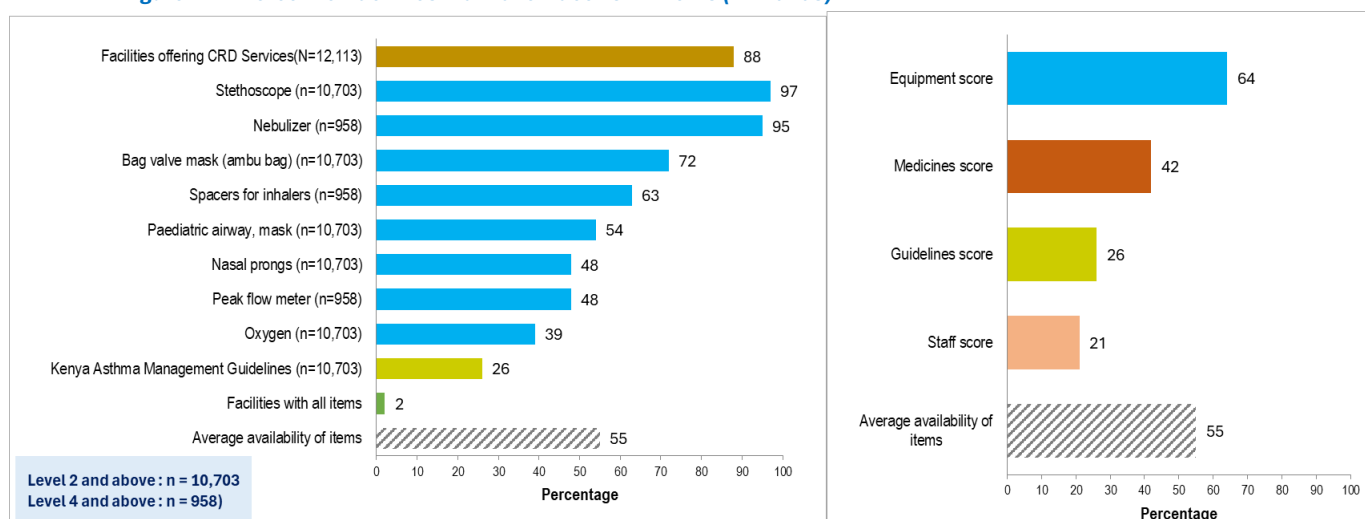
Domain	Tracer items
	• Oxygen • Nebulizer • Paediatric airway, mask • Nasal prongs • Bag valve mask (Ambu bag)
Guidelines	• Kenya Asthma Management Guidelines
Staff	• Health workers trained on asthma and COPD care in the last two years
Medicines	• Detailed list of 6 tracer medicines below

Key findings

Among the health facilities offering CRD services,

- On average, the availability of all tracer items for CRD was 55% among all health facilities that offered CRD services.
- The three most available equipment were stethoscope (97%), nebulizer (95%) and Ambu-bag (72%) whereas the three least available were oxygen (39%), nasal prongs and peak flow meter at 48% each. The overall equipment score was 64%
- Availability of guidelines was 26% across all the facilities.
- Only a fifth (21%) of staff were trained on asthma and COPD care in the two years prior to the survey.

Figure 124: Percent of facilities that have tracer CRD items (N=10703)



Disaggregation by location, KEPH level and ownership

Annex Table 44 shows the average availability of CRD tracer items disaggregated by location, KEPH level and ownership.

- About half (51%) of urban facilities had oxygen compared to 28% of rural facilities; while 27% of level 2 facilities had oxygen compared to all level 5 facilities. Public facilities had the least availability of oxygen (29%) compared to NGO facilities (61%).

- Faith based health facilities had the highest availability of peak flow meters at 60% compared with public health facilities at 40%.
- There was high availability of nebulizers in level 4 and 5 facilities regardless of level, ownership and location.
- Only a few facilities (2%) had all the items

Chronic Respiratory Disease Medicines

Table 71 shows the six tracer medicines assessed for CRD.

Table 71: Tracer medicines for CRD services

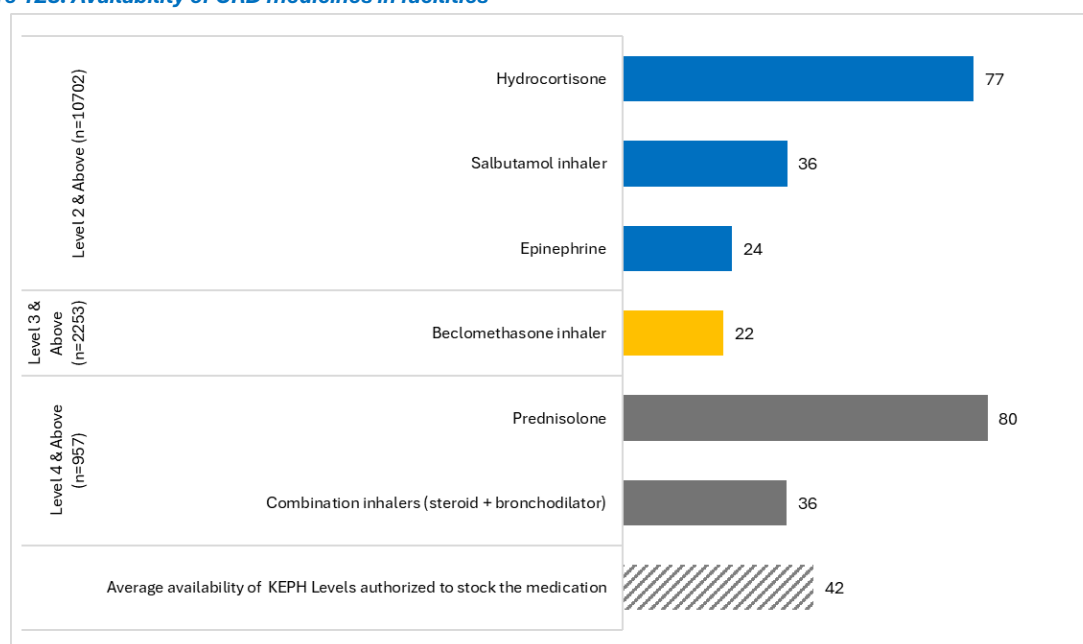
Medicines	• Epinephrine • Salbutamol inhaler • Combined inhaler (steroid + bronchodilator) • Beclomethasone inhaler • Prednisolone • Hydrocortisone

Key Findings

National distribution

- The overall average availability of CRD tracer medicines across all healthcare facilities was 42%.
- Salbutamol inhalers, a frontline therapy for relieving bronchospasm in asthma and COPD, were available in only 36% of facilities.
- Epinephrine, critical for emergency management of severe allergic reactions and asthma exacerbations, was available in 24% of facilities.
- Hydrocortisone was available in 77% of healthcare facilities, indicating relatively high availability of this essential medicine.
- Prednisolone, a critical oral corticosteroid for long-term management of CRDs, was available in 80% of facilities, reflecting its broad accessibility across healthcare settings.
- Beclomethasone inhalers, a key inhaled corticosteroid for long-term asthma and COPD control, were available in only 22% of facilities.
- Combination inhalers containing both a steroid and a bronchodilator, essential for managing severe asthma and COPD, were available in just 36% of facilities.

Figure 125: Availability of CRD medicines in facilities



Disaggregation by location, KEPH level and ownership

Annex Table 157 shows the average availability of CRD medicines disaggregated by location, KEPH level, ownership and by county.

- By location, availability of CRD tracer medicines in rural regions (32%) is lower compared to urban regions (50%).

By ownership

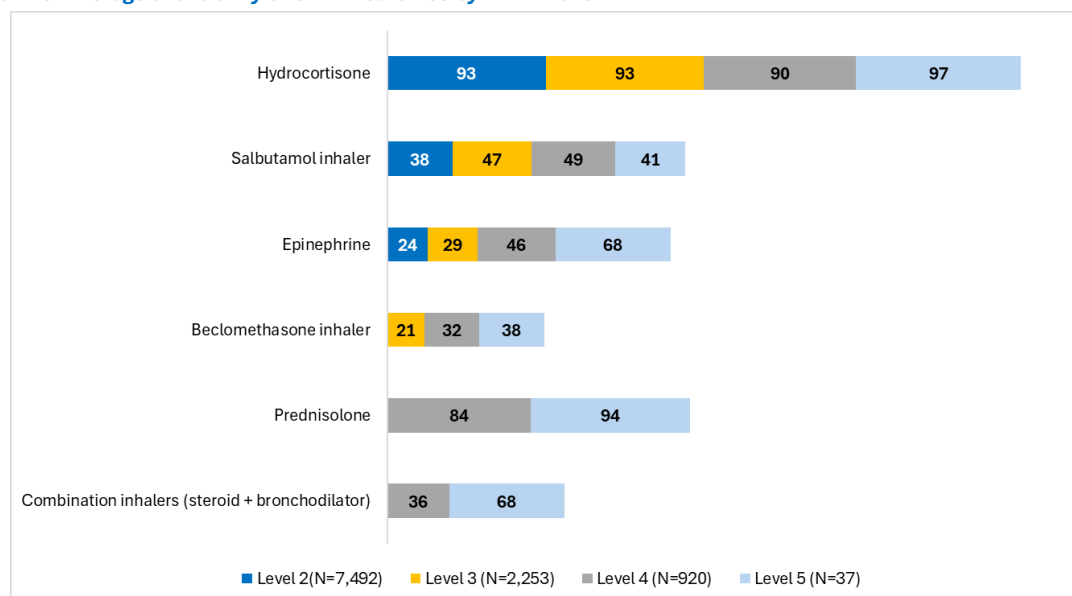
- By ownership, inhaler availability is limited in public facilities with salbutamol inhalers (11%), beclomethasone inhalers (7%), and combination inhalers (17%) compared to private facilities where availability is much higher with salbutamol inhalers (58%), beclomethasone inhalers (40%), combination inhalers (55%).
- Prednisolone was most available in FBO facilities at 99% as compared to 68% of public facilities.
- Epinephrine, essential for acute respiratory emergencies, was alarmingly scarce: being highest at private facilities (38%) and lowest in public facilities (9%).

By KEPH Levels:

- Salbutamol inhaler shows a varied distribution, with the highest at Level 4 (49%) and the lowest at Level 2 (38%).
- Epinephrine distribution increases with higher KEPH levels, peaking at Level 5 (68%).
- Generally, hydrocortisone is readily available across all KEPH levels, with the highest distribution at Level 5 (97%) and the lowest at Level 4 (90%).

- Prednisolone availability is high at levels authorized to stock it; Level 5 (94%) and Level 4 (84%).
- Combination inhalers are distributed at Level 4 and Level 5, with a higher distribution at Level 5 (68%).

Figure 126: Average availability of CRD medicines by KEPH Level



County Distribution

Figure 127 shows the average availability of CRD tracer items and medicines disaggregated by county.

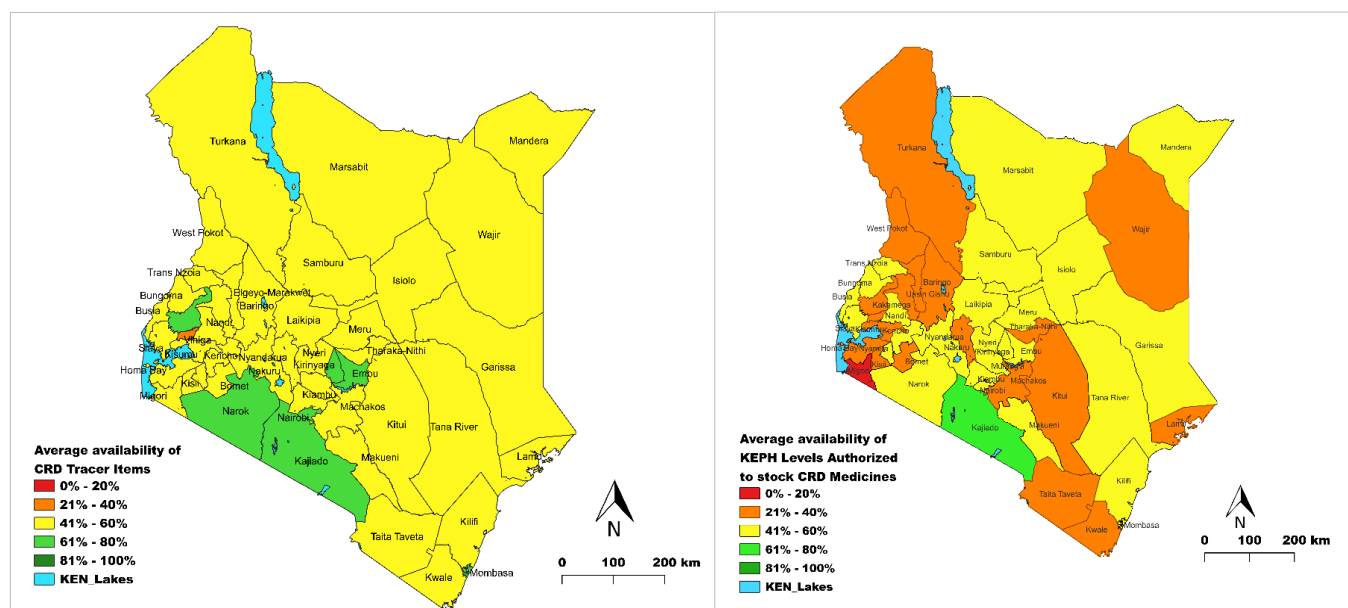
Tracer Items

- Majority of counties have a moderate average availability of CRD tracer items, falling within a range of 41% - 60%
- Two counties (Kajiado and Nairobi) had high availability of CRD tracer items at 77% and 71% respectively while the lowest average availability was in Vihiga at 39%.

Medicines

- Kisumu, Lamu and West Pokot fall within the 21% to 40% range, indicating low to moderate availability of CRD medicines.
- Kajiado county had the highest availability of CRD medicines at 66% while Migori had the lowest availability at 20%.

Figure 127: Average availability of CRD Items and Medicines



Discussion

The availability of Chronic Respiratory Disease (CRD) services in Kenya exhibits significant disparities, particularly between urban and rural areas, as well as across different levels of healthcare facilities. Urban centers and higher-level facilities (Levels 4 and 5) demonstrate greater availability of CRD services, likely due to better funding, access to skilled personnel, and concentrated resources. In contrast, rural areas and lower-tier facilities often face challenges such as inadequate infrastructure, limited access to essential equipment, and shortages of trained staff, leading to insufficient availability of CRD services.

Factors contributing to these disparities include low prioritization of non-communicable diseases (CRDs), fragmented supply chains, and reliance on external funding for essential items. For instance, while basic equipment like stethoscopes is universally available, specialized tools such as peak flow meters are less accessible, underscoring disparities in resource allocation.

According to the Kenya National Guidelines for Asthma Management, adequate service readiness for CRD requires facilities to have all essential items in place. However, only a small percentage of facilities meet this standard, falling significantly below national benchmarks. This shortfall reflects systemic challenges, including financial constraints, weak supply chain mechanisms, and inconsistent adherence to national healthcare standards.

Comparisons with previous assessments, such as the 2018 Kenya Health Facility Assessment (KHFA), indicate moderate progress in areas like screening and counselling services. However, the availability of comprehensive care services for conditions like asthma, bronchitis, and cystic fibrosis remains insufficient, particularly in rural and lower-level facilities. For example, only a limited percentage of facilities provide services for cystic fibrosis, a condition requiring

advanced diagnostics and treatment that are often unavailable in most public and rural facilities.

The uneven distribution of CRD services and resources poses significant challenges for equitable healthcare delivery in Kenya. Many patients, especially in rural and underserved counties, remain without adequate access to necessary care. These gaps contribute to delayed diagnosis, inadequate treatment, and poorer health outcomes, further straining the healthcare system. The lack of essential items, such as peak flow meters and nebulizers, undermines the quality of care, while the minimal availability of trained personnel and updated guidelines reduces the effectiveness of CRD management.

Addressing these disparities requires targeted resource allocation, strengthening of supply chain mechanisms, and enhanced training for healthcare providers, particularly in rural and lower-level facilities. Counties with higher availability of CRD services could serve as models for implementing comprehensive care, guiding efforts to improve access and outcomes across the country.

Table 72: CRD Recommendations

KEY FINDINGS	RECOMMENDATION
Low availability of CRD select tracer equipment.	Increase investment to ensure adequate availability of essential equipment.
It was noted that there were gaps in availability of CRD medicines possibly due to supply chain management challenges.	Address inefficiencies in supply chain mechanisms to ensure consistent availability of essential CRD medicines and equipment in public and lower-tier facilities.
Gaps were identified in capacity building for healthcare providers.	Provide specialized training programs for healthcare providers to improve CRD diagnosis, management, and adherence to updated clinical guidelines.
County disparity in availability of and readiness to offer CRD services.	Scale up successful models of CRD service delivery from counties with higher availability to improve care in low-performing regions.
Disparity in availability of CRD services by ownership, particularly between public and private facilities	Establish public-private partnerships to expand service coverage and optimize resource allocation.
Low availability of the Kenya Asthma Management Guidelines	Efforts should be made to distribute the national asthma documents across all the country. The information may also be integrated into existing healthcare curricula or offered as mandatory CPD



Palliative Care

According to WHO, palliative care aims to prevent and relieve health related suffering of adults, children and their families' facing problems associated with life-threatening illness. Providing equitable and timely access to quality palliative care is an ethical duty shared by public health stakeholders. It is estimated that globally only 14% of patients who need palliative care receive it; to achieve Sustainable Development Goal 3, working towards universal health coverage, countries have to strengthen palliative care services. Kenya, in compliance to WHO has ensured that palliative care is maintained as a key part of their health systems and adopts emphasis on the Primary Health Care approach to improve equitable access to palliative care services. Palliative care is needed, has to be available at all levels of care.

Palliative care aims to improve the quality of life for patients with serious illnesses by alleviating symptoms and stress. Common medications are for managing pain, nausea, and anxiety. The national palliative care guidelines list 35 medicines that are used in palliative care.

Service Availability

The 2024 QoC survey defined the service availability of palliative care services as availability of the following tracer services:

Table 73: Palliative Care tracer services

Domain	Tracer Palliative care service
Palliative Care	• Inpatient palliative care • Outpatient palliative care • Home based palliative care • Linkages with other organizations providing home-based palliative care

Key Findings

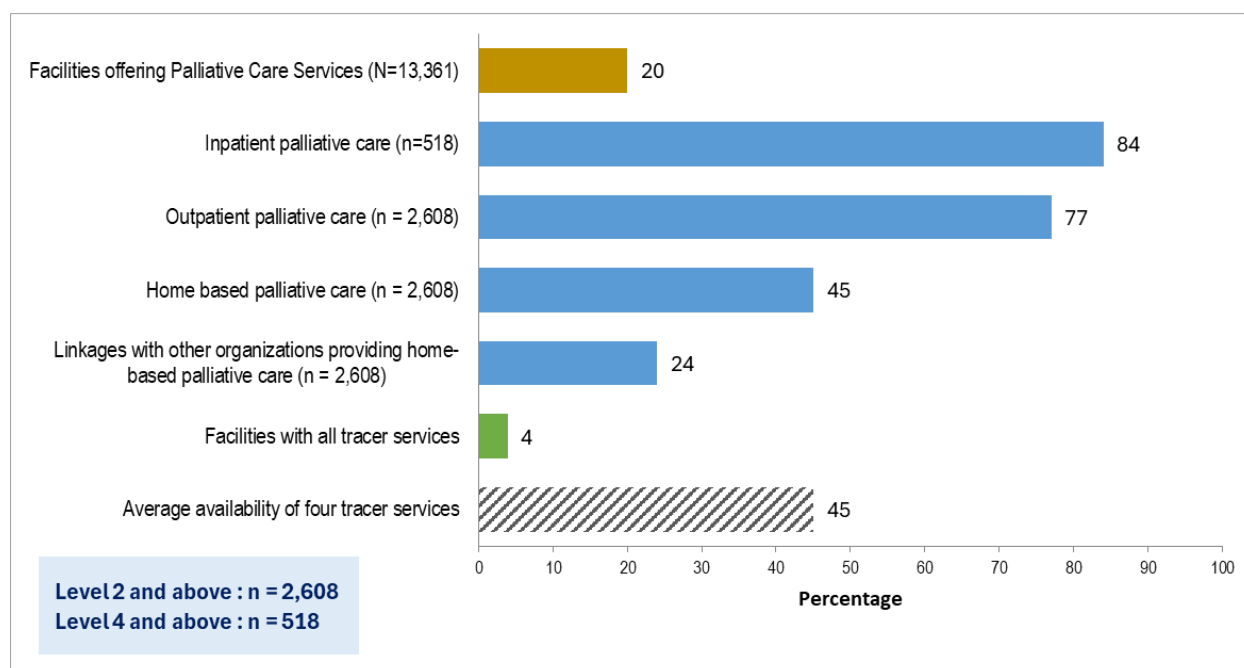
1. National Distribution

Palliative health services were offered in 20% (n=2608) of all the facilities.

Among the health facilities offering palliative care services;

- Nationally, more than three-quarters (77%) of facilities provided palliative care services as an outpatient service. Availability of inpatient palliative care services in level 4 and 5 facilities was high at 85% while home-based palliative was least available at 45%.
- About a quarter (24%) of health facilities provide linkages with other organizations providing home-based services while only 4% had all tracer services available.

Figure 128: Percent of facilities that have select palliative care services (N=2608)



Palliative Care Services disaggregated by location, Management Authority and KEPH Level

Annex Table 47 shows the average availability of palliative services disaggregated by location, KEPH level, ownership and by county.

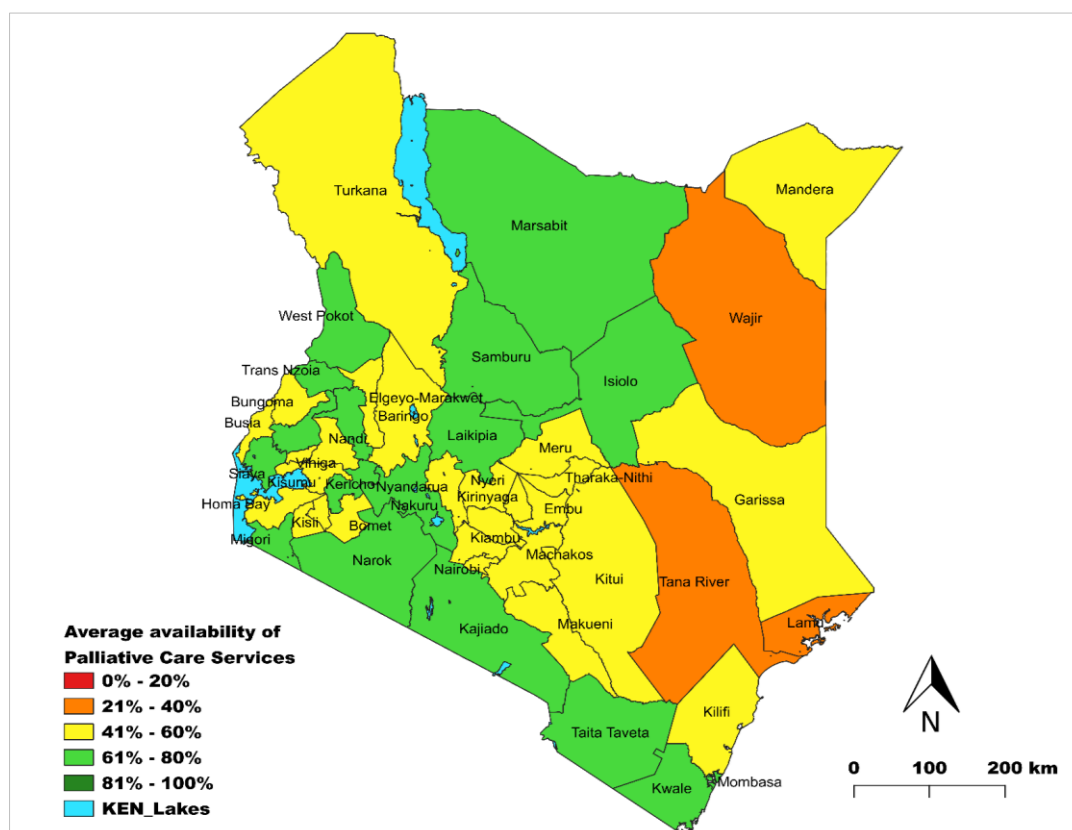
- Outpatient palliative care was the most readily available tracer service regardless of facility location, level or ownership
- Linkages with other organizations were disproportionately higher in urban facilities at 30% compared to 18% in rural facilities.
- The availability of the four tracer services for palliative care was highest in level 5 facilities compared to other levels of care.
- A few facilities had all the tracer services (4%).

County Distribution

Figure 129 shows the average availability of palliative services disaggregated by county.

- Almost two thirds (64%) of the counties had between 41%-60% availability of palliative care services in their health facilities
- Health facilities in Mombasa, Narok and Kwale counties had the highest availability of palliative care services 79%, 74% and 71% respectively.
- The lowest availability for palliative care service was in Wajir (37%), Tana River (31%) and Lamu (27%) counties

Figure 129: Average availability of palliative care services by county



Service Readiness

The 2024 QoC survey assessed the readiness to provide palliative care based on availability of tracer items:

Table 74: Tracer items for Palliative services

Domain	Tracer Items
Guidelines	Kenya National Palliative Care Guidelines
Trained staff	Healthcare workers trained on palliative care MOH/Kenya Hospices and Palliative Care Association (KEHPCA) or an equivalent
Medicines and commodities	7 tracer items listed under palliative care medicines

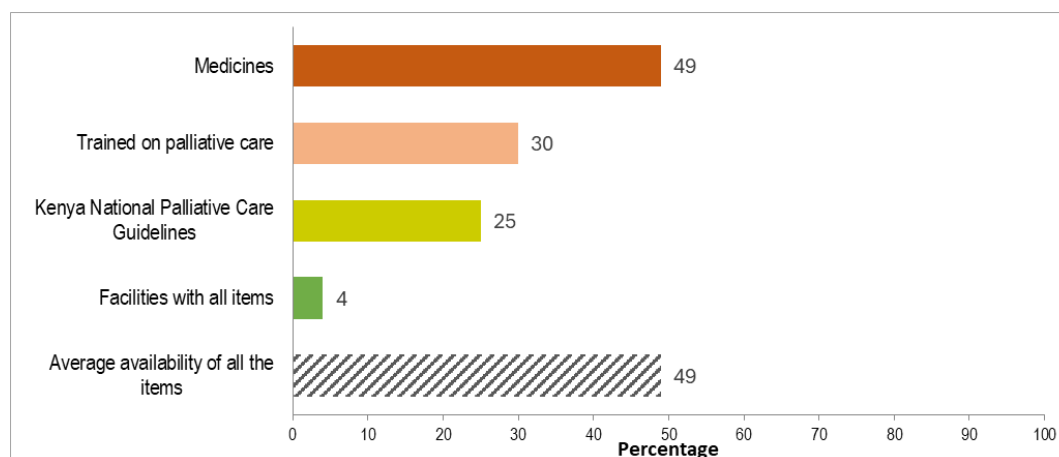
Key findings

Palliative health services were offered at 20% (n=2,608) of all the facilities assessed. Among the health facilities that offer palliative care services.

- Nationally, palliative care medicines and commodities were the most readily available tracer items at 49%.

- Kenya national palliative care guidelines were available in a quarter of the health facilities while the availability of staff trained on palliative care was 30%.
- Only 4% of the facilities have all the tracer palliative care items.

Figure 130: Percent of facilities that have tracer palliative care items (N=2608)



Palliative care service readiness by location, KEPH level ownership

Annex Table 48 shows the average availability of palliative care tracer items disaggregated by location, KEPH level, ownership and by county.

- At level 5 facilities average availability of medicines was at 49%.
- Trained staff availability was lowest (36%) in public facilities and most available in NGO's (29%).

Palliative Care Medicines and Commodities

Table 75 gives a list of tracer palliative care medicines and commodities considered for this survey

Table 75: Tracer Palliative Care medicines and commodities

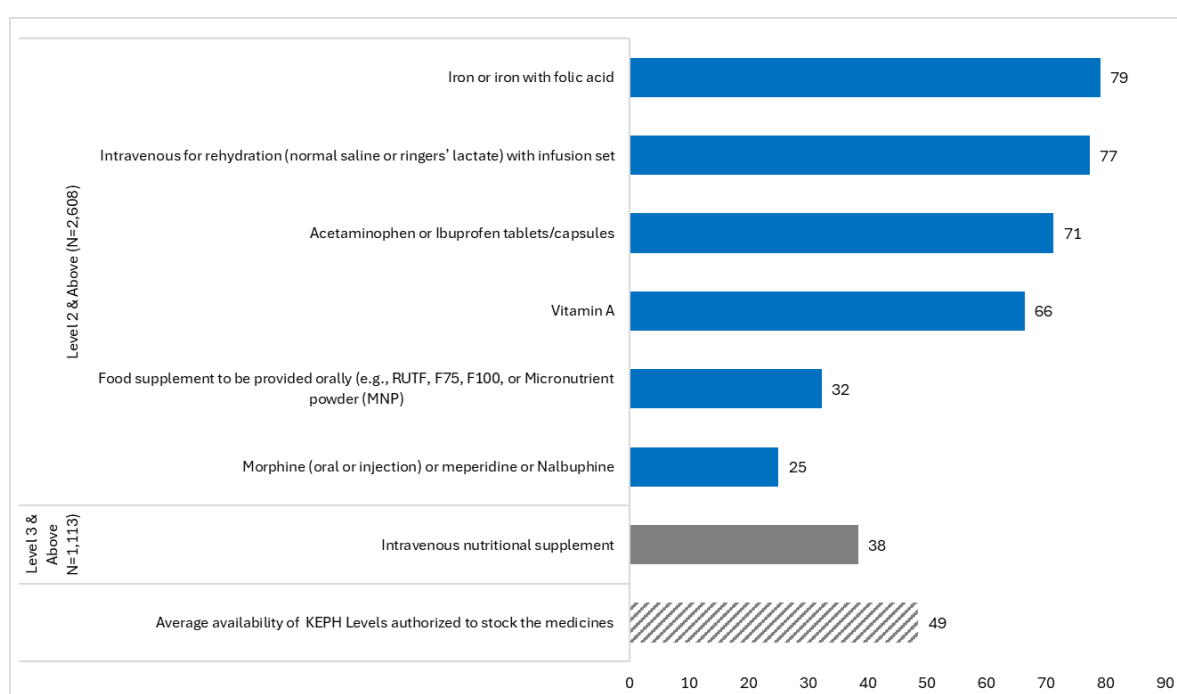
Domain	Tracer Medicines and commodities
Medications and Commodities	• Intravenous fluids for rehydration (normal saline or ringers' lactate) with infusion set • Intravenous nutritional supplement • Food supplements to be provided orally (e.g., RUTF, F75, F100, or Micronutrient powder (MNP) • Morphine (oral or injection) or meperidine or Nalbuphine • Acetaminophen or Ibuprofen tablets/capsules • Vitamin A • Iron or iron with folic acid

Key Findings:

National Distribution

- There was an average availability of palliative tracer medicines and commodities is 49%.
- Iron or iron with folic acid, Intravenous rehydration solutions, and common pain relievers like Acetaminophen or Ibuprofen show high availability (over 70%).
- Vitamin A has a moderate availability of 67%, suggesting that it is relatively accessible but still requires improvement.
- Oral food supplements (32%), and opioid analgesics like Morphine or its alternatives (25%) is significantly lower.
- The availability of Intravenous nutritional supplements at facilities KEPH level 4 and above is (38%)

Figure 131: Availability of palliative care medicines in facilities



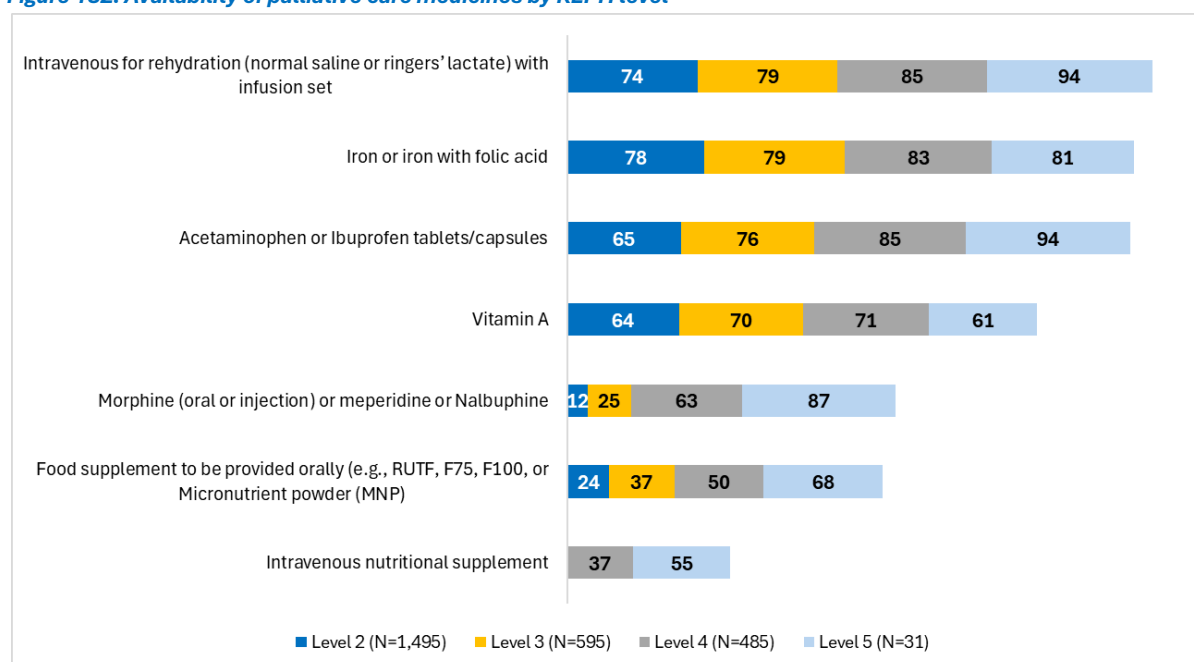
Palliative Care Medicines Disaggregation by location, KEPH level and Ownership

Annex Table 161 shows the average availability of palliative care medicines disaggregated by location, KEPH level, ownership and by county.

By KEPH Level:

- Four tracer items i.e. IV rehydration, iron/folic acid, Vitamin A and ibuprofen/acetaminophen tablets/ capsules are moderately available; progressively increasing with KEPH levels of care.
- Oral food supplements and opioid analgesics (Morphine (oral or injection) or meperidine or Nalbuphine) have low availability especially at level 2 and 3 facilities.

Figure 132: Availability of palliative care medicines by KEPH level



County Distribution

Figure 133 shows the average availability of palliative care tracer items and medicines disaggregated by county.

Tracer Items

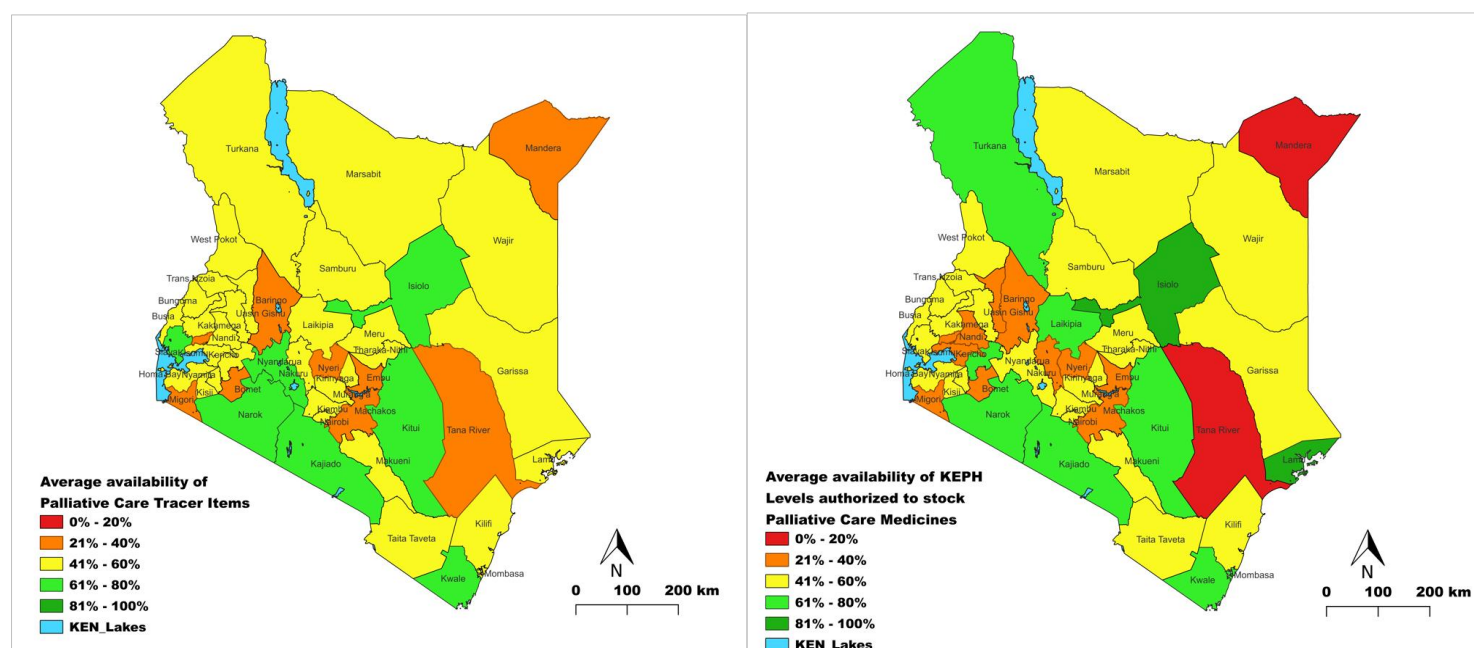
- The three counties with the highest availability of palliative care tracer items were Narok (74%), Kitui (67%) and Nakuru (66%).
- The two counties with the lowest availability of palliative care tracer items were Tana River (22%) and Mandera (23%).

Medicines Country Distribution

- Isiolo had the highest availability of palliative care tracer medicines at 88% while Mandera had the least availability at 16% , and Tana River 17%.



Figure 133: Palliative care items (left) and medicines (right) by county



DISCUSSION

The assessment of palliative care services across health facilities reveals significant insights into the availability and accessibility of essential services aimed at improving the quality of life for patients in need of these services.

The result show that while there are strong outpatient palliative care services, other components like home-based palliative care, inpatient palliative care, and linkages with external organizations remain underdeveloped. The low percentage of facilities with established linkages to organizations providing home-based palliative care highlights a missed opportunity for integrated support systems, which are essential for comprehensive palliative care delivery.

The low readiness score of 49% across the three tracer items, trained personnel, palliative care guidelines, and medicines and commodities, indicates that health facilities are not well prepared to deliver effective palliative care. Significant gaps exist in availability of trained personnel and the dissemination of palliative care guidelines that are essential for effective service delivery.

Palliative care medicines and commodities were the most readily available tracer item at 49%. This is an encouraging finding as access to essential medications is critical for rehydration, nutrition and pain management and other distressing symptoms. However, while this statistic is encouraging, it is essential to consider that availability alone does not ensure appropriate use. Facilities must also have protocols in place for prescribing and managing these medications effectively.

There are notable disparities in availability of tracer items between urban and rural health facilities, as well as differences across facility levels and ownership. The higher availability of tracer items for palliative care in urban facilities compared to rural counterparts indicates a critical geographic disparity. This disparity can lead to inequities in care for patients in rural areas, who may have less access to vital palliative services.

It is notable that non-governmental organizations (NGOs) report the highest average availability of tracer items followed by private facilities. This suggests that NGO facilities may be effectively leveraging their resources and support networks to enhance service availability.

Table 76: Palliative care recommendations

No.	KEY FINDINGS	RECOMMENDATION
	Low health facility linkage to other facilities that offer palliative care services.	Improve the linkage and referral network to ensure continuity of care.
3	Gaps in the availability of staff trained in palliative care at facilities offering the services.	It is crucial to build the capacity of palliative care workforce to ensure patients' complex needs are addressed by skilled teams.
4	Gaps were found in the availability of national palliative care documents across the country.	Efforts should be made to distribute the national palliative care documents across all the country. The information may also be integrated into existing healthcare curricula.

REPRODUCTIVE, MATERNAL, NEWBORN, CHILD AND ADOLESCENT HEALTH (RMNCAH) & NUTRITION AND DIETETICS

Reproductive, Maternal, Newborn, Child, and Adolescent Health (RMNCAH) services form a key pillar in universal health coverage, and remains a critical health priority. Despite some advancements in improving RMNCAH outcomes, Kenya continues to face a significant burden of maternal and child mortality and illness. The primary aim of the RMNCAH program is to eliminate preventable deaths and ensure that women, children, and adolescents lead healthy lives, contributing fully to society for sustainable development.

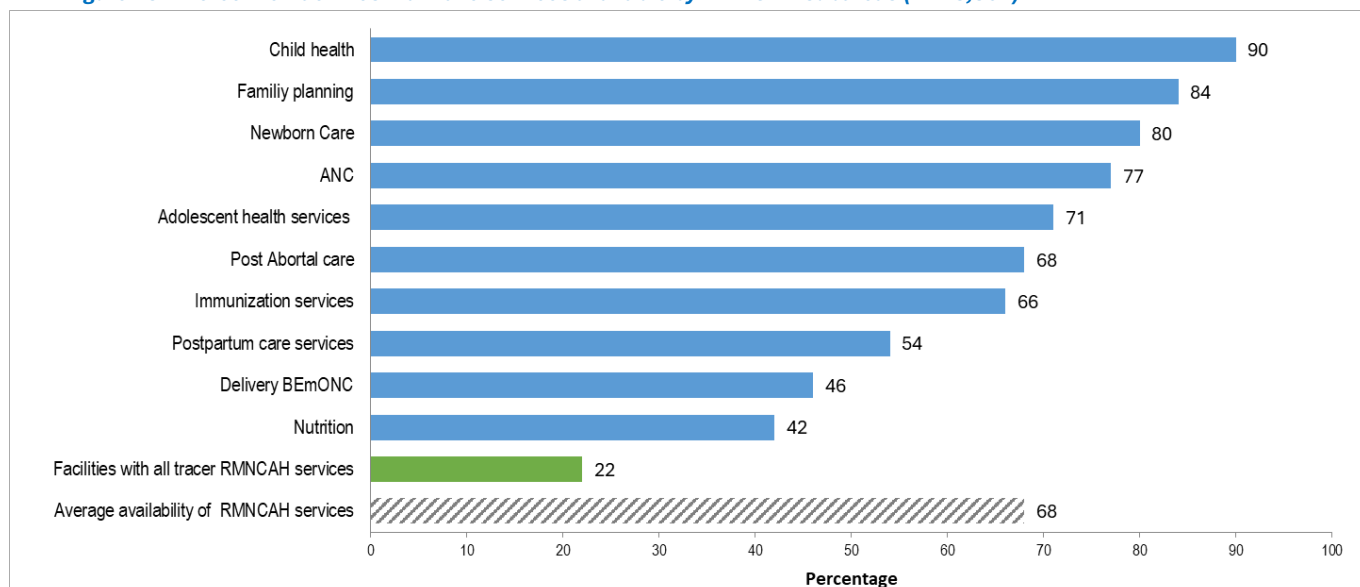
RMNCAH health services follow a continuum of care, encompassing pre-pregnancy, pregnancy, childbirth, the immediate postnatal period for women and newborns, and extending through childhood and adolescence. This approach emphasizes that providing preventive, promotive, and treatment interventions throughout the entire lifespan is the most effective way to reduce mortality and enhance health outcomes for women, newborns, children, and adolescents. The continuum of care includes interventions for both normal and complicated pregnancies, as well as for healthy and ill children and adolescents.

The Kenya Quality of Care Health Facility assessment evaluated the availability of services in RMNCAH subareas at facilities.

According to Figure 134;

- Under 5 child health services were more readily available with 90% of the facilities assessed offering the service
- Less than half of the facilities assessed were offering BEmONC 7 signal functions and nutrition services at 46% and 42% respectively
- At least 2 out of 10 of the facilities assessed had all RMNCAH sub areas.

Figure 134: Percent of facilities that have services available by RMNCAH subareas (N=13,361).



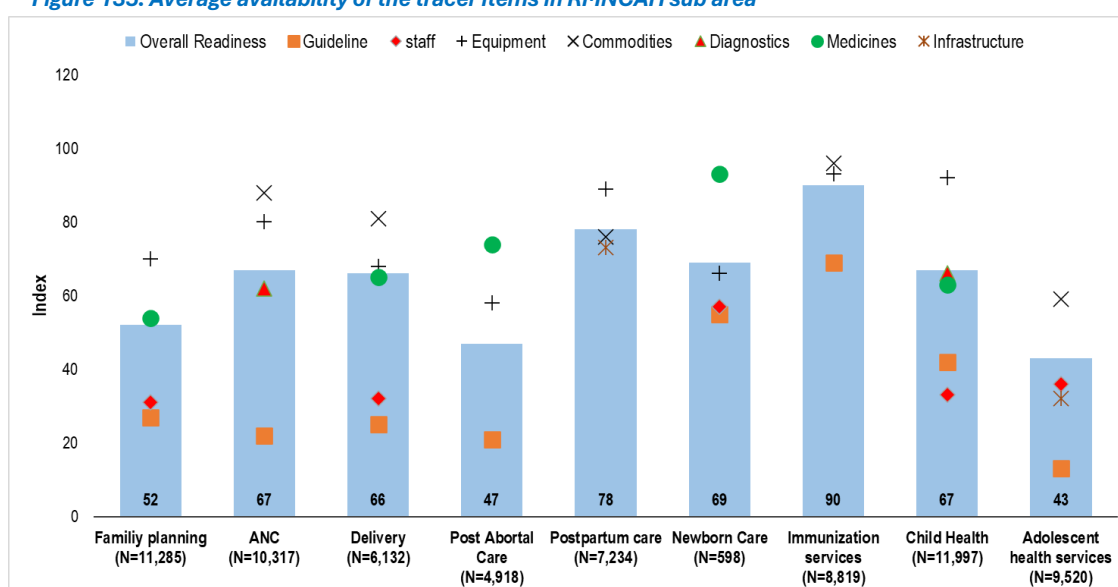
Overall RMNCAH Readiness.

Findings.

The overall readiness to offer a service is and based on one of more of the following domains; guidelines, trained staff, equipment, commodities, medicines, diagnostics and infrastructure.

- Guidelines were the most commonly assessed domain across the RMNCAH sub areas.
- Either medicines or commodities was assessed in the RMNCAH sub areas, except in BEmONC and CEmONC delivery services for which both domains were included.
- Immunization services had the highest overall readiness with an overall score of 90% while adolescent services had the lowest overall readiness with a score of 43%

Figure 135: Average availability of the tracer items in RMNCAH sub area



* The readiness score corresponds to the average availability (%) of the tracer items of the applicable domains (guidelines, trained staff, equipment, commodities, medicines, diagnostics and infrastructure.)

Family Planning

Introduction

Access to quality family planning (FP) services is a key driver in improving reproductive health outcomes and empowering individuals to make informed choices about their reproductive lives. The quality of care survey assessed the state of family planning services across Kenya, focusing on two critical aspects: the supply-side factors—availability of family planning services and the readiness to offer the services—and the demand-side factors—client experiences and satisfaction—at health facilities across various counties.

The QOC survey assessed the availability of FP services, as well as the range of contraceptive methods available as shown in Table 77.

Table 77: Family Planning tracer services

Domain	Tracer Family Planning Services
Services	• Family planning counseling • Combined estrogen-progesterone oral contraceptive pills (COCs) • Progestin-only contraceptive pills • Depo Medroxy Progesterone Acetate (DMPA) Injection/Depo Provera)-150mg/mL, Intramuscular (IM) • Depo Medroxy Progesterone Acetate (DMPA) Injection-104 mg/0.65mL, Subcutaneous (SC) • Norethisterone Enanthate (NET-EN) 200mg I.M. Injection • Male condoms • Female condoms • Implant insertion and removal • Emergency contraceptive pills • Intrauterine contraceptive device (IUCD) – insertion and removal • Cycle beads for standard days method • Vasectomy (Male Surgical Contraception) • Bilateral Tubal Ligation (BTL) (Female Surgical Contraception)

Findings

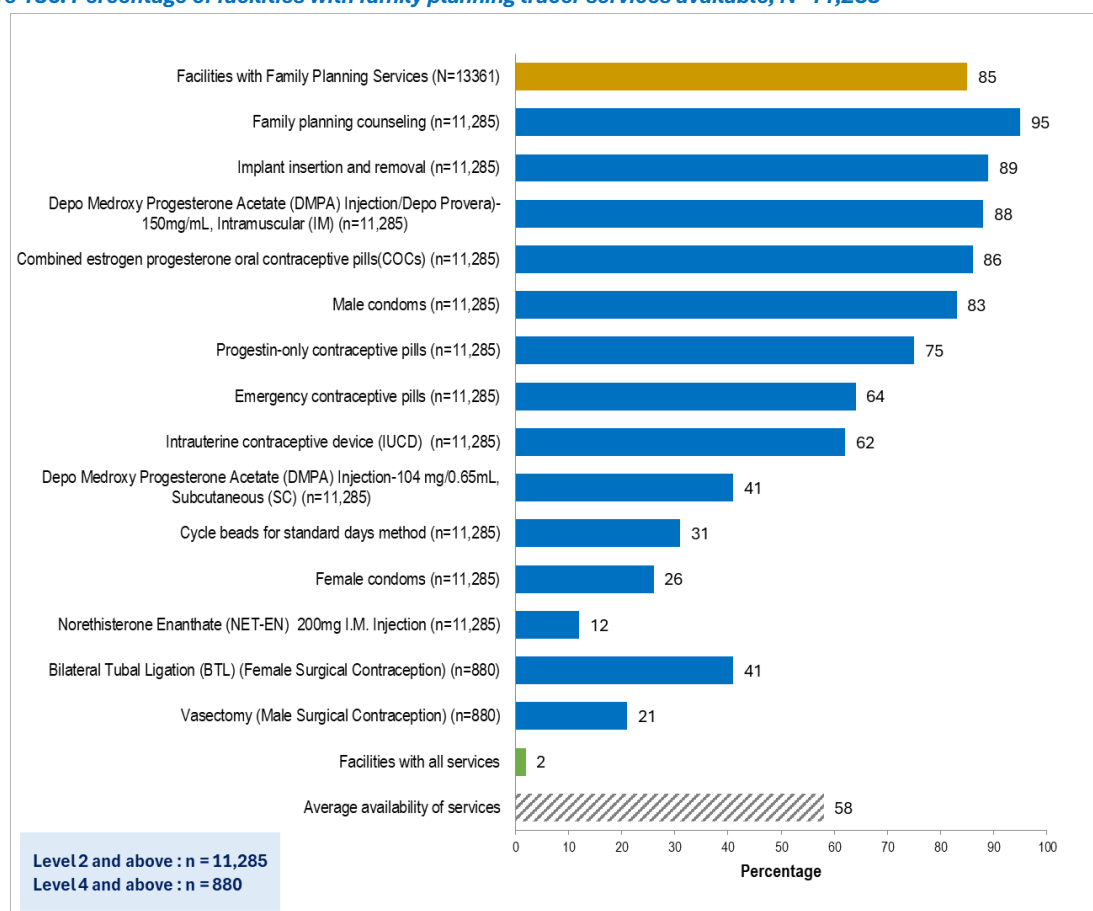
Service Availability

Family planning services were available in 85% (n=11,285) of facilities nationwide. Figure 136 provides a summary of their availability.

Among the health facilities offering 14 family planning tracer services:

- Family planning counseling was available in 95% of the facilities.
- At least 8 in 10 facilities provided methods such as implant insertion and removal, Depo Medroxyprogesterone Acetate (DMPA) intramuscular injections, combined oral contraceptive pills, and male condoms.
- The most available surgical contraceptive option in Level 4 and 5 facilities was bilateral tubal ligation (BTL) at 41%, while vasectomy was the least available at 21%.
- The overall average availability of the tracer services was 58%.

Figure 136: Percentage of facilities with family planning tracer services available, N=11,285



Disaggregation by location, KEPH level and ownership

Annex Table 70 presents the average availability of family planning services, disaggregated by location, KEPH level, ownership, and county.

By location:

- Urban facilities reported slightly higher availability of methods such as progestin-only pills (77% in urban vs. 74% in rural), female condoms (30% vs. 23%), and cycle beads for the standard days' method (35% vs. 28%).
- Rural facilities had better availability of male condoms (88% vs. 76%) and emergency contraceptive pills (90% vs. 87%). Urban facilities also provided a greater variety of long-term and surgical methods, including vasectomy (26% vs. 12% in rural) and bilateral tubal ligation (BTL) (49% vs. 26%).

By facility type:

- Level 4 and 5 facilities offer the most comprehensive services, with high availability of long-term methods such as IUCD insertion/removal (86% in Level 4 and 94% in Level 5) and implants (95% in Level 4 and 94% in Level 5).
- Lower-level facilities (Levels 2 and 3) generally have lower service availability, particularly for subcutaneous DMPA injections, which are available in 40% of Level 2 facilities and 43% of Level 3 facilities.

- Surgical contraceptive options are more available in Level 5 facilities compared to Level 4, with vasectomy at 57% vs. 20% and bilateral tubal ligation (BTL) at 69% vs. 40%.

By ownership:

- NGO-run facilities demonstrate higher availability in many areas, including male condoms (92%) and female condoms (60%).
- Faith-based organization (FBO) facilities reported higher availability of surgical methods such as vasectomy (39%) and bilateral tubal ligation (BTL) (60%).
- Public facilities have strong coverage of essential services, with 95% providing family planning counseling, 90% offering male condoms, 94% offering implant insertion and removal, and 88% offering injectable contraceptives (DMPA).
- Private facilities show the lowest availability for some methods, such as male condoms (74%) and progestin-only pills (68%), but higher provision of emergency contraceptive pills (68%) and injectable contraceptives (DMPA) (90%).

County Distribution

Figure 137 presents the average availability of family planning services by county.

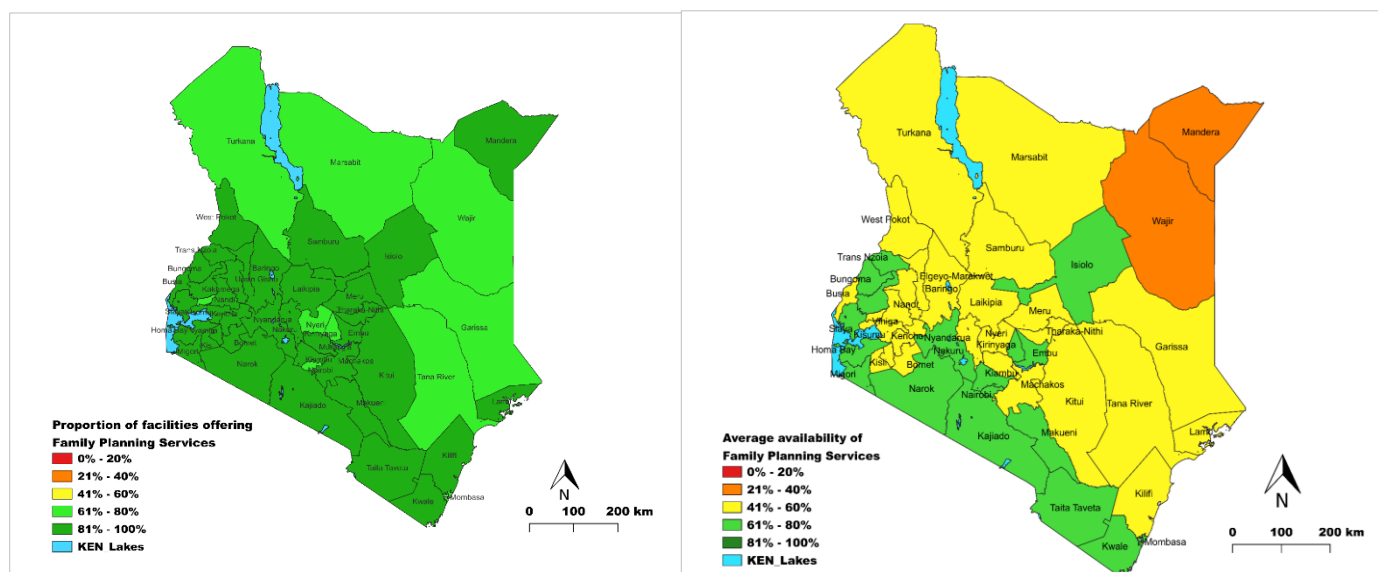
Proportion of facilities offering family planning services:

- In most counties, at least 80% of facilities offered family planning services.
- Nine counties, Turkana, West Pokot, Samburu, Baringo, Nyandarua, Embu, Murang'a, Machakos, and Kilifi, had at least 60% of their facilities providing family planning services.

Average availability of 14 tracer family planning services:

- Trans Nzoia (73%), Nakuru (71%), and Mombasa (71%) recorded the highest average availability of tracer family planning services.
- Mandera (35%) and Wajir (38%) had the lowest availability.

Figure 137: Average availability of Family Planning services by county



Service Readiness

To determine the readiness to offer the family planning services, the survey assessed the availability of tracer infrastructure/ equipment, guidelines, trained staff and commodities.

Table 78: Tracer items for Family Planning

Domain	Family Planning Tracer Items
Guidelines	• Medical Eligibility Criteria (MEC) Wheel • Kenya National Family Planning Guidelines 6th Edition 2018 • National Family Planning Standards for health care providers 2022
Infrastructure/ Equipment	• Room for administering FP • Blood pressure apparatus • IUCD Set • Implant set
Trained Staff	• Trained health care provider on FP administration in the last 2 years
Commodities	• Combined estrogen-progesterone oral contraceptive pills (COCs) • Progestin-only contraceptive pills • Norethisterone Enanthate (NET-EN) 200mg I.M. Injection • Depo Medroxyprogesterone Acetate (DMPA) Injection Intramuscular (IM) or Subcutaneous (SC) • Male condoms • Female condoms • 1 Rod Implant (Etonogestrel 68mg) • 2 rod Implant (Levonorgestrel 75 mg) 5 years • 2 rod Implant (Levonorgestrel 75 mg) 3 years • Emergency contraceptive (e.g. levonorgestrel, ulipristal acetate, mifepristone tablet) • Intrauterine contraceptive device (IUCD) e.g. Copper T • Intrauterine contraceptive device (IUCD) – hormonal

Readiness score

Figure 138 summarizes the availability of family planning tracer items.

Among health facilities offering family planning services:

- The average availability of family planning tracer items was 52%.
- Commodities were moderately available at 54%. Combined oral contraceptive pills, DMPA injections (intramuscular or subcutaneous), male condoms, and 2-rod implants (Levonorgestrel 75 mg for 5 years) were available in at least three-quarters of the facilities.
- Equipment for family planning was more readily available, scoring 70%. Of the four tracer equipment items assessed, more than three-quarters of facilities had a blood pressure apparatus (86%) and a designated room for family planning services (77%).

- Guidelines were the least available at 27%, while only 31% of facilities had healthcare providers trained in family planning service delivery within the past two years.

Figure 138: Family planning tracer items availability score (N= 11,285)

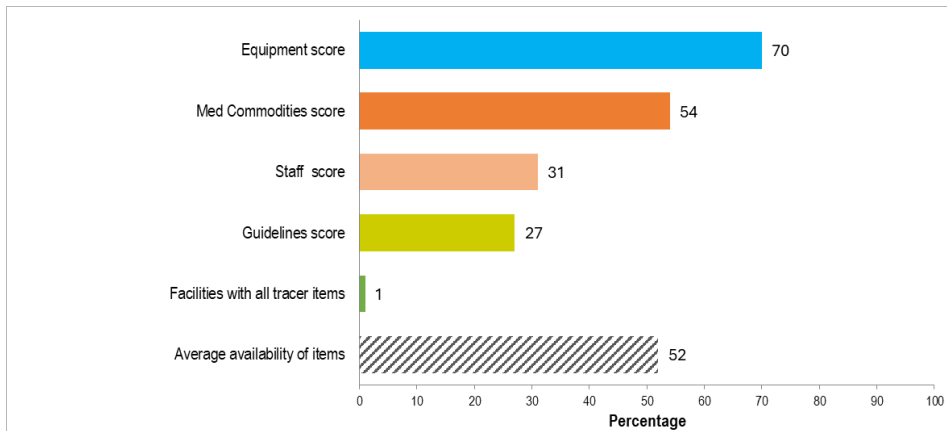
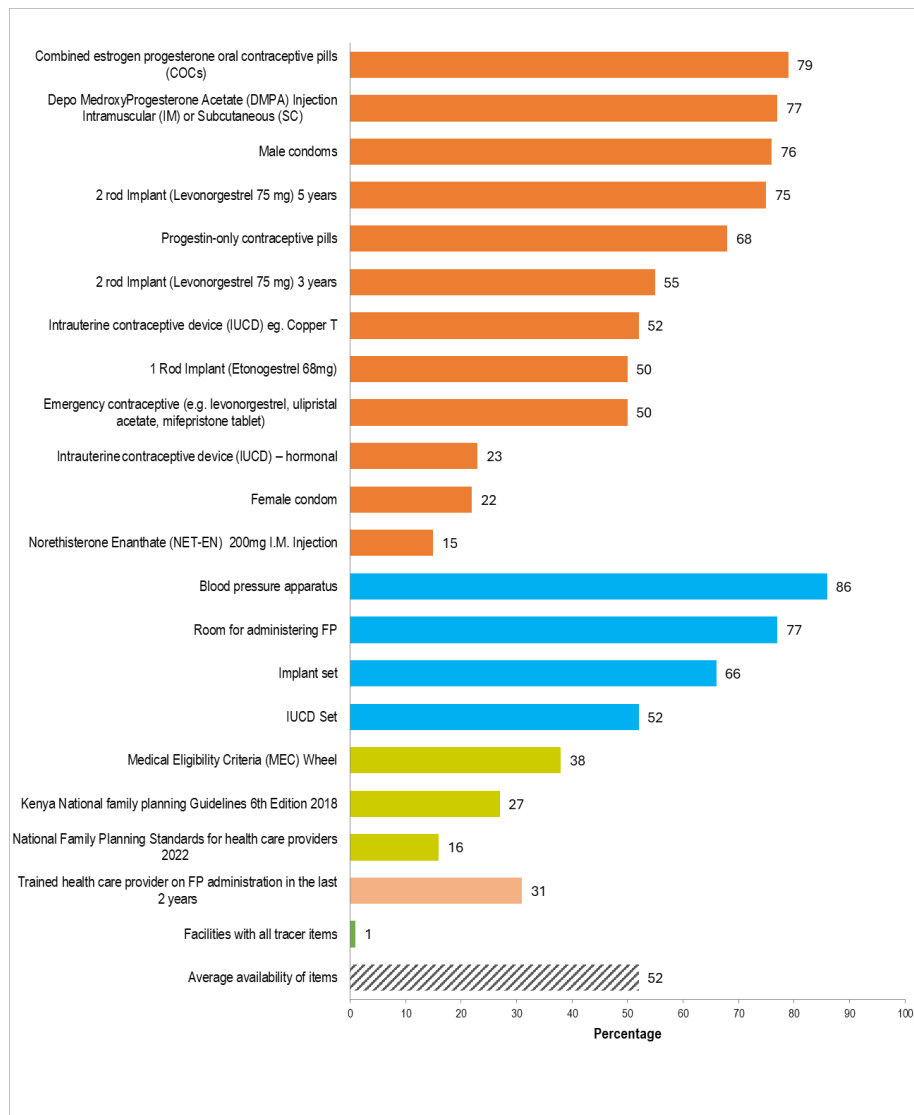


Figure 139: Percent of facilities with select tracer items for offering family planning services (N=11285)





Disaggregation by location, KEPH level and ownership

Annex Table 72 & 73 shows the average availability of family planning tracer items disaggregated by location, KEPH level and ownership.

By Location

- Urban facilities scored slightly higher on all tracer items compared to rural facilities.
- In rural facilities, the top three available medical commodities were male condoms (80%), DMPA (79%), and combined oral contraceptive (COC) pills (78%). In urban facilities, the top three were COC pills (78%), DMPA (77%), and 2-rod implants (72%).
- In rural facilities, the availability of the Kenya National Family Planning Guidelines, 6th Edition was 13%, and the National FP Standards for Health Care Providers was 25%, compared to 21% and 30% respectively in urban facilities.
- Availability of the Medical Eligibility Criteria wheel was 36% in rural facilities and 40% in urban facilities.

By KEPH Level

- The average availability of family planning (FP) tracer items was highest in Level 5 facilities (71%) and lowest in Level 2 facilities (49%).
- The availability of *National FP Standards* was generally low across all four levels of care.
- Inequities were observed in access to training opportunities for healthcare providers (HCPs) offering family planning services: only 26% of HCPs in Level 2 facilities had received training in the two years before the assessment, compared to 69% in Level 5.
- Availability of the *National FP Standards* for healthcare workers was lowest in Level 2 facilities (13%), while Levels 4 and 5 had the highest availability (31%).

By ownership

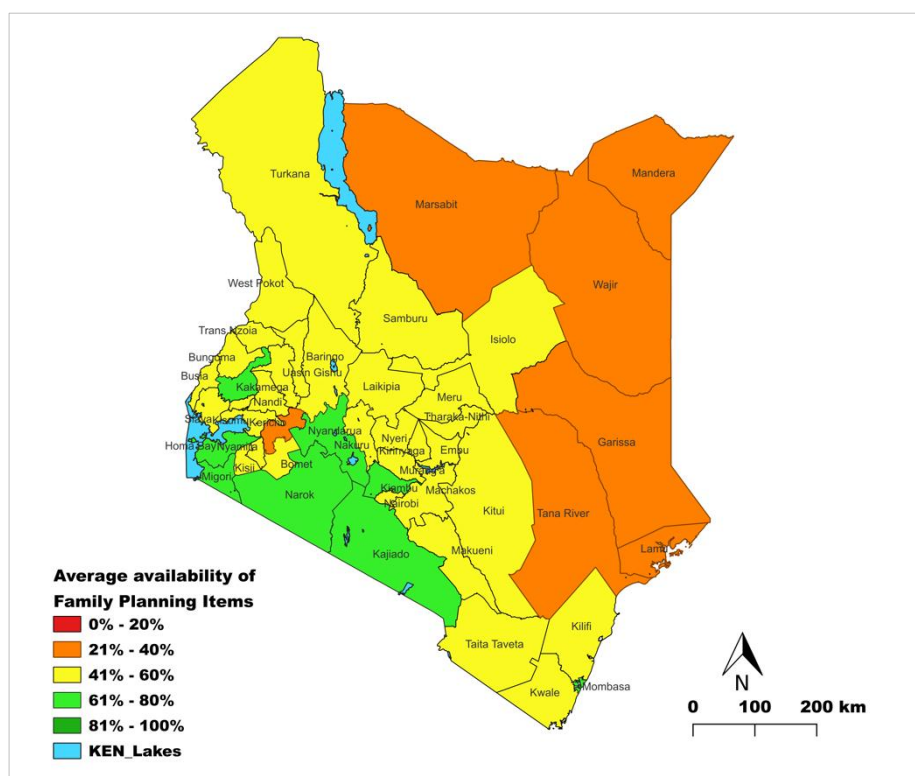
- The average availability of the Family planning tracer items was highest in public at 54% and lowest in private facilities at 49%.

County Distribution.

Figure 140 shows the average availability of family planning services distributed by county.

- The average availability of family planning services varied across counties, with most counties recording between 41% and 60%.
- Only seven counties, Kakamega, Homa Bay, Migori, Narok, Nakuru, Kiambu, and Kajiado, had an average availability of 61% to 80%.
- The lowest average availability was observed in Kericho (26%) and Mandera (22%).

Figure 140: Average readiness to offer family planning services by county



Discussion

The findings show that while Kenya has widespread availability of family planning counseling and key contraceptive methods, there are clear gaps in the provision of specialized methods and long-term or surgical contraception. Injectable contraceptives (IM DMPA) and oral contraceptive pills are well-established, but newer options such as subcutaneous DMPA injections (Depo Provera SC) and NET-EN injections remain underutilized, potentially limiting client choice in some areas. The very low availability of vasectomy (3%) and bilateral tubal ligation (5%) is a significant issue, as these are important long-term methods that should be more accessible, especially in rural areas where availability is even lower.

Urban facilities tend to offer a broader range of contraceptive options, especially in terms of long-term and surgical methods, compared to rural facilities. However, rural facilities do provide strong access to basic methods like male condoms and emergency contraceptives, which are critical for managing short-term contraceptive needs. Bridging the gap between rural and urban service availability, particularly for long-term and permanent methods, could improve equitable access to family planning across Kenya.

The analysis of family planning services in Kenya, based on both facility data and the Kenya Demographic and Health Survey (KDHS) 2022, reveals strong alignment in key areas but also some gaps. Family planning counseling is widely available in 95% of facilities, reflecting the high

awareness (99%) of contraceptive methods reported in the KDHS 2022. Injectables, the most popular method used by 30% of women, are offered in 88% of facilities.

Training of HCPs and availability of guidelines are aimed at improving access and quality of care in family planning services. There is generally low readiness of the healthcare workers to offer family planning services, training of the HCPs in the last 2 years, low availability of the medical eligibility criteria, guidelines and standards.

Conclusion

While Kenya has made significant strides in ensuring the availability of family planning services, the assessment revealed some gaps in the availability of long-term and permanent contraceptive methods. There are notable gaps and disparities in the access to training for HCP and availability of the guidelines, which can contribute to the low availability, access and quality of family planning services.

Table 79: Family planning recommendations

Findings	Recommendation
Gaps in the provision of specialized methods and long-term or surgical contraception.	There is a need for targeted interventions to increase access to long-term and permanent contraceptive methods.
- Disparity in availability and readiness of FP services across levels of care and facility location - Facilities have higher availability of the services than the commodity for tracer methods, except for NET-EN.	Strengthening lower-level facilities and increasing the provision of newer and less common contraceptive options, especially in rural areas, could greatly enhance the country's family planning program and contribute to better reproductive health outcomes.
Low proportion of facilities with health workers trained on FP services and administration in the last 2 years	There is a need to invest in the training of HCPs to enhance their knowledge and build capacity and skills in offering family planning services.

Antenatal Care Services

Introduction

The World Health Organization (WHO) emphasizes the critical role of antenatal care (ANC) in improving maternal and newborn health outcomes. Antenatal care (ANC) refers to the routine healthcare services provided to pregnant women by skilled providers to ensure a healthy pregnancy, safe delivery, and the well-being of both the mother and the baby. Antenatal Care is a critical component of maternal and child healthcare, aiming to ensure the health and well-being of both the mother and the unborn child through regular check-ups, health education, and preventive interventions. According to The Kenya Maternal and Newborn Health standards, 2022, all health facilities should provide the full range of ANC services, including diagnostics, preventive care, and management of pregnancy-related complications.

In the context of the Kenya Health Facility Assessment (KHFA), the quality of ANC services is assessed based on the availability of essential services, equipment, and medical commodities in healthcare facilities.

To evaluate the availability of ANC in the country, 18 tracer services were assessed, as detailed in Table 80.

Table 80: Tracer services for ANC

Domain	Antenatal Care Services
Services	• Iron supplementation • Folic acid supplementation • Combined Iron and Folic Acid Supplementation (IFAS) • Tetanus toxoid vaccination • Routinely checks urine in protein • Routinely checks hemoglobin level • Blood grouping • Tests for blood sugar for diabetes • HIV test for pregnant women • Routine syphilis testing • Treatment for syphilis • Monitoring for hypertensive disorder of pregnancy • Calcium supplementation for women at risk of pre-eclampsia • Low-dose aspirin for women at risk of pre-eclampsia • Performs Obstetric Ultrasound

**Provision of Intermittent preventive treatment in pregnancy (IPTp) for malaria and Long-Lasting Insecticidal Nets (LLINs) for pregnant women services is discussed under Malaria in Pregnancy section of this report.*

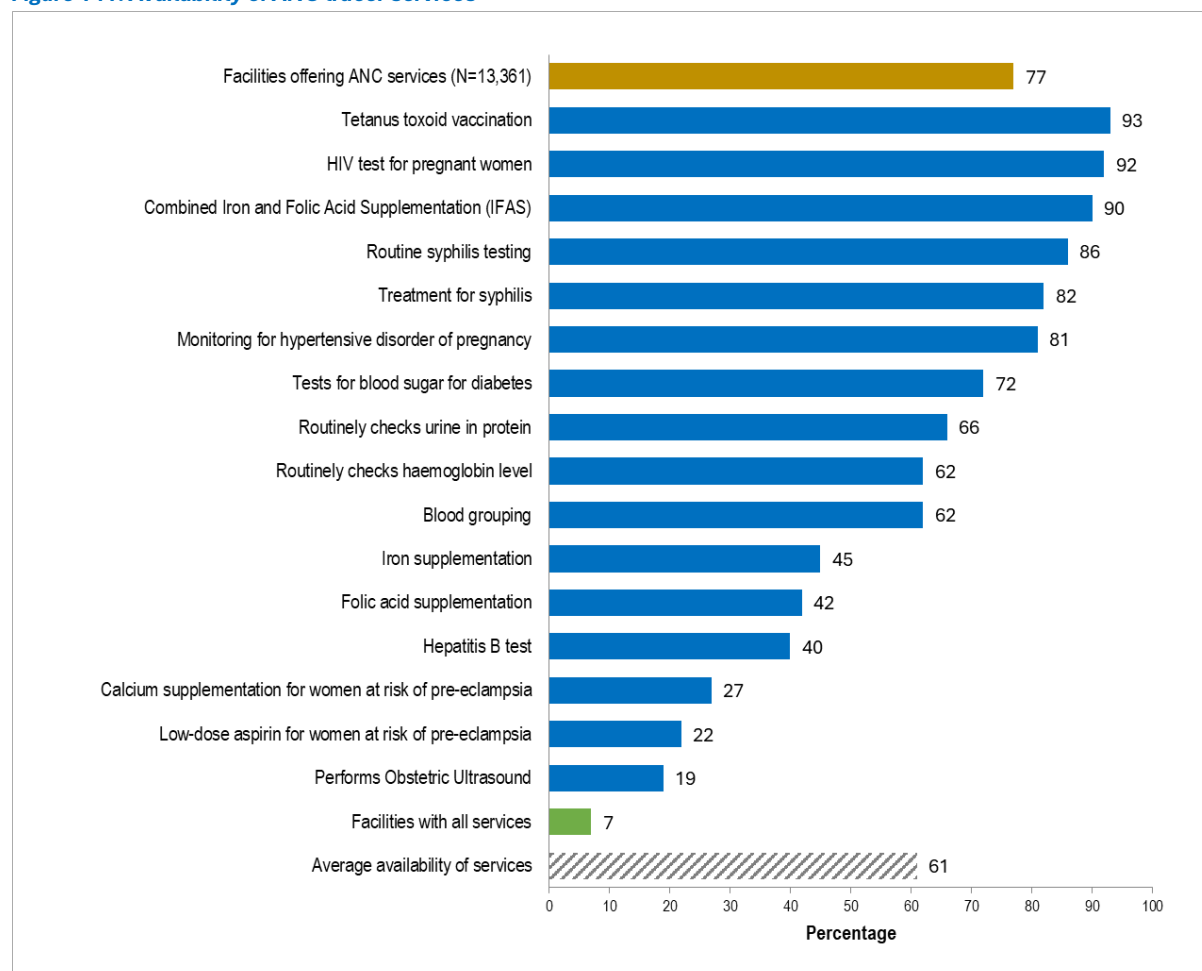
Findings

Service Availability

ANC services were offered at 77% (n=10,317) of all the facilities offering all facilities nationally. Among the health facilities offering 18 ANC tracer services,

- Antenatal care (ANC) services were available in about 8 out of 10 facilities
- The most widely available services were tetanus toxoid vaccine, HIV test for pregnant women and combined iron and folic acid supplementation with over 90% of the facilities offering these services.
- The least available services were low-dose aspirin for women at risk of pre-eclampsia (22%) and obstetric ultrasound (19%).
- Only 7% of the facilities offered all the recommended ANC services.
- The average availability of ANC services was 61%.

Figure 141: Availability of ANC tracer services



Disaggregation by location, KEPH level and ownership

Annex Table 74&75 and shows the average availability of ANC tracer items disaggregated by location, KEPH level, ownership and by county.

By location,

- Urban facilities generally provide more ANC services than rural ones, with 74% of urban facilities offering the ANC services, compared to only 54% in rural areas.
- Only 1% of the rural health facilities had all the ANC services available compared to 15% in urban facilities
- Ultrasound, Hepatitis B testing, Low dose aspirin for patients at risk of pre-eclampsia and calcium supplements were the least available services

By Facility type

- Level 5 facilities had the highest availability of ANC services while Level 2 had the least

By Ownership

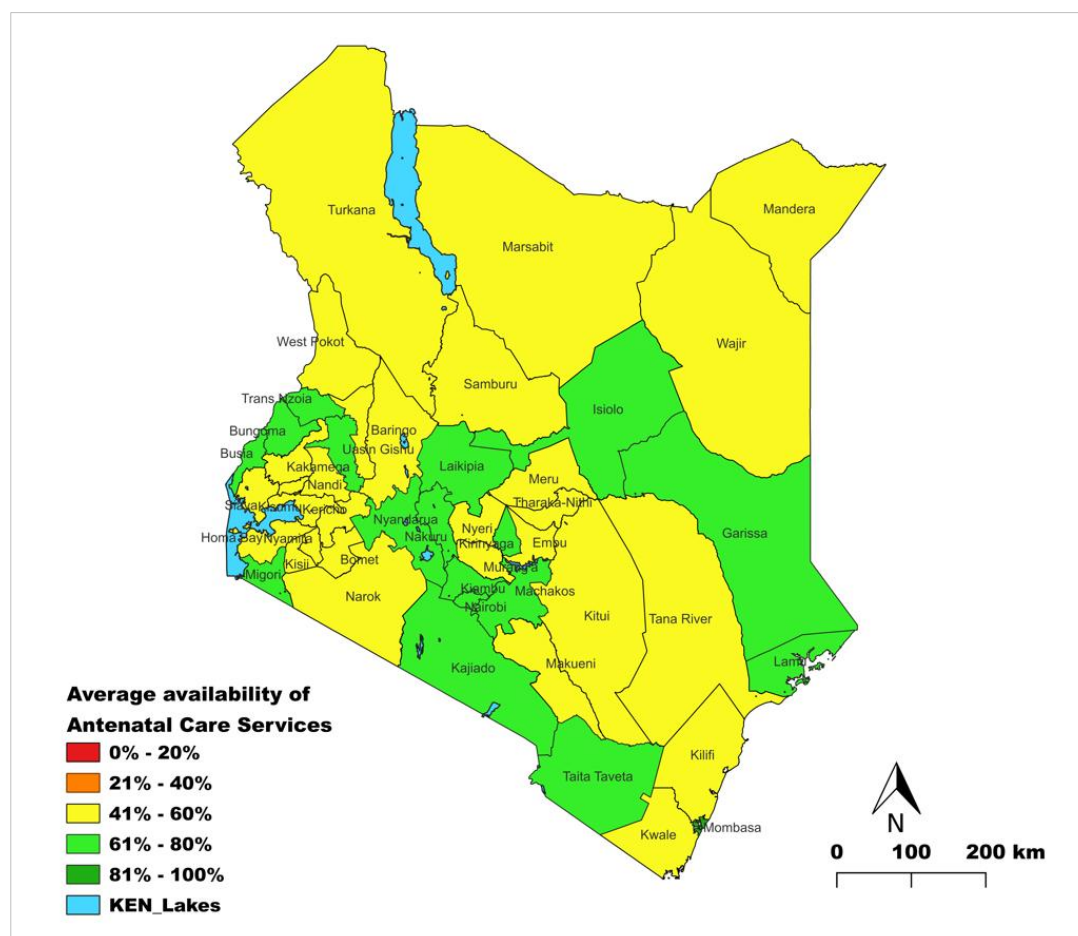
- Only 7% of the public health facilities perform obstetric ultrasound

County Distribution

Figure 142 shows the average availability of ANC services distributed by county.

- Fourteen counties had an average availability of 61%-80%
- Majority of the counties had average availability of 41%-60%.

Figure 142: Average availability of ANC Services in the county



Service Readiness

The 2024 QOC assessed the readiness of facilities to provide ANC services based on 16 tracer items-diagnostic tests (4), commodities (4), equipment (6) and guidelines (2) as detailed in the following table 81.

Table 81: Tracer items for ANC Services

Domain	Antenatal Care Services
Diagnostic tests	• Haemoglobin test • Blood grouping • Rhesus factor • Urine dipstick protein test
Commodities	• Combined Iron Folic Acid Supplementation (IFAS) tablets • Tetanus toxoid vaccine
Equipment	• Blood pressure apparatus • Foetal stethoscope/pinard/doppler • Obstetric Ultrasound • Adult weighing scale • Examination couch • Tape measure
Guidelines	• National Guidelines for Quality Obstetrics and Perinatal care (NGQOPC) 2022 • Maternal and Newborn Health Standards 2021

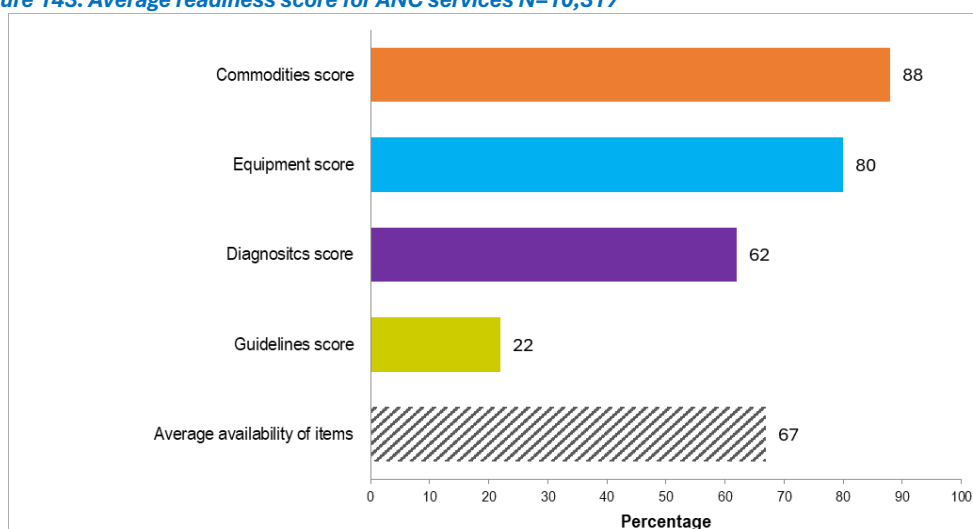
Commodities for Intermittent preventive treatment in pregnancy (IPTp) for malaria and Long Lasting Insecticidal Nets (LLINs) for pregnant women are discussed under **Malaria in Pregnancy section of this report.*

Findings

Among facilities offering ANC services

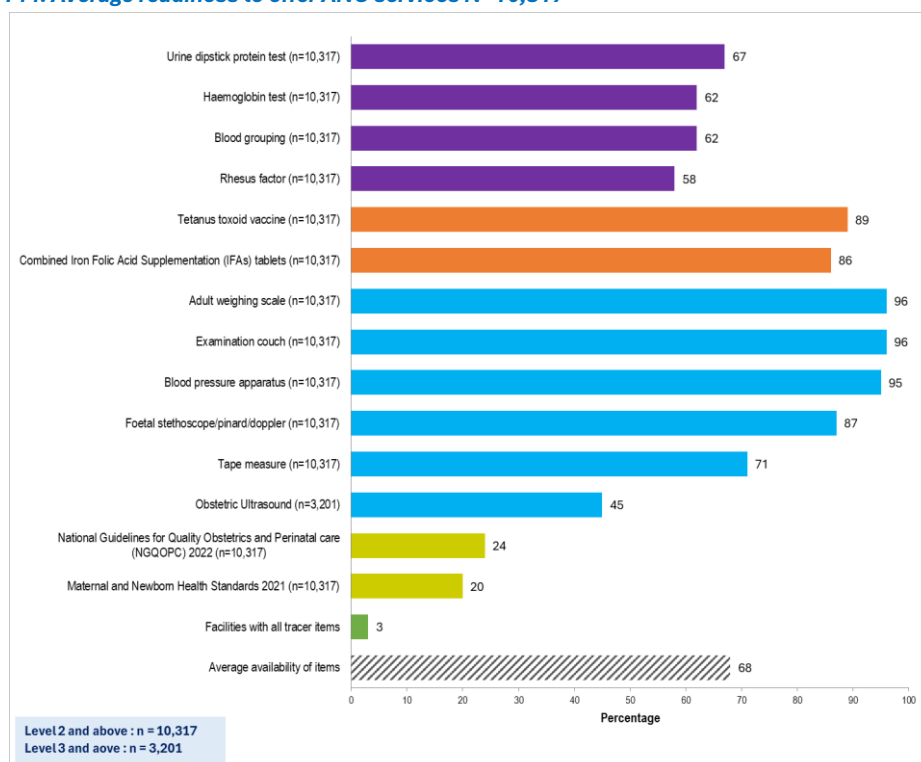
- The overall commodities score was 88%.
- The overall equipment score was 78% indicating that at least 7 out of 10 facilities had the tracer equipment
- Diagnostic items have an availability score of 62 while the guideline score was lowest at 22%

Figure 143: Average readiness score for ANC services N=10,317



- Tetanus toxoid vaccine and combined iron folic acid supplementation had high availability at 89% and 86% respectively.
- Equipment such as adult weighing scales, examination couches and blood pressure apparatus were the most available tracer items at 96%, 96% and 95% respectively. Obstetric ultrasound was the least available equipment with 37% of facilities having it.
- Two of every three facilities offering ANC services had urine dipstick protein test available while hemoglobin, blood grouping and rhesus tests were 62%, 62% and %58% available respectively.

Figure 144: Average readiness to offer ANC services N=10,317



Annex Table 76 shows the average availability of family planning tracer items disaggregated by location, KEPH level, ownership and by county.

- ## County Distribution

- Most counties had an average availability of ANC items of 61% and 80%.
- Notably, Mombasa County had the highest availability at 85% followed by Kiambu at 82%.
- Mandera had the least availability at 53% followed by Vihiga at 54%

Average Availability of ANC Items

- 0%-20%
- 21%-40%
- 41%-60%
- 61%-80%
- 81%-100%
- Kenyan Lakes

Table 82: ANC Recommendations

Findings	Recommendations
While 86% of facilities providing ANC had combined IFAS; less than two thirds had HB testing, Blood grouping and Rhesus factor testing	- Strengthen investments to ensure continuous availability of essential services and commodities at ANC facilities, preventing missed opportunities for care despite good client adherence. - Address gaps in managing high-risk pregnancies by ensuring consistent availability of specialized services and required commodities, supported by ongoing monitoring and supply chain strengthening
With 87% availability of the foetal stethoscope/pinard fetoscope or doppler, and 37% for obstetric ultrasound, there are facilities offering ANC services where the foetal heart is not monitored.	This presents a gap in vital ANC service and should be prioritized to achieve better birth outcomes.

Childbirth/Delivery Services

Delivery services are dedicated to providing comprehensive, high-quality care during labor and childbirth, ensuring a safe, supportive environment for both mother and baby. Key components of these services include;

- Labor support: Providing continuous physical and emotional support.
- Pain management: Offering a range of options for managing pain.
- Child birth support: Ensuring skilled assistance with different delivery options;
- Monitoring and interventions: Ongoing monitoring of maternal and fetal well-being, with timely interventions to manage complications and optimize outcomes.

BEmONC services

A set of seven key obstetric services/tracer services or “signal functions,” has been identified as critical to basic emergency obstetric and newborn care (BEmONC): administration of parenteral antibiotics; administration of parenteral anticonvulsants; administration of parenteral uterotonics; removal of retained products (manual vacuum aspiration); assisted vaginal delivery; Manual removal of the placenta; and resuscitation of the newborn.

CEmONC services

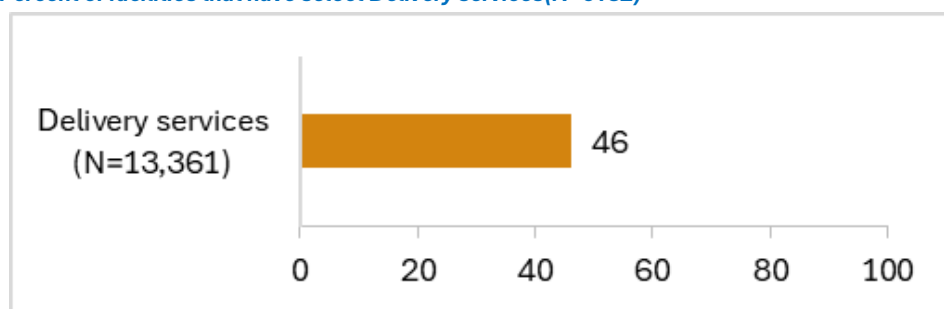
Comprehensive emergency obstetric and newborn care (CEmONC) includes all BEmONC services and adds surgical capacity and blood transfusion. This set of life-saving services defines a health facility with regard to its capacity to treat obstetric and newborn emergencies.

Findings

Service Availability

Delivery services were offered at 46% (n=6132) of all the facilities nationally.

Figure 146: Percent of facilities that have select Delivery services(N=6132)



Disaggregation by location, KEPH level and ownership

Annex Table 78 shows the average availability of delivery tracer services disaggregated by location, KEPH level, ownership and by county.

- By location, rural areas, 56% of facilities reported offering delivery services, compared to 34% in urban areas.

- By ownership, delivery services were more available in public facilities (61%) in contrast to privately owned (30%) and of NGO (22%).
- By level, delivery services are least available at level 2 at 34% and most available at level 5 at 97%.

Hours Delivery services are offered.

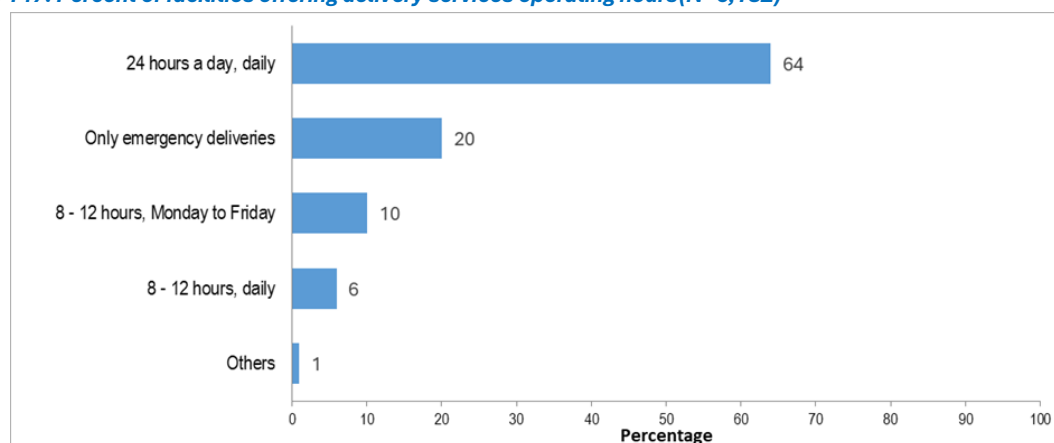
Every pregnant mother should have the right to access childbirth services whenever they are needed, as the timing of labor is unpredictable and can occur at any hour of the day or night. To ensure the health and safety of both mother and child, it is essential that hospitals provide 24-hour delivery services. Continuous access to medical care during labor and delivery is crucial to prevent complications.

The QOC assessed the number of hours delivery services were available in facilities offering the service.

Figure 147 shows hours of service in facilities offering delivery services.

- More than half of the facilities (64%) were offering 24 hours daily delivery services.
- Less than a quarter (20%) of the facilities were offering emergency delivery services only with 10% offering for 8-12 hours a day from Monday to Friday and 6% offering 8-12 hours a day daily.

Figure 147: Percent of facilities offering delivery services operating hours(N=6,132)



Service Readiness

The QOC assessed the readiness to offer delivery services based on tracer items in five domains as detailed in Table 83 below.

Table 83: Tracer items for delivery services

Domain	Delivery Tracer Items
Equipment	• Sterilization equipment • Examination light • Sterile delivery pack

Domain	Delivery Tracer Items
	• Checklist for delivery pack • Suction apparatus • Delivery bed • Partograph • Blood pressure apparatus • Manual vacuum extractor • Manual Vacuum Aspirator or Dilatation and Curettage (D&C) kit • Resuscitation table • Radiant warmer • Neonatal bag and mask • Infant weighing scale • Cord Clumps
Guidelines	• National Guidelines for Quality Obstetrics and Perinatal care (NGQOPC) 2022
Trained Staff	• Staff trained on Emergency Obstetric and Newborn Care) EMONC within the last 2 years • Staff trained on essential newborn care
Commodities	• Soap and running water or alcohol-based hand rub • Skin disinfectant • Gloves • Injectable uterotonic (e.g. oxytocin) • Injectable antibiotic • Injectable Magnesium sulphate • Intravenous anticonvulsants • Medical Oxygen
Maternal care medicines in childbirth/delivery	• Oxytocin injectable • Sodium chloride injectable solution • Calcium gluconate injectable • Magnesium sulphate injectable • Ampicillin powder for injection • Gentamicin injectable • Metronidazole injectable • Misoprostol cap/tab • Azithromycin cap/tab or oral liquid • Cefixime cap/tab • Benzathine benzylpenicillin powder for injection

Domain	Delivery Tracer Items
	• Dexamethasone injectable • Nifedipine cap/tab • Hydralazine injection • Methyldopa tablet

Key Findings

Figure 148 & 149 shows the percentage of facilities that had tracer items for delivery services. Among the health facilities offering delivery services.

- Blood pressure apparatus, infant weighing scales, cord clumps and delivery bed Delivery tracer equipment had over 90% availability, while manual vacuum aspirator, manual vacuum extractor, radiant warmer had availability of less than 50%. Overall equipment score is 68%.
- Staff and guidelines scores were below average at 32% and 25% respectively. Availability of staff training on EmONC was very low at 28% , while those trained on essential newborn care was at 36%.
- At least half of the facilities (51%) had a resuscitation table with slightly less than half (44%) having medical oxygen.
- The average availability of the delivery tracer items was 66%.
- Only 2% had all the tracer items.

Figure 148: Readiness score for delivery services (N=6132)

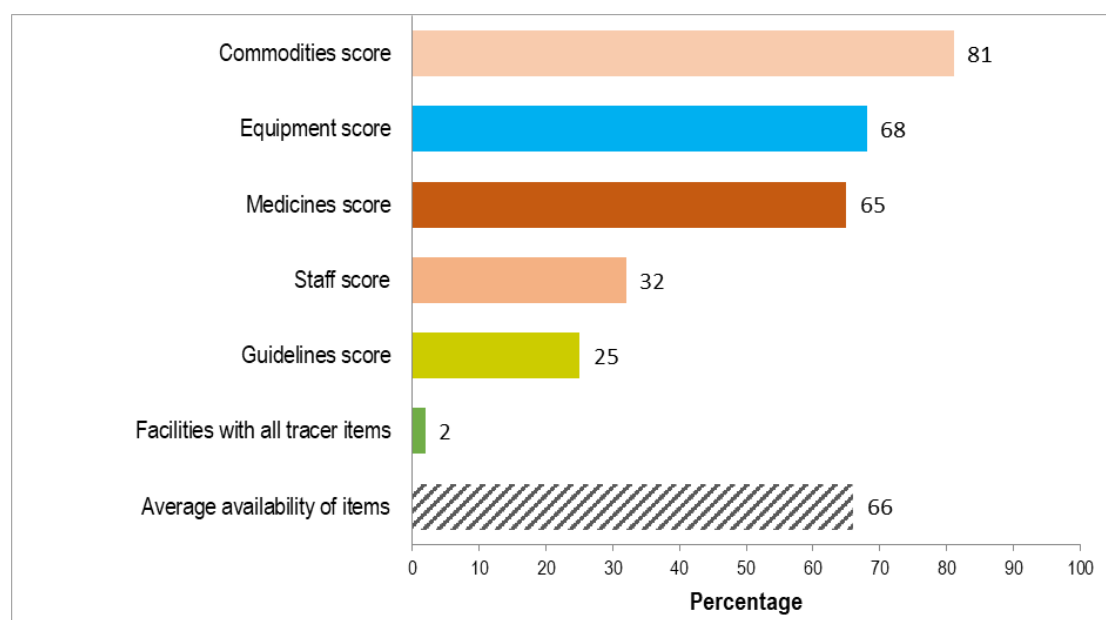
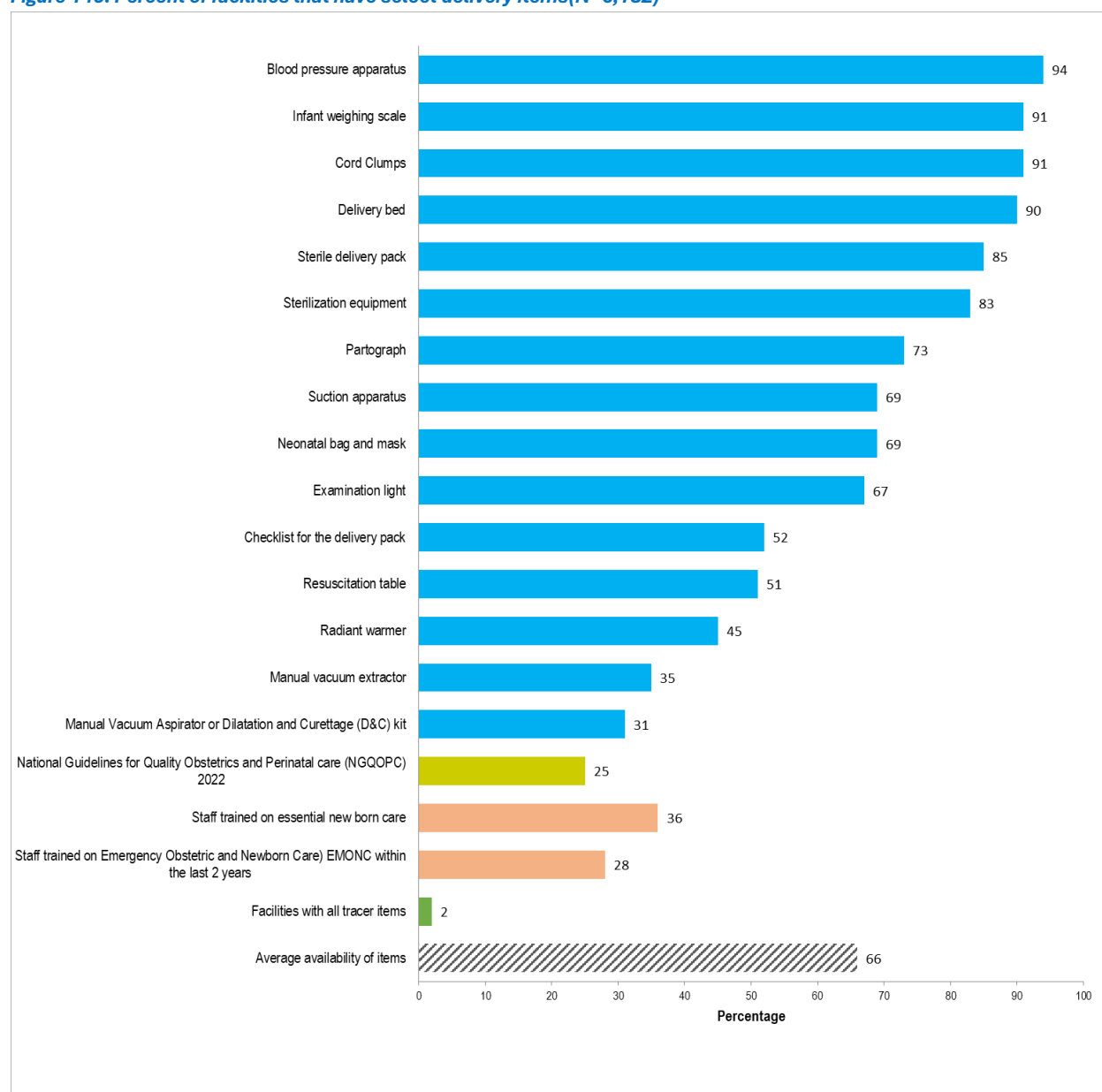


Figure 149: Percent of facilities that have select delivery items(N=6,132)



Disaggregation by location, KEPH level and ownership

Annex Table 80 shows the average availability of delivery tracer items disaggregated by location, KEPH level, ownership and by county.

By location, urban facilities had higher average availability (77%) for all the tracer items compared to the rural facilities (60%).

- All level 5 facilities had partograph and medical oxygen available. The availability of partographs at other levels was 61% in level 2, 83% in level 3 and 97% in level 4. Medical oxygen availability was very in level 2 (26%) compared to level 3 (56%), level 4 (88%).
- National guidelines for Quality Obstetric and Perinatal Care 2022, was the least available tracer item across all facilities. Three quarters of level 5 facilities had guidelines available while only 16% of levels 2 had them.

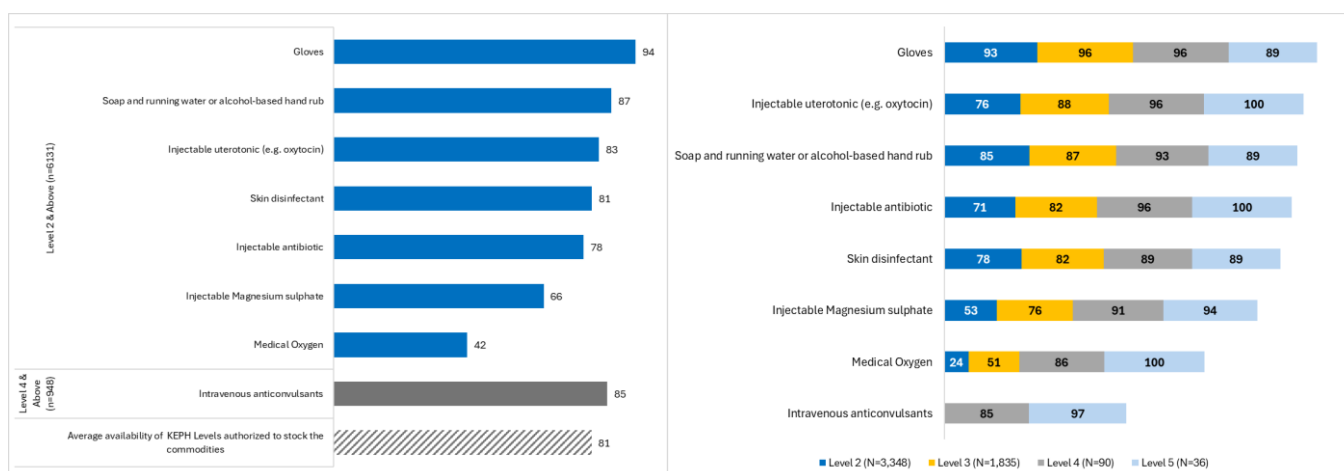
- By ownership, private facilities (74%) and the Faith Based Organizations (70%) had a higher average availability for most of the tracer items compared to the NGO (67%) and the public facilities (51%).

Childbirth/Delivery Commodities

Figure 150 showing:

- The most available delivery tracer commodity was gloves at 94% and soap and running water or alcohol-based hand rub at 87%.
- Medical oxygen was the least available delivery commodity.
- The average availability of delivery tracer items at facilities of KEPH levels authorized to stock them was 81% and is reflected as the commodities score.
- The availability of tracer delivery commodities was higher in Level 3,4, and 5 facilities compared to level 2 facilities.

Figure 150: Availability of maternal commodities in facilities



Maternal medicines in childbirth /delivery.

Figure 151 and Figure 152 showing (reference both figures below)

- The average availability of maternal care medicine for delivery was 65% at the KEPH levels authorized to stock them.
- At level 2 and above facilities, the most available medicine is oxytocin (84%) while at level 4 and above facilities the most available were metronidazole (89%) and calcium gluconate (81%).
- The least available for level 2 and above was cefixime (27%) and misoprostol at 37% whereas at facilities level 4 and above, ampicillin was the least available.

Figure 151: Availability of maternal medicines in facilities

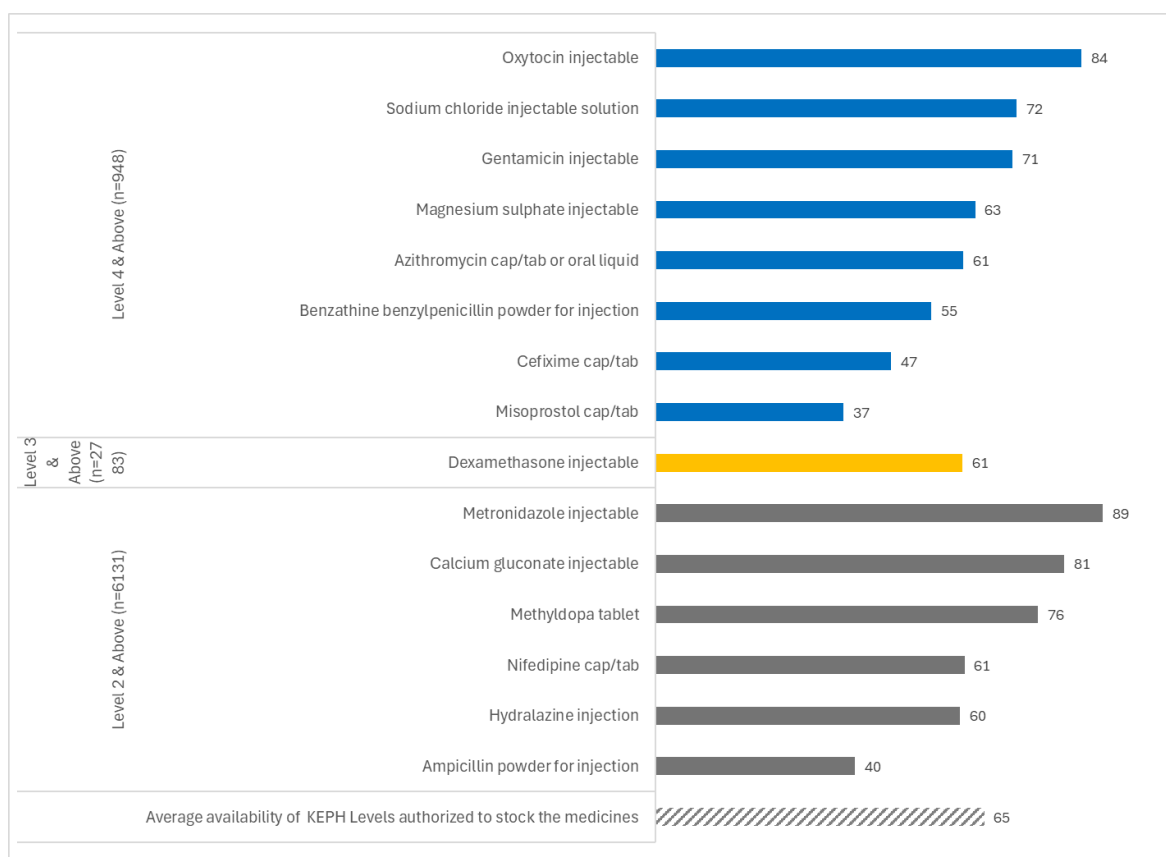
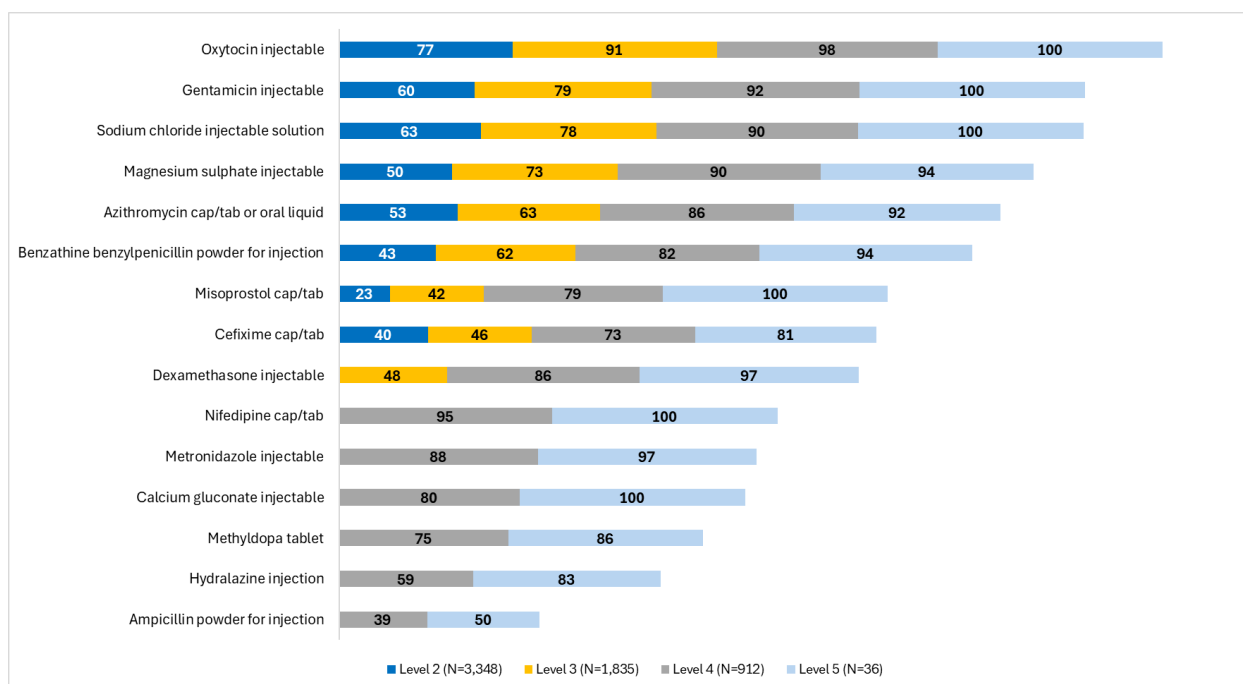


Figure 152: Availability of maternal medicines by KEPH Level



County Distribution

Figure 153 shows the average availability of tracer items and medicines for delivery services distributed by county.

Among the facilities providing delivery services,

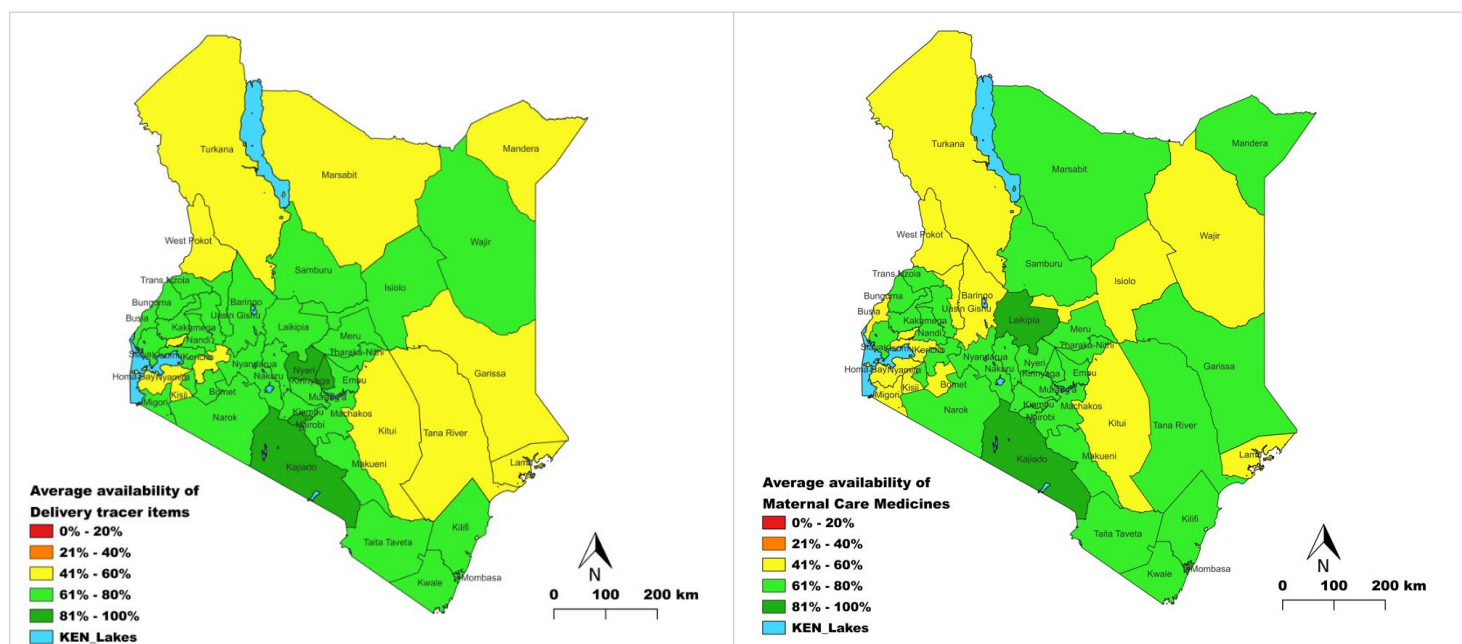
Tracer Items

- Majority of the counties have an average availability of 41-60% delivery tracer items.
- Two counties with the highest average availability of delivery tracer items are Nairobi (85%) and Kirinyaga (80%)
- Five counties had an average availability of less than 50%; Vihiga (44%), Turkana (46%), West Pokot (48%), Mandera (48%) and Marsabit (49%).

Medicines

- Most of the counties had an average availability of tracer maternal medicines ranging between 61-80%.
- The average availability of tracer maternal medicines was greater than 80% in three counties: Mombasa (88%), Kajiado (81%) and Laikipia (81%).
- Bomet county had the lowest average at 47% availability of tracer maternal medicines.

Figure 153: Average availability of delivery tracer items and maternal care medicines by county



Basic Emergency Obstetric and Newborn Care (BEmONC)

Availability

The following tracer items were checked to assess Basic Emergency Obstetric and Newborn Care services in hospitals with delivery services:

Table 84: BEmONC tracer services

Domain	Tracer services (7 signal functions)
Basic Emergency Obstetric Newborn Care and (BEmONC) services provided	Parenteral administration of antibiotics Parenteral administration of oxytocic drugs Parenteral administration of anticonvulsants Assisted vaginal delivery Manual removal of placenta Manual removal of retained products Neonatal resuscitation

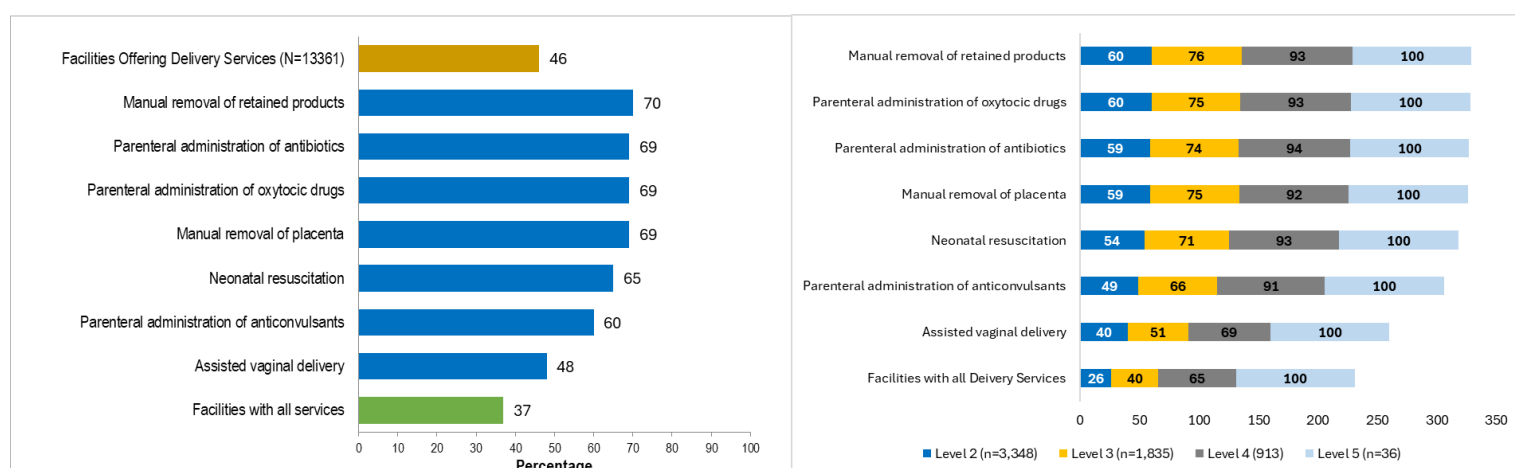
Findings

Nationally 46% of all facilities offer as shown in Figure 146 above. The analysis further verified this by assessing the availability of 7 BEmONC signal functions.

Figure 154 below shows percent of facilities that have the 7 BEmONC signal functions among the health facilities offering delivery services (N=6132),

- The full package of Basic Emergency Obstetric Newborn Care (BEmONC) services (7 signal functions) was available in 37% of facilities offering delivery services.
- The most available BEmONC services were manual removal of retained products (70%) and placenta (69%) as well as parenteral administration of both antibiotics (69%) and oxytocic drugs (69%). Less than half the facilities (48%) conducted assisted vaginal delivery.

Figure 154: Percent of facilities that have select BEMONC tracer services (N=6132)



Disaggregation by location, KEPH level and ownership

Annex Table 79 shows the availability of all 7 BEmONC services disaggregated by location, KEPH level, ownership and by county.

By Location

- In urban areas, 50% of facilities offered the full package of BEmONC (all 7 signal functions) services, compared to 30% in rural areas.

By KEPH Level

- All Level 5 (100%) facilities provided the full package of BEmONC services compared to 65% of level 4, 40% of level 3 and 26% of level 2 facilities.

By ownership,

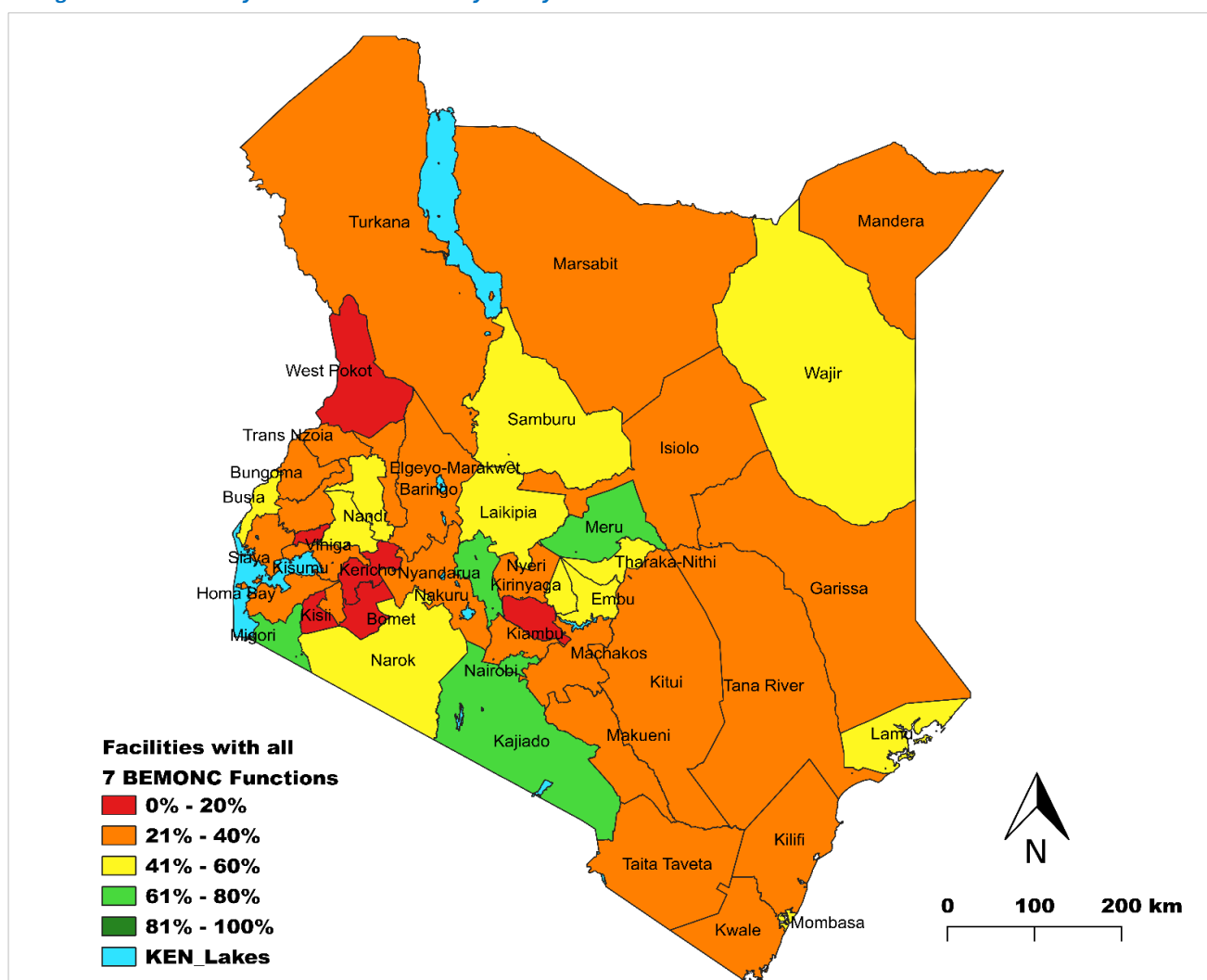
- 45% of private facilities offered the full package of BEmONC services, compared to 42 % NGO, 41% of FBO, 32% of public facilities.

County Distribution

Figure 155 shows the average availability of BEmONC services disaggregated by county.

- In most counties, the percentage of facilities offering all BEmONC services ranged between 21% and 40%.
- Counties that had availability of above 61% were Meru (71%), Kajiado (68%), Nairobi (63%), Migori (66%) and Nyandarua (66%).

Figure 155: Availability of BEmONC Services by county



CeMONC Availability

Select tracer services were assessed to determine the availability of CEmONC services among level 4 and 5 facilities offering delivery services.

Table 85: CEmONC tracer services

Domain	CEmONC tracers (9 signal functions)
Comprehensive Emergency Obstetric Newborn Care (CEmONC) services provided (Level 4 and 5)	• Parenteral administration of antibiotics • Parenteral administration of oxytocic drugs • Parenteral administration of anticonvulsants • Assisted vaginal delivery • Manual removal of placenta • Manual removal of retained products • Neonatal resuscitation • Blood Transfusion • Caesarean Section

Findings

National:

Among the level 4 and 5 health facilities offering delivery services,

- The full package of (Comprehensive Emergency Obstetric Services) CEmONC was offered at 46% of the facilities.
- Most of the facilities offered parenteral administration of antibiotics (94%), oxytocic drugs (93%), manual removal of retained products of conception (93%) and neonatal resuscitation (93%).
- The least available CEmONC services were caesarean section (65%) and blood transfusion (67%).

Figure 156: Percent of facilities (levels 4 and 5) that had CEmONC services (9 signal functions)

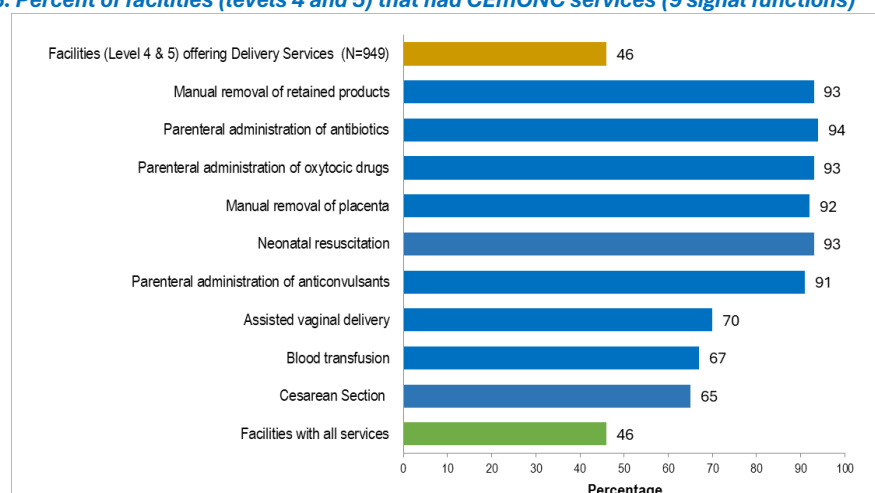
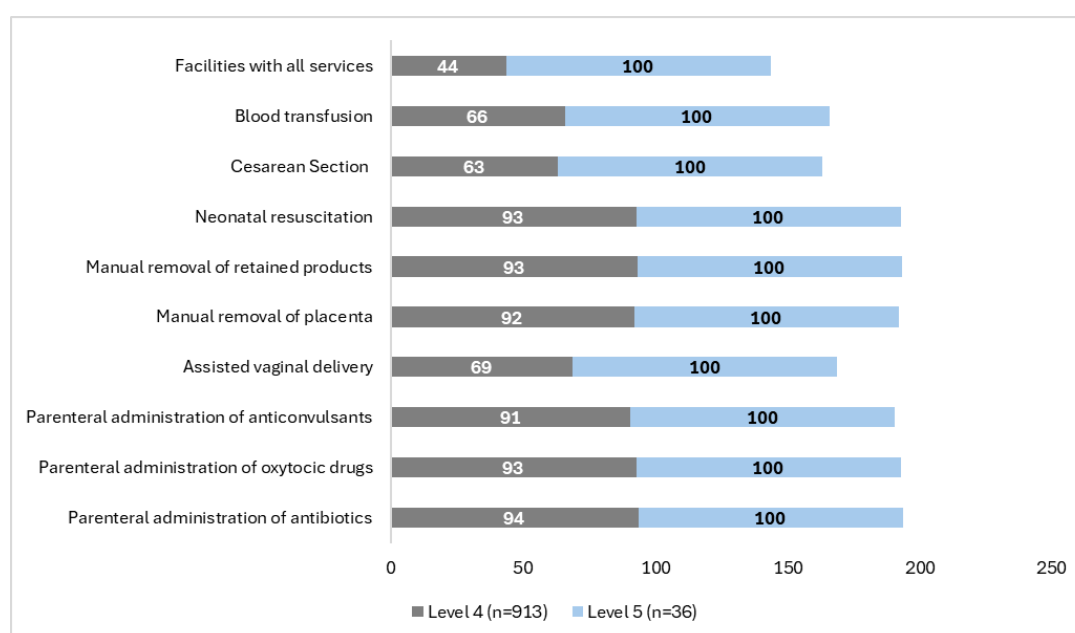


Figure 157: Percent of facilities (levels 4 and 5) that had CEmONC services (9 signal functions) by KEPH Level



Disaggregation by location, KEPH level and ownership

Annex Table 81 shows the average availability disaggregated by location, KEPH level, ownership and by county.

By location,

- The full CEmONC package was available in 55% of urban facilities and at only 28% of rural facilities.
- Caesarian section and blood transfusion were offered in 77% and 76% of urban facilities respectively compared to 41% and 49% of rural facilities respectively.

By KEPH level,

- All the level 5 facilities had full CEmONC package available compared to 44% of level 4 facilities.
- The least available signal function in level 4 facilities was caesarian section at 63%

By ownership,

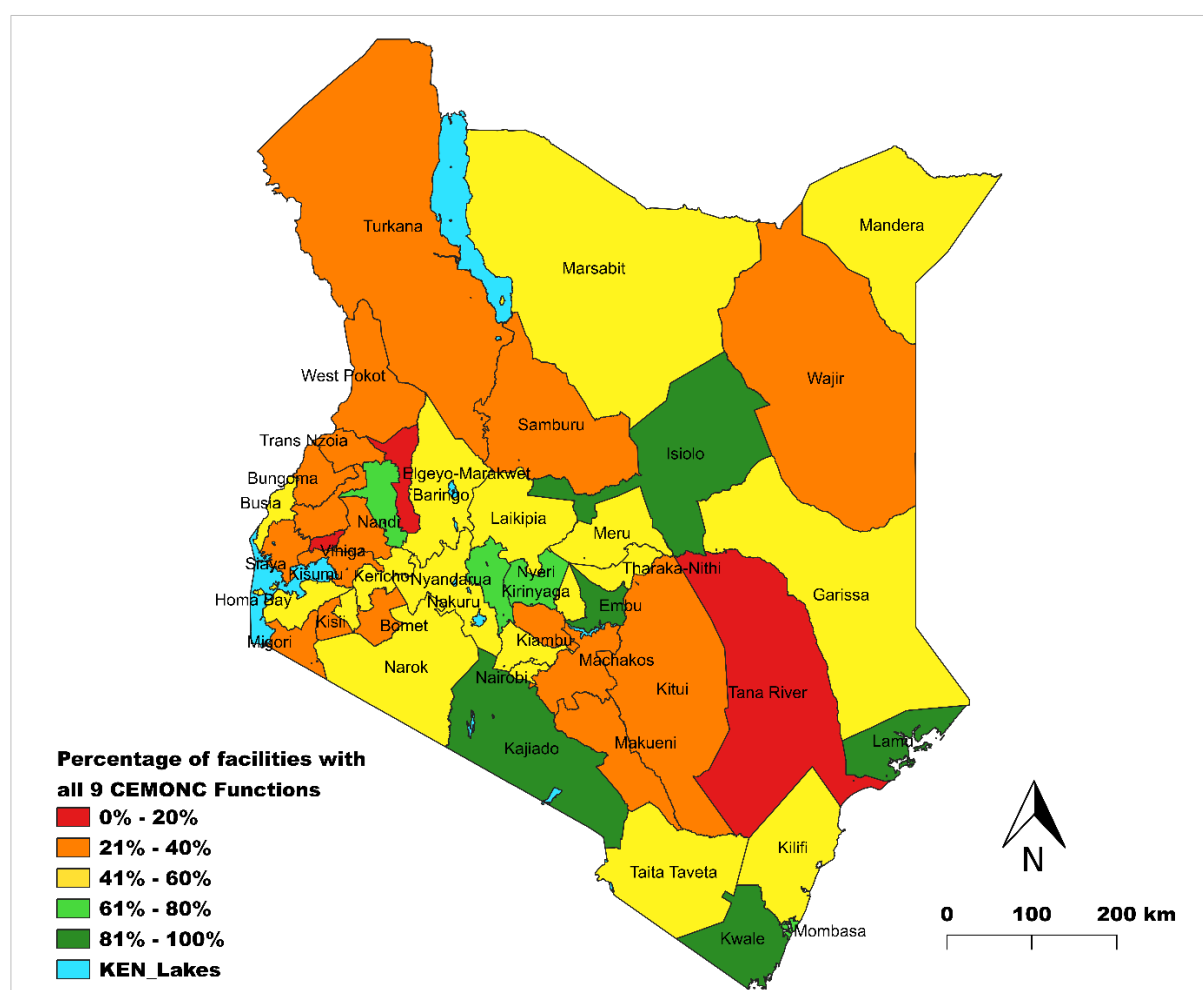
- The full CEmONC package was most offered in FBO facilities (68%) followed by private facilities (56%), public facilities (34%) and NGO facilities (33%)

County Distribution

Among the level 4 and 5 health facilities offering delivery services,

- All facilities in Lamu and Kwale counties offered the entire CEmONC package.
- None of the facilities in Elgeyo Marakwet county offered all the 9 CEmONC signal functions. The county also had the least proportion of facilities that provided both blood transfusion and caesarian section (22% and 33% respectively).

Figure 158: Availability of CEmONC services by county



Discussion

There is a slight decline in the proportion of facilities offering delivery services from 50% in 2018 KHFA to 46% in this survey. The proportion of facilities offering delivery services with all the 7 BEmONC signal functions had tripled to 37%, from 12% in 2018 KHFA. While the full CEmONC package (9 signal functions) were offered in 46% of the hospitals (Level 4 and 5)

The readiness to provide basic delivery services was generally low with only 2% of the facilities having all the assessed tracer items for offering childbirth/delivery services. Partographs are a mainstay of labor monitoring and management. There was a decline in availability partographs in facilities offering delivery services from 85% in 2018 to 73%.

Conclusion

There is generally low availability and readiness to offer basic delivery services with notable gaps in the availability of the tracer items and services. The readiness to provide comprehensive maternity services was also very low with a notable gap in the availability of Caesarean section and blood transfusion services especially in the level 4 facilities.

Table 86: Delivery recommendations

Findings	Recommendations
• Less than half of all facilities were offering delivery services with a disparity by location and KEPH level. • Almost two thirds of facilities conducting delivery services do not offer the entire BEmONC package. • Less than half of level 4 and 5 facilities that offered delivery services had the full CEmONC package.	• It is necessary to make urgent investments in resources in order to increase the service availability and readiness to offer both basic and comprehensive maternity services.
• Low availability of essential medical equipment (radiant warmer, resuscitation table and manual vacuum aspirator), medical oxygen and medicines.	• To ensure mothers are provided with quality care during and after delivery, it is important that service delivery guidelines are provided and adhered to and the human resource gets the necessary training.
• Partographs are not available in more than a quarter of facilities offering delivery services.	• Ensure availability and utilization of partographs in monitoring of labour for better maternal and neonatal outcomes. Continuous training on partographs, including e-versions, should be embedded in all delivery curricula and CPD.

Postnatal Care Services

Postnatal care services are a fundamental component of maternal and newborn health and also a key to achieving the Sustainable Development Goals (SDGs) on reduction of maternal mortality rates and end preventable deaths of newborns. According to WHO, approximately 30% of postnatal maternal and newborn deaths occur within the first 24 hours, and 66% occur during the first week, yet this period remains the most neglected phase in the provision of quality maternal and newborn care¹.

The postnatal period is defined as the period beginning immediately after the birth of the baby and extending up to six weeks (42 days)². Women and newborns require support and careful monitoring after birth. Postnatal care can be provided to women and newborns at inpatient or outpatient settings. Inpatient postnatal care refers to care provided to mothers and newborns admitted to a health facility, usually within the first 48 hours after delivery while outpatient care is the care provided when the mother and baby have been discharged home from the hospital. In instances where the mother delivers at home, both mother and newborn should be referred to the nearest health facility as soon as possible and preferably within 24-48 hours to receive postnatal care.

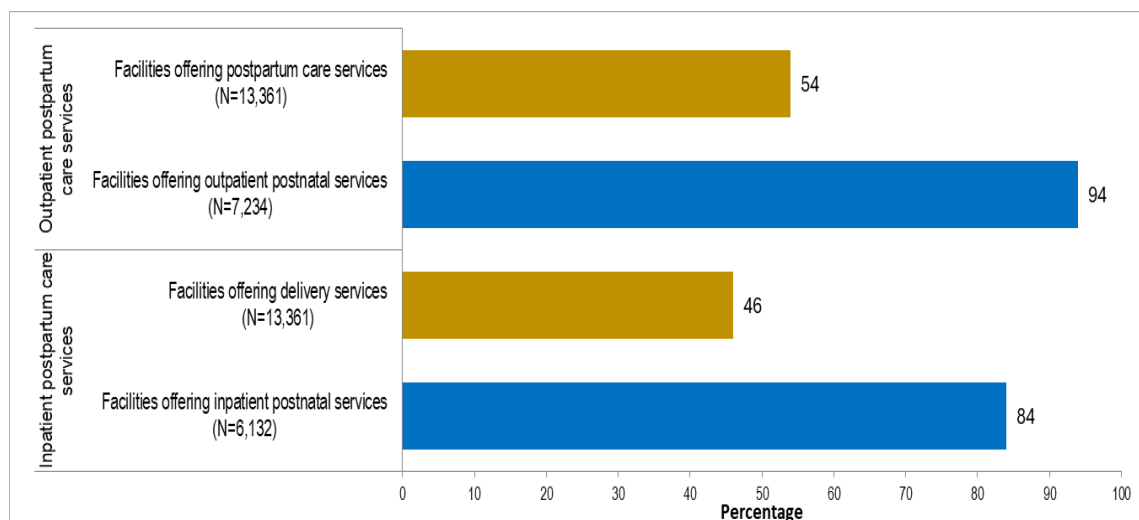
In Kenya, postnatal care visits are scheduled as follows: within 48 hours after birth, 1-2 weeks, 4-6 weeks, and 4-6 months post-delivery³.

Service Availability

Key findings

- Half (54%) of the facilities in Kenya provide postpartum care services.
- Among the facilities providing postpartum services, almost all (94%) provide outpatient postnatal services.
- Delivery services were available in 46% of facilities, with 84% of these providing inpatient postnatal services.

Figure 159: Availability of inpatient and outpatient postpartum care services



Inpatient Postnatal Services

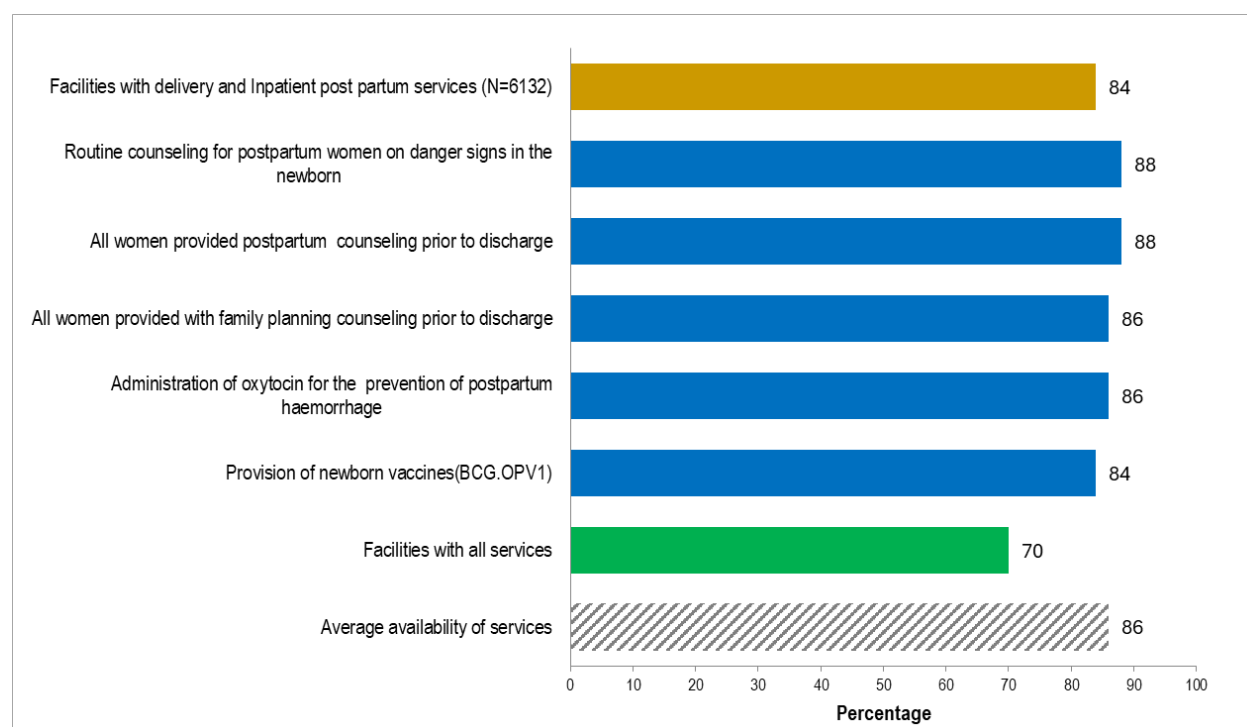
The 2024 QOC assessed service availability for inpatient postnatal services based on five tracer services across facilities offering delivery services. The tracer services assessed are summarized in Table 87.

Table 87: Tracer items for postnatal services

Domain	Tracer items
Postnatal services	- Administration of oxytocin for prevention of postpartum hemorrhage - All women provided postpartum counselling prior to discharge - All women provided with postpartum family planning prior to discharge - Routine counseling for postpartum women on danger signs in the newborn - Provision of newborn vaccines (BCG, OPV1)

- Nationally, 84% of the facilities offering delivery services provided inpatient postnatal services.
- Overall high availability of the tracer inpatient postnatal services; 86% administered oxytocin to prevent postpartum hemorrhage, 88% conducted routine counseling on newborn danger signs and 84% provided newborn vaccines (BCG, OPV1)
- Among the facilities offering delivery and inpatient postnatal services, 70% had all the tracer inpatient PNC services, while the average availability was at 86%.

Figure 160: Percent of facilities offering delivery services that have select tracer services for inpatient postnatal (N=5,162)



Disaggregation by location, KEPH level and ownership

Annex Table 89 shows the average availability of inpatient postnatal care tracer services disaggregated by location, KEPH level, ownership and by county.

Location

- Minimal difference in the average availability of inpatient postnatal services by location: urban (89%), rural (85%)

KEPH Level

- Administration of Oxytocin to prevent post-partum hemorrhage was provided in 78% of Level 2 facilities, Level 3 (91%), Level 4 and Level 5 both at 97%

Ownership

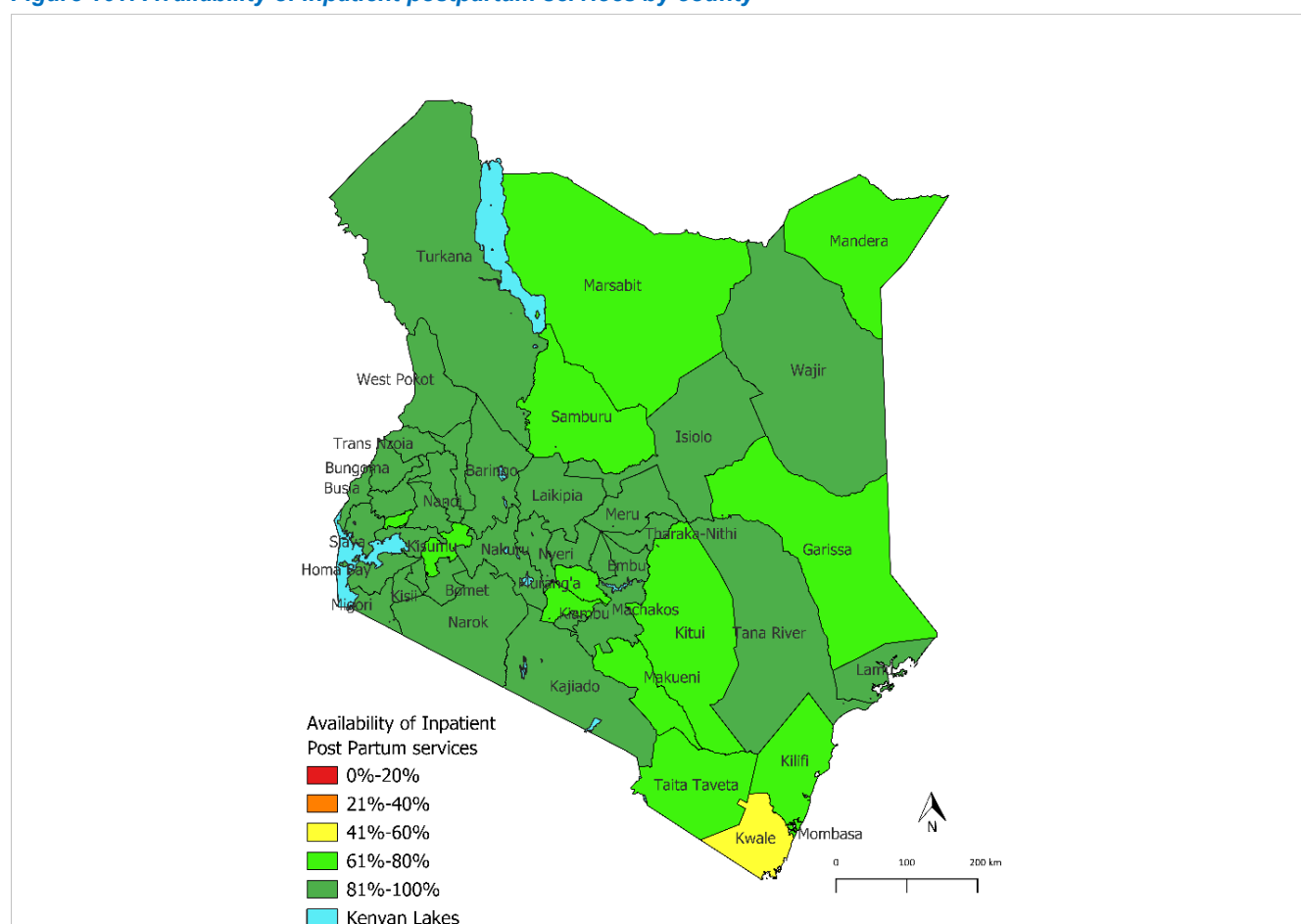
- Newborn vaccines (BCG, OPV1) were more readily available in FBO and public facilities at 91% and 89%, compared to NGO and private facilities at 75% and 71%, respectively.

County Distribution

Figure 161 shows the average availability of inpatient postnatal care tracer services disaggregated by county.

- There was high average availability of inpatient postnatal services across the majority of the counties except Kwale at 43%.

Figure 161: Availability of inpatient postpartum services by county



Outpatient Postnatal Care

Service Availability

To evaluate the availability of outpatient postnatal care services amongst facilities providing postnatal services, three tracer services were assessed as listed in the following table 88 below

Table 88: Outpatient Postnatal services

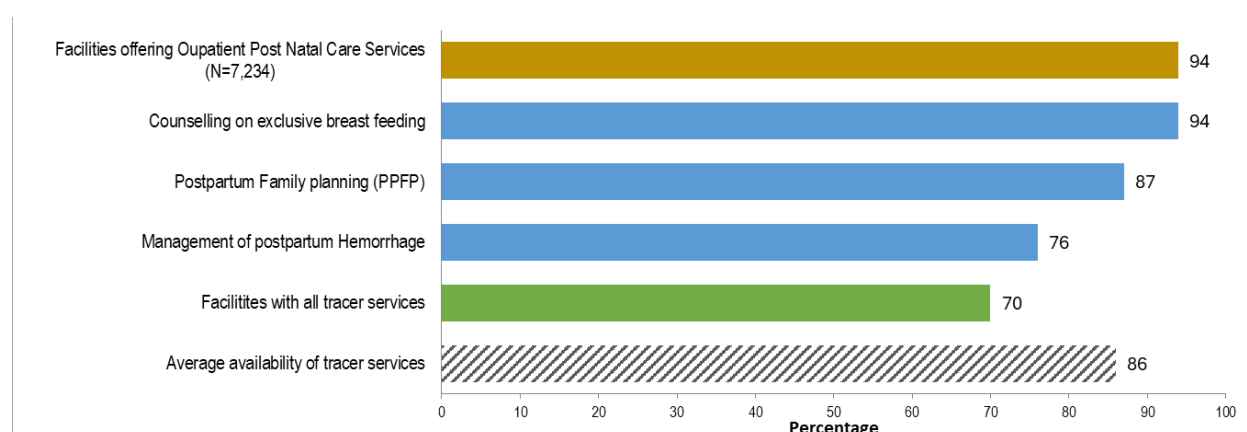
Domain	Out patient Postnatal Care Tracer Services
Services	• Management of postpartum Hemorrhage • Counselling on exclusive breastfeeding • Postpartum Family planning (PPFP)

Key findings

Nationally, 54% (n=7234) of facilities provided postnatal services of which 94% offered them on an outpatient basis. Among the health facilities offering outpatient postnatal services,

- 70% had all the Postnatal tracer services
- The average availability of the tracer services for outpatient postnatal care was 86%.
- Majority (94%) provided counselling on exclusive breastfeeding, while 87% and 76% provided postpartum family planning (PPFP) and management of postpartum hemorrhage, respectively.

Figure 162: availability of outpatient postnatal services (N=6,510)



Disaggregation by location, KEPH level and ownership

Annex Table 92 shows the average availability of outpatient postnatal care tracer services disaggregated by location, KEPH level and ownership.

- ## County Distribution

- Figure 163: Average availability of outpatient postnatal services**



Service Readiness

Definition

The 2024 QOC assessed readiness for health facilities to offer postnatal services based on availability of tracer items summarized in Table 89.

Table 89: Tracer items for postnatal services

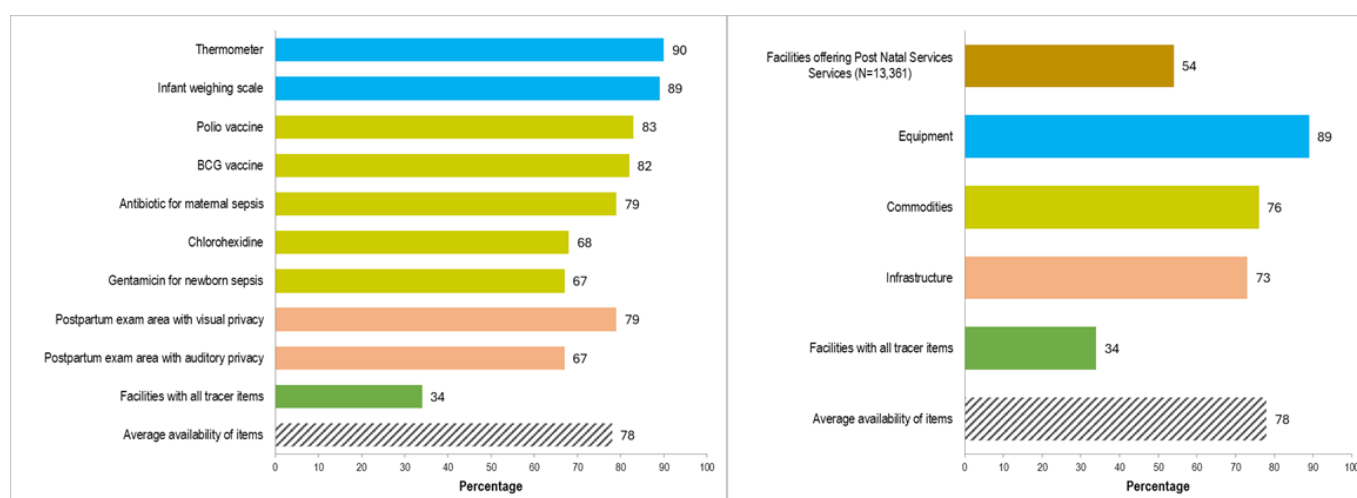
Domain	Tracer items
Equipment	• Infant weighing scale • Thermometer
Commodities	• Chlorhexidine • BCG vaccine • OPV vaccine, • Antibiotic for maternal sepsis, • Gentamicin for newborn sepsis
Infrastructure	• Postpartum examination area with visual privacy • Postpartum examination area with auditory privacy

Nationally:

Figure 164 show the readiness of facilities offering postnatal care to provide the service. Among the facilities providing postnatal services

- One third (34%) had all the tracer items available.
- The average availability of postnatal tracer items was 78%.
- There was varied availability of the tracer items; 89% equipment, as 76% commodities and 73% infrastructure.
- Thermometer and infant weighing scale were the most available tracers at 90% and 89% respectively.
- Availability of tracer commodities varied between 83% and 82% for Polio and BCG vaccines and gentamycin at 67% and chlorhexidine at 66%.
- In the postpartum exam areas, visual privacy was more available at 79% compared to audio privacy at 69%.

Figure 164: Percent of facilities that have select post-natal tracer items (N=7234)



Disaggregation by location, KEPH level and ownership.

Annex Table 91 shows the availability of post-natal tracer items disaggregated by location, KEPH level, ownership and by county.

Location

- The availability of all Postnatal tracer items was higher in urban (44%) compared to 28% of rural facilities.
- The average availability of Postnatal tracer items was higher in urban at 82% compared to 76% of rural facilities.

By KEPH Levels

- Availability of all PNC tracer items in Level 2 and Level 3 health facilities was 27% and 37%, respectively, while 64% of Level 5 had all the tracer items.
- The average availability of PNC tracer items was highest in Level 5 facilities at 95%, followed by Level 4 at 89%, Level 3 at 83% and Level 2 at 74%

By ownership

- In public health facilities offering PNC services, only 28% had all tracer items available compared to 50% of FBO, 37% of private, and 24% of NGO facilities
- The average availability of PNC tracer items was lowest in NGO facilities at 67% and highest in FBO at 85%. Both public and private facilities had an average availability of 77%.
- The availability of BCG and OPV vaccines was lowest in private health facilities at 61% compared to 87% of FBO facilities.

Discussion

The findings regarding postnatal care (PNC) inpatient and outpatient services availability and readiness highlights significant disparities in the availability of key tracer services across facility locations, levels, and managing authorities. Nationally, 70% of health facilities had all postnatal



care tracer services available while which is concerning, as the postnatal period is a critical and important time to mitigate against maternal and newborn mortalities. With facilities especially level 2 and level 3 facilities lacking the requisite services, this places mothers and newborns at risk of receiving suboptimal quality of care.

Availability of oxytocin for management of postpartum hemorrhage was 86% available service, with variations between counties some with less than 50% availability of this essential commodity. The low availability of oxytocin across all levels of healthcare coupled with low percentage of facilities managing postpartum hemorrhage, reveal some of the reasons why postpartum hemorrhage persists as a lead contributor of maternal mortality.

Vaccination is one of the greatest public health interventions that has managed to save the lives of children from morbidity and mortality. BCG and OPV1 are the first vaccines a baby receives upon delivery and ideally before discharge home, 84% of the facilities had these two vaccines available with private facilities at 71% having the least availability of newborn vaccines potentially contributing to zero-dose cases in communities.

Overall, facilities in rural areas fare worse than those in urban settings with regards to readiness to offer PNC services as exhibited by only 28% with all tracer PNC items versus 44% for urban facilities. Infrastructure was the least available PNC tracer item in rural facilities (68%) while commodities were the least available PNC tracer item in urban facilities (78%). This is a clear indicator of inequities within healthcare service availability that has the potential to marginalize rural populations.

PNC service provision as per the level of healthcare (KEPH) reveal a commendable state of PNC service readiness in level 3,4 and 5 tier health facilities, however level 2 facilities lag in service readiness with infrastructure at 68% and commodities at 71%. Level 2 facilities, are the first and most accessible point of health service delivery for mothers and newborns in the community, it would be worth investing to improve the infrastructure and strengthen the supply chain for this level to ensure universal PNC service delivery.

FBOs (50%) scored slightly higher on readiness to offer all PNC services as compared to NGOs (24%), Public (28%) and private facilities (37%), although the overall picture portrayed is one of suboptimal readiness to offer of comprehensive PNC services. Urgent action by all actors providing PNC services is required with the gaps addressed to ensure quality PNC service delivery.

Psychological support and lactation management is an important aspect of postnatal services. It provides information for women to make informed decisions regarding their health and their baby's health which has an impact on health seeking behaviors, nutrition and health outcomes in the mother-baby dyad. However, this is against a background of low availability of postpartum examination areas with auditory privacy that is important to create an environment of open discussions between the mother and the health service provider. Despite this shortcoming, the high availability of counseling services for exclusive breastfeeding 94% and postpartum family

planning 87% buttresses the commitment towards empowering women to take charge of their health.

Ministry of Health has prioritized reduction of preventable maternal and newborn mortalities and zero-dose children as a goal towards achievement of SDG 3. This requires concerted and accelerated efforts to enhance maternal and newborn health service availability and readiness across all levels and categories of facilities in the country. With the gaps in achievement of universal PNC services, addressing the gaps revealed in the assessment may be catalytic in reducing the high maternal and newborns in the country.

Table 90: PNC Recommendations

PNC Key Findings	Recommendation
Inpatient postnatal services - Of facilities offering delivery services and inpatient postnatal at level 2, only 78% administered oxytocin to prevent PPH. 68% of level 2 facilities providing outpatient postnatal services managed PPH	- Interventions of prevent and manage PPH should be offered at all health facilities to ensure that maternal mortality as a result of this complication does not occur. - The low availability and readiness of PNC services in level 2 facilities point towards a need to strengthen Primary Care Networks to achieve UHC. - There is a critical need for counties to review the findings of this assessment due to the low availability and readiness of several PNC tracer services that may hinder their achievement of good maternal and newborn health outcomes.
Of the facilities offering inpatient postnatal services, newborn vaccines were least available in private facilities at 71%.	To avoid missed opportunities to vaccinate the newborn, consider on how to ensure these private facilities provide this crucial service.

Malaria In Pregnancy

In, Kenya Malaria, the two main Malaria In Pregnancy (MIP) interventions are provision of Long-Lasting Insecticidal Nets LLIN's and Intermittent Preventive Treatment (IPTp). These interventions are offered in counties where there is high risk for malaria as prioritized by the national Malaria program.

LLIN's for pregnant mothers and the newborn are offered in 23 high risk malaria counties prioritized for the intervention while IPTp is provided to mothers in 13 high risk malaria counties prioritized for the intervention.

Table 91: Counties prioritized for LLIN's & IPTp provision

Malaria In Pregnancy Intervention	
Counties prioritized for LLIN's provision	Counties prioritized for IPTp provision
• Bungoma • Busia • Homa Bay • Kakamega • Kericho • Kilifi • Kisii • Kisumu • Kwale • Lamu • Migori • Mombasa • Nandi • Narok • Nyamira • Siaya • Taita Taveta • Tana River • Trans Nzoia • Turkana • Uasin Gishu • Vihiga • West Pokot	• Bungoma • Busia • Homa Bay • Kilifi • Kisumu • Kwale • Lamu • Migori • Mombasa • Siaya • Taita Taveta • Vihiga

Definition

The 2024 QOC assessed Malaria in pregnancy tracer services across various service points within facilities as summarized in table 92 below.

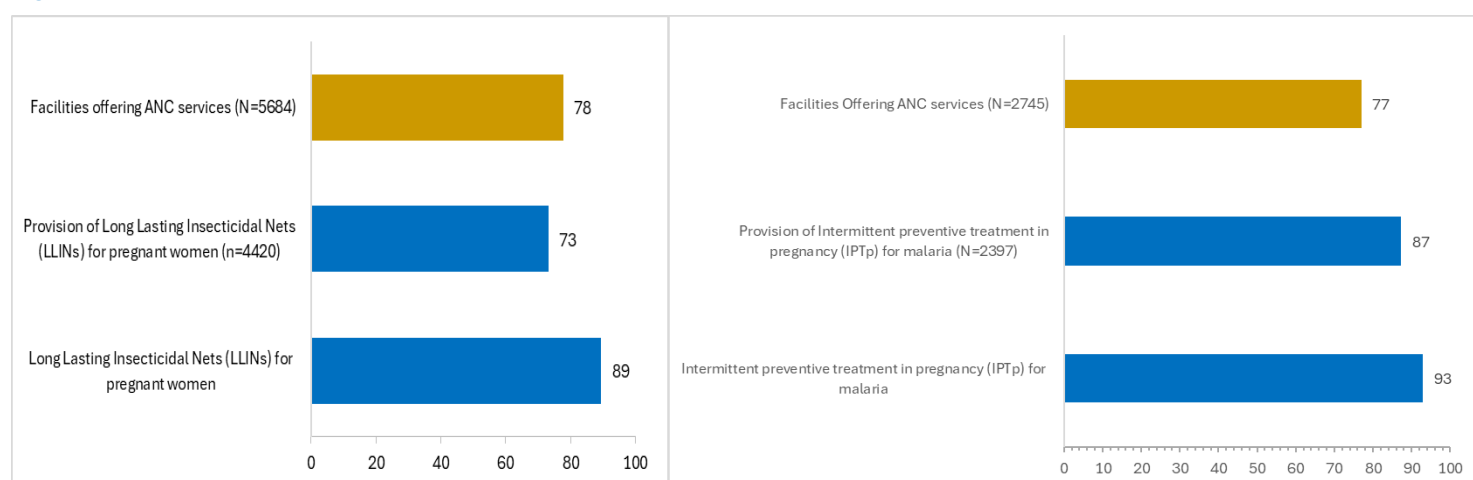
Table 92: MIP Tracer services and items

Domain	MIP Tracer services and items
Antenatal Care	Service Availability - Provision of Long-Lasting Insecticidal Nets (LLIN's) for pregnant women - Provision of Intermittent preventive treatment in pregnancy (IPTp) Service Readiness - Availability of Long-Lasting Insecticidal Nets (LLIN's) for pregnant women - Availability of Intermittent preventive treatment in pregnancy (IPTp) drug
Postnatal Services	Inpatient Postnatal care Service Availability-Provision of ITN's for the newborn
	Outpatient Postnatal Care Service Readiness-Availability of ITN's for the newborn

Malaria in pregnancy services in ANC

- In the epidemic and endemic counties, 78% of all facilities (N=5684) offer antenatal services.
- Among the facilities (N=4420), offering antenatal services in 23 target counties, 73% provided LLIN's for pregnant women as a service.
- Among the facilities (N=2745), offering antenatal services in 13 target counties, 63% provided Intermittent preventive treatment in pregnancy.

Figure 165: MIP Services in ANC



Disaggregation by location, KEPH level and ownership

Annex Table 90 shows the average availability of malaria in pregnancy ANC tracer services disaggregated by location, KEPH level, ownership and by county.

- In ANC, while provision of IPTp was highest at level 4 health facilities at 70%, provision of LLIN's was the lowest. By level availability of IPTp at was 2, 3 and 5 had 61%, 65% and 64% respectively. By level availability of LLIN's at was 2, 3 and 5 had 74%, 72% and 73% respectively.
- By ownership, the provision of LLIN's within ANC is notably low in private facilities (22%), compared to NGO at 43%, FBO at 85% and public 93%.

ANC MIP Service Readiness:

ANC services,

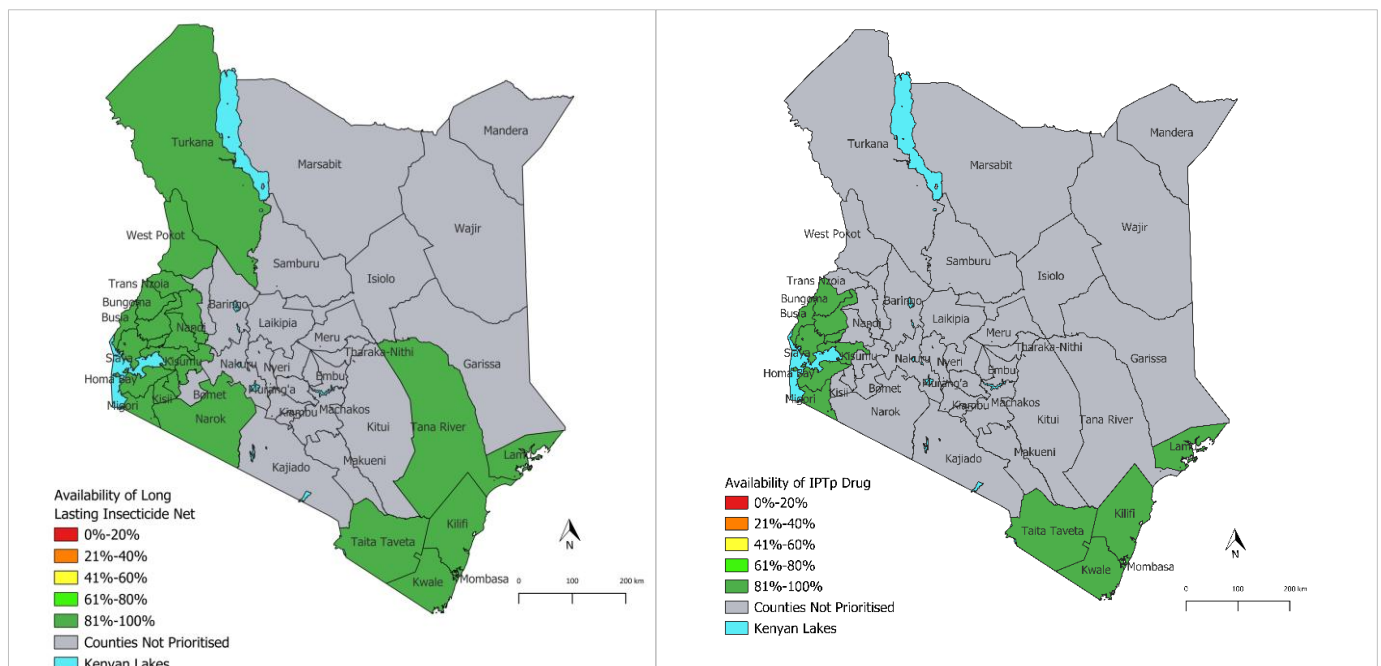
- Of those facilities providing LLIN for pregnant women as a service in ANC, 89% had LLIN's available on the day of the survey
- Of those facilities providing IPTp for pregnant women as a service in ANC, 95% had the medicine for IPTp available on the day of the survey

County Distribution:

Figure 166 show the average availability of malaria in pregnancy ANC tracer services disaggregated by county. Among facilities providing ANC services,

- Majority of the counties with facilities providing LLIN for pregnant women as a service in ANC, 89% had LLIN's available on the day of the survey.
- For IPTp, six counties had availability of IPTp of less than 81%. The three counties with least availability of the IPTp medicines are Uasin Gishu (35%), Trans Nzoia (40%) and Turkana at 50%.

Figure 166: Availability of LLIN's & IPTp drugs in endemic and epidemic zones by county

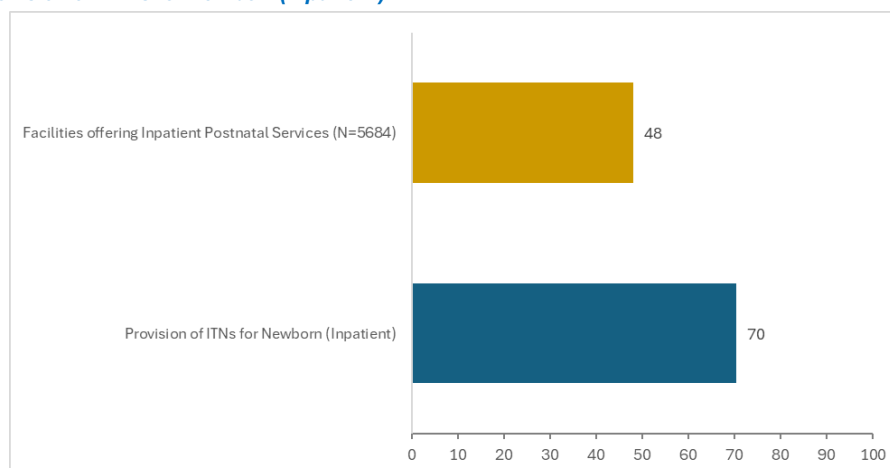


Malaria In Pregnancy in Post Natal Care

Inpatient Postnatal Service Availability for ITN

- The total number of facilities in the 23 malaria counties prioritized for malaria treatment are 5,684. 48% of these offer inpatient postnatal services.
- Among health facilities offering inpatient postnatal services (N=2720), 70% offered provision of ITN's/LLIN's for the newborn.

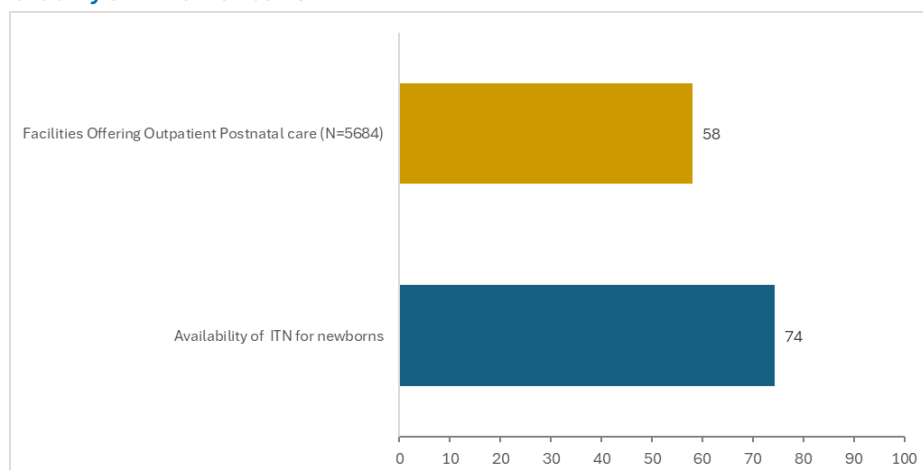
Figure 167: Provision of ITN's for newborn(inpatient)



Outpatient Postnatal Services Readiness for ITN.

- The total number of facilities in the 23 malaria high risk counties targeted for LLIN provision are 5,684. 58% of these offer outpatient postnatal services.
- Of the 3273 facilities offering postnatal care on an outpatient basis, 74% had ITN's/LLIN's for the newborn available.

Figure 168: Availability of ITN for newborns



County Distribution:

Figure 169 shows the IT outpatient postnatal services disaggregated by county.

- Amongst facilities offering outpatient postnatal services, ITN's for newborns were readily available (81-100%) in majority of counties.

- Amongst facilities offering outpatient postnatal services, ITN for newborns were least available in Kericho (55%) and Kericho (53%).

Figure 169 : Availability of ITN services for newborns in outpatient postnatal by county

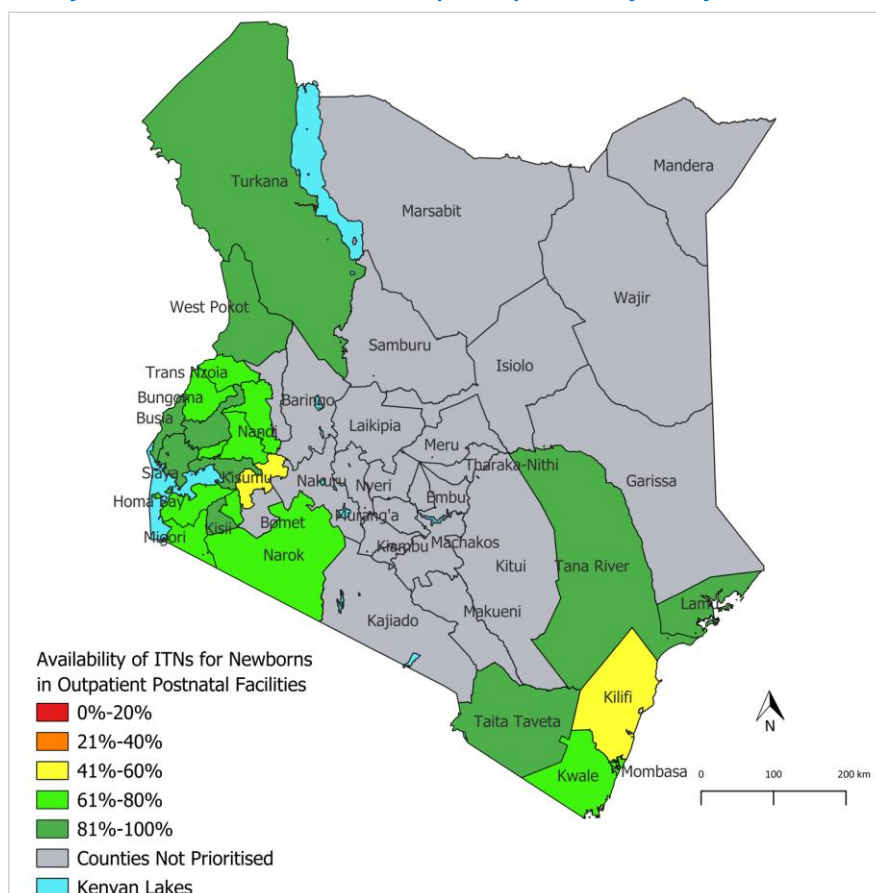


Table 93: MIP Recommendations

MIP Findings	Recommendations
• In ANC, three quarters of facilities offering delivery services provide LLIN's to pregnant women. • In PNC, about half of the facilities with inpatient services and 58% of those with outpatient services provide LLINs' for the newborn • Across all services, where LLIN's/ ITN are provided, the availability is high ranging 70-89%.	• Increase the proportion of facilities in the Malaria endemic and epidemic zones that provide LLIN's in ANC and PNC. • Increase the availability of LLIN's/ ITN's where gaps exist.
• 87% of the facilities in the 13 target counties provide IPTp in ANC. The medicine required for this is readily available.	• Increase the facilities providing the IPTp for pregnant women in ANC.

References

1. <https://www.who.int/publications/i/item/WHO-RHR-15-05>
2. <https://iris.who.int/bitstream/handle/10665/352658/9789240045989-eng.pdf?sequence=1>
3. The Kenya National Continuum of Care package guide*

Post Abortion Care Services

Introduction

In Kenya, unsafe abortions are the fifth leading cause of maternal mortality (MOH) underscoring the urgent need for effective PAC. PAC is key in minimizing health risks associated with unsafe abortions by addressing incomplete abortions, treating complications, and providing post-abortion contraception. Ensuring quality PAC is essential for reducing abortion-related complications, illnesses and deaths.

The QOC assessed availability of PAC services and the readiness of facilities to provide services.

***PAC services were assessed only in facilities offering postnatal services (N=7234)**

Service Availability

The availability of PAC in the country was assessed based on 4 tracer services as shown below.

Table 94: Post abortion care services

Domain	Post Abortion Care Tracer Services
PAC Services	- Post Abortion Care (PAC) Counseling - Manual Vacuum aspiration - Dilatation and Curettage (D&C) (<i>hospitals only</i>) - Provision of Post Abortion Family Planning

Findings

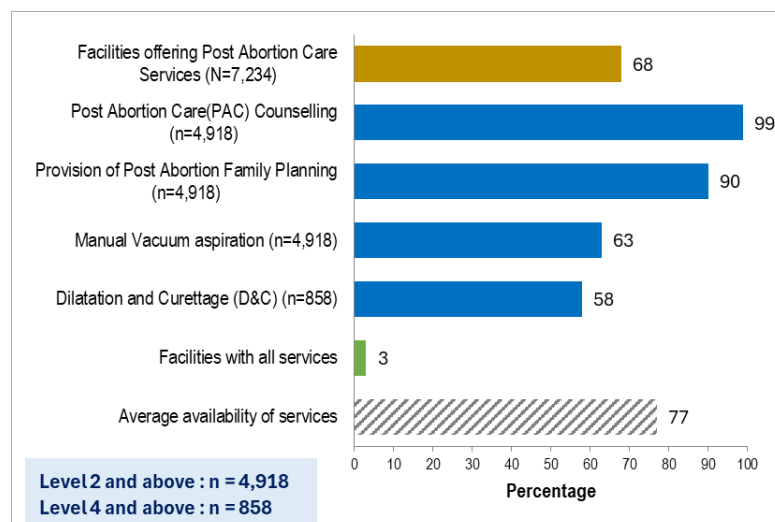
Figure 170 shows percent of facilities that have select PAC services.

PAC services were offered at 68% (n=4918) of all the facilities providing postnatal services.

Among the health facilities offering PAC services

- Counseling for PAC was available in almost all facilities (99%), while Dilatation and Curettage (D&C) had the lowest availability at 58%.
- Provision of post abortion counselling was also widely available (90%)
- The average availability of PAC tracer services is 77%

Figure 170: availability of PAC services in facilities offering Postnatal Care



Disaggregation by location, KEPH level and ownership.

Annex Table 94 shows the availability of PAC tracer services disaggregated by location, KEPH level, ownership and by county.

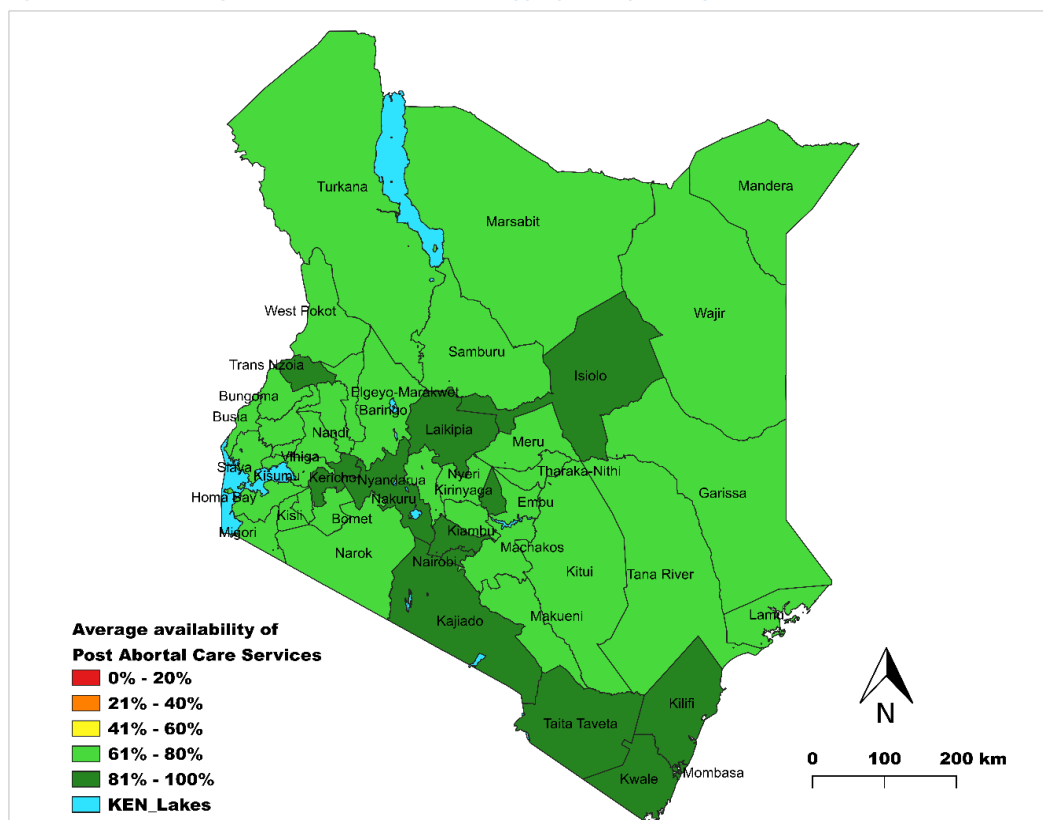
- Generally, PAC services were more available in urban areas (82%) compared to rural areas (70%).
- By KEPH level, almost all level 5 (98%) had PAC services while about 8 of every 10 level 2 facilities were providing the service.
- PAC counselling and post-abortion family planning were readily available regardless of the level of care
- By ownership, private facilities had the highest service availability of PAC at 86% while FBO and public had the lowest service availability at 74% and 72% respectively.

County Distribution

Figure 171 shows the availability of PAC tracer services disaggregated by county

- Majority of the counties had over 70% average availability of PAC services.
- There was a wide variation in availability of Dilatation and Curettage (D&C) services among Counties
- The lowest average availability of PAC services were recorded in Nandi (65%), Kitui & Tharaka Nithi (66%), West Pokot (67%), Kisumu & Murang'a (68%) and Meru (69%).

Figure 171: availability of PAC tracer services disaggregated by county



Services Readiness

To assess the readiness of PAC services in the country, 4 tracer equipment (2) and guidelines (2) were assessed, as detailed in the following table.

Table 95: Tracer items for post abortion care services

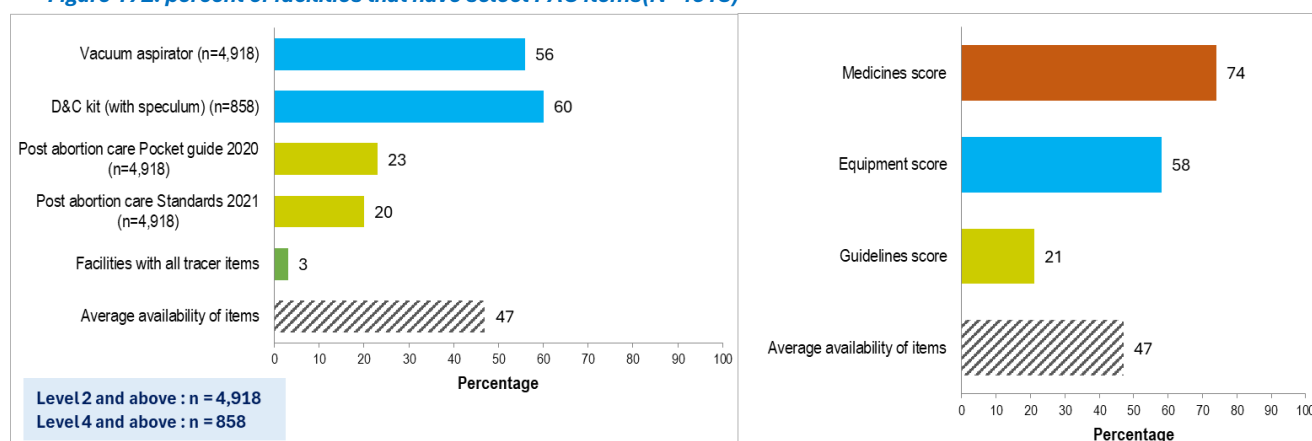
Domain	Post Abortion Care Services
Equipment	- Vacuum aspirator - D&C kit (with speculum) (<i>hospitals only</i>)
Guidelines	- Post abortion care Pocket guide 2020 - Post abortion care Standards 2021
Medicines	- IV Antibiotics for postpartum sepsis (e.g. X pen and gentamicin, or ceftriaxone) - Pain medicine (e.g. acetaminophen or ibuprofen) - Antiseptic for washing perineum and opening of uterus

Key findings

- There was varied availability of tracer items for PAC with medicines at 74%, equipment 58% and guidelines 21% respectively.
- The most available equipment D&C kit (60%) and Vacuum aspirators (56%)
- Only 1 in 5 facilities had PAC guidelines
- Average availability of PAC tracer items was 47%

PAC Medicines and Commodities

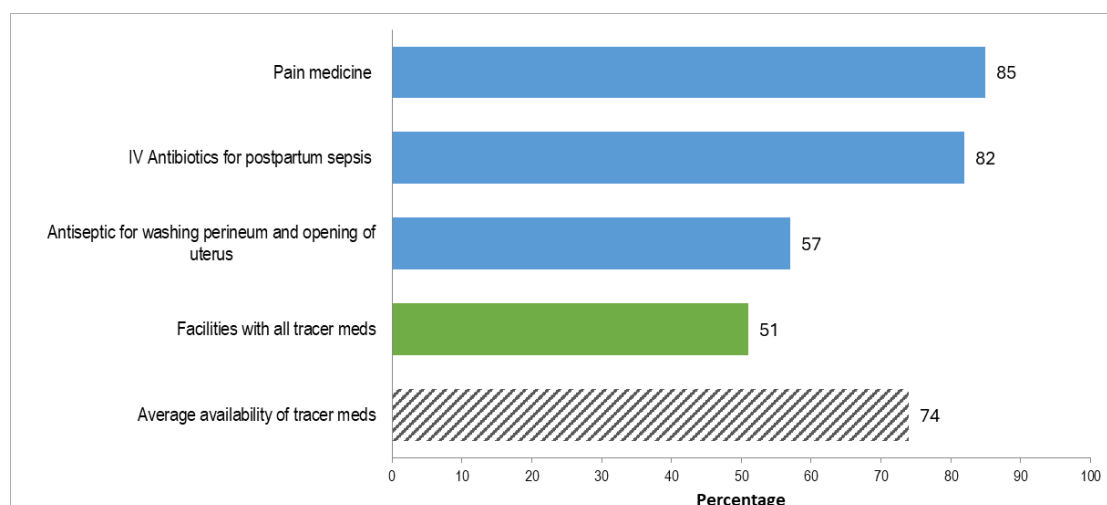
Figure 172: percent of facilities that have select PAC items(N=4918)



Among facilities providing PAC services,

- Pain medicine and IV Antibiotics for postpartum sepsis were highly available at 85% and 82% respectively. Availability of antiseptic for washing perineum and opening of uterus was 57%. The overall medicines score was 74%.
- Half the facilities had all PAC tracer medicines and commodities.

Figure 173: Percent of facilities that have PAC tracer medicines and commodities (N=4918)



Disaggregation by location, KEPH level and ownership.

Annex Table 95 shows the availability of PAC tracer items disaggregated by location, KEPH level, ownership and by county.

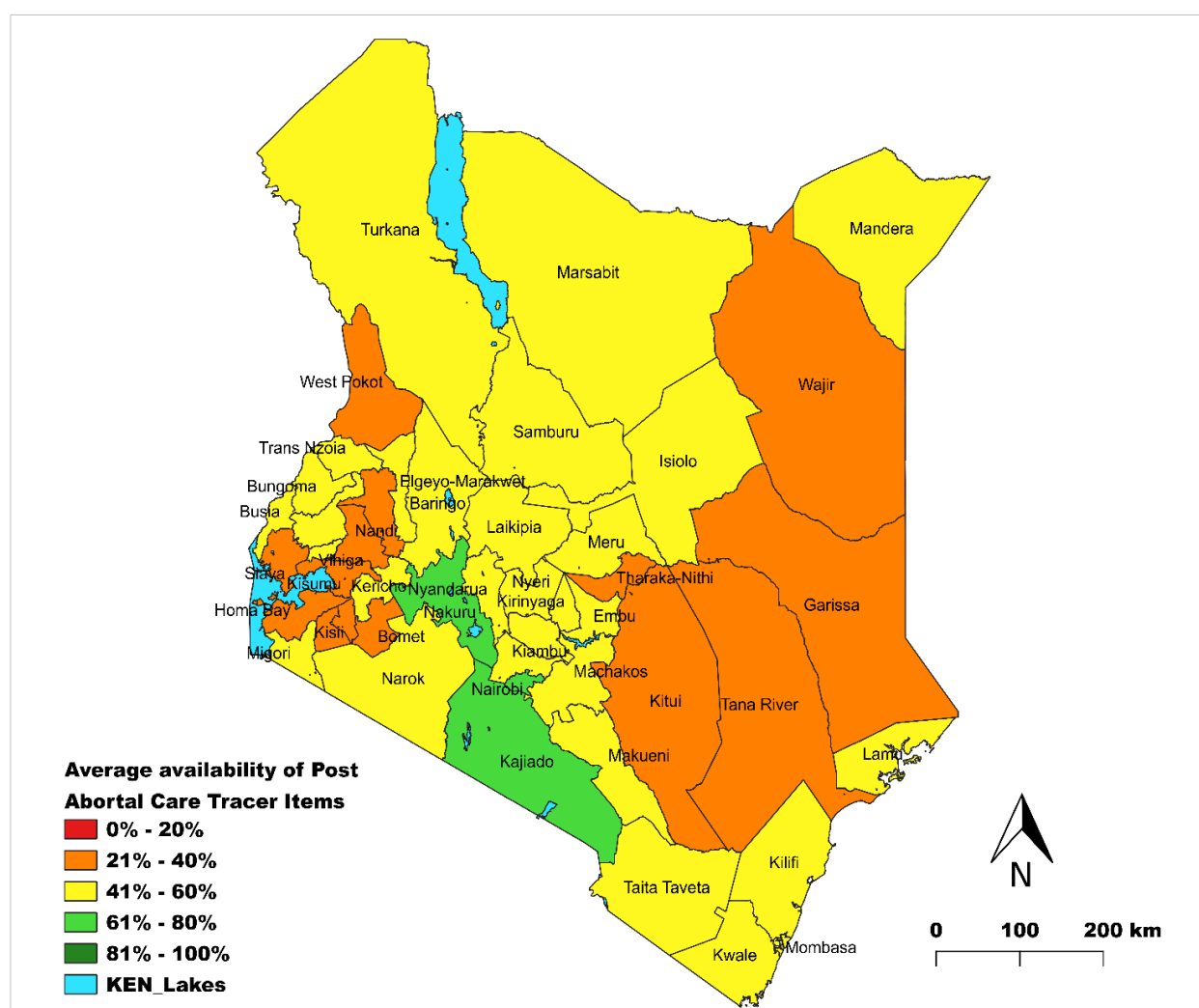
- By location, tracer items for PAC were more available at urban facilities compared to rural at 55% and 38% respectively.
- Level 4 and 5 have the highest availability of tracers. For instance, 92% of level 5 and 82% of level 4 facilities had vacuum aspirators, and 97% and 58% had D&C kits respectively. In contrast, level 2 facilities had the lowest availability of most items (42% for aspirators, and 16% for Post abortion care Pocket guide 2020).
- By ownership, NGO and private facilities are better equipped, with NGOs leading in PAC pocket guide (43%) availability. Public facilities lag behind, with 46% having vacuum aspirators and 17% of essential PAC guidelines.
- By owner, public facilities had the least availability of PAC items at 38% compared to 60% and 52% of NGO and FBO facilities respectively. Only 17% of public facilities had the PAC guidelines.

County Distribution

Figure 174 shows the availability of PAC tracer items disaggregated by county.

- Majority of the counties had average availability of PAC tracer items ranging from 41%-60%.
- The highest average availability of PAC tracer items was recorded in Nakuru (65%), Kajiado (64%), and Nairobi (61%) counties.
- Six counties with the lowest average availability of PAC tracer items were Nandi (27%), Homabay & Nyamira (31% each) West Pokot (32%) and Kisumu (33%).

Figure 174: Average availability of post abortion care items by county



Discussion

Availability of PAC services increased from 27% in KHFA 2018 to 68% in this assessment although the availability of PAC services in this assessment was based on facilities providing postnatal service.

Table 96: PAC Recommendations

Findings	Recommendation
- High availability of PAC services in the country more so private and higher-level facilities. - Low availability in FBO and lower-level facilities.	- Increase availability of PAC services in FBO and lower-level facilities in view of the high contribution of unsafe abortion to maternal mortality. Strengthen Lower level Facilities: Increase the capacity of Level 2 and rural facilities to offer comprehensive PAC services,

Findings	Recommendation
	particularly D&C, through training, resource allocation and guideline availability • Enhance Public Sector Capacity: Invest in public facilities to reduce dependence on private providers, ensuring equitable access for all populations, particularly those in lower-income brackets
• Low PAC service readiness in most counties despite availability of the service. • Public facilities recorded significantly less availability of items, especially guidelines • Wide variation in availability of Dilatation and Curettage (D&C) services among Counties indicates inequalities in access to the service • The unavailability of key PAC items, especially guidelines in undermines standardized care, provider competence, and adherence to evidence-based practices, potentially leading to suboptimal patient outcomes.	• Avail requisite tracer items for quality PAC services. • Dilatation and Curettage (D&C) services should be enhanced particularly in Counties with low availability • There's need for targeted dissemination of PAC guidelines particularly in public facilities • Strengthen Resource Allocation Prioritize equipping rural, lower-tier, and public facilities with essential PAC tracer items, including updated guidelines, through targeted funding and procurement initiatives.

Services for low birth weight and sick newborns

Newborn Health Services

Neonatal deaths account for nearly half of all deaths in children under 5 years of age. The Sustainable Development Goals (SDGs) target to reduce neonatal mortality rate (NMR) to at least 12 per 1,000 live births by 2030. The Kenya NMR is 21 deaths per 1,000 live births (KDHS 2022). In recent years, there has been a focus on interventions geared towards reducing morbidity and mortality among newborns (from birth up to 28 days of life).

Health services for newborns encompass a wide range of medical and support measures to ensure the health and well-being of newborns which include disease screening, vaccination, routine check-ups, intensive care, among others.

The QOC survey assessed essential newborn services (services immediately at birth) and comprehensive newborn services (essential services and services for the sick and premature newborns).

Essential Newborn Services

Service Availability

The QOC survey used the following tracer services and items to assess availability and readiness of essential newborn health services. The data was then analyzed based on the level of care as guided by the National Newborn and Child Health Strategic Plan 2023 – 2026 as per the table 97 below.

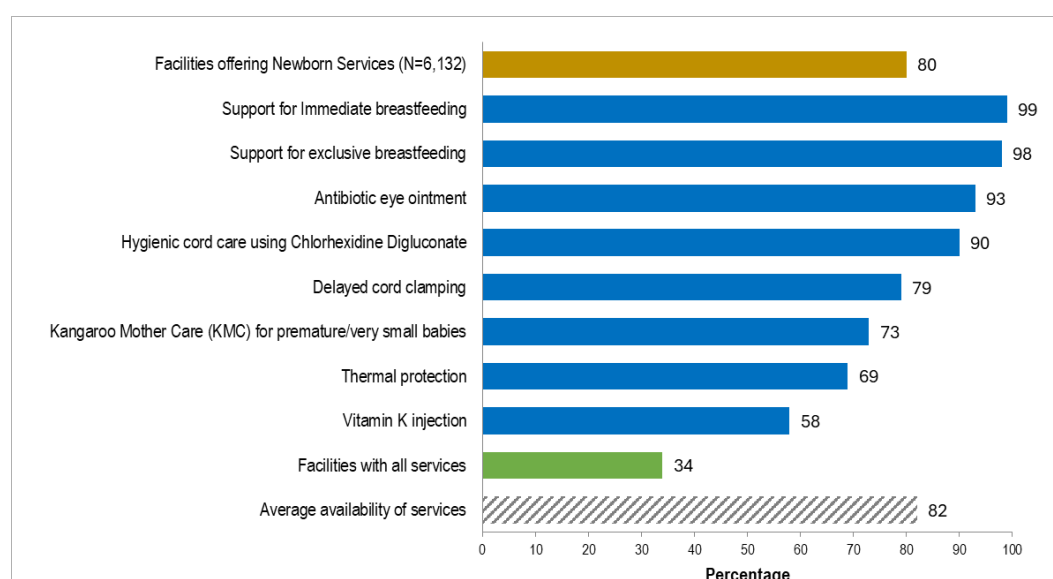
Table 97: Tracer services for essential newborn care

Tracer Services	Expected Level of Use
• Support for Immediate breastfeeding • Support for exclusive breastfeeding • Hygienic cord care using Chlorhexidine Digluconate • Thermal protection • Delayed cord clamping • Kangaroo Mother Care (KMC) for premature/very small babies • Antibiotic eye ointment • Vitamin K injection	KEPH level 2 - 6

- Nationally essential newborn health services were in 80% of facilities providing delivery services.
- Among the 8 essential newborn services assessed, availability ranged between 60%-99% except for Vitamin K injection which was at 58%.

- Average availability of essential newborn health services was 82% with 1 in 3 facilities having all the services

Figure 175: Availability of essential newborn health services (n=4876)



Annex Table 83 below outlines the availability of essential newborn health services based on various parameters for eliciting variations in the findings that will inform programming for the policy-makers.

Location

- There was slightly higher availability of essential newborn services in urban facilities (84%) compared to the rural facilities (78%)
- The availability of vitamin K injection was significantly lower in rural facilities compared to urban facilities at 48% and 74%, respectively.

Level

- Overall, the availability of essential newborn services showed an increasing trend by level of care, with services more available in Level 5 compared to lower-level facilities

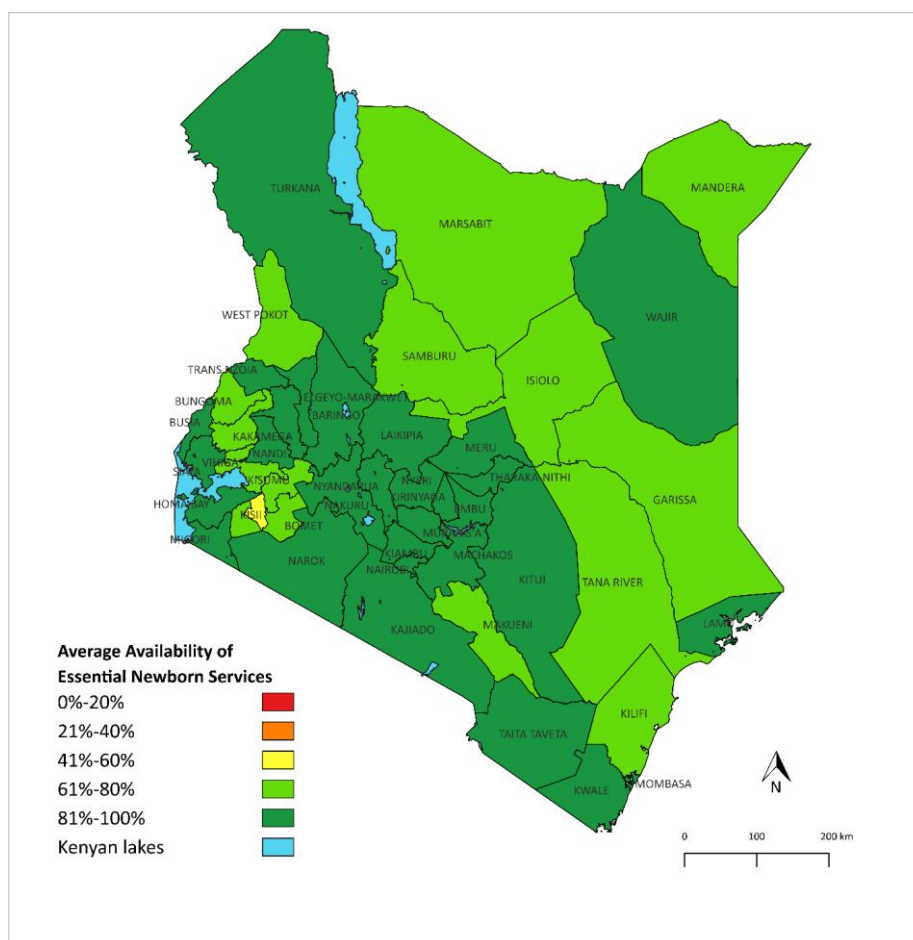
Ownership

- NGO run facilities consistently performed better across all tracer services with an average availability of 95% compared to public facilities at 79%, Private and FBO both at 87%.
- Among the tracer services assessed, Vitamin K injection was least available in public facilities (44%) compared to private (79%), FBO (76%), and NGO (80%).

County Distribution

- Majority of the counties had high average availability of essential newborn services, ranging between 67%- 94% except Nyamira County at 55%.

Figure 176: Average availability of essential newborn services by county



Comprehensive Newborn Care (Low birth weight and Sick Newborns)

The QOC survey used the following tracer services and items to assess availability and readiness of comprehensive newborn health services. The data was then analyzed based on the level of care as guided by the National Newborn and Child Health Strategic Plan 2023 – 2026 as per the table 98 below.

Table 98: Tracer services for Comprehensive Newborn Care

Tracer Services	Expected Level of Use
- Alternative feeding for infants who cannot breastfeed - Rehydration services/IV fluids - Safe administration of Oxygen - Phototherapy - Exchange transfusion blood - Management of preterm respiratory distress with Continuous Positive Airway Pressure (CPAP) or other artificial ventilation services - Management of neonatal sepsis with injection	KEPH level 4 - 6

Tracer Services	Expected Level of Use
antibiotics Detection and referral of congenital abnormalities	

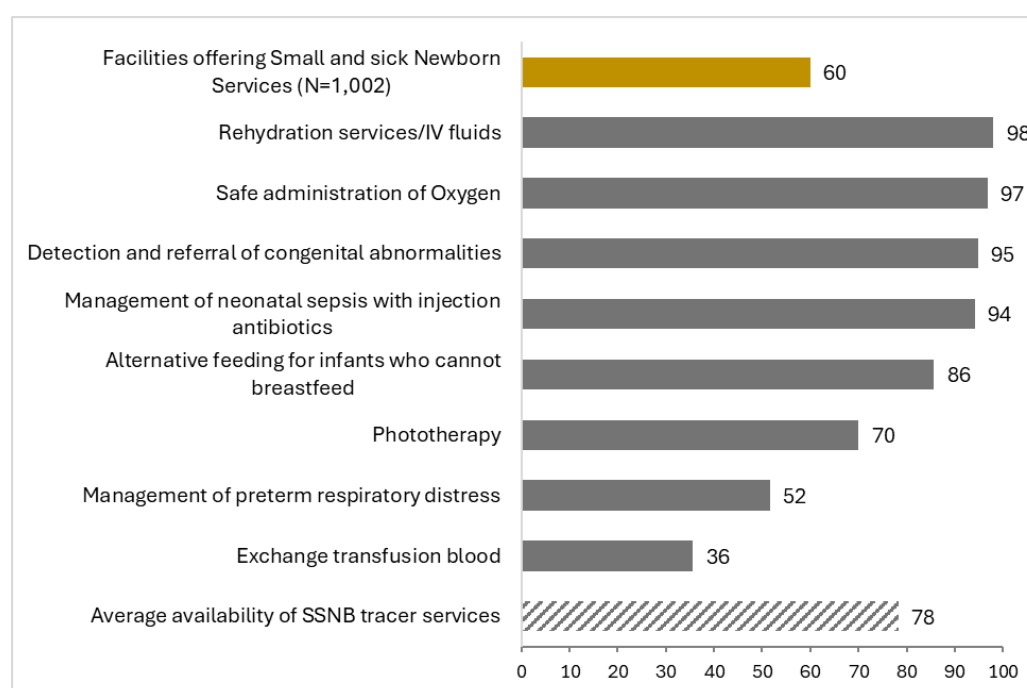
Service Availability

- In Kenya, 60% of Level 4 and 5 facilities provide services for **Comprehensive Newborn Care** (small and sick newborns)

Among the facilities providing Comprehensive Newborn Care;

- The most available services were rehydration services (98%), safe administration of oxygen (97%), detection and referral of congenital abnormalities (95%), and management of neonatal sepsis with injection antibiotics (94%)
- The least available services were exchange blood transfusion (36%) and management of preterm respiratory distress (52%)
- Average availability of tracer services for the sick and small newborns was 78%.

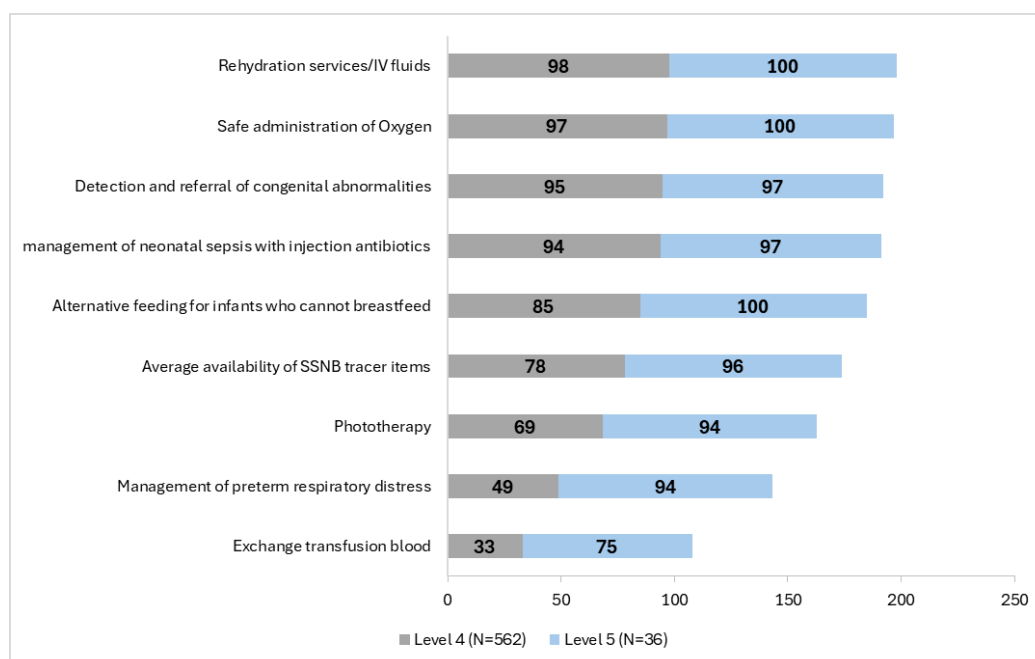
Figure 177: Availability of comprehensive newborn health tracer services in Kenya (n=598)



Annex Table 84 shows the average availability of *Comprehensive Newborn* tracer services disaggregated by location, KEPH Level, ownership and by county

- Overall higher availability of sick and small newborns in level 5 compared to level 4 facilities.
- Regardless of the level of care, exchange blood transfusion was the least available service.

Figure 178: Availability of comprehensive newborn health tracer services by facility level (n=598)



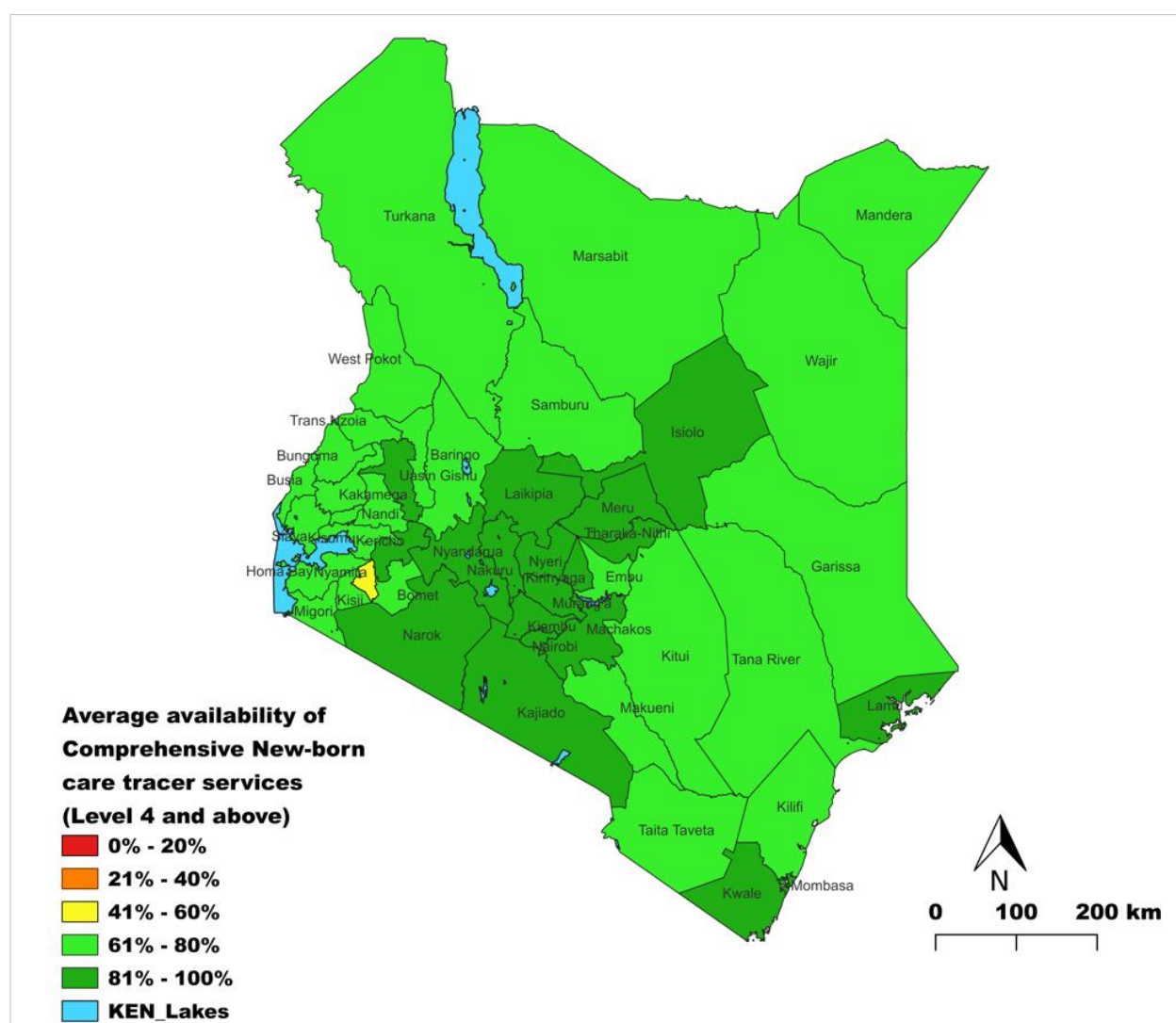
Public facilities had the lowest availability of newborn health services at 74% compared to the NGO (76%), Private (82%) and FBO (85%).

County Distribution

Figure 179 shows the average availability of *Comprehensive Newborn* tracer services in level 4 and 5 disaggregated by counties.

- Majority of the counties had high average availability of sick and small newborns services, ranging between 59%- 90%
- Kajiado and Kwale Counties had the highest average availability of sick and small newborns services at 90%
- Nyamira County had the lowest average availability of sick and small newborn services at 59%
- None of the Level 4 and 5 hospitals in West Pokot and Nyamira counties had exchange blood transfusion services

Figure 179: Comprehensive newborn services by county



Service Readiness

The readiness to offer comprehensive newborn health services was assessed based on the tracer items available as listed in Table 99 below.

Table 99: Tracer Items for Comprehensive Newborn Care in Hospitals

Domain	Tracer Items for Comprehensive Newborn Health Services in Level 4 and 5 facilities
Equipment	- Syringe Pump - Bilirubinometer - Phototherapy Light - CPAP (Continuous Positive Airway Pressure) machine - Flow Splitter - Oxygen Concentrator - Pulse Oximeter - Suction Machine

Domain	Tracer Items for Comprehensive Newborn Health Services in Level 4 and 5 facilities
	• Radiant Warmer • Hemoglobinometer • Incubator • Wall thermometer
Guidelines	• Kangaroo Mother Care Guidelines 2023 • Comprehensive new-born care guidelines 2022
Trained staff	• Healthcare worker trained on new-born ETAT +
Medicines	• IV antibiotics, Benzyl Penicillin • IV antibiotic Gentamycin • IV antibiotic Ceftriaxone

Findings:

Among the level 4 and 5 facilities providing Comprehensive newborn care;

- Overall, average service readiness was 69%.
- Suction machine was the most available item (97%) while bilirubinometer was the least available item (39%).
- The availability of a wall thermometer was remarkably low at 44% despite there being moderate availability of radiant warmer at 89%.
- Availability of health workers trained on newborn ETAT+ was 57% whereas availability of KMC guidelines was 57% and comprehensive newborn care guidelines 2022 was 53%.
- Facilities with all tracer items was 9%.

Figure 180: Readiness of comprehensive newborn health tracer items in (level 4 and 5) facilities(N=598)

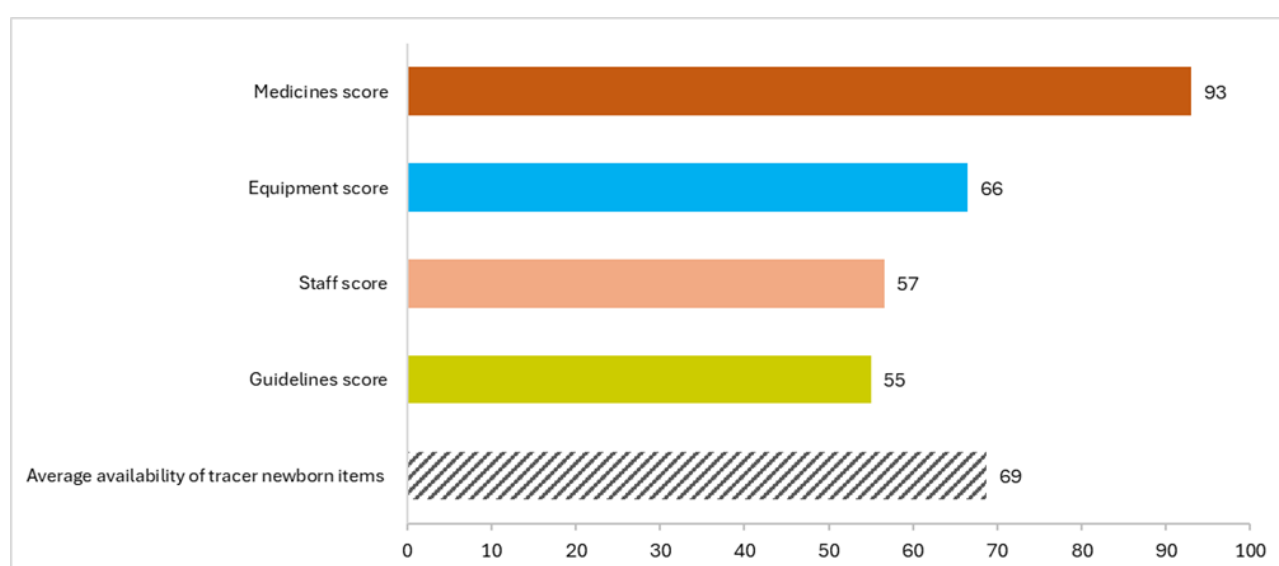
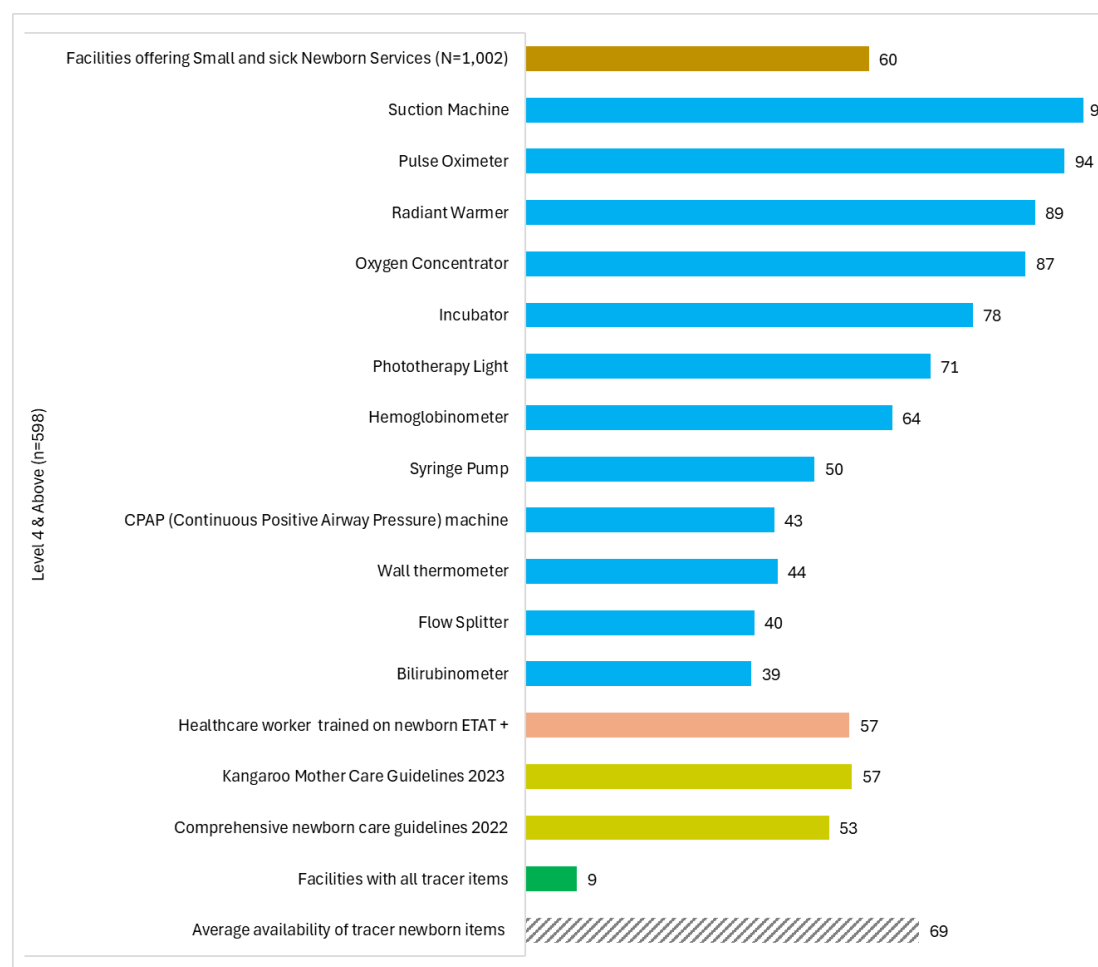


Figure 181: Availability of comprehensive newborn health tracer items in (level 4 and 5) facilities (n=598)



Disaggregation by location, KEPH Level and ownership.

Annex Table 85 shows the average availability of Comprehensive Newborn tracer items disaggregated by location, KEPH Level, ownership and by county.

By location, rural based facilities had a lower readiness score compared to Urban based facilities across all the tracer items assessed 55% and 68%.

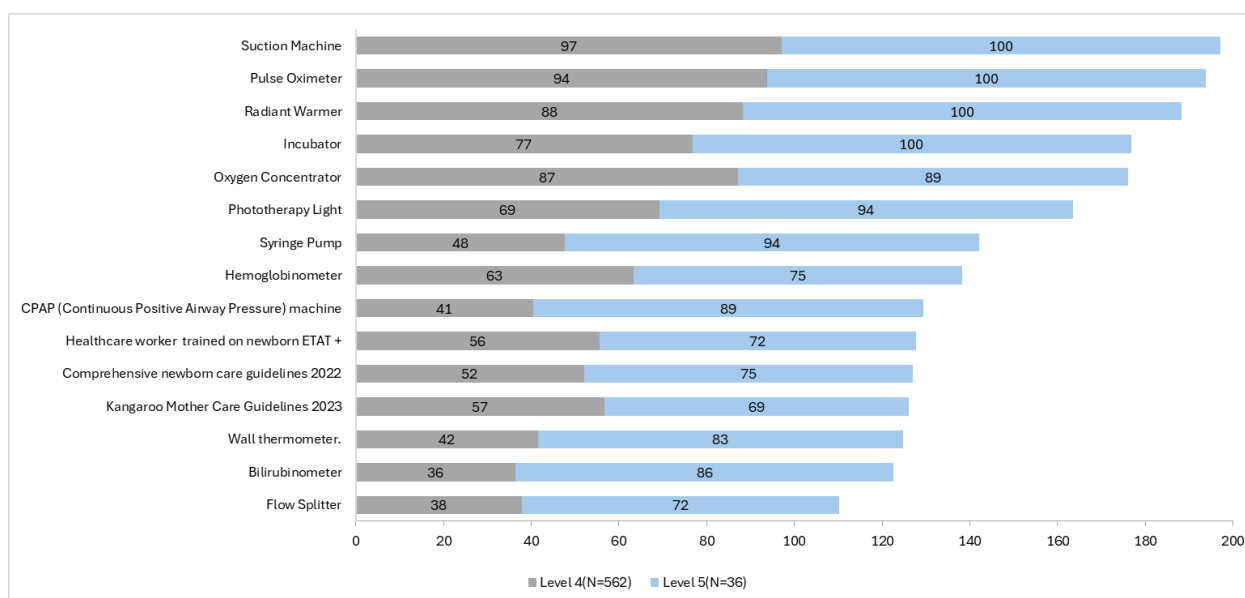
By ownership,

- Availability of tracer items was lowest in NGO facilities at 47% compared to the FBO (71%) and public (61%) and private (67%),
- There was variation in the availability of tracer items across the 4 managing authorities; NGO facilities had the lowest availability of health workers trained on newborn ETAT+ at 23% and new born care guidelines.

By KEPH Level

- Higher availability of tracer items in level 5 facilities.
- Low availability of wall thermometer, CPAP machine, flow splitter and bilirubinometer in level 4 facilities at 42%,41%,38% and 36% respectively.

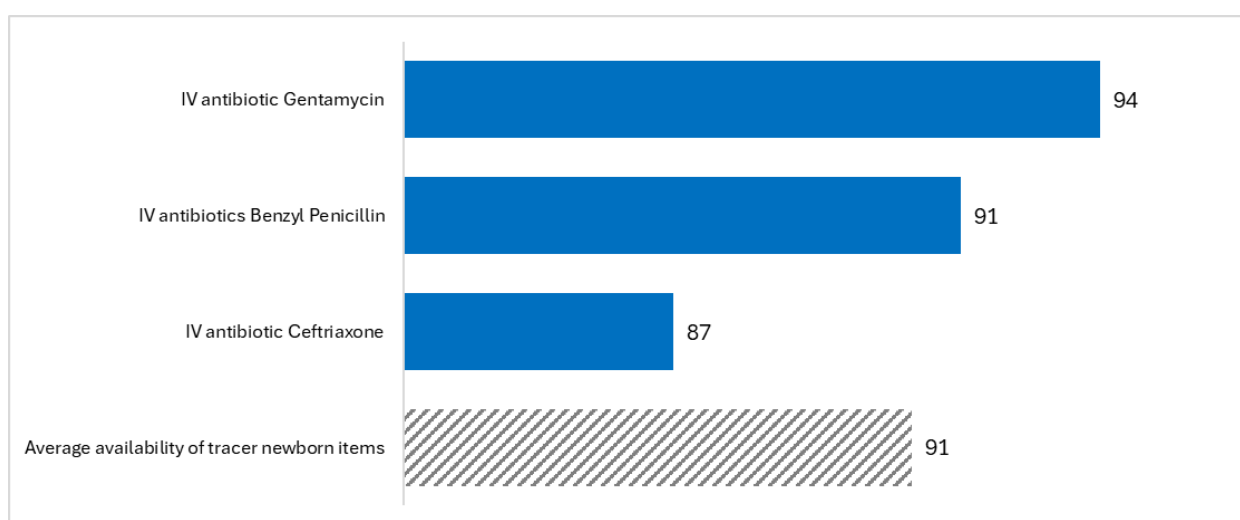
Figure 182: Availability of comprehensive newborn health tracer items in Kenya by facility level (n=598)



Medicines

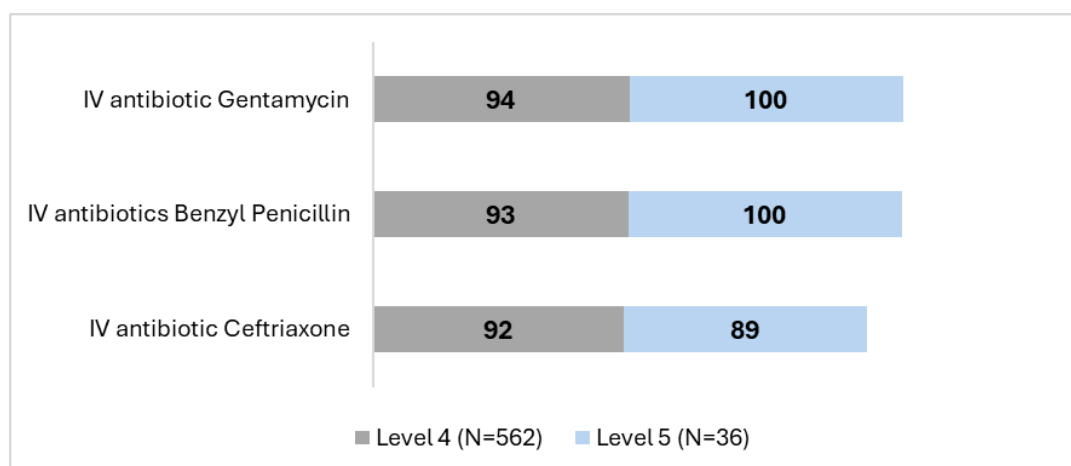
- There was high availability of tracer antibiotics for comprehensive newborn care in hospitals with i.v Gentamycin at 94%, i.v Penicillin 91% and i.v Ceftriaxone 87%.
- Average availability was 91% .

Figure 183: Availability of comprehensive newborn care medicines in facilities



- All level 5 facilities had Gentamycin and Benzyl-Penicillin.
- Ceftriaxone was more readily available in level 4 facilities.

Figure 184: Availability of comprehensive newborn care medicines by KEPH Level



County Distribution

Figure 185 shows the average availability of *Comprehensive Newborn tracer* items disaggregated by counties.

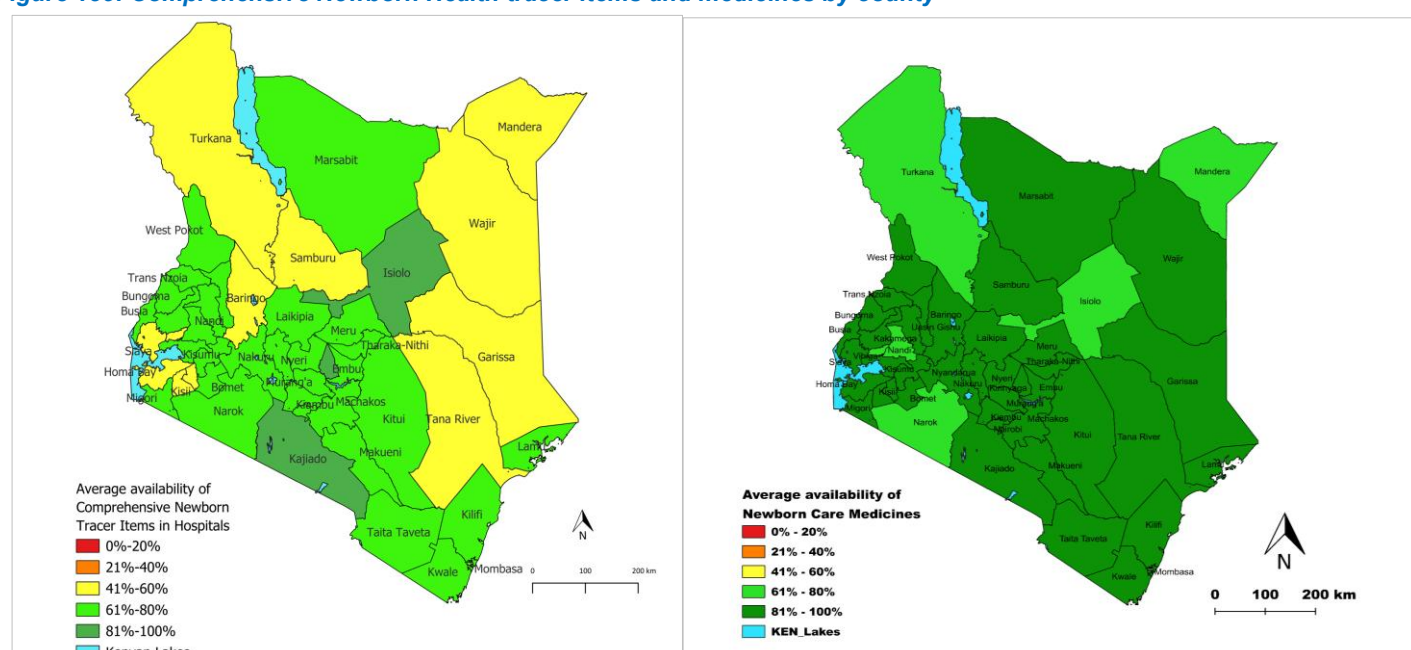
Among the hospitals (level 4 and 5) providing services for the small and sick newborn;
Tracer Items

- Kajiado county had the highest availability at 85% while Tana River County had the lowest availability of tracer items at 44%.
- Majority of the counties had average availability of between 61% and 80%

Medicines

- All counties had an average availability of above 61% with Trans Nzoia, Kericho, Kiambu, Kirinyaga, Kwale, Lamu, Marsabit being the highest counties at 100%.

Figure 185: Comprehensive Newborn Health tracer items and medicines by county



Discussion

The QoC survey is the first ever assessment of comprehensive newborn health services as defined by the MOH Newborn and Child Health Strategic Plan 2022-2026.

Overall, there was high availability and equitable distribution of essential newborn services.

There was a discrepancy between availability and the actual readiness to provide comprehensive newborn health services in hospital (level 4 and 5.)

This survey depicts major gaps especially in availability of services and poor readiness to manage conditions such as respiratory distress in preterm babies, phototherapy and exchange blood transfusion necessary for management of neonatal jaundice.

The MoH has made progress in the delivery of quality health services with the publication of newborn and paediatric care standards, handbook on newborn care, in-service training curriculum for health workers and pre-service training curriculum for community health workforce.

Conclusions

- There exists a discrepancy in the intention and the capabilities of health facilities to provide comprehensive newborn health services. The facilities report to provide the service but their readiness to do so is limited which was most pronounced among Private and FBO facilities. and public facilities.
- High variation exists among health facilities in different counties in providing the health service which may be attributed to administrative challenges such as financing.
- The Sub optimal availability of commodity-free services such as KMC indicates a skills gap among the health workers indicating a need for capacity building to promote this high impact low-cost intervention.

Table 100: Comprehensive newborn care recommendations

Key Findings	Recommendations
● Discrepancy between availability of services and the actual readiness to provide comprehensive newborn services in hospitals (level 4 and 5) ● There are major gaps especially in availability of services and poor readiness to manage conditions.	● Invest in equipment, training and guidelines for comprehensive newborn care more so in level 4 facilities.
● The Sub optimal availability of commodity-free services such as KMC indicates a skills gap among the health workers indicating a need for capacity building to promote this high impact low cost intervention.	
	● The MoH and stakeholders to invest and expedite the skills transfer of high impact interventions to health care providers across the levels of care.

Child Health Services

Substantial global progress has been made in reducing childhood mortality since 1990. The total number of deaths under 5 worldwide has declined from 12.6 million in 1990 to 5 million in 2020¹. Kenya has also made significant strides in reducing under-five mortality, from 102 deaths per 1,000 live births in 1990 to 41 deaths per 1,000 live births according to KDHS 2022.

In Kenya, infectious diseases, including pneumonia, diarrhea and malaria, remain a leading cause of under-five deaths. The three diseases can be largely prevented through simple health preventive and promotive measures such as vaccination, use of insecticide treated nets, growth monitoring and improving availability and access to diagnostic, treatment and WASH facilities. Children under five also suffer from other conditions such as malnutrition, sickle cell disease, cancer, disabilities and delayed milestones that contribute towards the high morbidity and mortality.

Availability and access to **comprehensive child health services** ensure that children receive timely treatment, and routine vaccinations for their health and well-being in-order to survive, thrive and reach their full potential.

Immunization is one of the most cost-effective public health interventions, averting an estimated 4.4 million deaths yearly (UNCIEF 2024). **Immunization services for children under five are** especially important, as the immunity of this group is still developing making them susceptible to infectious diseases.

For purposes of the quality-of-care health facility assessment (QOC HFA), a child refers to persons aged between 29 days (1month) and 59 months. This population is often referred to as ‘children under five or Under-five (U5)’.

Definition

The 2024 QOC assessed service availability and service readiness for child health based on two categories as follows:

- Preventive Curative and Rehabilitative Services for Children Under 5 Years
- Immunization services for routine under 5 vaccinations.

Preventive Curative and Rehabilitative Services for Children Under 5 Years

Service availability

Ten (10) services were selected as tracer services for child health as follows:

Table 101: Tracer items for services for children Under 5 years

Domain	Tracer Items
Child health	• Triage system for sick children under 5 • Diagnosis and management of malnutrition • Vitamin A supplementation • Iron supplementation



Domain	Tracer Items
	• Management of diarrhea • Child growth monitoring • Management of pneumonia • Treatment of malaria • Assessment and referral of developmental milestone delays and disability • Management of milestone delays and disability

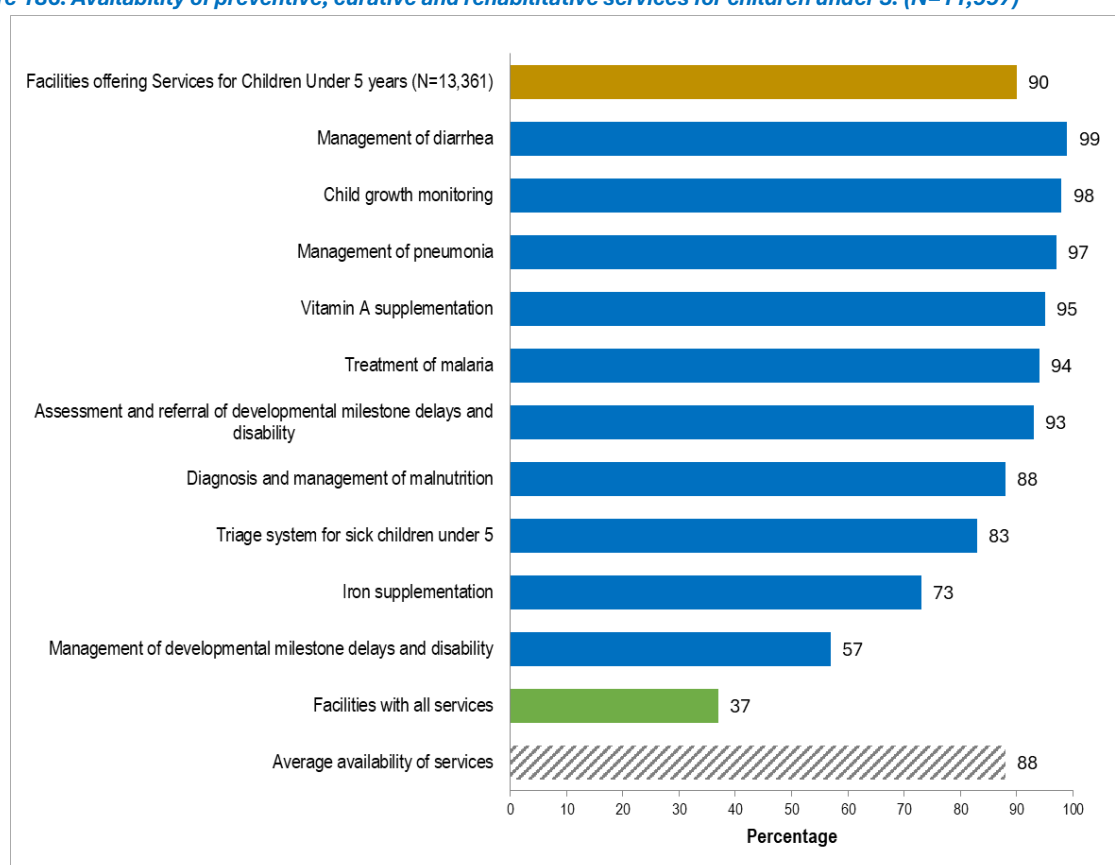
Key findings

Preventive, curative and rehabilitative services for under 5 were offered at 90% (n=11,997) of all facilities nationally.

Among the health facilities offering 10 tracer services for under five health services for

- There was high availability of services for the following: diarrhea management (99%), child growth monitoring (98%), management of pneumonia (97%), Vitamin A Supplementation (VAS) (95%) treatment of malaria (94%) and assessment and referral of developmental milestone delays and disability (93%).
- Triage system for sick children under 5 and diagnosis and management of malnutrition was equally high at 83% and 88% respectively.
- About half (57%) of the facilities offered services for management of developmental milestone delays and disability.
- The average availability of under 5 tracer services was 88%
- Only one in three (37%) facilities had all the under 5 tracer services
- Figure 186 summarizes the availability of Preventive, curative and rehabilitative services for under 5.

Figure 186: Availability of preventive, curative and rehabilitative services for children under 5. (N=11,997)



Disaggregation by location, KEPH level and ownership

Annex Table 96 shows the average availability of Preventive, curative and rehabilitative services for under 5 disaggregated by location, KEPH level, ownership and by county.

By location

- Of the rural facilities offering child health services, availability of a triage system for sick children under 5, iron supplementation and management of developmental milestone delays and disability was 79%, 69% and 50% respectively which is much lower than the other services that scored above 90% availability.
- Among the urban facilities with child health services, the least available service management of developmental milestone delays and disability at 68%; management of pneumonia, management of diarrhea and child growth monitoring were highly available at 99% each.

By KEPH levels

- Level 5 facilities had high availability (above 90%) of child health tracer services except iron supplementation which was at 89%.
- All level 4 facilities had services for management of pneumonia and diarrhea with three quarters (76%) having services for management of developmental milestone delays and disability.

- The average availability of under 5 services in lower-level facilities was 90% and 86% in level 3 and 2 respectively.

By ownership;

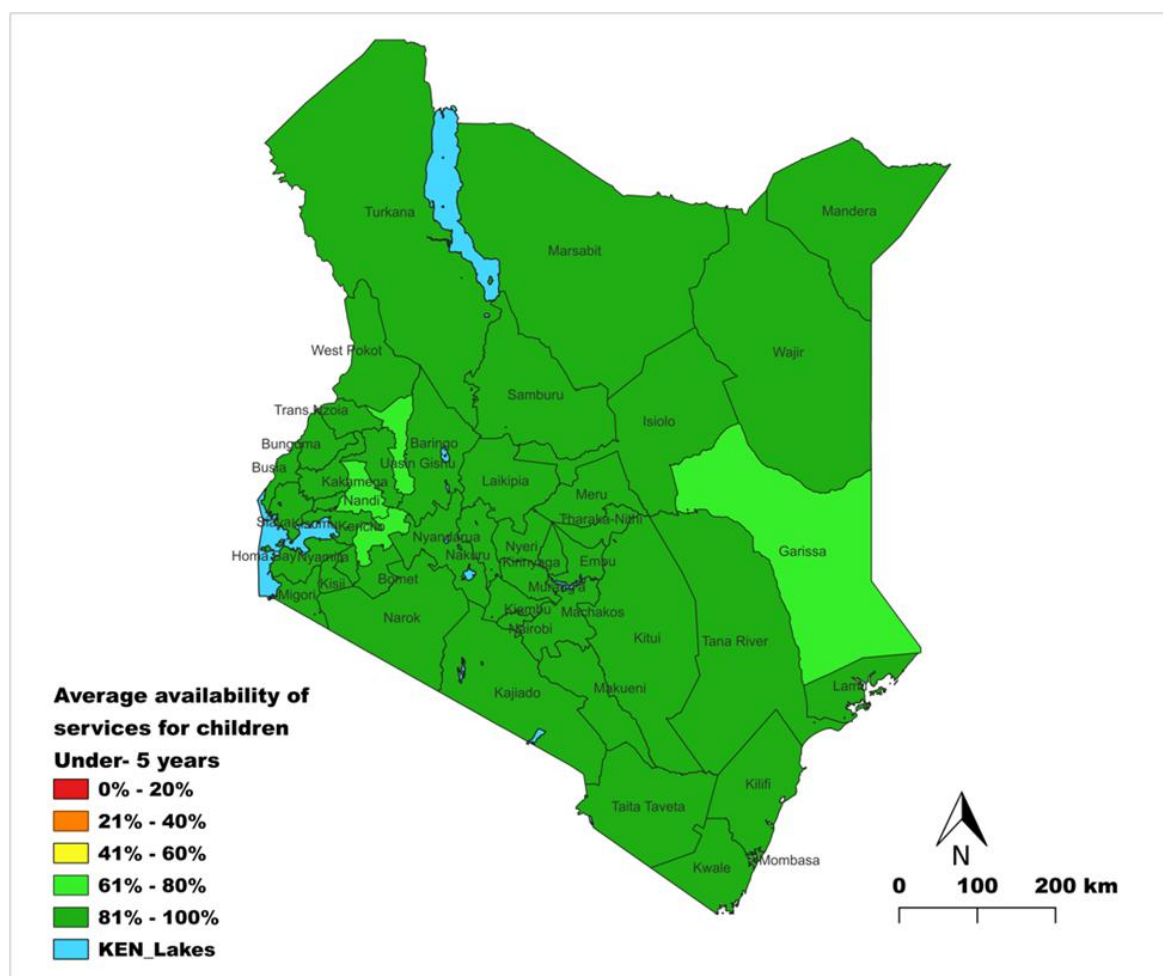
- Availability of under 5 services by ownership was high except Management of developmental milestone delays and disability that was low regardless of ownership.
- Management of developmental milestone delays and disability was low regardless of ownership at 65% private facilities, 63% NGO, 59% FBO and only 53% public facilities.
- Child growth monitoring was also available in 98% of all four categories of facilities as per managing authority.

County Distribution of Preventive, curative and rehabilitative services for under 5.

Figure 187 shows the average availability of preventive, curative and rehabilitative services for under 5 disaggregated by county.

- Availability of child health services was above 80% in 43 out of the 47 counties.
- Only 4 counties: Kericho, Nandi, Elgeyo Marakwet and Garissa reported 61 - 80% availability of child health tracer services.

Figure 187: Average availability of services for children under 5 by county



Service Readiness for Preventive, curative and rehabilitative services for under 5.

Definition

The 2024 QOC assessed readiness of health facilities offering Preventive, curative and rehabilitative services for under 5 based on availability of twelve (12) tracer items (N=11,997). The tracer items assessed are summarized in Table 102.

Table 102: Tracer items for children under 5 services

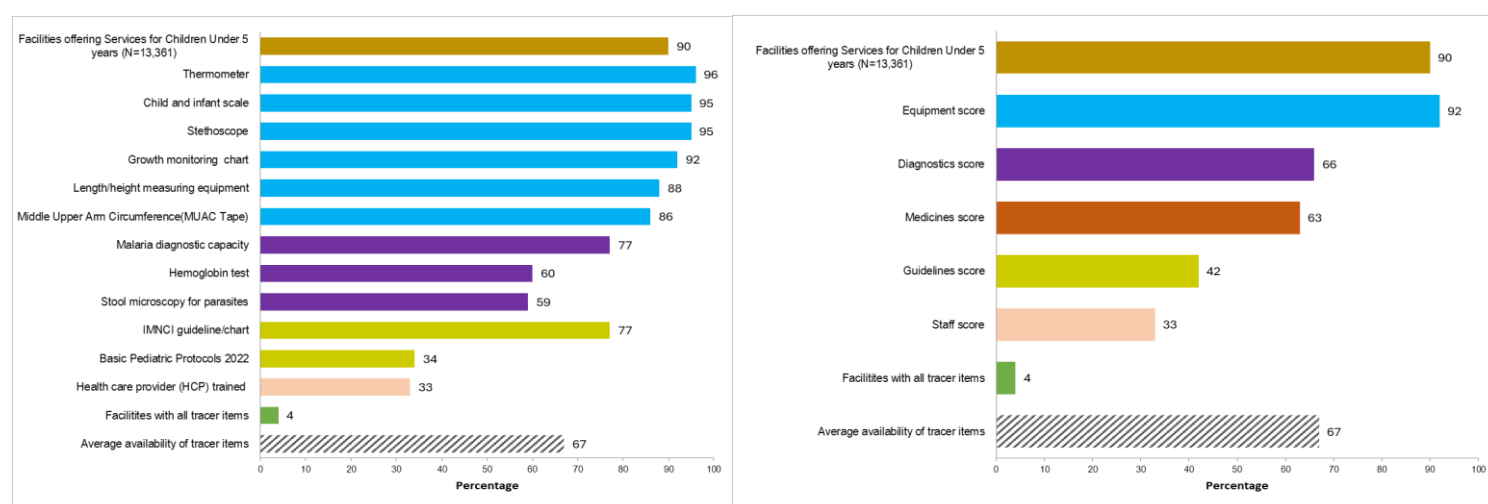
Domain	Tracer items
Guidelines	IMNCI guideline/chart Basic Pediatric Protocols 2022
Equipment	Child and infant scale Length/height measuring equipment Thermometer Stethoscope Growth monitoring chart Middle Upper Arm Circumference (MUAC Tape)
Diagnostics	Hemoglobin test Stool microscopy for parasites Malaria diagnostic capacity
Training	Health care provider (HCP) trained on IMCI or Emergency Triage Assessment and Treatment (ETAT) +in the last 2 years
Medicines	• Zinc-ORS Copack • Zinc tablets or syrup • ORS Sachets • Amoxicillin syrup/suspension/dispersible tablet • Co-trimoxazole syrup/suspension • Paracetamol syrup/ suspension • Vitamin A capsules • Mebendazole/albendazole cap/tab • Morphine granule, injectable or cap/tab • Artemisinin combination therapy (ACT) • Artesunate rectal or injectable forms • Ceftriaxone powder for injection • Gentamicin injectable • Procaine benzylpenicillin powder for injection

Findings

Annex Table 100 shows the average readiness of facilities offering Preventive, curative and rehabilitative services for under 5

- The average readiness to provide under 5 health services was 67% with varied availability of tracer items; equipment availability at 92%, diagnostic at 66%, medicines at 63%. Availability of guidelines and staff was the least at 42% and 33% respectively.
- Only 4% of facilities had all the select child health tracer items available.
- Availability of equipment to provide under 5 health services ranged between 86% for MUAC tape to 95% for stethoscope and weighing scale.
- Stool microscopy and Hemoglobin were the least available diagnostics tests at 59% and 60%.
- There was a remarkable difference in the availability of guidelines with IMNCI at 77% and Basic pediatric protocols 2022 at 34%

Figure 188: Readiness of preventive, curative and rehabilitative services for children under 5



Disaggregation by location, KEPH level and ownership.

Annex Table 100 shows the average readiness of facilities offering preventive, curative and rehabilitative services for children under 5.

By location,

- Average availability of under 5 health tracer items was 61% in rural and 78% in urban.
- The three most available items were the child& infant scale, stethoscope and thermometer in both rural and urban facilities
- Availability of diagnostics was significantly lower in rural than in urban facilities

By KEPH level

- Average availability of under 5 tracer items. increased as the KEPH level increased.

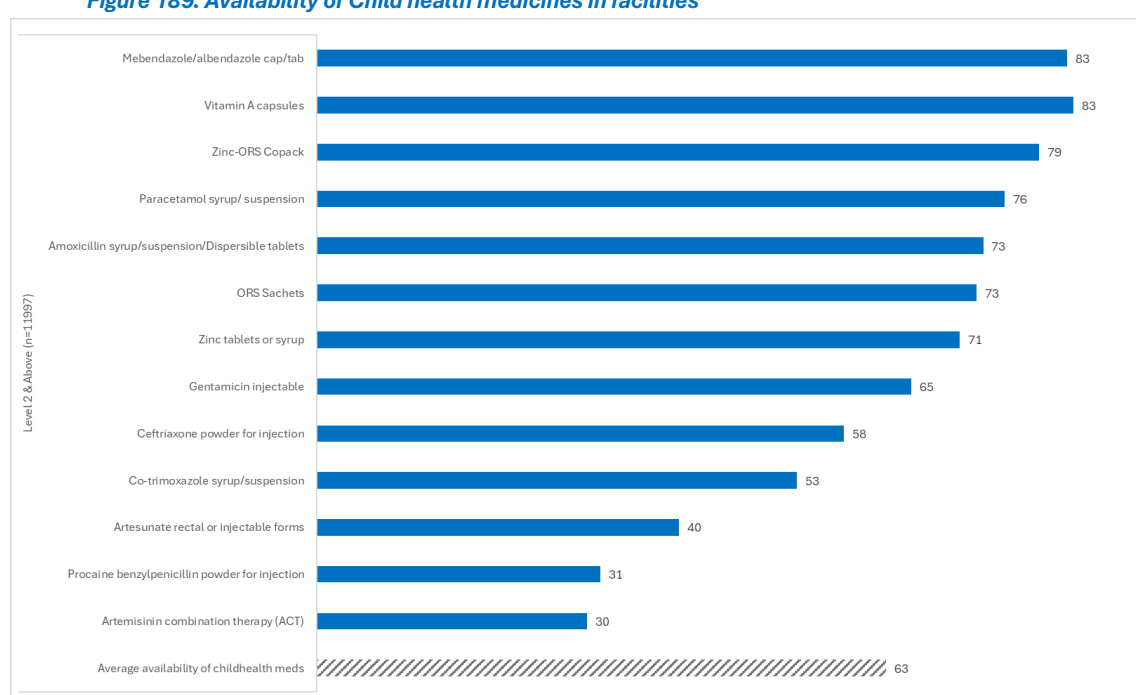
By ownership,

- Average availability of under 5 tracer items was 60% in public facilities compared to 80% in private. Notably, only 1% of public facilities had all items available.

Medicines

- Availability of medicines for the treatment of children under 5 varied from 30% to 83%.
- Mebendazole/Albendazole (83%), Vitamin A (83%), Zinc-ORS copack (79%), Paracetamol (76%), Amoxicillin (73%), ORS sachets (73%) and Zinc tablets (71%) had the highest availability. On the contrary ACT, Procaine benzylpenicillin are available in one in three facilities.

Figure 189: Availability of Child health medicines in facilities

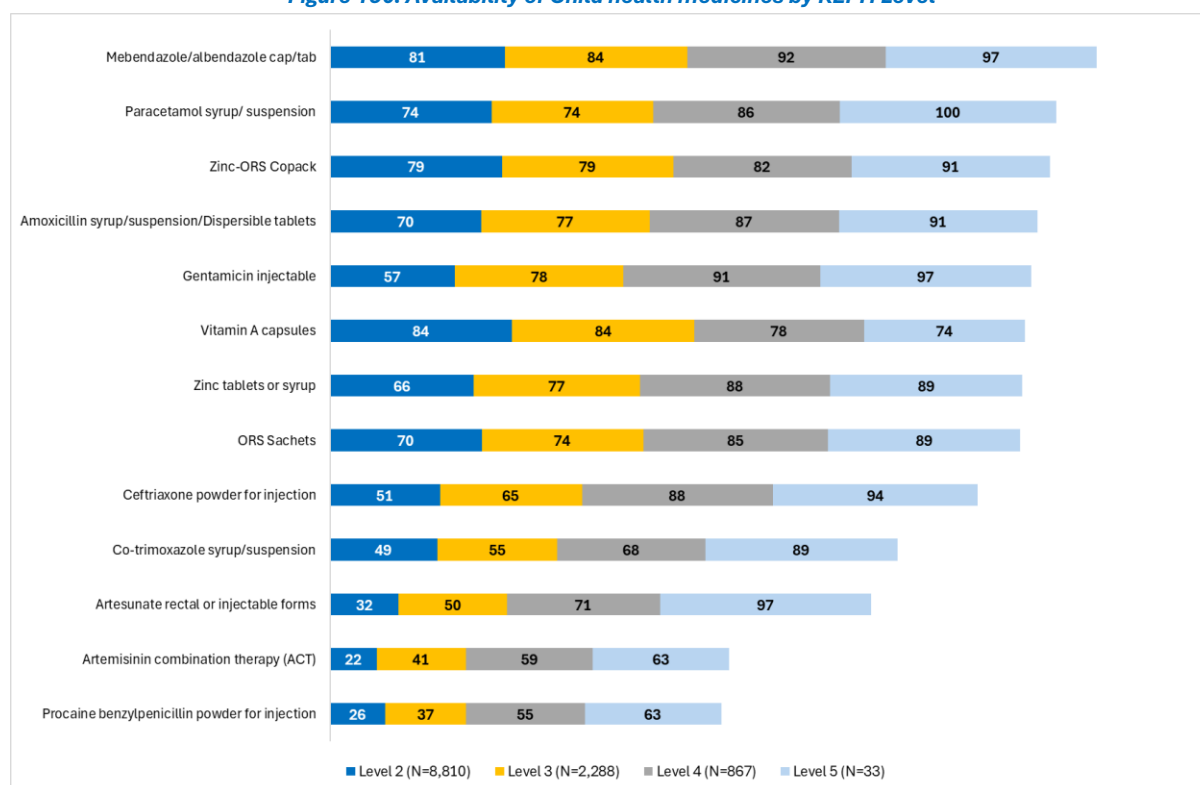


Disaggregation by location, KEPH level and ownership.

Annex Table 165 shows the average availability of medicines in facilities offering treatment services for children under 5 by level.

- Although the availability of all tracer medicines is lower in primary health care compared to hospitals, the availability of ACT, Procaine benzylpenicillin and Artesunate rectal/injectables is disproportionately lower in level 2 and 3 facilities.
- Notably, availability of Vitamin A capsules was higher in the lower-level facilities compared to hospitals.

Figure 190: Availability of Child health medicines by KEPH Level



County Distribution

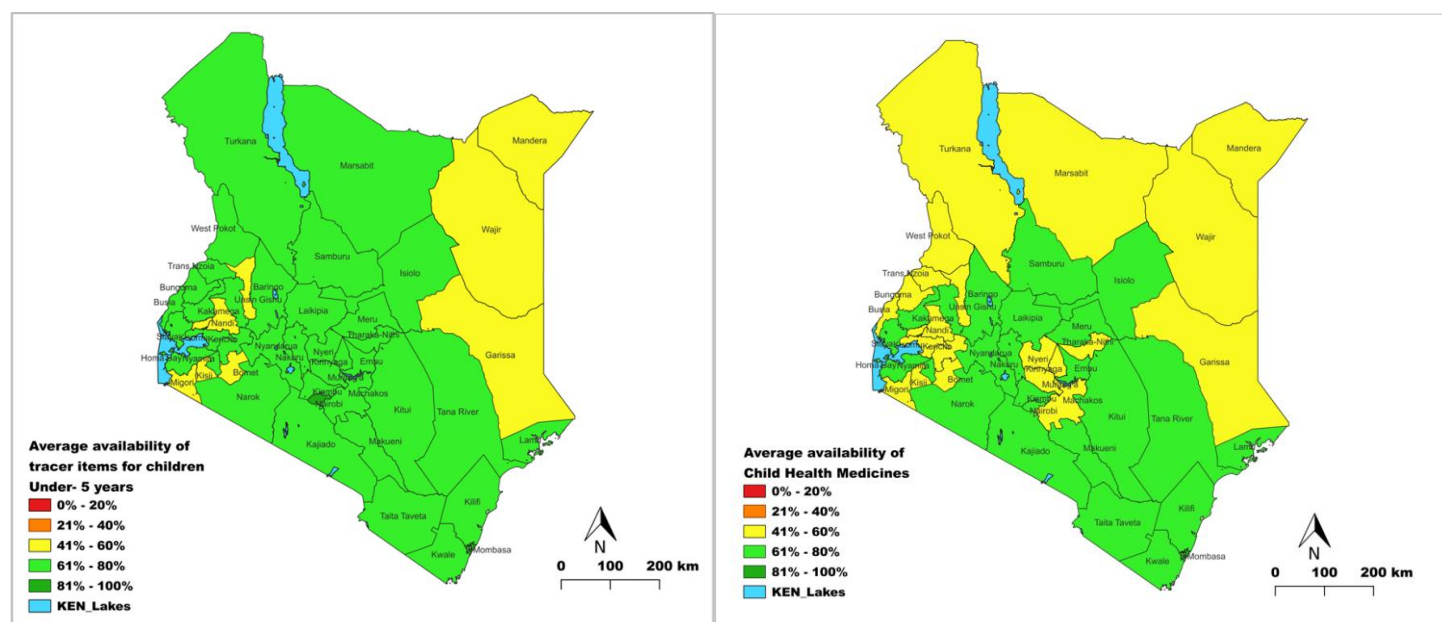
Tracer Items

- Majority of the counties had an average availability of 61-80%.
- Counties that had the highest average availability of tracer items for children under 5 services are Mombasa (84%) and Nairobi (82%).
- Nine counties had average availability of tracer items for children under 5 services below 61%, with the least availability in Nandi at 61%.

Medicines

- Mombasa county had the highest average availability of tracer medicines for children under 5 at 82%.
- Majority of ASAL counties had an average availability of 41-60% for under 5 tracer medicines.

Figure 191: Average availability of tracer items and medicine for children under 5.



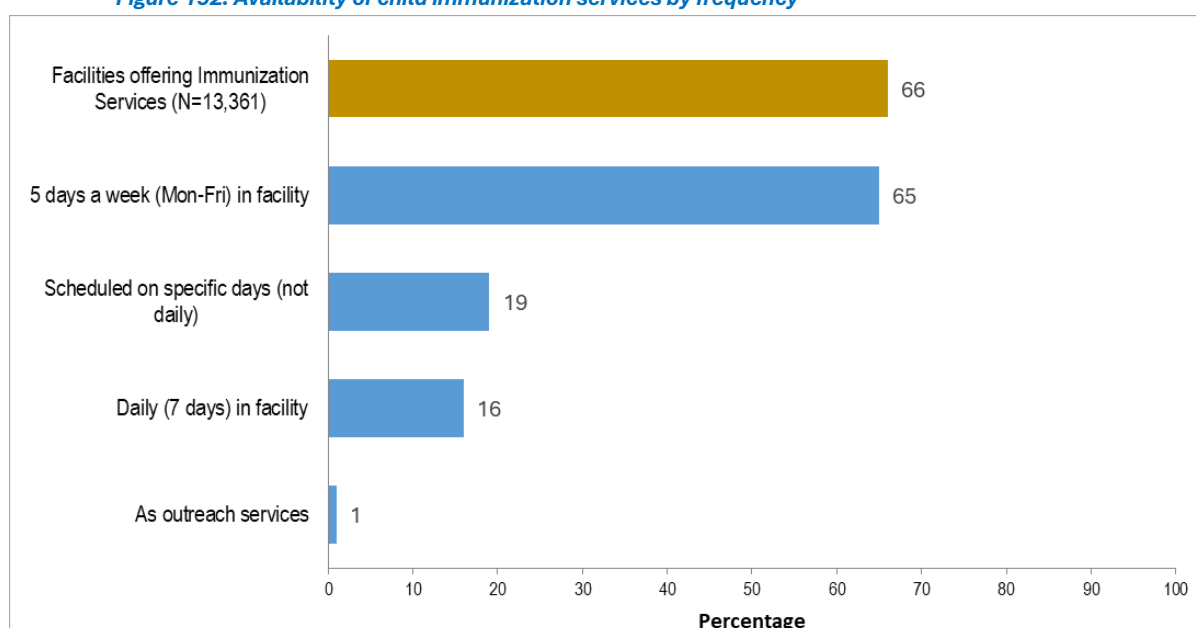
Child Immunization Services

Service Availability

Nationally, 66% (8,819) of all health facilities offered child immunization services.

- Among facilities that offer child immunization, 65% provide immunization services five days a week (Mon-Friday), and 16% provide immunization services 7 days a week, while facilities scheduling on specific days (not daily) accounted for 19%.
- Immunization services offered as outreaches in 1% of facilities

Figure 192: Availability of child immunization services by frequency



By location, 25% of urban facilities had daily immunization services compared to 11% of rural facilities. 72% of rural facilities provided immunization services 5 days a week versus 51% of urban facilities.

- Majority of level 5 facilities offered immunization services daily (56%) and only 33% offered immunization services 5 days a week.
- Most of the level 2 (66%) level 3 (63%) and level 4 (59%) facilities offered immunization services 5 days a week; Level 3,4 and 5 facilities did not offer child immunization services on an outreach basis whereas 1% of level 2 facilities provided outreach immunization services.

County Distribution

- Majority of the counties had 61-80% of their facilities offering child immunization services.
- Five counties had more than 81% of their facilities offering child immunization service; Bomet (93%), West Pokot (91%), Bungoma (84%), Laikipia (82%), Elgeyo Marakwet (81%).
- Nyeri county had the least proportion of facilities offering the services.

*The proportion of facilities that indicated they offer immunization services based on a yes/ no response.

Service Readiness

The 2024 QOC assessed service availability for child health immunization based on availability of 19 tracer items across all the facilities that offered immunization services (N=8819): The tracer services assessed are summarized in Table 103.

Table 103: Tracer items for Child health services

Domain	Child health services
Vaccines	• Oral polio vaccine • BCG vaccine • IPV (Inactivated Poliovirus Vaccine) * • DPT-HiB+HepB vaccine (pentavalent vaccine) • Rotavirus vaccine* • Pneumococcal vaccine* • Measles Rubella vaccine
Equipment	• Ice packs • Vaccine carrier • Refrigerator/Freezer • Safety box • Auto-disable syringes • Temperature monitoring device in refrigerator • Temperature monitoring chart
Guidelines	• Mother and Child Handbook) MOH 216) 2022 • Adverse Events Following Immunization Form (AEFI) • Displayed and updated immunization monitor chart

Findings.

Among the facilities that offer child immunization services,

- Availability of the seven (7) select vaccine antigens was all above 90% with the oral polio vaccines having the highest availability at 98% and rotavirus vaccine revealing the least availability at 91%. The overall vaccine score was 96%.
- Temperature monitoring devices and temperature charts for the refrigerator were available in 88% and 87% of the facilities.
- The least available tracer items were the immunization monitor chart displayed and updated (73%), Adverse events following immunization form (AEFI) 69% and Mother Child handbook 2022 at 66%.
- One in every three facilities offering child immunization services had all the tracer items.
- The average availability of child immunization tracer items was 90%.

Figure 194: Readiness score of immunization services

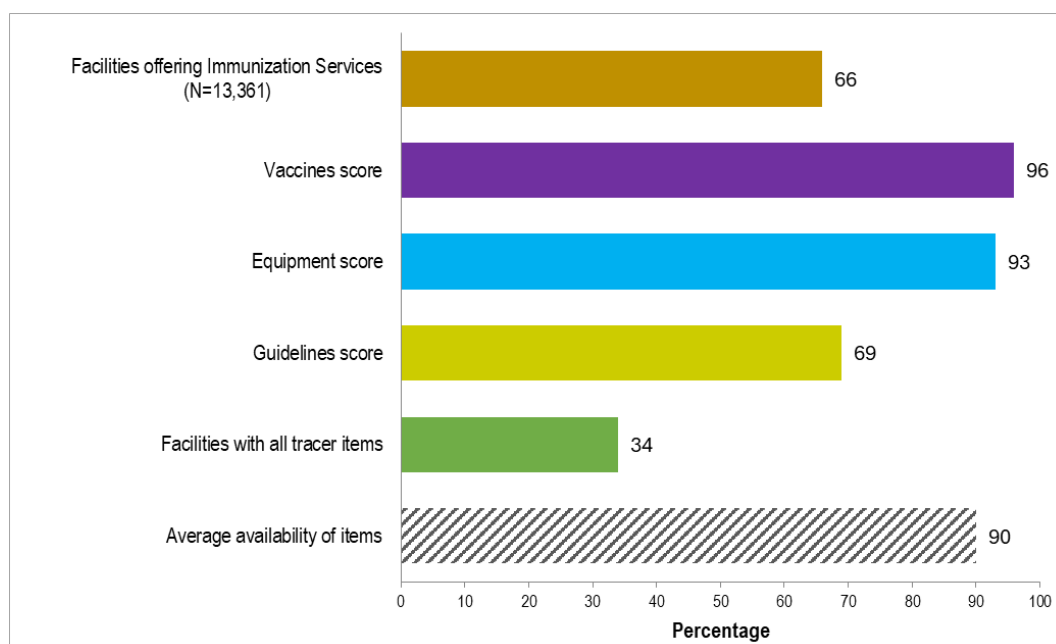
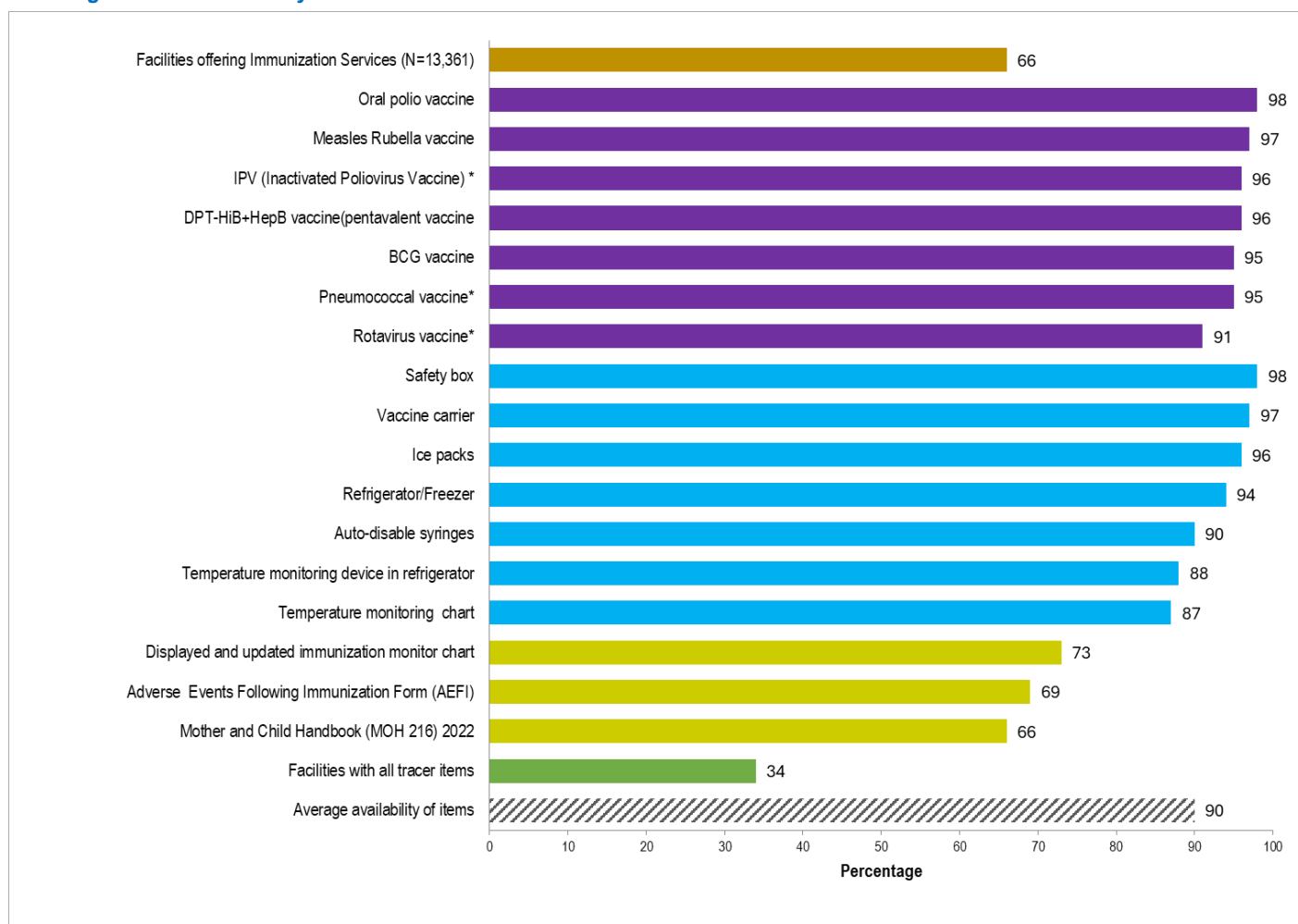


Figure 195: Availability of tracer items for child health services





Disaggregation by location, KEPH level and ownership.

Annex Table 98 shows the average readiness of facilities offering child immunization services.

By location:

- The average availability of the child immunization tracer items was 91% in urban facilities compared to rural 89%.
- Of note in rural facilities of offering child immunization services, the availability of auto-disposable syringe is 89%, and MCH handbook 62%.
- In urban facilities the least available tracer items were MCH handbook (72%), displayed and updated immunization monitor charts (72%) and adverse effect following immunization form (AEFI) (70%).
- 39% of urban facilities and 32% of rural facilities had all select tracer items for immunization.

In terms of KEPH levels;

- With the exception of level 3 facilities that had a low availability of 88% for Rotavirus antigen, all the other levels of facilities had over 90% availability of ALL the seven antigens selected as tracer items for immunization services.
- The MCH handbook 2022 was the least available tracer items in all the levels of facilities as follows; level 2 (64%), level (68%), level 4 (70%) and level 5 (86%).
- Ice packs, vaccine carriers and refrigerators or freezers had near universal availability in all the four KEPH levels of facilities

As per the ownership.

- NGO facilities had the least availability of the following tracer immunization items: BCG vaccine (88%), refrigerators/freezers (85%), temperature monitoring device in the fridge (83%) and temperature monitoring chart (81%) compared public facilities BCG vaccine (97%), refrigerators/freezers (93%), temperature monitoring device in the fridge (88%) and temperature monitoring chart (87%).
- Public facilities had near universal availability of most of the select tracer immunization items, they had the least availability for MCH handbook 2022 (62%) and Adverse events following immunization form AEFI (72%).

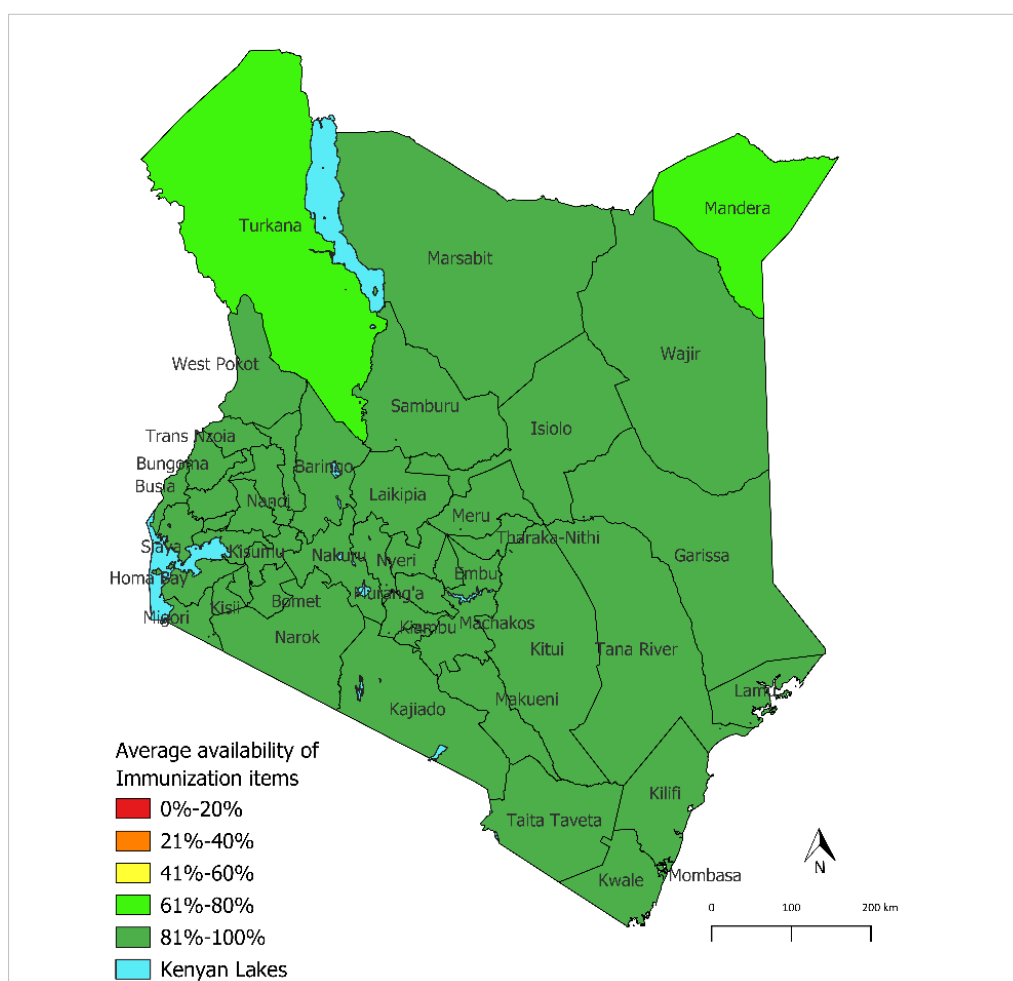
County Distribution

Figure 196 shows the average readiness of facilities offering child immunization services by county.

Amongst facilities offering child immunization services,

- Average availability of child immunization services in 45 out of 47 counties was between 81 – 100%.
- Only two counties had an average availability lower than 81%; Average availability in Turkana at 79% and Mandera at 72% respectively.

Figure 196: Average availability of Immunization Items by county



Discussion

Immunization:

- Availability of child immunization services decreased from 71% (KHFA 2018) to 66% (8819).
- Amongst facilities providing child immunization services, the average availability of tracer item was 74% in KHFA 2018. There has been a remarkable improvement in average availability of tracer items to 90% in this survey.
- Low availability of MCH handbook across all facilities results in a gap in documentation of the service given and affects the continuity of child immunization services.

Table 104: Child health services recommendations

Key Findings	Recommendation
Immunization readiness • Low availability of MCH handbook leads to incomplete documentation of	• Avail MCH handbooks to all health facilities offering MCH services.



Key Findings	Recommendation
immunization and other services received and continuity of care.	
Inadequate availability of cold chain equipment such as refrigerators and temperature monitoring device in the fridge. This is particularly low in NGOs facilities.	Invest in cold chain equipment to ensure safety and efficacy of vaccines.
Nationally there was low availability of AEFI forms which compromises on surveillance and reporting of vaccine related adverse events.	Distribute AEFI forms and sensitize health workers on their use.

Adolescent health

Adolescents are individuals between 10 and 19 years old. They represent a significant portion of the population. Nationally, approximately 1 in 5, or 11.6 million of Kenya's population, is an adolescent, per the KNBS 2024 projected population.

While most adolescents are healthy, this age cohort suffers from substantial premature death and illness mainly due to unsafe sexual activity, injuries/road accidents, violence, substance abuse, and mental illness. Key challenges faced by adolescents include but are not limited to :

- Vulnerability to HIV & STIs,
- Early marriage and sexual, gender-based violence.
- High unmet needs for contraception.
- Mental health and substance use

Service Availability

Adolescent health services focus on teenagers' unique physical, mental, and social needs. They provide education, prevention, and treatment to promote healthy behaviors, prevent risky activities, and set the foundation for lifelong health during their developmental stage.

The 2024 QOC assessed the availability of adolescent services based on the 7 tracer services shown in Tables 105 below

Table 105: Adolescent health tracer services

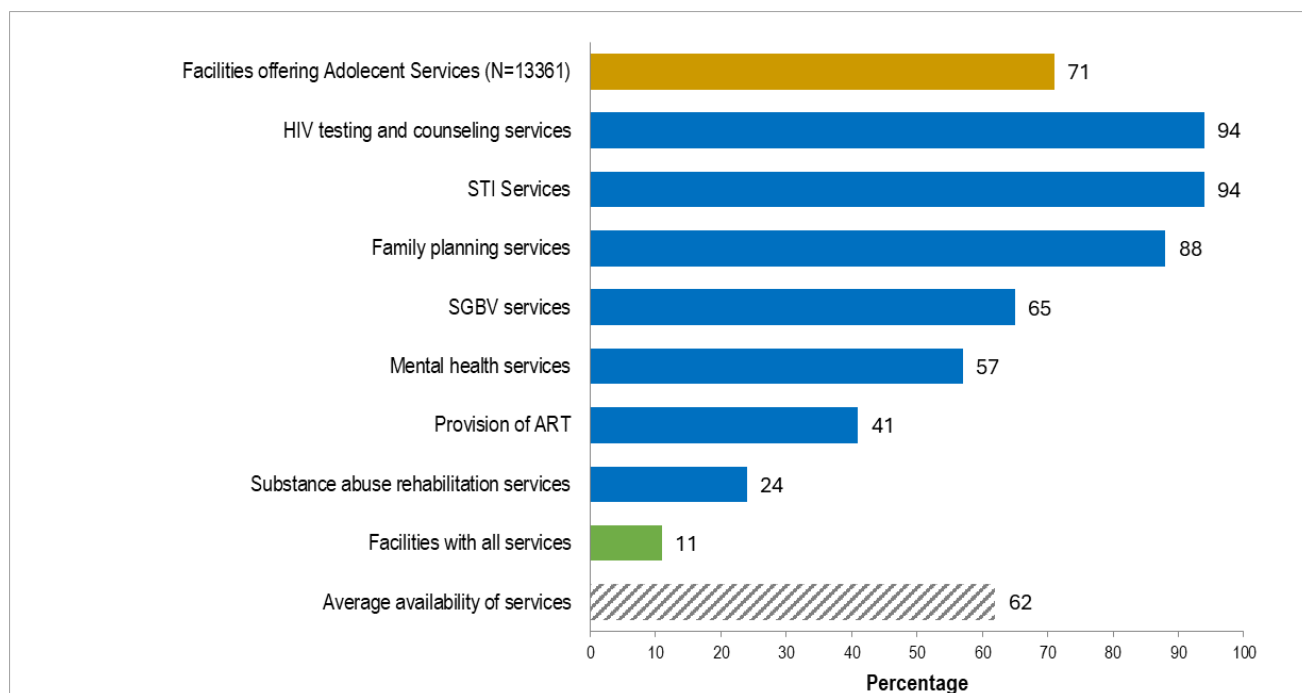
Domain	Adolescent Tracer Services
Tracer services	● HIV testing and counseling services ● Provision of ART ● STI Services ● SGBV services ● Family planning services ● Mental health services ● Substance abuse rehabilitation services

Key findings

Nationally, 71% of facilities offered for adolescent health services.
Among facilities offering adolescent health services,

- HIV testing, counseling, and STI services were the most available at 94%. In comparison, the provision of substance abuse rehabilitation services (24%), antiretroviral therapy (ART) (41%), and mental health services (57%) to adolescents were the least available services.

Figure 197: Percent of facilities with adolescent health services (N=9520)



Disaggregation by location, KEPH level and ownership

Annex Table 102 shows the disaggregation of adolescent services by location, KEPH level, ownership and by county

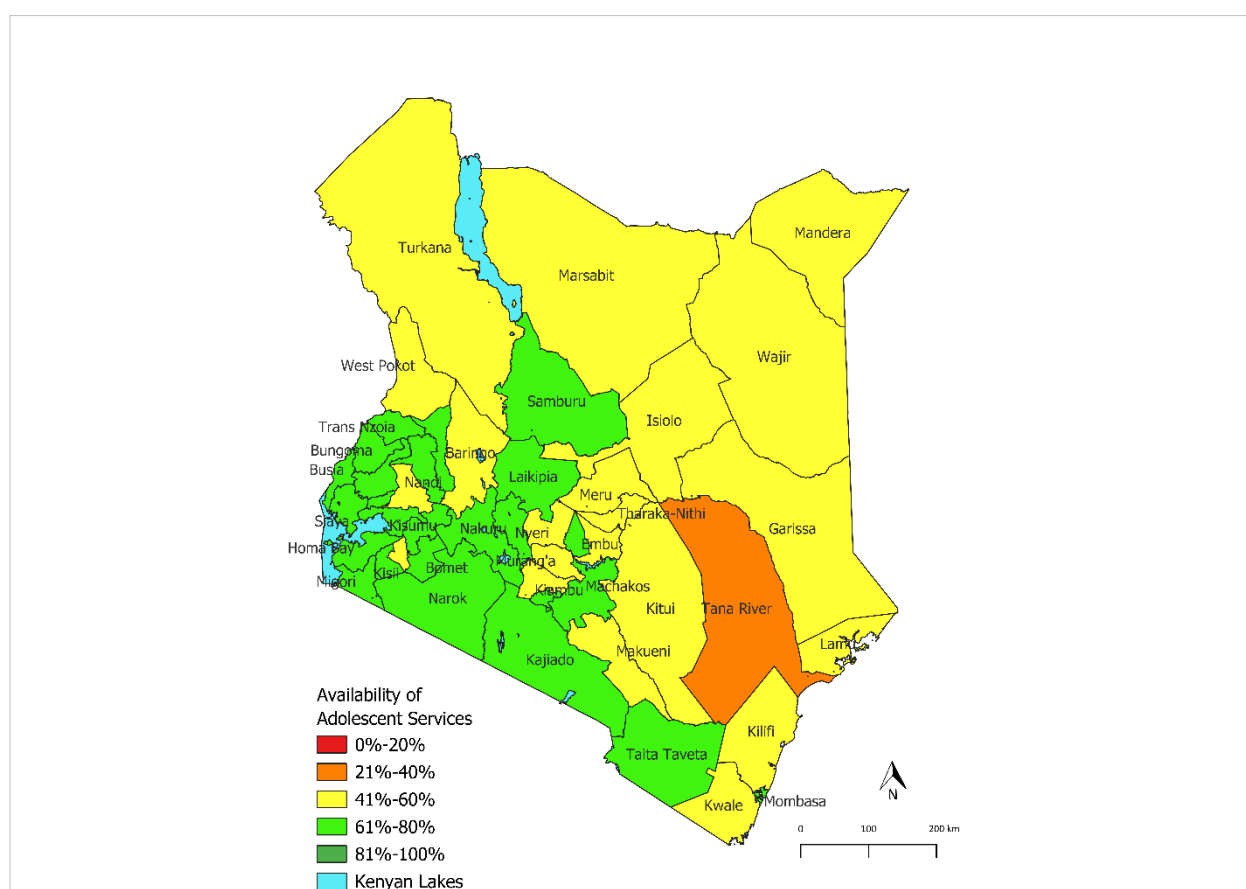
- The percentage of facilities with tracer adolescent services is almost similar in rural (62%), and urban areas (61%).
- Level 5 facilities have the highest average availability of services (85%)
- Private facilities have the lowest (55%) average availability of services

County Distribution

Figure 198 shows the disaggregation of adolescent services by county.

- On average, Tana River County has the least adolescent health services available.
- Most counties exhibit moderate availability of these services ranging 41-60%.

Figure 198: Availability of Adolescent services by county



Service Readiness

The 2024 QOC assessed readiness to offer adolescent health services based on the tracer items available in Table 106 below.

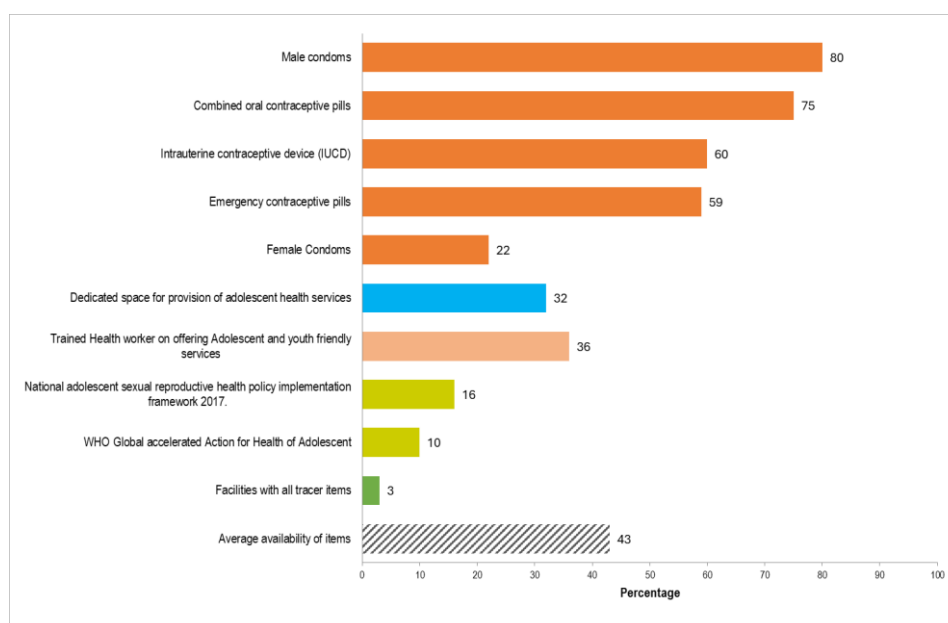
Table 106: Tracer items for adolescent services

Domain	Tracer Items
Commodities	- Male condoms - Female Condoms - Combined oral contraceptive pills - Emergency contraceptive pills - Intrauterine contraceptive device (IUCD)
Infrastructure	Dedicated space for provision of adolescent health services
Training	Trained Health worker on offering Adolescent and Youth Friendly Services
Guidelines	National Adolescent Sexual Reproductive Health Policy Implementation Framework 2017.

Findings.

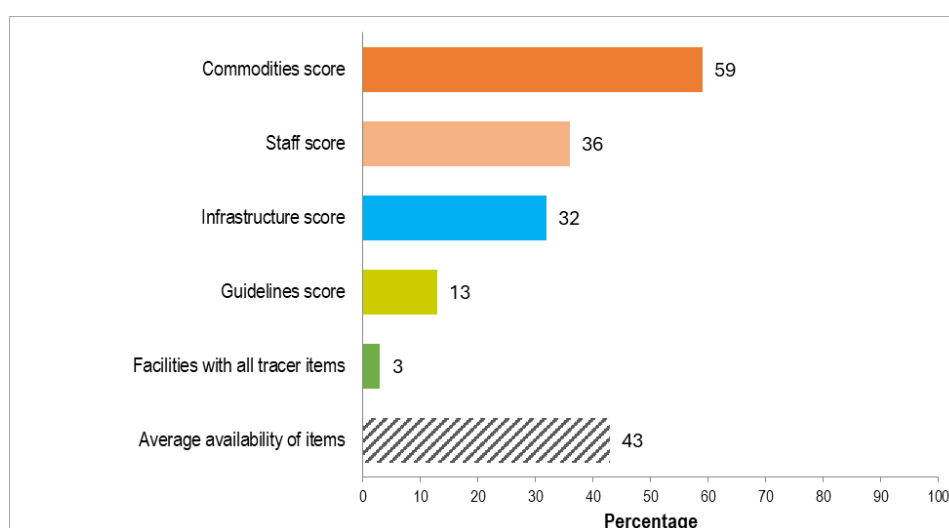
- Male condoms are the most available at 80%, followed by combined oral contraceptive pills (75%) and intrauterine contraceptive devices (60%). The least available commodity was female condoms at 22%. The overall commodity score was 59%.
- Only 32% of facilities have dedicated spaces for adolescent health, and 36% have trained health workers on adolescent health. Guidelines for adolescent health are available in 13% of facilities.

Figure 199: availability of adolescent health tracer items in facilities(N=9,520)



- Only 3% of facilities have all adolescent services tracer items.
- The average availability of adolescent tracer items at facilities was 43%.
- 42% of rural facilities have tracer items, compared to 45% in urban areas.

Figure 200: Readiness of Adolescent services

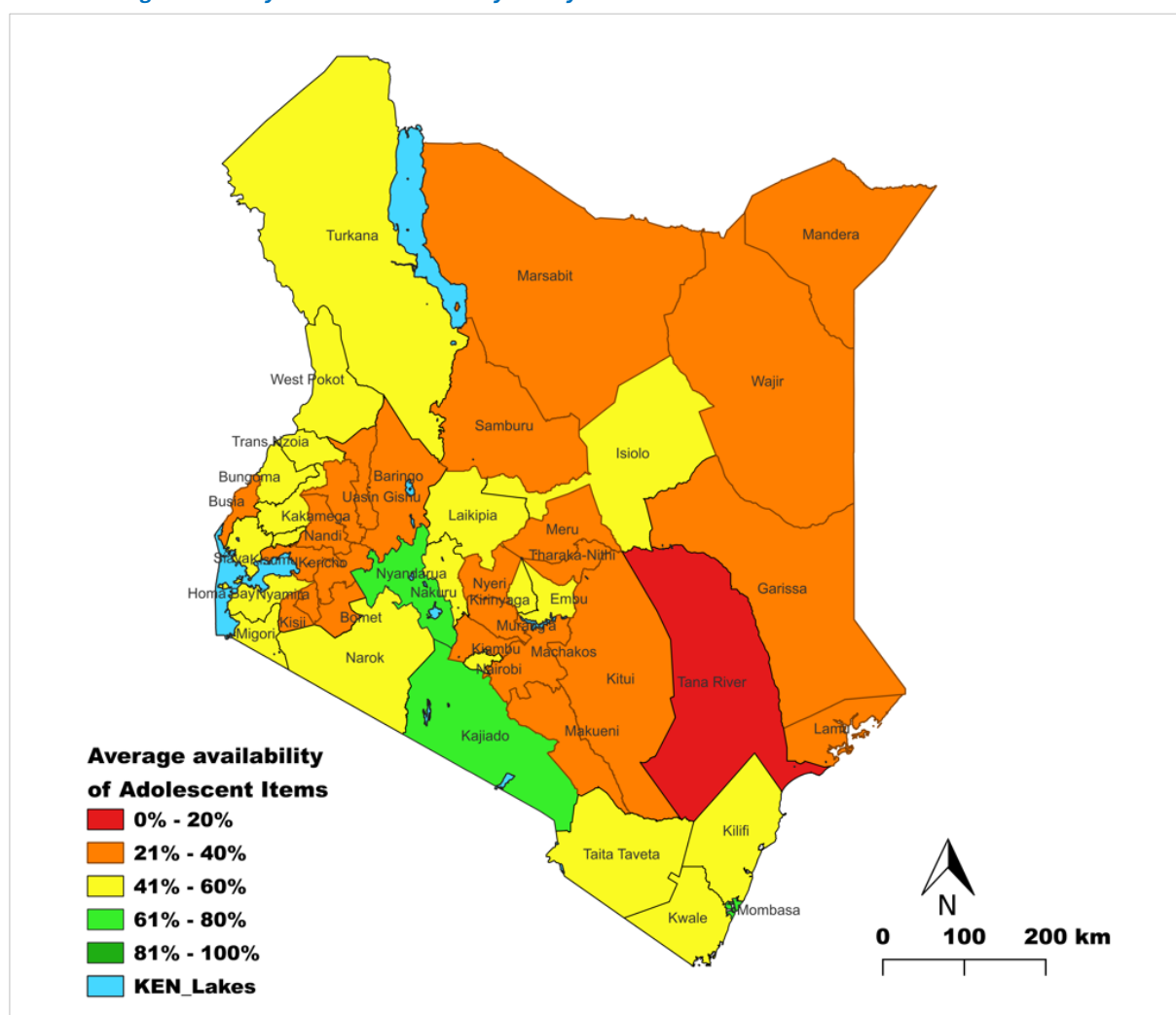


County Distribution:

Figure 201 shows the availability of adolescent health tracer items distributed by county.

- Tana River county has the least average availability (0%-20%) of adolescent health items.
- Moderate availability (41%- 60%) is observed in Meru, Kisii, Samburu, and Mandera counties. Counties with high availability (61%- 80%) include Kajiado and Nyandarua.
- Two counties, Vihiga and Nyamira, have very high average availability of adolescent health tracer items (above 81%)

Figure 201: Average availability of adolescent items by county



DISCUSSION

Service availability

HIV testing, STI, and family planning services were more readily available than mental health, substance abuse, and rehabilitation services. This could be attributed to funding available to



promote HIV and STI testing, as well as FP commodities. Provision of ART was less than 50% available, which could have been caused by stockout challenges.

Limited investments have been made in substance abuse and rehabilitation services, possibly due to the focal dispersion of patients requiring these services, which are mainly in urban slums and upmarket areas. Higher-level facilities have more services available for adolescents than lower-level facilities, as they have higher staffing ratios and more equipment, infrastructure, and other health products and technologies.

Tana River County had the least available adolescent health services (21% - 40%), with the northern part of the country having moderate availability (41% - 60%) and the southern half having over 60% availability. This could be attributed to the discrepancies in population densities between the regions, with the northern half of the country having a sparser population density and distinct cultural differences that may affect service availability.

Service readiness

While investments have been made in securing adequate commodities to provide adolescent health services, more must be done to expand the infrastructure and train staff to deliver the services comprehensively. Despite national guidelines launched in 2017, 90% of the facilities still need to be made available, indicating that more needs to be done to disseminate national guidelines to the facility level.

Trends

Comparison between service availability in the Kenya Health Facility Assessment Report 2018 and this survey revealed overall improvement in service availability for adolescent health. The proportion of facilities offering adolescent Health services improved from 62% in 2018 to 71% in 2024. HIV testing services improved from 77% in 2018 to 94% in 2024. Provision of ART to adolescents improved marginally from 32% to 41%. Provision of family planning services to adolescents enhanced from 56% in 2018 to 88% in 2024. On service readiness for adolescent health, readiness to provide male condoms decreased marginally from 83% to 80% in 2018 and 2024 respectively.

Figure 202: Trend of service availability in 2018 and 2024

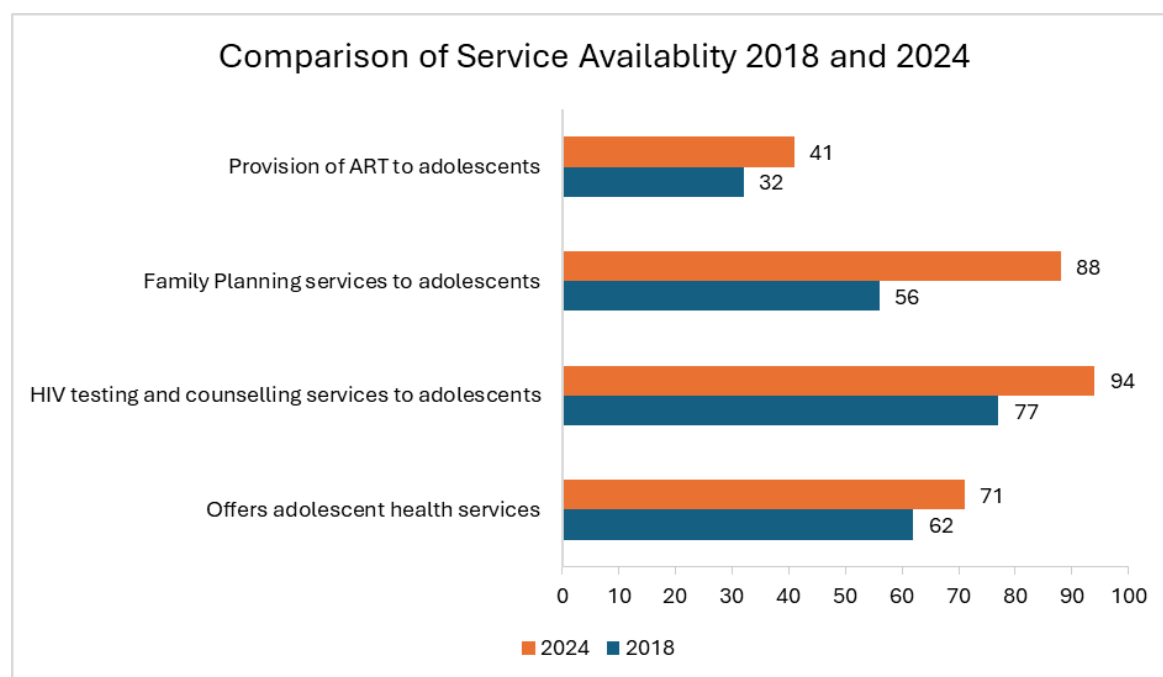


Table 107: Adolescent health recommendations

Key Findings	Recommendation
The northern part of the country has average availability of adolescent services (41% - 60%) while the southern half having over 60% average availability	Increase efforts to improve service availability in the northern part of the country.
- Tana River County had the least available adolescent health items (21% - 40%), - Vihiga and Nyamira, have very high average availability of adolescent health tracer items (above 81%)	Conduct qualitative assessments in Tana River (0%-20%) and Vihiga and Nyamira (> 80%) and document unique challenges and best practices for cross-county learning.
Infrastructure and staff trained on the provision of adolescent services available in just one in three facilities.	- Invest in infrastructure according to the National Guidelines for Provision of AYF services. - Increased sensitization of HCWs and CHPs on adolescent health service provision through CMEs and training on Adolescent Health Guidelines is expected to improve adolescent health service availability.

Nutrition and dietetics

Introduction

Kenya is facing a high burden of malnutrition including underweight, overweight, micronutrient deficiency and disease related malnutrition. As a result, there is an increased need to ensure health facilities offer responsive nutrition and dietetics services for the different types of malnutrition across the life-course in all levels of healthcare. Good nutrition contributes to prevention of diseases and associated conditions, accelerated patient recovery, reduced length of hospital stay, reduced medical cost and overall positive health outcomes.

Service Availability

The 2024 Quality of Care assessed the availability of nutrition based on the seven (7) tracer services as shown in table 108 below.

Table 108: Nutrition Tracer services

Domain	Nutrition
Services	All KEPH Levels - Nutritional Counselling - Integrated Management of Acute Malnutrition (CSBFB, RUTF, RUSF, other) - Diet Therapy (diet plan, plan, diet prescription, feeding regimen for inpatients) - Suitable breastmilk substitute Level 4 and 5 (hospitals) - Parental Feeds - Enteral Feeds Facilities with maternity and inpatient services - Specialized or modified diet for patients according to their medical condition (E.g. children cancer, diabetic, renal)

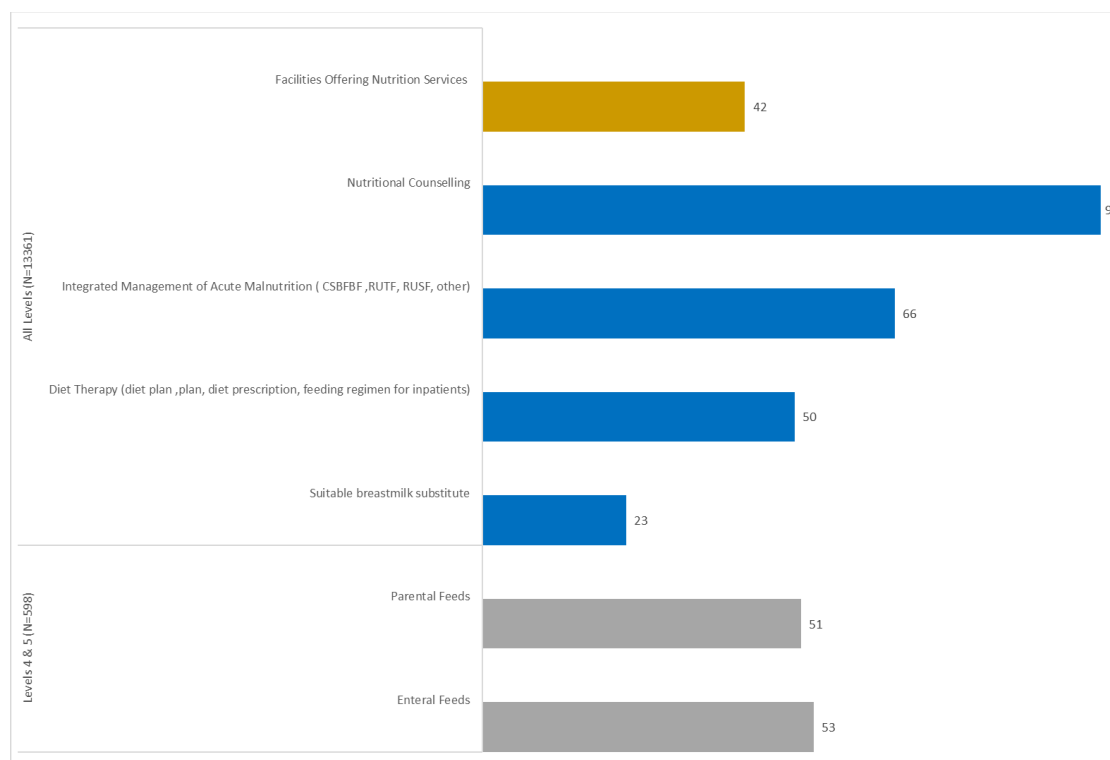
Findings

Nationally 42% of all the facilities offer nutritional services. Among facilities that offer nutritional services,

- Of the four basic services offered at all levels of care, nutritional counselling was almost universally available at 99% compared to IMAM, diet therapy and suitable breastmilk substitutes at 66%, 50% and 23 % respectively.
- Parental and enteral feeding were available at just half of the hospitals.

- Two of every three facilities with inpatient and maternity offered specialized or modified diet for patients according to their medical condition.

Figure 203: Availability of tracer nutrition services.



Disaggregation by location, KEPH level and ownership

Annex Table 105&106 shows the disaggregation of nutrition services by location, KEPH level, ownership and by county.

Among health facilities offering nutritional services,

Basic Services

- Availability of IMAM services was comparable at level 5 and 4 facilities at 85% and 86% respectively: decreasing to 73% in level 3 and 59% in level 2 facilities.
- By facility type, IMAM was least available in private facilities at 52% and most available at public and NGO facilities at 71% and 79% respectively.
- Availability of diet therapy was notably low in public facilities at 43% compared to private (57%), FBO (59%) and NGO (77%).

Specialized Services- Parenteral and Enteral Services in Hospitals

- The availability of parenteral and enteral feeds was higher in the Level 5 facilities, 97% and 94% respectively compared to Level 4 facilities where it was 49% and 51% respectively.

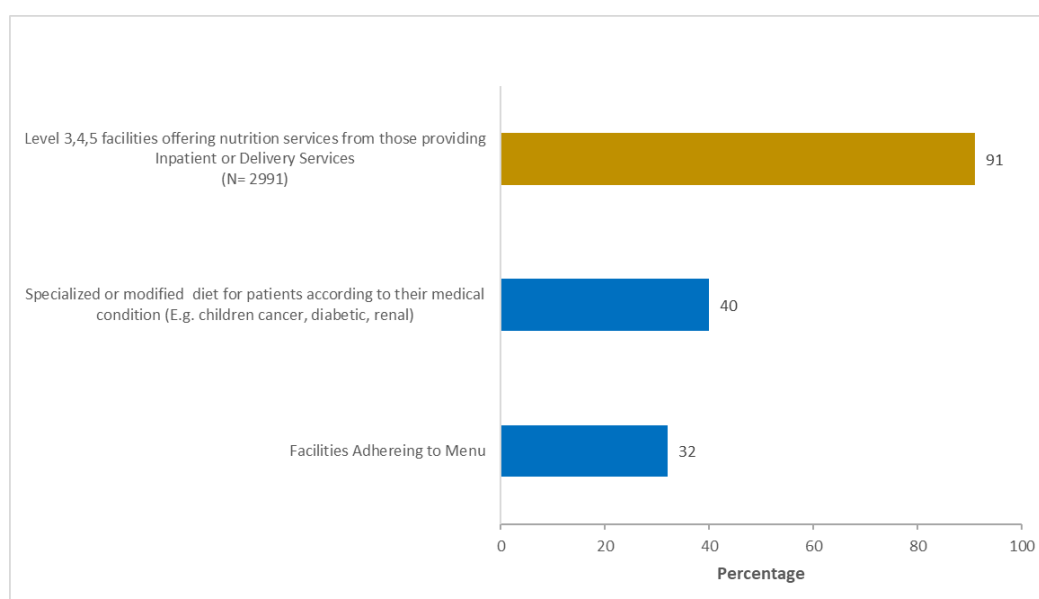
- Specialized or modified diet for patients according to their medical condition was moderately available in level 4 (59%) and level 5 (63%) facilities.

Nutritional Services in Facilities Offering Inpatient or Maternity Services.

Among facilities offering inpatient or maternity services, 91 % offered nutrition services. Of these facilities

- Specialized or modified diet for patients according to their medical condition (E.g. children cancer, diabetic, renal) in 40% while 32 % of facilities adhered to a menu.

Figure 204: Percent of facilities offering inpatient or maternity services with tracer nutrition services (N=2721)



Annex Table 107 shows the disaggregation of facilities that have a balanced hospital menu available and displayed in the kitchen by location, KEPH level, ownership and by county

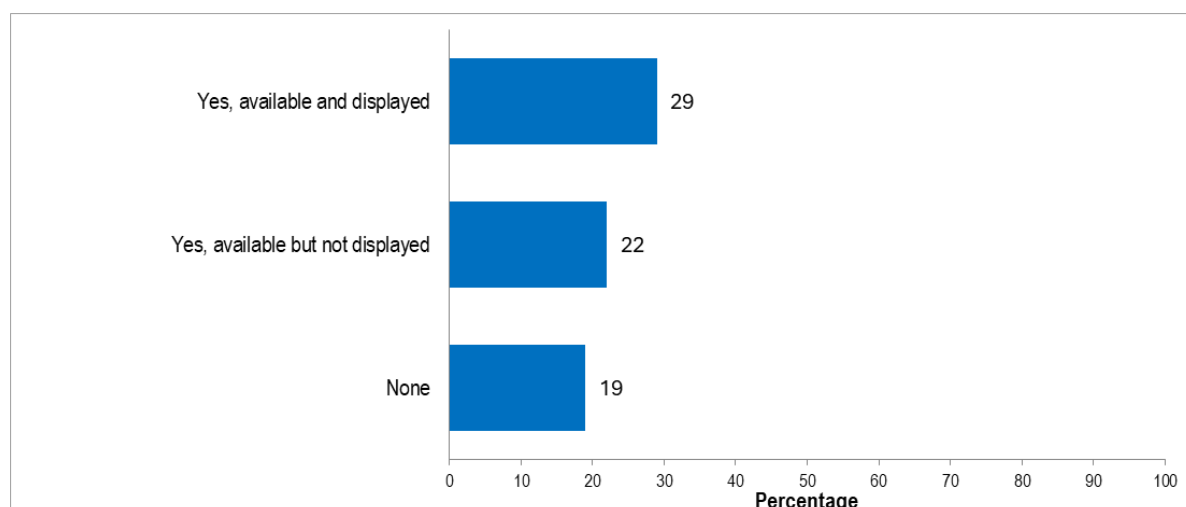
Out of level 3,4, and 5 health facilities offering inpatient or maternity services, and with nutritional services

- 32% had adhered to a menu, while 29% of the facilities had it available and displayed in the kitchen.

Of the level 5 facilities, 83% adhered to a menu while 72% had the menu available and displayed.

- Most of the health facilities that had no balanced hospital menu were located in rural areas (74%) as compared to urban health facilities at 62%.
- Only 27% of public health facilities adhered to the menu compared to 34% and 47% in the Private and FBOs respectively.

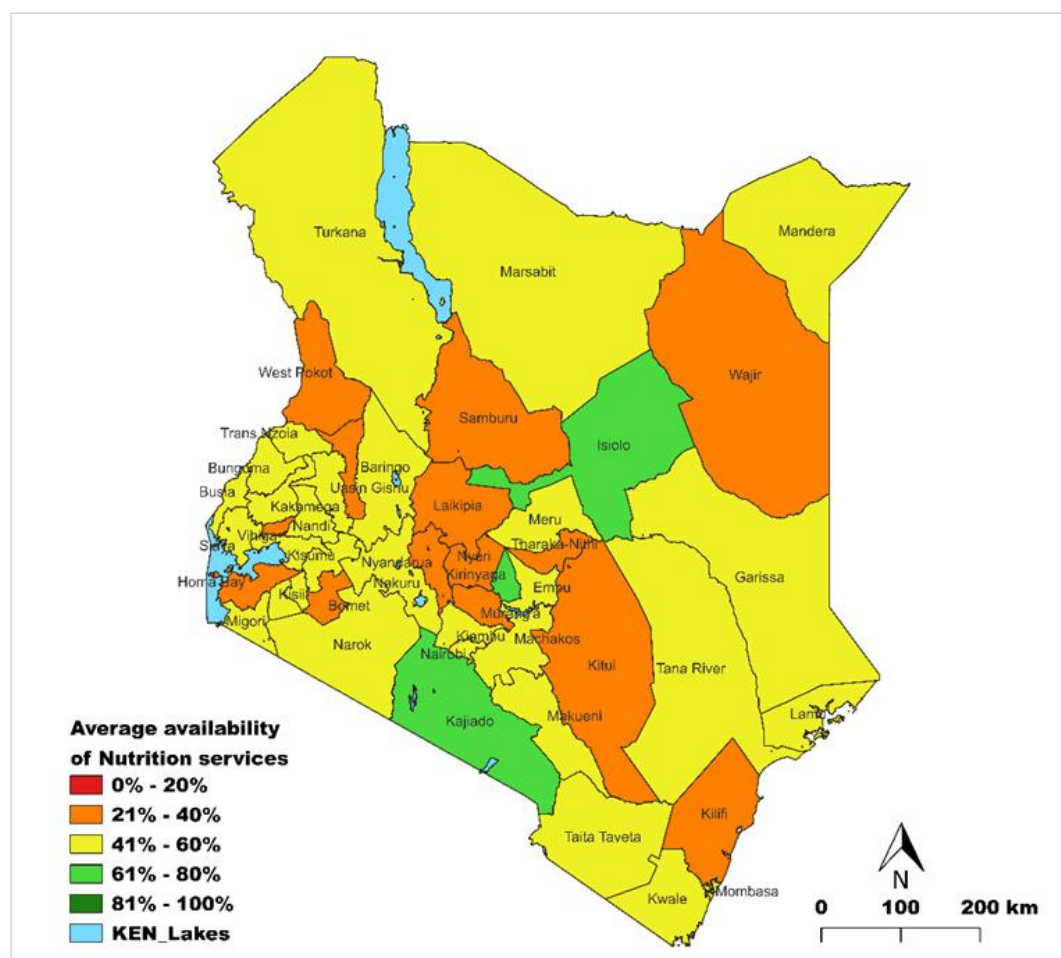
Figure 205: Percent of level 3,4 and 5 facilities offering inpatient or delivery services that have a balanced menu available and displayed in the kitchen (N=870)



County Distribution

Kajiado, Embu and Isiolo counties had the highest (61-80%) average availability of all nutritional services. Most counties had 41-60% average availability of nutritional services.

Figure 206: Average availability of nutritional services by county



Discussion

Nutrition and dietetics services are provided to address different types of malnutrition. The type and quality of services provided were not determined during the audit. The good performance for nutrition counselling could have been attributed to national nutrition programs implementation like the Maternal, infant and young child nutrition (MIYCN) where healthcare workers have been trained on infant and young child feeding counselling. Nutrition education and messaging could have been reported as counselling. However, the scope, threshold, type and target patients for counselling were not captured.

The different tracer services address both primary health and specialized nutrition services. Basic nutrition counselling and integrated management of acute malnutrition services are expected to be provided in all levels of healthcare. However, disease specific nutrition counselling, diet therapy, parenteral and enteral feeds should be provided in all level four and five hospitals. Some counties have previously reported to have nutrition and dietetics volunteers working in level two and three which could explain the availability of specialized nutrition services in these levels.

All facilities with inpatient services (including maternity) are required to have a menu providing nutritious and safe diets that are responsive to patient needs. However, the availability and adherence to the menu performed poorly. This could be attributed to lack of a national inpatient feeding protocol to guide and support capacity for procurement, patient menu development, food preparation /service and financing among others.

The good performance of level five hospitals could be as a result of availability of nutrition and dietetics staff. The poor performance at lower levels of healthcare could have been attributed to inadequate human resource, nutrition commodities and capacity to deliver.

Table 109: Nutrition Recommendations

Key finding	Recommendations
Nutrition services in Kenya are inadequately integrated and unequally distributed across healthcare levels and geographic regions, deviating from WHO standards. While nutrition counselling is widely available, comprehensive services are lacking, especially in lower-level facilities (Levels 2 and 3), public health institutions, and rural areas.	- The national and county governments should increase the investment for nutrition and dietetics services to ensure that all facilities at all levels of care provide comprehensive nutrition and dietetics services as per existing standards and guidelines. - The nutrition component in the Primary health care strategy should be strengthened to address the severe gaps in nutrition services at level two and three facilities.
The performance for primary healthcare nutrition services is higher than	



Key finding	Recommendations
specialized nutrition services indicating a need to increase availability of these services.	● To address the access to services gap, the nutrition and dietetics outreaches should be increased and include more specialized services.
● The disparity between urban and rural areas, as well as public and private facilities, highlights systemic challenges in ensuring universal access to nutritional care.	● The availability of specialized nutrition services at lower-level facilities provides an opportunity to explore home based nutrition and dietetics services. ● There is a need to develop and implement inpatient feeding protocols to address hospital acquired malnutrition. In addition, there is a need to increase and ring fence funding for inpatient feeding at all levels of care to support adherence to hospital menus.



IN-PATIENT SERVICES-MEDICAL WARD

In-patient services are critical to healthcare delivery, providing patients with round-the-clock medical attention and support during their hospital stay. The availability and readiness of these services are essential to ensure optimal patient outcomes.

Availability refers to the extent to which facilities and resources—such as hospital beds, specialized wards, medical equipment, and trained healthcare personnel—can meet patient needs at any given time.

Readiness, on the other hand, highlights the preparedness of healthcare facilities to deliver high-quality care, which includes having essential supplies, trained staff, and functional infrastructure in place.

Ward rounds in health facilities is a critical element of patient care, where health care providers review and discuss individual patient progress, collectively plan for treatment and progressively adjust care based on patients' health status. The ward rounds are conducted routinely by a multi-disciplinary team depending on individual patient needs, and is usually led by a medical specialist in the respective field. Routine ward rounds allow for continuous patient assessments and thus improve patient outcomes. In addition, it also provides a learning opportunity for junior staff to gain knowledge and skills from their senior colleagues.

The level 2 health facilities offering inpatient services included inpatient beds in the maternity wards.

Service Availability

The 2024 QOC assessed inpatient services in medical wards (both male and female), focusing on the following: the number of beds and their occupancy, the availability of linen and mattresses with Mackintosh, the availability of updated emergency tray, personal protective equipment, and medical waste segregation facilities.

Table 110: Inpatient tracer services

Domain	Tracer Services
Inpatient tracer services	• Patient gowns • Mackintosh covered mattresses • Linen

Findings

Service Availability

Availability of in-patient services (medical wards)

Nationally, 22% (2955) of health facilities had medical in-patient services.

Amongst the facilities offering patient services,

- 
- There were 741 level 2 facilities, 1,231 level 3 facilities, 946 level 4 facilities and 37 level 5 facilities.
 - Half of the health facilities providing inpatient services were private, a third were public, 16% FBO and 1% NGO
 - Nairobi county had the highest number of facilities with in-patient services, 344, while Bomet and Nyandarua counties had the least (7 facilities each)

Functional Inpatient Beds

- A total of 87,577 functional in-patient beds in medical wards were available across the 2955 health facilities out of which 37,514 (43%) were occupied. However, patients were found to be sharing beds in 4% of the facilities
- Most of the beds were available in urban facilities (61,111) as compared to rural facilities which had 26,466 beds.
- Level 4 facilities had the highest number of beds (45,591), followed by level 3 facilities with 22,219 beds, level 2 facilities with 11,536 beds and level 5 facilities with 8,230 beds
- Private health facilities had the highest number of beds (42,240) compared to 29,466 in public, 14,925 in FBO and 947 in NGO

Availability of patient gowns in medical wards

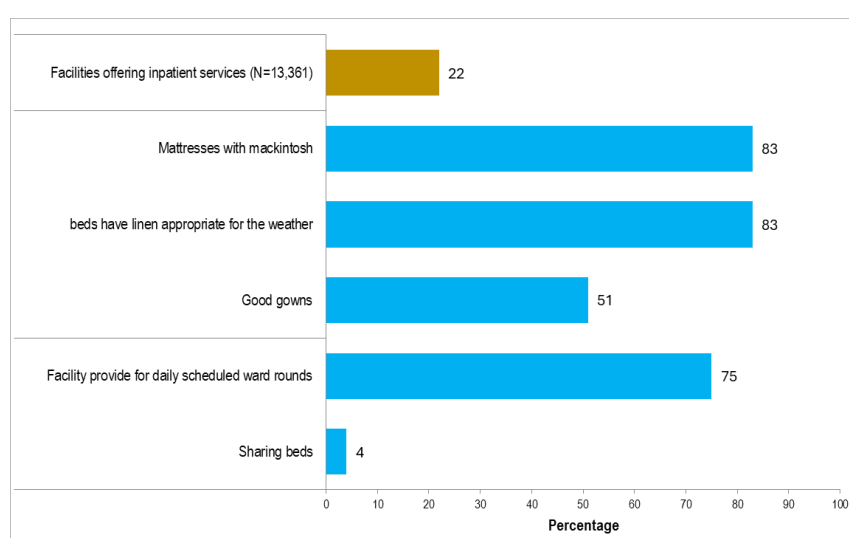
- About half of the facilities (51%) had their patients with gowns which were in good condition
- By location, Majority of health facilities with good patient gowns were in urban areas (58%) compared to 41% of rural areas
- By KEPH level; Less than half of level 2 and 3 health facilities had their patients in good gowns (46% and 48%, respectively) compared to level 4 and 5 facilities at 59% and 68% respectively
- By ownership; availability of good patient gowns was highest in private health facilities at 59% and lowest in public facilities at 35%
- By county; Availability of good patient gowns in health facilities was highest in Murang'a county at 95% and lowest in Vihiga County at 5% Only 1% of the health facilities had their patients having torn gowns

Availability of mattresses covered with Mackintosh

- Majority of the in-patient beds (83%) in health facilities had mattresses covered with Mackintosh
- By location; More inpatient beds in health facilities in the urban areas (86%) had their mattresses covered with Mackintosh compared to rural at 78%.

- By KEPH Level; Level 5 health facilities had the highest proportion of facilities with beds covered with Mackintosh at 92% followed by level 4 at 89%, level 3 at 80% and level 2 at 77%
- By ownership, Analysis by facility managing authority categories showed that 90% and 89% of FBO and NGO health facilities respectively had inpatient beds covered with Mackintosh compared to 87% and 72% of private and public facilities respectively
- By county; All health facilities in Isiolo, Tana River, Tharaka Nithi and Kirinyaga counties had in-patient beds covered with Mackintosh
- Availability of in-patient beds covered with mackintosh in the health facilities was lowest in Bomet county at 43%

Figure 207: Availability of inpatient services in facilities



Service Readiness

The 2024 QOC assessed readiness to provider inpatient services in medical wards (both male and female), focusing on the following tracer items.

Table 111: Tracer items for inpatient services

Service Readiness	Tracer Items
In patient tracer items	• Emergency Trays • PPE • Medical Waste Segregation Items

Emergency trays in medical wards

Emergency trays in medical wards aims to provide immediate access to essential medical supplies and medications in case of an emergency, such as sudden deterioration of a patient's condition within the ward. The tray is ordinarily composed of airway management supplies, breathing equipment, circulatory support supplies and emergency medications.

The quality-of-care survey assessed availability of;

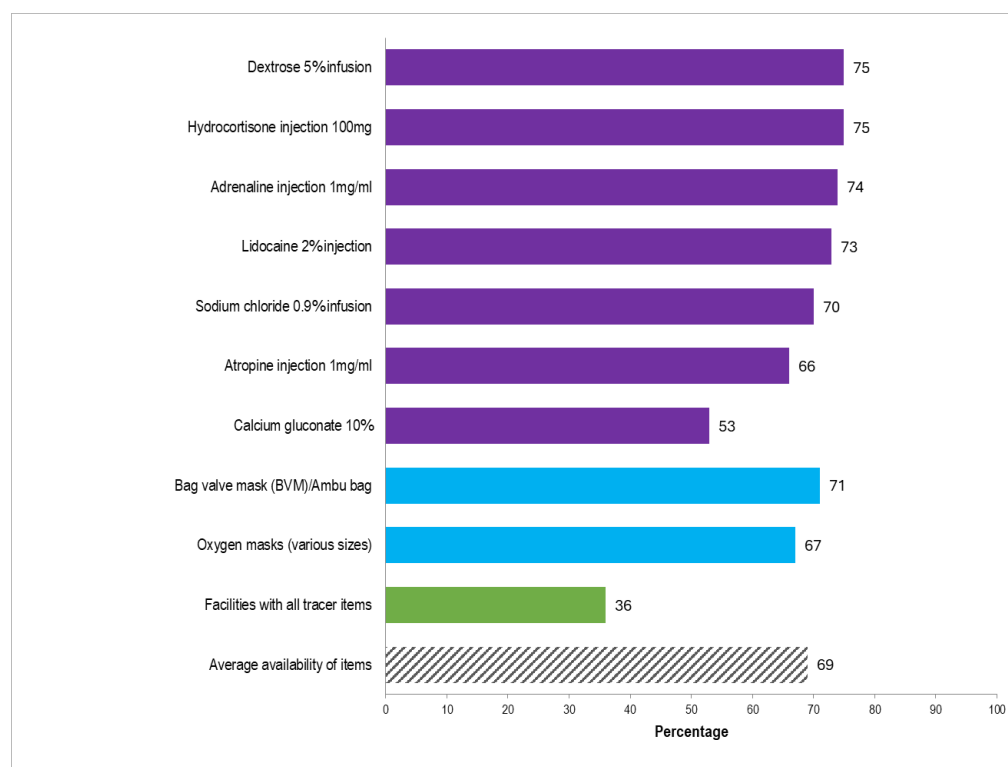
Table 112: Tracer items for the emergency trays in medical wards

Tracer Items.
• bag valve mask/ambubags, • Oxygen masks • Atropine injection 1mg/ml, • Calcium gluconate 10%, • Sodium chloride 0.9% infusion, • Dextrose 5% infusion, • Adrenaline injection 1mg/ml, • Hydrocortisone injection 100mg • Lidocaine 2% injection.

Findings

- The most available emergency tray tracer items in the medical ward were Dextrose 5% infusion and hydrocortisone injection 100mg, which were available in 75% of the health facilities
- The least available was calcium gluconate 10%, which was available in 53% of the facilities, followed by atropine injection 1mg which was available in two thirds of the facilities (66%)
- Slightly more than a third (36%) of the health facilities had all the emergency tray tracer items while the average availability of these items was 69% as illustrated in the figure 208.

Figure 208: Percent of facilities that had select emergency tray tracer items (N=2,955)





Disaggregation by location, KEPH level and ownership:

Annex Table 116 shows the average availability of emergency tray tracer items by location, KEPH level, ownership and by county

By level of KEPH level

- The average availability of these items was highest in level 5 health facilities (91%), followed by level 4 at 79%, level 2 and 3 facilities at 65% and 64% respectively
- Availability of all emergency tray tracer items in medical wards was higher in hospitals compared to primary care facilities; 68% of level 5 facilities had all the emergency trays available items in the medical ward whereas only 32% of level 2 and 3 had all item.

By location

- All tracer emergency items were most available in urban health facilities, with an average availability of 73% compared to 64% of rural facilities
- Six out of ten health facilities in rural areas had sodium chloride infusion compared to 7 in urban areas

By facility ownership

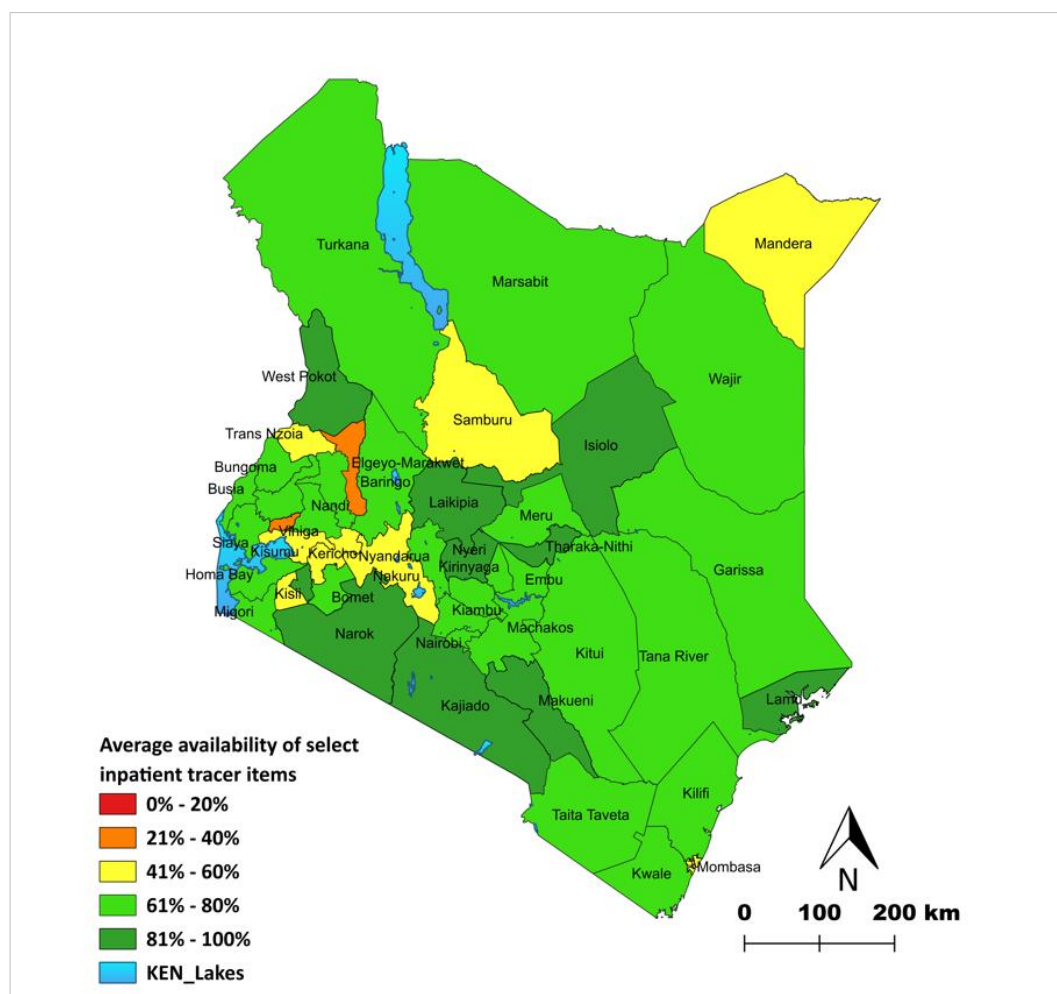
- The highest average availability of these emergency tray tracer items in NGO health facilities at 84%, followed by FBO at 75%, private at 74% and 59% for public facilities
- Two thirds of public facilities (66%) had Ambu bags compared to 83% of NGO facilities
- Three quarters (75%) of NGO facilities had all the emergency tray tracer items compared to just a quarter of public facilities (26%)

County distribution

Figure 209 shows the average availability of emergency tray tracer items by county

- The highest average availability of emergency tracer items was in Nyeri county at 93% while the lowest was in Vihiga county at 35% followed by Elgeyo Marakwet county at 38%.
- Majority of the counties had the average availability of emergency tray tracer items ranging between 61% -80%
- Only seven counties had average availability of emergency tray tracer items above 81%.

Figure 209: Average availability of emergency tracer items by county



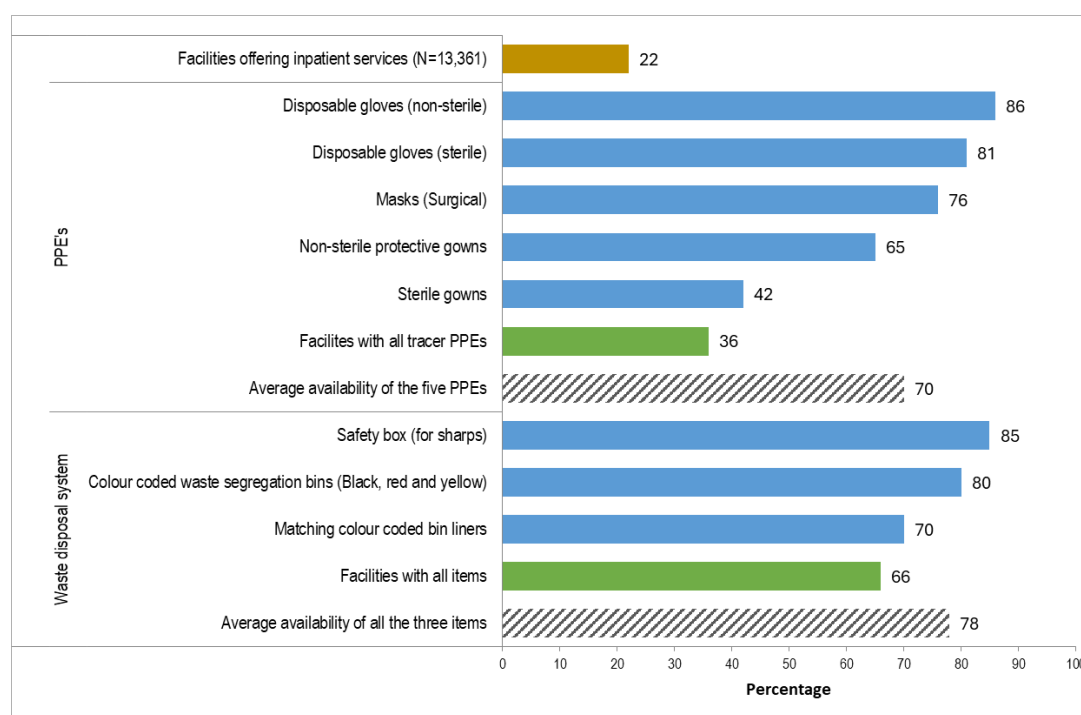
Availability of Personal Protective Equipment (PPE)s in medical ward

The survey assessed the following tracer PPEs; disposable gloves (sterile and non-sterile), surgical masks and gowns (sterile and non-sterile)

Among the 2,955 facilities with medical in-patients,

- 36% had all the tracer PPE items
- Disposable non-sterile gloves were the most commonly available, found in 86% of the health facilities
- In contrast, sterile gowns were the least available, with less than half (42%) of the health facilities having them
- The average availability of PPEs in the health facilities was at 70% as shown below

Figure 210: Percent of facilities that have select PPES (N=2,955)



Disaggregation by location, KEPH level and ownership:

Annex Table 117 shows the average availability of PPE by location, KEPH level, ownership and by county

By location:

- The average availability of PPEs was higher in urban health facilities (74%) than in rural facilities (65%). The biggest margin in availability was for sterile gowns which were available in 51% of urban health facilities compared to 30% in rural facilities

By facility level

- The higher-level facilities (level 4 and 5) had higher proportion of facilities with all tracer PPE items compared the lower-level facilities
- Half of the level 5 and 4 health facilities had all the PPE tracers available while they were all available in a quarter and a third of the level 2 and 3 facilities respectively
- The average availability of the PPE tracer items was highest in level 5 health facilities at 84% and least in level 2 facilities at 65%
- Sterile and non-sterile disposable gloves were available in 92% and 97% of level 5 health facilities, compared to 78% and 83% in level 2 respectively

By ownership

- Public facilities had the lowest proportion of facilities with all tracer PPE items, at 25% compared to 42% in faith-based and private facilities and 41% NGO facilities

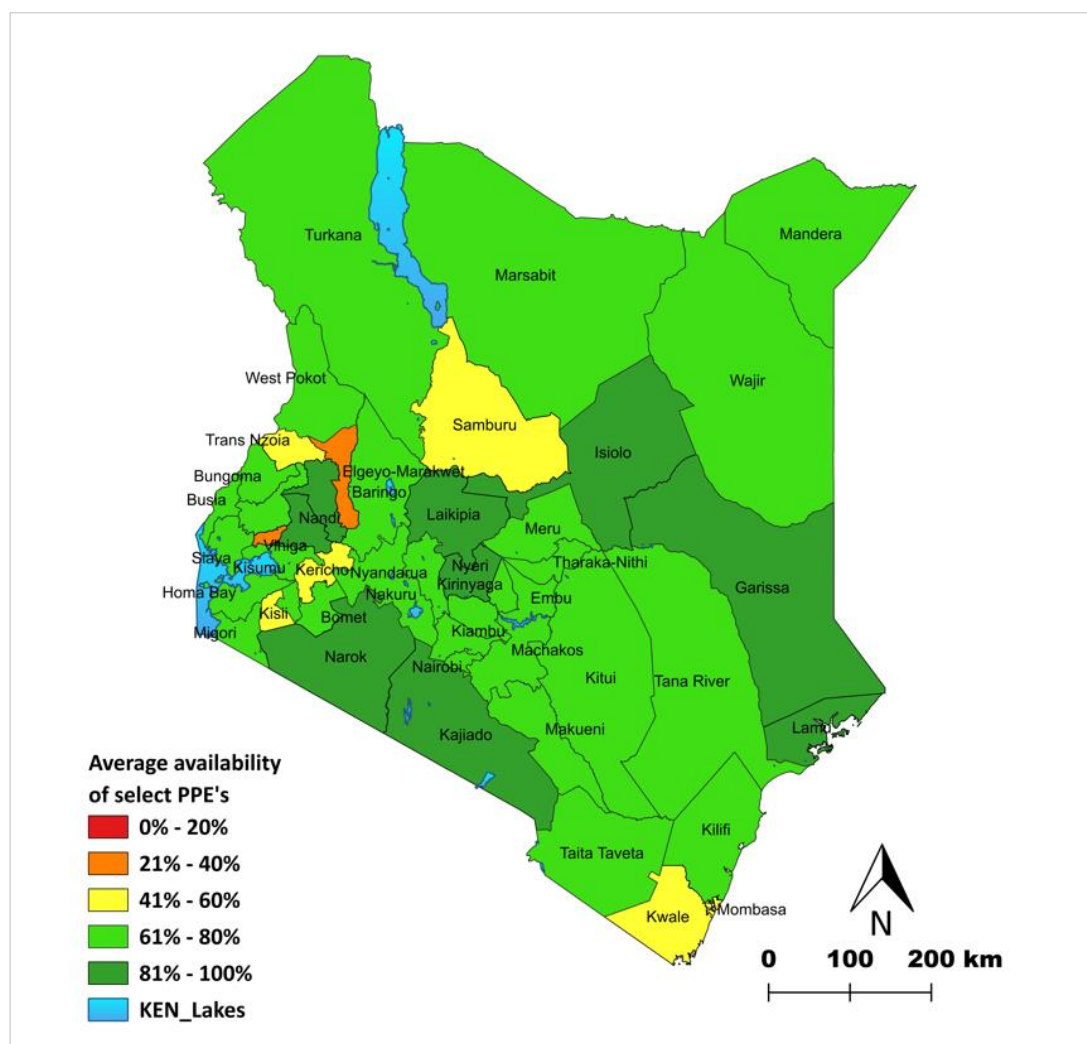
- Sterile gloves and surgical masks were least available in public health facilities at 72% and 65% respectively
- Sterile gowns were the least available PPE with only half of the NGO health facilities having them

County distribution

Figure 211 shows the average availability of PPE items by county

- The average availability of the tracer PPEs was highest in Nyeri county at 100% and lowest in Vihiga county at 33%
- The average availability of PPEs was at least 60% in most of the counties. Elgeyo Marakwet and Vihiga counties had the lowest average availability of PPs at 36% and 33% respectively.
- Availability of all the tracer PPEs was highest in Nyeri county at 100% and lowest in Vihiga county at 7%

Figure 211: Average availability of PPE's by county



Medical waste segregation items in the medical wards

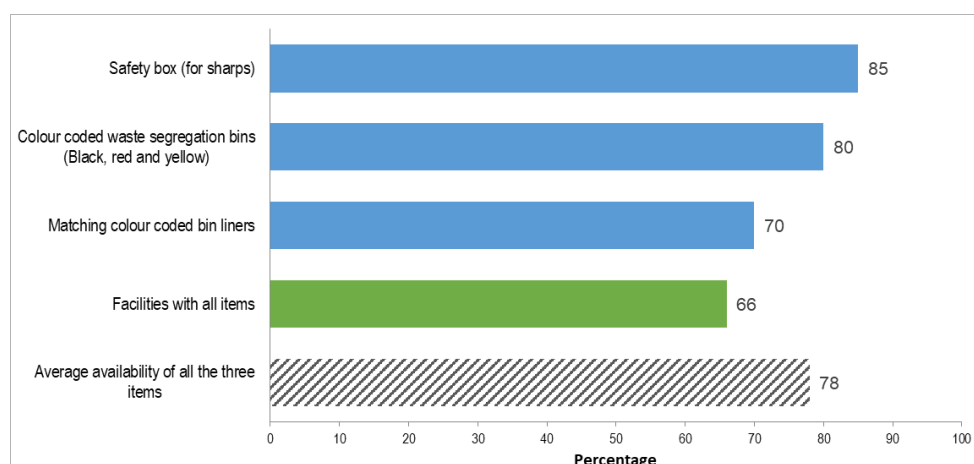
The QoC survey assessed the following medical waste segregation items; colour coded waste segregation bins (Black, red and yellow), Matching colour coded bin liners and safety box (for sharps)

Findings

Among facilities offering inpatient (medical ward services),

- Two thirds of the facilities had all the necessary component for a complete waste segregation system
- The average availability of the medical waste segregation items in the health facilities was at 78%
- The most available item was of safety boxes for sharps disposal at 85% The least available medical waste segregation item was matching colour coded bin liners at 70%

Figure 212: Percent of health facilities that have waste segregation system (N=2,955)



Disaggregation by location, KEPH level and ownership:

Annex Table 122 shows the average availability of medical waste segregation tracer items by location, KEPH level, ownership and by county

By location

- The average availability of all medical waste segregation items in medical wards was higher in urban health facilities (81%) compared to rural facilities (74%)
- Seven in every ten urban health facilities (70%) had all the medical waste segregation items compared to about six in every ten rural facilities (61%)

By level of care

- The average availability of medical waste segregation items in medical wards least in level 3 at 72% compared to 92% in level 5.
- All medical waste segregation items in medical wards were more readily available in level 5 health facilities at 81% compared to level 3 at 69%

By ownership

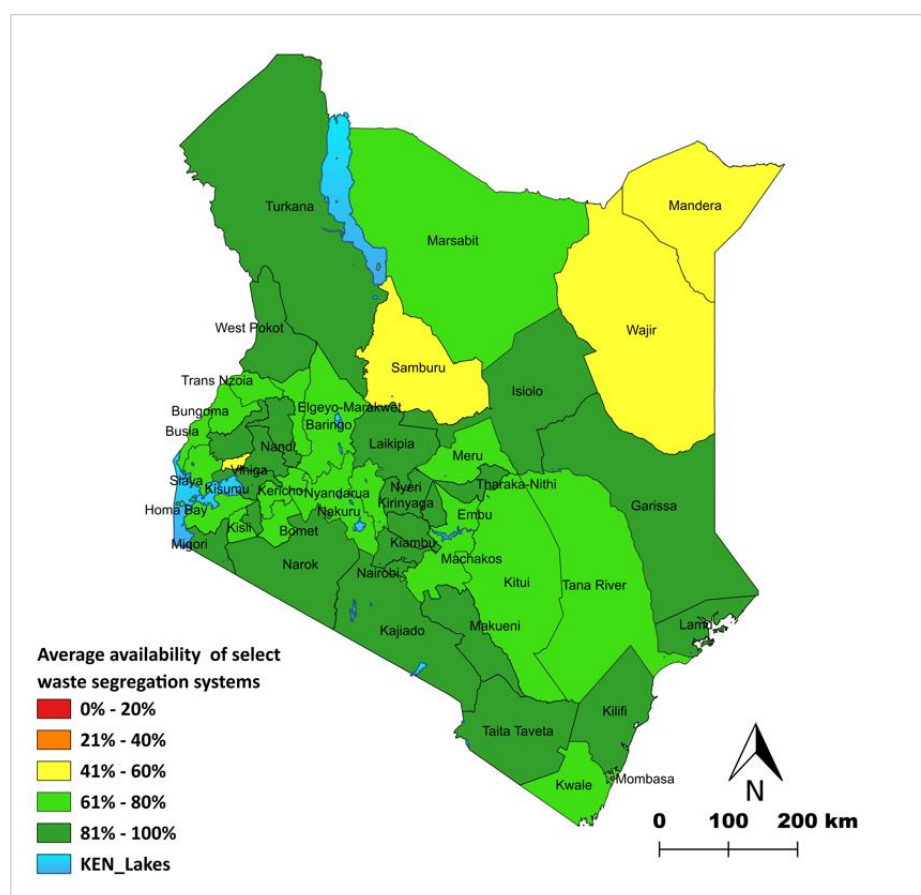
- Availability of all waste segregation items in medical wards was highest in FBO at 73% and least available in NGO and public at
- The average availability of medical waste segregation items in medical wards was highest in private health facilities at 83% and least in public facilities at 68%.
- Colour coded bins were least available in Vihiga county at 51% of health facilities while matching colour coded bin liners and safety boxes were least available in Wajir county at 27% and 48% of its facilities respectively

County distribution

Figure 213 shows the average availability of PPE items by county

- Availability of the waste segregation items varied across the counties
- The average availability of medical waste segregation items is highest in Isiolo at 100% and least in Wajir at 48%.
- The availability of all medical waste segregation items in medical wards was highest in Isiolo County (100%), while lowest in Wajir (27%)

Figure 213: Average availability of medical waste segregation items in health facilities by county



Quality of Inpatient Services

The 2024 QOC assessed the quality of inpatient services based on the structures below.

Table 113: Quality of inpatient services assessed

Structures	Processes
Sharing of beds in medical wards	
Scheduled ward rounds in medical wards - Daily ward rounds - Frequency with consultant - Weekly major ward rounds - Cadres represented	Frequency

Annex Table 120 shows the average availability of inpatient items and services by location, KEPH level, ownership and by county

Sharing of beds in medical wards

- Nationally, 4% of the health facilities that offered medical in-patient services were found to have patients sharing beds
- By location, the proportion of health facilities where patients shared beds was slightly higher in urban facilities (5%) compared to rural facilities (3%)
- By KEPH level, sharing of beds by patients was most common in level 5 health facilities at 19%, followed by level 4 at 8%, level 3 and level 2 facilities at 2% and 1%, respectively
- By ownership, None of NGO health facilities had patients sharing beds, compared to 9% of public, 2% of private and 1% of FBO facilities
- By county, 16 counties there was no sharing of beds. West Pokot County had the highest proportion of health facilities where patients shared beds at 20%

Ward rounds in medical wards

Among facilities that offered medical in-patient services, the QOC 2024 assessed the frequency of scheduled ward rounds and the cadres involved.

Daily ward rounds in medical wards

- Three quarters (75%) of health facilities that offered medical in-patient services conducted daily scheduled ward rounds
- The proportion of facilities that conducted daily ward rounds was higher for urban (79%) compared to 69% in rural health facilities
- Daily scheduled ward rounds were mostly conducted in higher level health facilities; 92% of level 5 compared to 69% of level 2 facilities.

- 
- By ownership, showed that 83% of private facilities conducted daily scheduled ward rounds followed by NGO facilities (77%), FBO facilities (76%) and public facilities (62%)
 - By county, Garissa and Kajiado counties had the highest proportion of health facilities that conducted daily scheduled ward rounds at 98% while the lowest was Vihiga county at 10%.

Frequency of consultant led daily ward rounds.

- By county, all health facilities that offered medical in-patient services in Vihiga, Garissa, Narok and Nyandarua counties daily ward rounds with a consultant

Weekly Multidisciplinary Major Ward Rounds

- Nationally, about three quarters (74%) of the health facilities that offered medical in-patient services conducted at least one multi-disciplinary ward round in a week
- Majority of the urban health facilities (80%) conducted at least one multi-disciplinary major ward round in a week compared to 65% of rural facilities
- Weekly multi-disciplinary major ward rounds were mostly conducted in private health facilities (77%), followed by FBO (74%), public (68%) and NGO facilities (66%)
- All level 5 health facilities conducted weekly multi-disciplinary major ward rounds compared to 78% of level 4 , 70% of level 3 and 73% of level 2 facilities
- Uasin Gishu county had the least proportion of health facilities that conducted weekly multi-disciplinary major ward rounds at 23%.

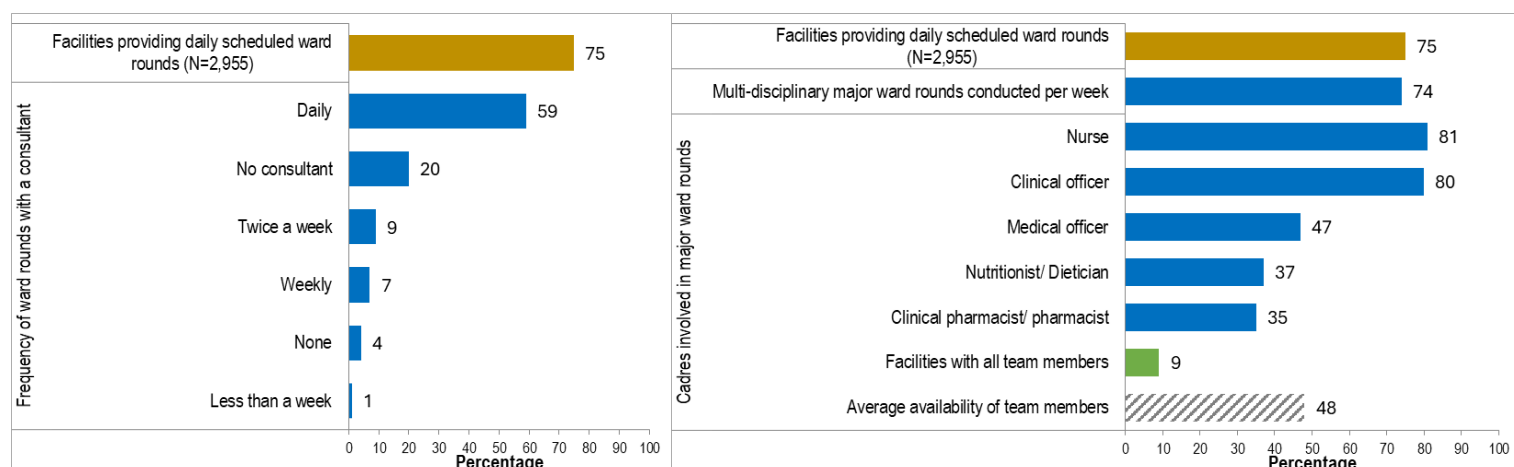
Health cadres involved in multi-disciplinary ward rounds

Annex Table 114 shows the cadres in their MDT ward rounds by location, KEPH level, ownership and by county

- Medical consultants led multi-disciplinary ward rounds in 32% of health facilities
- Medical officers participated in multi-disciplinary ward rounds in less than half of facilities (47%).
- Nurses and clinical officers were involved in multi-disciplinary ward rounds in the majority of the health facilities at 81% and 80% respectively
- Physiotherapists were the least involved cadre in facilities that conducted multi-disciplinary ward rounds at about a fifth (21%) of the health facilities

- The proportion of health facilities that conducted multi-disciplinary ward rounds involving all the 7 listed cadres was low at 9%

Figure 214: Frequency of ward rounds with consultant and the cadres involved



Discussion:

Overall, it was observed that a quarter of facilities that offered medical in-patient services did not conduct scheduled daily ward rounds, and about one-third had medical consultants to lead the ward round (32%). For optimal patient care, admitted patients should be reviewed daily and led by a medical officer as the bare minimum. Medical specialists (Consultants) then lead multi-disciplinary ward rounds to review patients at least once a week. Rural health facilities conducted fewer multi-disciplinary ward rounds which could be attributed to the shortage and uneven distribution of consultants and other healthcare workers.

Tracer emergency equipment and medications were fully stocked in the minority of health facilities (36%), with rural facilities being more affected than urban ones.

Personal protective equipment and medical waste segregation facilities are key to ensuring both patient and health care provider safety and favourable patient outcomes. The availability of PPE was generally poor, with only 36% of the facilities having all basic tracer PPEs assessed compared to 59% in KHFA 2018 having access to gloves. This posed a threat to patient safety especially, healthcare associated infections.

Table 114: Inpatient recommendations

Key Findings	Recommendations
• One in four facilities did not conduct daily ward rounds. • A large proportion of the facilities did not have consultants leading the	• Health facilities offering in-patient services to ensure patients are reviewed on a routine basis led by the requisite medical specialists to ensure quality patient centered care and best patient outcomes.



Key Findings	Recommendations
multidisciplinary major ward rounds.	
Gaps in availability of emergency tracer items in the medical ward across all KEPH level.	Both levels of the government (national and county) and health facility managers to ensure health facilities offering in-patient services are well resourced with requisite emergency equipment and medication to enable them to respond appropriately to medical emergencies
Gaps in availability of PPE and medical waste segregation in offering in-patient services	Health facilities offering in-patient services should avail requisite facilities PPE and proper medical waste segregation within the wards. This reduces patient and healthcare worker exposure to infectious pathogens, injuries from sharps and risk of contamination thus promoting patient and healthcare worker safety.



SURGICAL SERVICES

Access to surgical services would save lives, prevent disability and promote economic growth. The quality of surgical services is a critical component of health service delivery in Kenya. High-quality surgical care ensures positive health outcomes, reduces post-operative complications, and contributes significantly to the population's overall well-being. In recent years, the demand for surgical interventions has increased due to the rising burden of both communicable and non-communicable diseases, as well as trauma-related injuries, hence the need for the provision of quality surgical services. Whereas surgical procedures are intended to save lives, unsafe surgical care can cause substantial harm, including permanent disability.

Minor surgeries involve less complex procedures such as abscess drainage, wound repairs, and excision of small growths. They are usually conducted at all levels of care. While minor surgeries are less resource-intensive, challenges like inadequate equipment, lack of trained personnel, and inconsistent follow-up care can compromise outcomes.

Major surgeries encompass more complex and high-risk procedures, such as cesarean sections, laparotomies, orthopedic surgeries, and cardiovascular interventions, and are predominantly performed in higher-level facilities. These surgeries necessitate a multidisciplinary approach involving specialist medical practitioners e.g., surgeons, anesthesiologists/anesthetists, perioperative nurses, and post-operative care teams. The quality of major surgical care is highly dependent on the availability of critical resources such as functional operating theatres, modern diagnostic equipment, reliable anesthetic agents, and blood transfusion services. Furthermore, ensuring adequate staffing levels and continuous professional development for surgical teams is vital for maintaining high standards of care.

Minor Surgery

Service Availability

The 2024 QOC assessed the degree to which quality surgical care is provided by assessing the availability of the selected tracer minor surgical services, as well as tracer items required in the provision of surgical services.

Quality measures in the provision of surgical services were also assessed, including availability of oxygen in theatre, utilization of the WHO surgical safety checklist, availability of a functional theatre users committee, and availability of IPC items. The tracer surgical services, tracer items for minor surgery and theatre IPC items assessed were as follows;

Table 115: Tracer services for Minor surgery

Domain	Tracer services for Minor Surgery
Availability of Minor surgical Services	a) Incision and drainage of abscesses b) Wound debridement c) Suturing d) Male circumcision e) Chest tube insertion f) Biopsy of lymph node or mass g) Removal of foreign body (throat, eye, ear or nose) h) Suprapubic cystostomy / catheterization

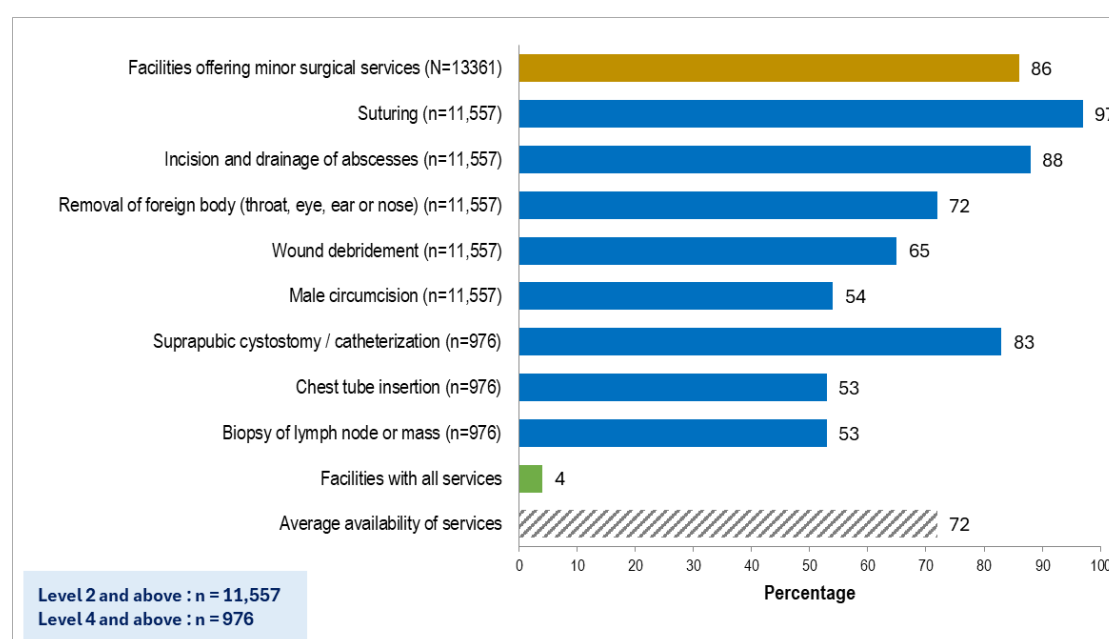
Findings

A total of 11,557 health facilities offered minor surgical services, which translates to 86% of all health facilities.

Among facilities offering minor surgical services:

- The majority provided suturing (97%) and incision and drainage of abscesses (88%).
- The least available procedures were male circumcision (54%) and chest tube insertion and biopsy of lymph nodes or mass (both at 53%).
- About two-thirds (65%) of facilities offered wound debridement.
- On average, the availability of tracer minor surgical services across facilities was 72%.
- A summary of these findings is presented in Figure 215 below.

Figure 215: Percentage of facilities with select tracer minor surgical services. (N=11,557)





Disaggregation by location, KEPH level and ownership:

Annex Table 108 shows the average availability of minor surgical tracer services by location, KEPH level, ownership and by county

Availability of minor surgical services by level of care

- The availability of minor surgical services increased with the level of care, being lowest in Level 2 facilities and highest in Level 5 facilities. The average availability was 40% in Level 2, 45% in Level 3, 82% in Level 4, and 97% in Level 5.
- All Level 5 facilities offered incision and drainage, compared to 98% of Level 4, 92% of Level 3, and 85% of Level 2 facilities.
- Wound debridement was provided by 60% of Level 2 facilities, compared to 72% in Level 3, 90% in Level 4, and 94% in Level 5.
- Chest tube insertion was available in 94% of Level 5 facilities but only about half (52%) of Level 4 facilities.
- Nine out of ten Level 5 facilities (90%) offered lymph node/mass biopsy compared to about half of Level 4 facilities (50%).
- Male circumcision services were available in 94% of Level 5 facilities, 88% of Level 4, 65% of Level 3, and 47% of Level 2 facilities.

Availability of minor surgical services by facility ownership

- The survey revealed notable variation in the availability of minor surgical services across facility ownership categories. Average availability was lowest in public facilities (65%) and highest in private and FBO facilities (both at 78%).
- About 8 in 10 FBO and NGO facilities provided minor surgical services.
- Incision and drainage were available in 94% of NGO facilities compared to 85% of public facilities.
- Wound debridement was available in 74% of private facilities, compared to 55% of public facilities.
- Chest tube insertion was more common in FBO (72%) and private (70%) facilities, but available in only about a third (35%) of public facilities.
- Lymph node/mass biopsy was offered in about 7 in 10 FBO, NGO, and private facilities, compared to 3 in 10 public facilities.
- Male circumcision services were most available in NGO facilities (69%) and least available in private facilities (47%). About half (48%) of public facilities provided male circumcision services.

Availability of minor surgical services by facility location

- Most tracer minor surgical services were more available in urban than rural facilities, with average availability at 78% and 64%, respectively.

- 
- Wound debridement was provided in 72% of urban facilities compared to 59% of rural facilities.
 - Male circumcision was available in 66% of urban facilities versus 44% in rural facilities.
 - Chest tube insertion and lymph node/mass biopsy were both available in 62% of urban facilities, compared to about a third of rural facilities (34% and 32%, respectively).
 - Incision and drainage were available in 92% of urban facilities compared to 84% of rural facilities.

Availability of minor surgical services by county

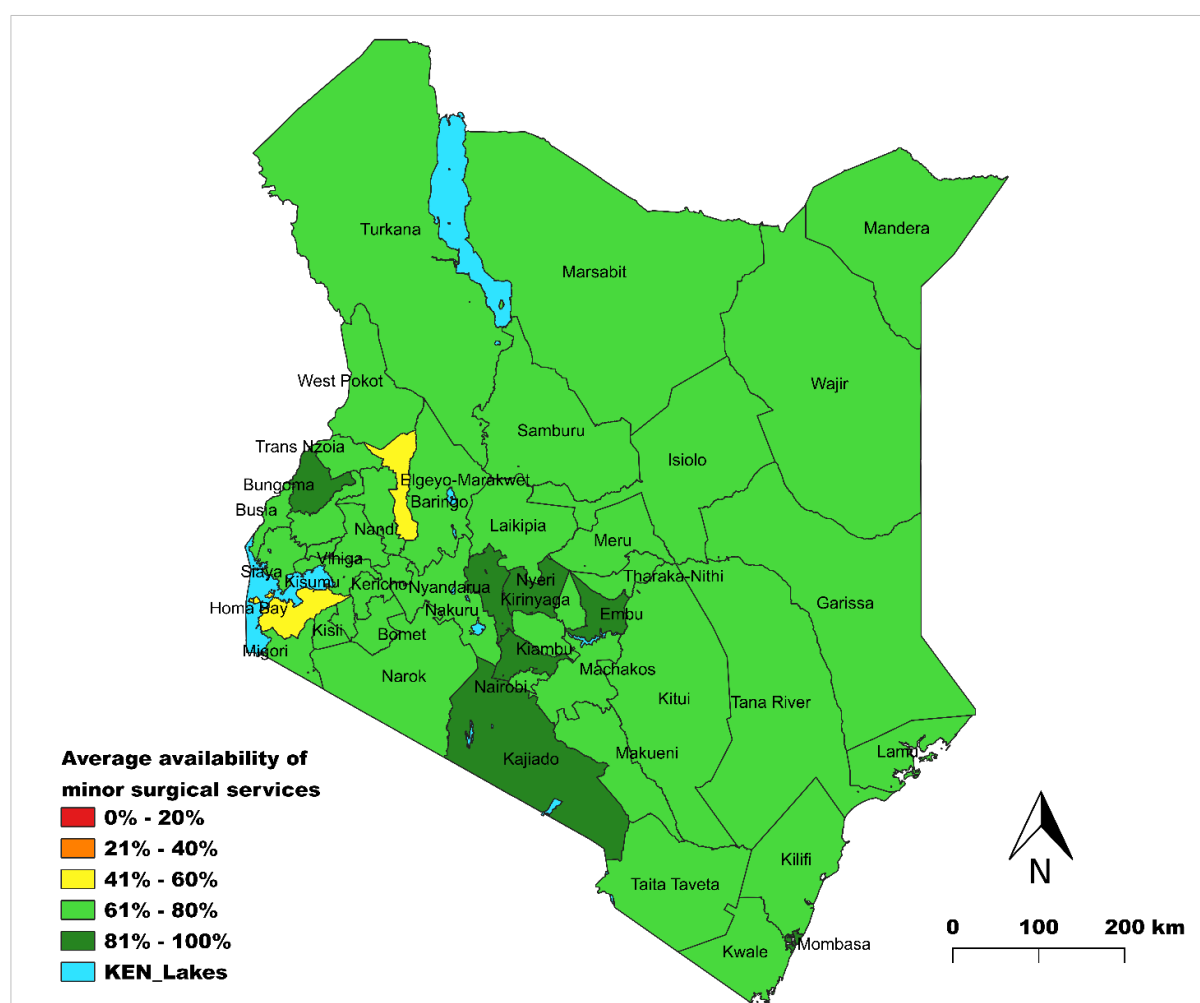
- There were notable county-level variations in the availability of minor surgical services.
- All facilities in Lamu and Tana River counties offered incision and drainage, compared to less than half (45%) in Baringo.
- Nearly all facilities in West Pokot (95%) provided wound debridement, while only 16% in Elgeyo Marakwet offered the service.
- Nyeri recorded the highest availability of chest tube insertion (92%), while Wajir had the lowest (14%).
- All facilities in Embu provided lymph node/mass biopsy, compared to just 11% in Elgeyo Marakwet.
- Male circumcision was most available in Bungoma (89%) and least available in Bomet (12%).

County Distribution

Figure 216 shows the average availability of minor surgery tracer services by county.

- The average availability of minor surgical services varied across counties, ranging from 57% in Homa Bay to 88% in Kajiado.
- Seven counties, Kajiado(88%), Embu(84%), Nyandarua(83%), Mombasa(82%), Nyeri(80%), Kiambu(80%) and Bungoma(80%), had an average availability of at least 80%.
- Only two counties, Homa Bay (57%) and Elgeyo Marakwet (59%), had an average availability of minor surgical services below 60%.

Figure 216: Average availability of minor Surgical Services by county



Service Readiness

Table 116: Tracer items for Minor surgery services

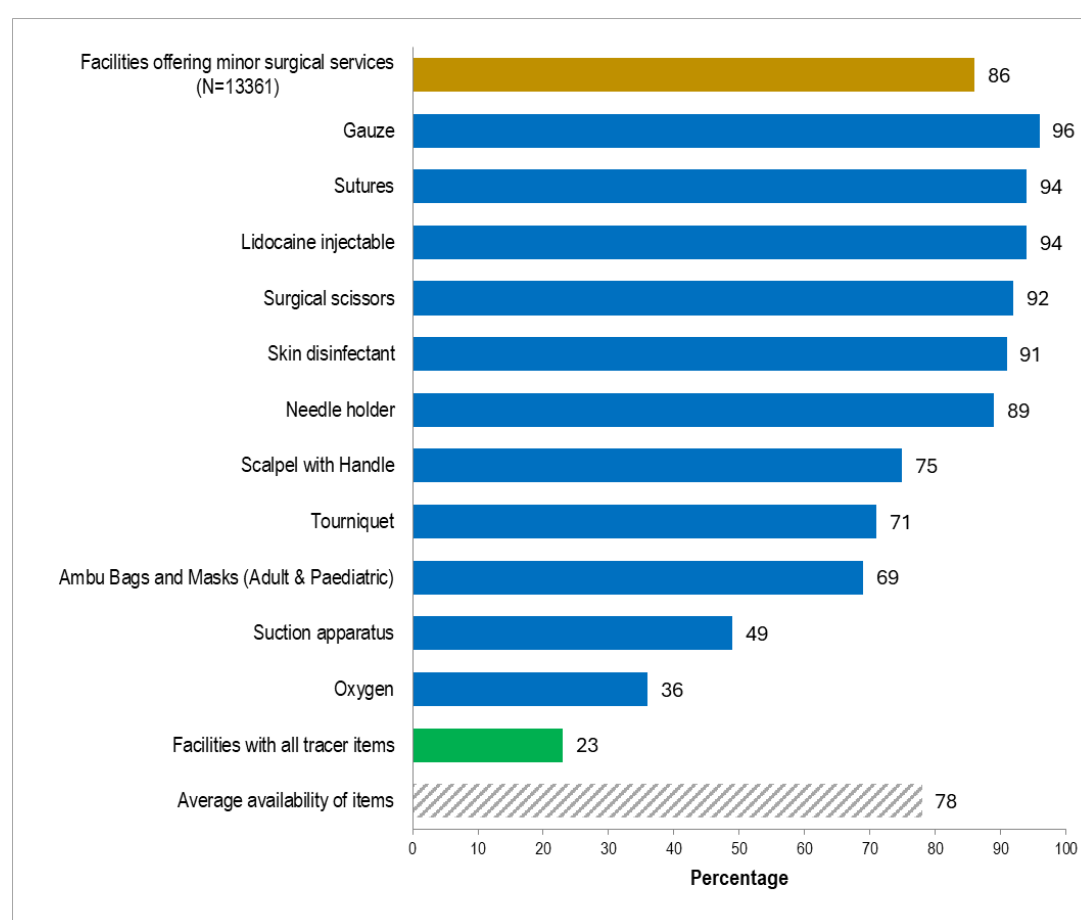
Domain	Tracer services for minor surgery
Readiness for Minor Surgical Services	• Oxygen • Suction apparatus • Needle holder • Tourniquet • Ambu bags and masks (pediatric and adult) • Gauze • Surgical scissors • Scalpel with handle • Sutures • Lidocaine injectable • Skin disinfectant

Findings:

Availability of Tracer items for Minor Surgery Services

- The average availability of the 11 tracer items for minor surgery was 78%.
- The most available tracer items for minor surgery were gauze, sutures and lidocaine injection at 96% and 94% respectively, while the least available tracer items were oxygen and suction apparatus at 36% and 49%, respectively
- Nearly a quarter of facilities (23%) that offered minor surgical services had all the tracer items.
- These findings are shown in the figure 217 below

Figure 217: Percentage of facilities with select tracer items for minor surgical services. (N=11,557)



Disaggregation by location, KEPH level and ownership

Annex Table 109 shows the average availability of minor surgical services tracer items by location, KEPH level, ownership and by county

Availability of tracer items for minor surgical services by level of care

- Availability of tracer items for minor surgical services was higher in hospitals (level 4 & 5) than in primary facilities (level 2&3).
- All level 5 facilities had oxygen as compared to 93% of level 4 facilities, 54% of level 3, and 24% of level 2 facilities

- Availability of suction apparatus was low in level 2 facilities at 38% compared to 67% in level 3 facilities, 94% in level 4 facilities and 100% in level 5 facilities.

Availability of tracer items for minor surgical services by facility ownership

- Availability of tracer items for minor surgery varied across the different facility ownership categories.
- Slightly more than half of NGO facilities had oxygen (57%) compared to 48% of FBO facilities, 42% of private facilities and 26% of public facilities.
- Suction apparatus was most available in FBO facilities at 61%, followed by NGO facilities (55%), private facilities (51%) and public facilities (44%).
- FBO, NGO and private facilities had about a third of facilities having all tracer items for minor surgery, while public facilities had the least proportion of facilities at 13%

Availability of tracer items for minor surgical services by facility location

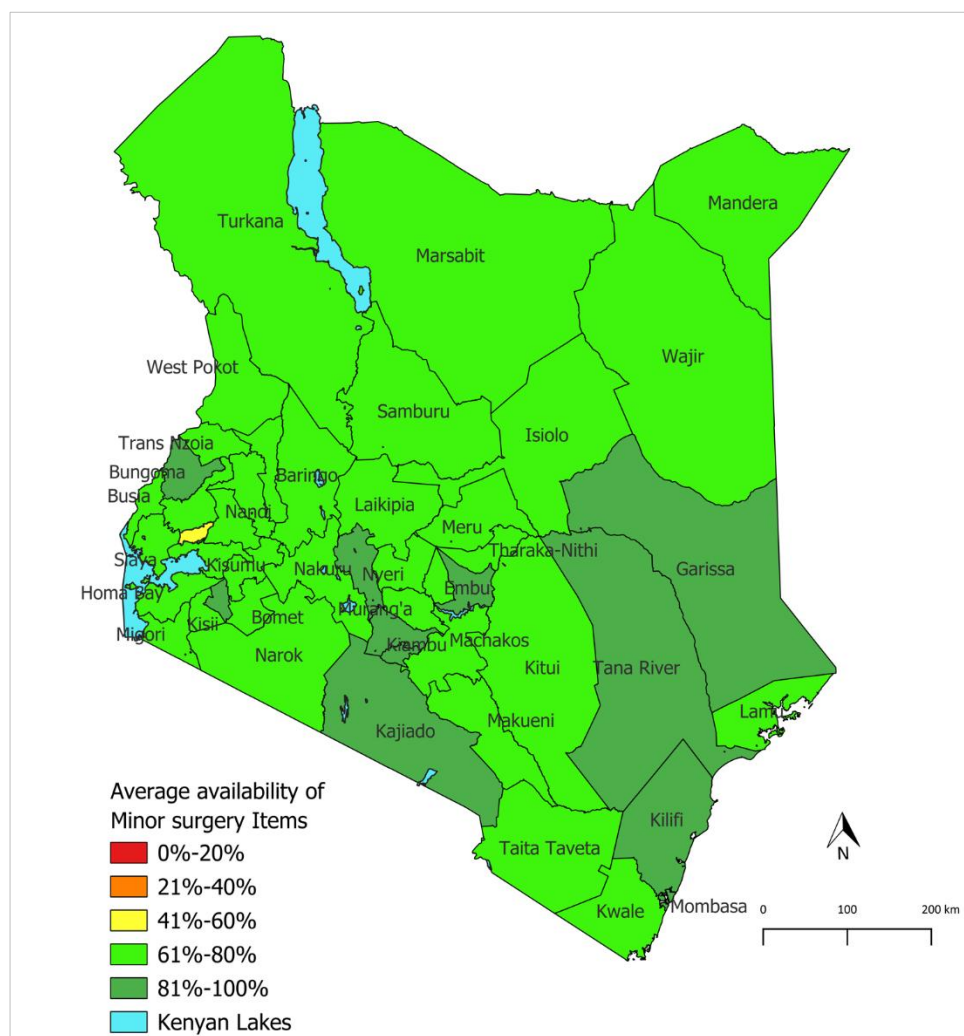
- Availability of tracer items for minor surgery was higher in urban facilities compared to rural facilities
- Less than half of rural facilities had oxygen and suction apparatus at 24% and 41%, compared to 50% and 58% of urban facilities, respectively.

County Distribution:

Figure 218 shows the average availability of minor surgical tracer items by county.

- Eleven counties, Bungoma, Embu, Garissa, Kajiado, Kiambu, Kilifi, Mombasa, Nairobi, Nyamira, Nyandarua and Tana River, had an average availability of tracer items for minor surgeries of between 81%-100%.
- Majority (77%) of the counties had an average availability of the tracer items for minor surgery between 61%-80%.
- Vihiga County had the least average availability of minor surgical tracer items at 58%.

Figure 218: Average availability of tracer items for minor Surgical Services by county.



Major Surgery (Level 4 and 5)

Service Availability

The 2024 QOC assessed the availability of major surgery based on the following tracer services.

Table 117: Tracer services for major surgical services

Domain	Tracer Service for Major Surgery
Availability of Major Surgical Services	a) Colostomy/ileostomy b) Amputation (Limbs) c) Cataract surgery d) Contracture release/ fasciotomy e) Skin grafting f) Hernia repair g) Appendicectomy h) Open reduction and fixation for fracture

Domain	Tracer Service for Major Surgery
	i) Repair of cleft lip and Palate j) Hydrocele repair k) Craniotomy l) Ectopic pregnancy surgery m) Hysterectomy n) Repair of intestinal perforation

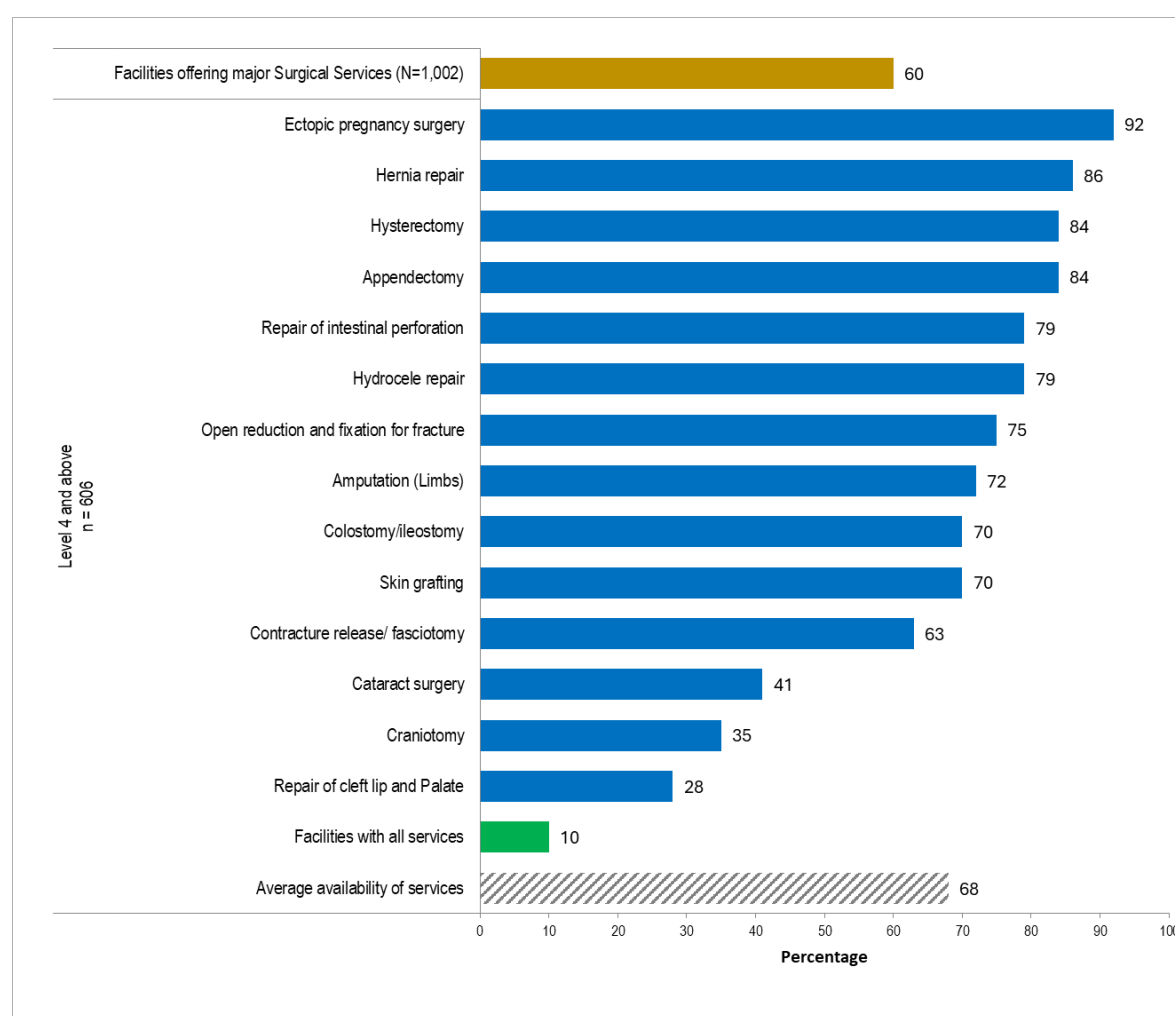
Findings:

Sixty percent (60%) of all levels 4 and 5 facilities offered major surgical services.

Among the facilities offering the services,

- The average availability of major surgical services was 68%.
- Ectopic pregnancy surgery and hernia repair were the most available services at 92% and 86% respectively, while craniotomy and repair of cleft lip and palate were the least available at 35% and 28%, respectively, as shown below.

Figure 219: Availability of major surgical services in facilities



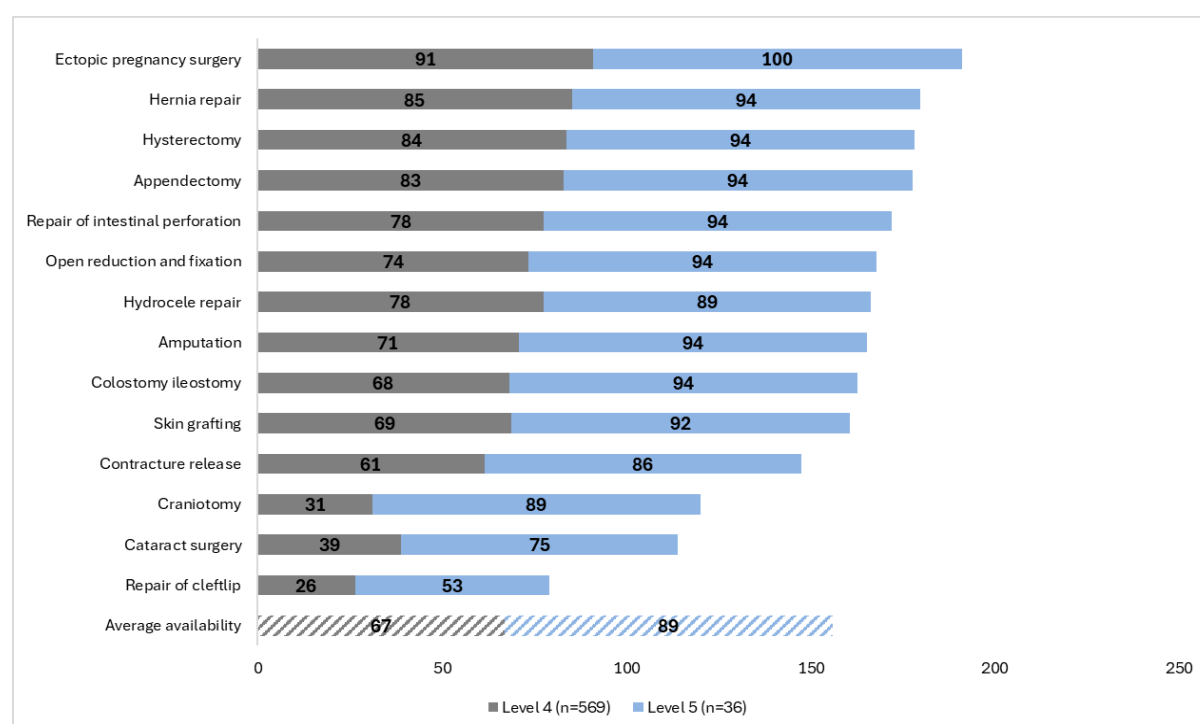
Disaggregation by location, KEPH level and ownership:

Annex Table 110 shows the average availability of major surgery tracer services by location, KEPH level, ownership and by county

Availability of major surgical services by level of care

- Majority of level 5 facilities performed most of the tracer major surgery services; the average availability of the services was 89% for level 5 and 67% for level 4 facilities.
- All level 5 facilities performed surgeries for ectopic pregnancies compared to 91% of level 4 facilities
- About 9 out of every 10 level 5 facilities performed craniotomies compared to 3 out of every 10 level 4 facilities
- Three-quarters (75%) of level 5 facilities conducted cataract surgeries compared to 39% of level 4 facilities.

Figure 220: Percentage of facilities with select tracer major surgical services disaggregated by KEPH level



Availability of major surgical services by facility ownership

- The findings revealed variation in the availability of major surgical services across different facility ownership categories
- The availability of Craniotomy services was generally low at 41% of Private, 35% of FBO and 26% public facilities. None of the NGO facilities offered craniotomy services.
- About 9 out of 10 public, FBO and private facilities performed surgeries for ectopic pregnancies

- Nine in every ten private facilities (88%) repaired perforated gut compared to 84% of FBO facilities, 63% of public facilities and 41% of NGO facilities
- None of the NGO facilities conducted repair of cleft lip and palate, as well as craniotomies
- Cataract surgeries were available in 4 out of every 10 facilities, regardless of the facility ownership

Availability of major surgical services by facility location

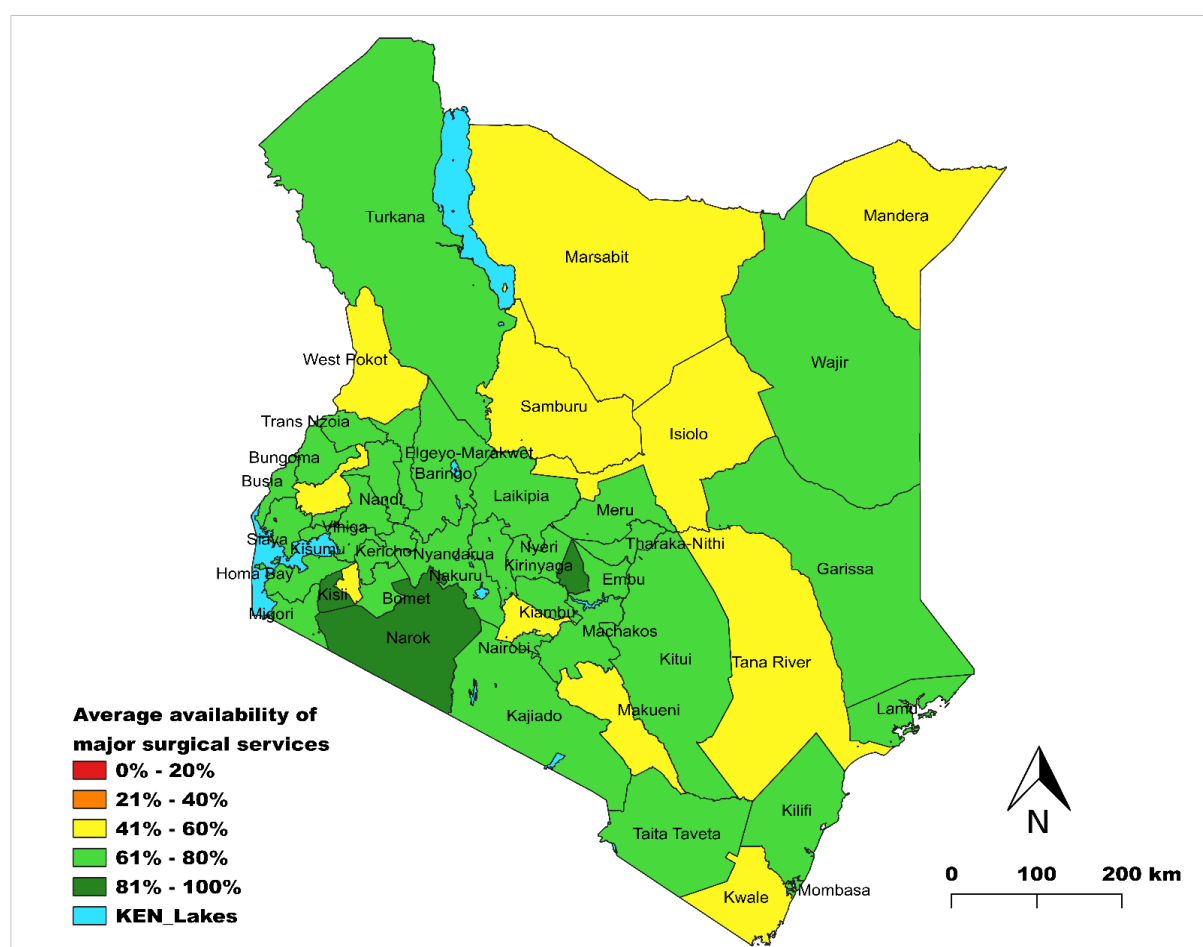
- These services were more available in urban facilities; the average availability in urban was 72% compared to 53% in rural facilities
- About nine in every ten facilities in urban areas (89%) performed hysterectomies compared to about seven in every ten rural facilities (67%)
- Slightly more than half of rural facilities (55%) conducted open reduction and internal fixation compared to 80% of urban facilities
- About a fifth of the rural facilities had craniotomy (21%) and cleft lip repair (22%) compared to about a third of urban facilities at 35% and 30%, respectively.
- Cataract surgery was available in about half of the urban facilities at 46% compared to 24% in rural facilities.

County Distribution:

Figure 221 shows the average availability of major surgical tracer items by county

- The average availability of major surgical services was highest in Narok county at 88% and least in Samburu County at 40%.
- Three counties had an average availability of major surgical services of more than 80%: Narok (88%), Kisii (82%) and Kirinyaga (81%).
- Most counties (70%) had an average availability of major surgical services of between 61%-80%.
- Four counties had an average availability of major surgical services of less than 50%: Makueni (49%), Nyamira (43%), Tana River (41%) and Samburu (40%). –should be in orange

Figure 221: Average availability of major surgical services



Service Readiness

The 2024 QOC assessed readiness to provide major surgical services based on the following tracer items.

Table 118: Tracer items for major surgical services

Domain	Tracer Items for Major Surgery
Readiness for Major Surgical Services	Medicines - Suxamethonium (powder) - Atropine (injectable) - Diazepam (injectable) - Halothane (inhalation) - Bupivacaine (injectable) - Lidocaine (heavy spinal solution) Theatre Oxygen Source - PSA Plant

Domain	Tracer Items for Major Surgery
	• Liquid Oxygen • Manifold System • Standalone cylinders

Medicines for major surgical services

- General anaesthetics (e.g., propofol or sevoflurane) are used to induce and maintain unconsciousness during surgery, ensuring the patient feels no pain.
- Muscle relaxants (e.g., succinylcholine) facilitate intubation and prevent muscle movement, while analgesics (e.g., morphine or fentanyl) manage post-operative pain.
- Antibiotics (e.g., cefazolin) are often administered prophylactically to prevent infections, and anticoagulants (e.g., heparin) may be used to reduce the risk of blood clots.
- These medicines work together to support the surgical process, minimize complications, and promote a smooth recovery, playing a vital role in the success of major surgeries.

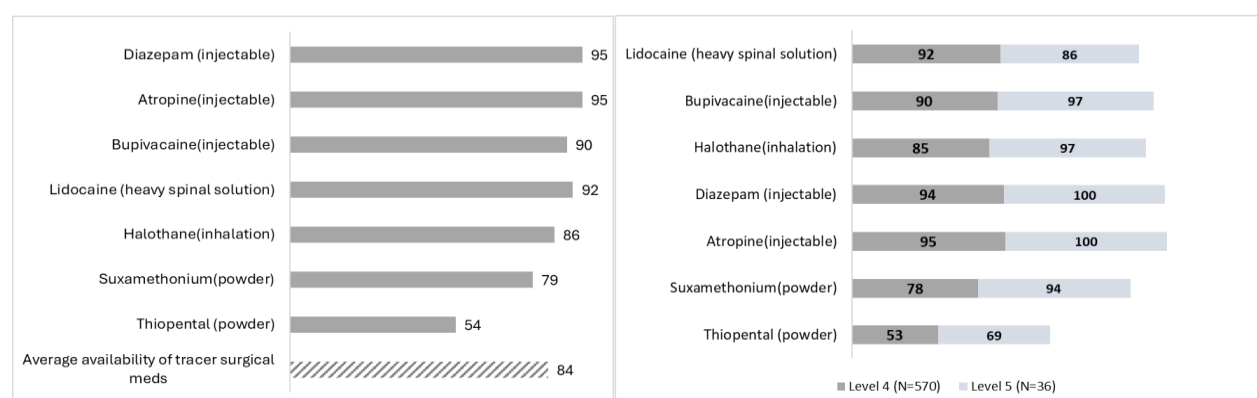
Table 119: Tracer medicines for major surgical services

Domain	Tracer Medicines
Medicines	• Suxamethonium(powder) • Atropine(injectable) • Diazepam (injectable) • Halothane(inhalation) • Bupivacaine(injectable) • Lidocaine (heavy spinal solution)

Findings

- The average availability of major surgical medicines was at 84%.
- The most available major surgical medicines were diazepam and atropine at 95% of health facilities that offered major surgical services.
- Thiopental powder was the least available major surgical medicine in slightly more than half of the facilities (54%).

Figure 222: Percent of facilities that had select tracer medicines for major surgical services and by level of care (n=606)



Disaggregation by location, KEPH level and ownership:

Annex Table 171 shows the availability of major surgical tracer items by location, KEPH level, ownership and by county.

Availability of major surgical medicines by level of care

- Availability of theatre medicines was generally higher in level 5 facilities compared to level 4 facilities
- Diazepam (injectable) and Atropine (injectable) were available in all level 5 facilities.
- Lidocaine was more available in level 4 facilities (92%) than in level 5 facilities (86%).
- Thiopental (powder) was available in about seven out of every ten level five facilities and in five out of every level 4 facilities.

Availability of major surgical medicines by facility location and ownership

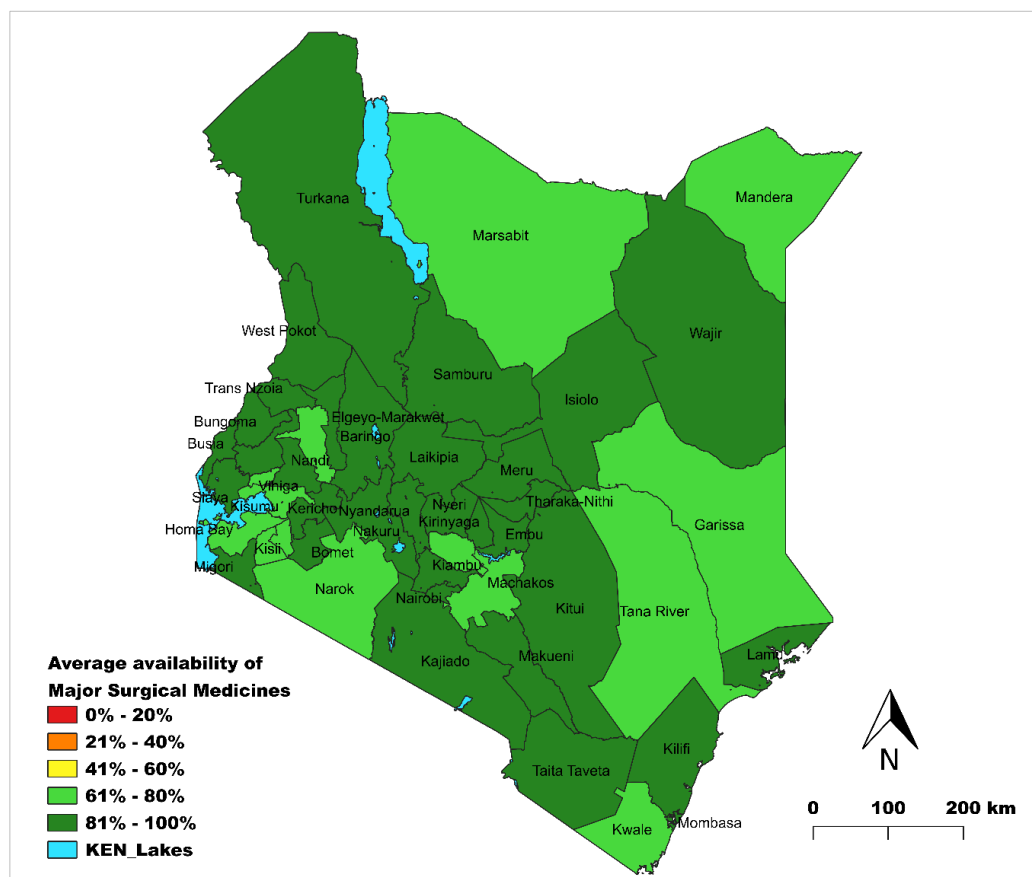
- The average availability of theatre medicines was higher in urban facilities (86%) compared to rural facilities (79%).
- Diazepam (injectable) and Atropine (injectable) were available in over 90% of the facilities, regardless of the location.
- Six out of every ten urban facilities had Thiopental (powder) available compared to five out of every ten rural facilities.
- There was variation in the average availability of major surgical medicines across the facility ownership categories, ranging from 90% for FBO, 84% in private, 82% in public and 79% in NGO facilities
- Lidocaine (heavy spinal solution), Diazepam (injectable) and Atropine (injectable) were available in all NGO facilities
- Thiopental (powder) was available in about six out of every ten public, FBO and NGO facilities compared to five out of every ten private facilities.

County Distribution:

Figure 223 shows the average availability of major surgical tracer items by county.

- The average availability of major surgical medicines was highest in Elgeyo Marakwet County at 100% and least in Garissa County at 67%.
- Sixty-eight percent (68%) and 60% of the counties had all the facilities offering major surgical services, having Atropine (injectable) and Diazepam (injectable), respectively.
- Lidocaine (heavy spinal solution) was available in all facilities offering major surgical services in 45% of the counties.
- Only Elgeyo Marakwet and Samburu County had thiopental powder in all their facilities that offered major surgeries, while it was least available in Bomet, Marsabit and Tana River Counties at only 20% of the facilities.

Figure 223: Average availability of theatre medicines by county



Oxygen source in theatre

Oxygen is a critical commodity in ensuring success in the delivery of major surgical procedures that usually require general anesthesia. Oxygen and other gases in the operating theatre help in maintaining patient stability and ensuring a safe surgical environment, thus preventing potential

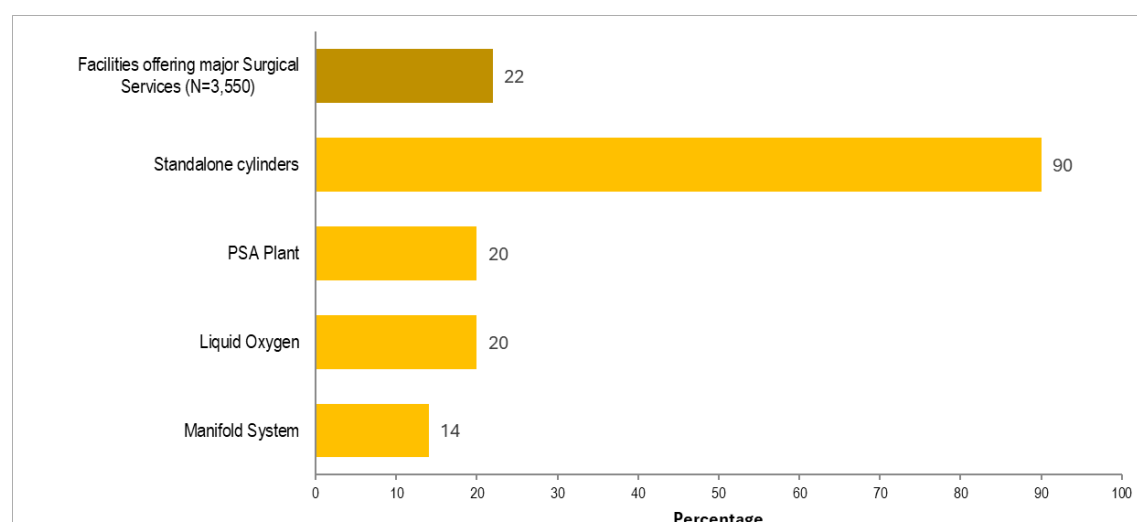
complications. There should be an uninterrupted supply of oxygen in operating theatres for optimal surgical outcomes.

The QoC survey assessed the sources of oxygen to operating theatres in health facilities that offered surgical services. The sources included PSA Plant, Liquid Oxygen, Manifold system and standalone cylinders.

Findings

- A total of 773 health facilities that offered theatre services had oxygen available through different sources.
- Most facilities had standalone cylinders at 90%, while the least available source of oxygen was the Manifold system at 14% of the facilities.
- PSA plant and liquid oxygen were available in 20% of the facilities.

Figure 224: Percentage of facilities with various oxygen sources in theatre (N=773)



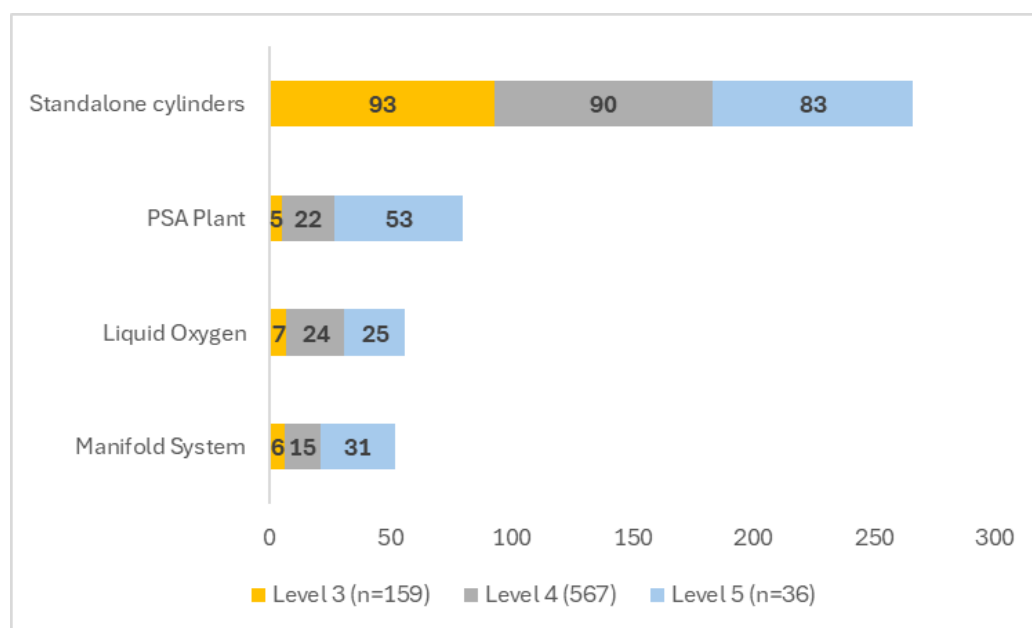
Disaggregation by location, KEPH level and ownership

Annex Table 111 shows the availability of oxygen source disaggregated by location, KEPH level and ownership.

Oxygen source by level of care

- Standalone cylinders were most available in level 3 facilities (93%) compared to 90% and 83% of levels 4 and 5 facilities, respectively
- More than half of level 5 facilities had PSA plants (53%) compared to 22% of level 4 facilities and 5% of level 3 facilities
- About a quarter of level 4 and 5 facilities had liquid oxygen (24% and 25% respectively), while 31% of level 5 facilities had a Manifold system compared to 15% of level 4 facilities and 6% of level 3 facilities.

Figure 225: Percentage of facilities with various oxygen sources in theatre by KEPH Level



Oxygen source by facility ownership

- Availability of PSA plants was higher in public facilities (30% of facilities) compared to 15% of FBO facilities, 14% of private facilities and 12% of NGO facilities
- Public facilities had the highest proportion of facilities with liquid oxygen at 28%, followed by private facilities (18%), FBO facilities (17%) and NGO facilities (12%)
- Availability of the Manifold system was highest in FBO facilities (19%), followed by public and private facilities at 15% and 13% respectively.
- None of the NGO facilities had a manifold system.

Oxygen source by county

- The average availability of oxygen sources was highest in Nyeri County at 61%, while Lamu, Samburu, Taita Taveta, and Tana River Counties recorded the lowest availability at 25%.
- In Nyandarua County, 75% of facilities had PSA plants, whereas none were available in facilities in Busia, Kakamega, Lamu, Migori, Narok, Samburu, Tana River, and Turkana Counties.
- Liquid oxygen was available in 67% of facilities in West Pokot County, while none of the facilities in Laikipia, Lamu, Makueni, Murang'a, and Nyamira Counties had it.
- Stand-alone cylinders were available in all health facilities offering surgical services in 22 counties, but were least available in West Pokot County, at 33%.



Theatre Quality of Care Systems

Theatre Users Committee

Theatre users committee is a multi-disciplinary team within a hospital setting whose main focus is optimization of the safety, efficiency and quality of surgical services within a health facility. The committee is composed of representatives from various departments within the facility, including surgery, administration, nursing, pharmacy, anaesthesia and other support departments.

The QoC survey assessed the availability of a functional theatre users committee in facilities with major surgical services.

Findings

- Out of all facilities that offered major surgical services, 44% had functional theatre users' committees.

Disaggregation by location, KEPH level and ownership

Annex Table 113 shows the availability of theatre users' committees disaggregated by location, KEPH level, ownership and by county.

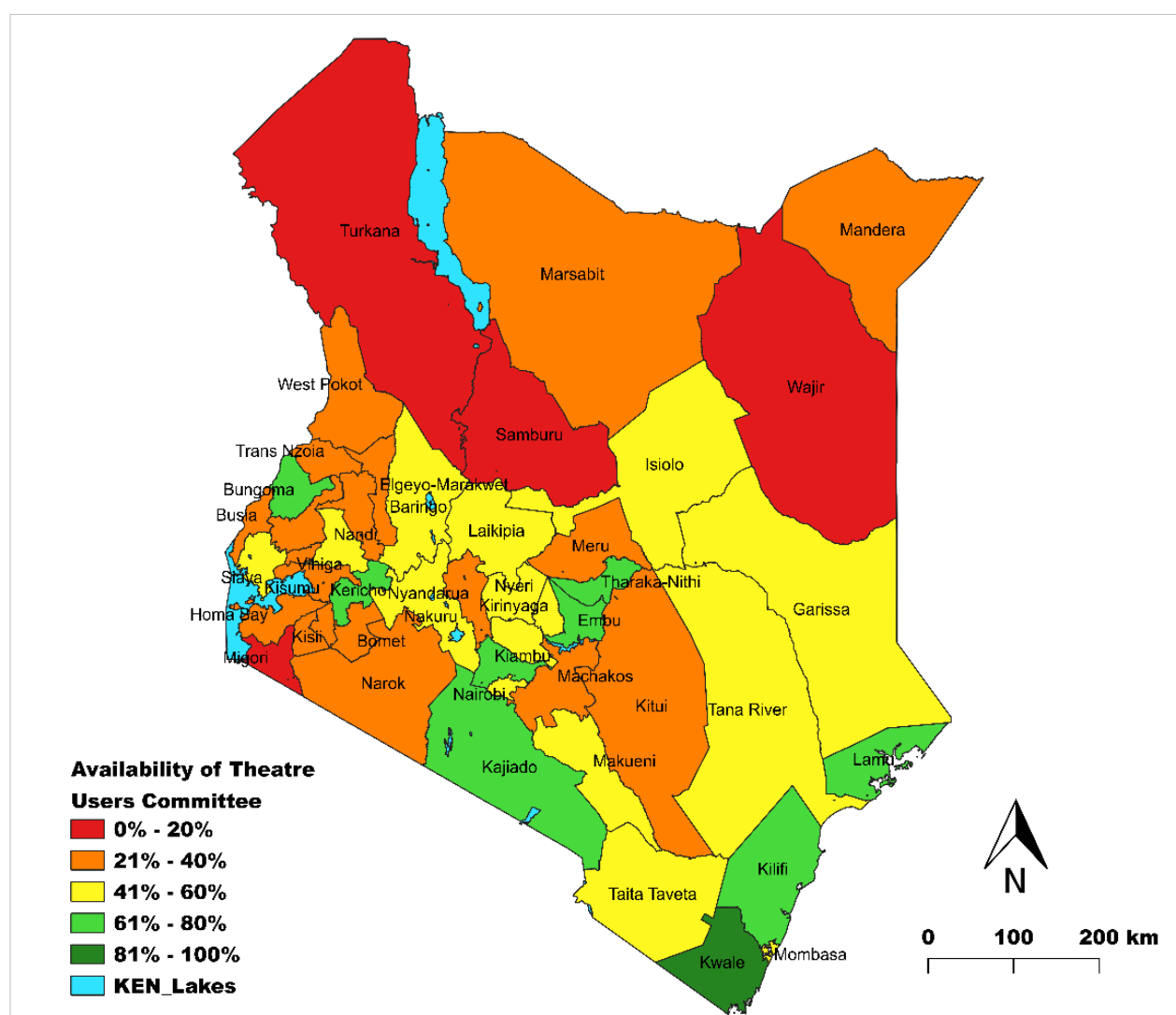
- Availability of the committees was higher in level 5 facilities at 86%, compared to level 4 facilities at 43%.
- Slightly more than half (53%) of the urban facilities had theatre users' committees compared to about a quarter (27%) of rural facilities.
- FBO facilities had the highest proportion of facilities with the committees (65%) followed by private (57%), public (31%) and NGO facilities (30%).

County Distribution

Availability of the theatre users committee by county

- The availability of theatre users' committees was highest in Kwale County (100%) and lowest in Turkana County (8%), followed by Wajir (14%) and Migori (17%).
- Only 16 counties had at least half of their facilities with theatre users' committees in place.
- Theatre users' committees were present in at least 70% of facilities in Kwale (100%), Lamu (80%), and Kajiado (70%).

Figure 226: Availability of theatre users committee by county



Discussion

Minor surgical services are widely available in the country, but disparities persist across facility levels, ownership, and location. While basic procedures such as suturing are almost universal, more advanced services like chest tube insertion and biopsies are limited, especially in lower-level, rural, and public facilities. Service readiness remains a key challenge, with low availability of critical items like oxygen and suction apparatus undermining quality and safety. County variations further highlight inequities in access to essential surgical care.

The assessment found that major surgical services in Kenya were available in 60% of level 4 and 5 facilities, with higher readiness in level 5 and urban hospitals compared to level 4 and rural ones. While common procedures such as ectopic pregnancy surgery and hernia repair were widely accessible, specialized surgeries like craniotomy and cleft lip repair remained scarce. Availability of essential medicines was fairly high, though gaps in anaesthetics such as

thiopental limited surgical capacity. Overall, progress has been made in expanding access, but significant disparities persist across counties, facility levels, and service types.

Most theatres relied on standalone cylinders (90%), while sustainable sources like PSA plants, liquid oxygen, and manifold systems were limited and unevenly distributed across facility levels, ownership, and counties. Public and higher-level facilities had better access, but many counties had little or no advanced oxygen infrastructure, creating risks for surgical safety and equity.

Only 44% of facilities offering major surgical services had functional theatre users' committees, with marked disparities by facility level, location, ownership, and county. Availability was higher in level 5, urban, and faith-based facilities, while rural, lower-level, public, and NGO facilities lagged. Counties also showed wide gaps, with some achieving full coverage while others had very limited presence. These gaps indicate inequities in governance and coordination of surgical services, potentially compromising safety and quality.

Conclusion

The country has made notable progress in expanding access to surgical services, with many facilities offering a range of minor and major procedures. However, persistent disparities remain across counties, facility levels, ownership, and rural–urban settings. While basic procedures and some common surgeries are widely available, more advanced interventions and critical readiness elements such as oxygen infrastructure, suction apparatus, and essential anaesthetic medicines are unevenly distributed. In addition, weak governance and coordination, reflected in the limited presence of functional theatre users' committees, undermine the quality and safety of surgical care. Addressing these inequities through targeted investments in infrastructure, supplies, workforce, and governance mechanisms is essential to ensure that all Kenyans have equitable access to safe, high-quality surgical services.

Table 120: Surgical services recommendations

Findings	Recommendations
- Advanced minor surgical procedures (e.g., chest tube insertion, biopsies) remain limited, especially in lower-level and rural facilities. - Public facilities have lower readiness compared to private, FBO, and NGO facilities. - Critical tracer items such as oxygen and suction apparatus have low availability in health facilities - Evident disparities in counties in both service availability and readiness.	- Advanced minor surgical procedures (e.g., chest tube insertion, biopsies) remain limited, especially in lower-level and rural facilities. - Prioritize provision of essential tracer items and equipment in public facilities to improve equity. - Scale up investment in essential life-saving equipment across all facility levels. - Strengthen equitable resource allocation in counties to address the gaps.



Findings	Recommendations
- Major surgical services are available in only 60% of level 4 and 5 facilities, with better readiness at level 5 than level 4. - Urban facilities have higher availability of surgical services (72%) compared to rural facilities (53%). - Common procedures (e.g., ectopic pregnancy surgery, hernia repair) are widely available, while specialized surgeries (e.g., craniotomy, cleft lip repair) remain limited. - Essential medicines for surgery are fairly available (84%), but critical anaesthetics such as thiopental are lacking in nearly half of the facilities. - County-level disparities persist, with some counties (e.g., Narok, Kisii, Kirinyaga) performing well while others (e.g., Samburu, Tana River, Nyamira, Makueni) lag below 50%.	- Strengthen surgical capacity in level 4 facilities by investing in infrastructure, equipment, and staffing to reduce referral burdens to Level 5 facilities - Scale up investment in rural surgical services, including outreach programs, workforce deployment, and resource allocation to reduce urban–rural inequities. - Expand specialized surgical services through training, partnerships, and referral networks to improve access at county and regional levels. - Improve supply chain management and ensure consistent availability of key anaesthetic drugs to support safe surgery. - Implement targeted county-level support and equitable resource distribution to uplift underperforming counties and enhance national uniformity in surgical care.
- Heavy reliance on standalone Oxygen cylinders (90% of facilities) despite their limitations. - PSA plants are available in only 20% of facilities, with much higher concentrations in level 5 and public facilities. - Large county disparities (e.g., Nyandarua with 75% PSA plants vs. none in several counties). - Public facilities had higher access to PSA plants and liquid oxygen compared to private, FBO, and NGO facilities.	- Scale up PSA plants and liquid oxygen for stable supply. - Expand investment in PSA plants to level 3 and 4 facilities to ensure broader access and equitable distribution. - Target counties with the lowest availability for prioritized oxygen infrastructure development and donor/government support. - Encourage public-private partnerships to enhance access to advanced oxygen systems across all ownership categories
- Only 44% of facilities(hospitals) had functional theatre users’ committees. - Higher availability in level 5 facilities (86%) than in level 4 facilities (43%). - Urban facilities (53%) outperformed rural facilities (27%).	- Scale up the establishment of theatre users’ committees across all facilities offering surgical services. - Support lower-level facilities with guidelines, training, and mentorship to strengthen committee formation and functionality.



Findings	Recommendations
- FBO (65%) and private facilities (57%) had higher committee availability than public (31%) and NGO (30%). - Wide county disparities	- Prioritize support for rural facilities to ensure equitable access to safe and well-coordinated surgical care. - Strengthen governance and accountability in public and NGO facilities by integrating committees into quality assurance structures. - Replicate best practices from high-performing counties and provide targeted county-level technical support.

BLOOD TRANSFUSION SERVICES (LEVEL 3, 4 AND 5)

In Kenya, the Kenya National Blood Transfusion Service (KNBTS) plays a crucial role in ensuring safe and sufficient blood supplies. Blood transfusion is key during surgery, trauma, childbirth or conditions that hinder the body's ability to produce sufficient blood or its components including anaemia, bleeding disorders, bone marrow disorders, low platelet count (thrombocytopenia) and severe infections. While it carries minimal risks, the procedure is generally safe when conducted according to national standards and guidelines, ensuring the blood supply's safety and sufficiency, and safeguarding the health of recipients of transfusion and blood donors.

Blood screening for infectious pathogens, usually HIV, hepatitis B, hepatitis C and syphilis, before transfusion ensures the safety of the recipient. In the lower-level facilities without blood banks, blood is usually screened at the regional blood centers before being distributed to those facilities.

Service Availability:

The 2024 QOC assessed health level 3,4 and 5 facilities that offered blood transfusion services.

Table 121: Tracer services for Blood Transfusion services

Domain	Tracer services
Blood Transfusion Services	• Transfusion • Blood Interruptions • Blood screening for transfusion transmissible infectious diseases • Mechanisms to maintain blood and blood components at the required temperature • Continuous temperature recorder/logger available in the refrigerators • Temperature of the refrigerator monitored at least twice every 24 hours • Temperature log been filled for the past 30 days • Temperature been within the range (2–6 °C) in the past 30 days

Findings

Availability of blood transfusion Services

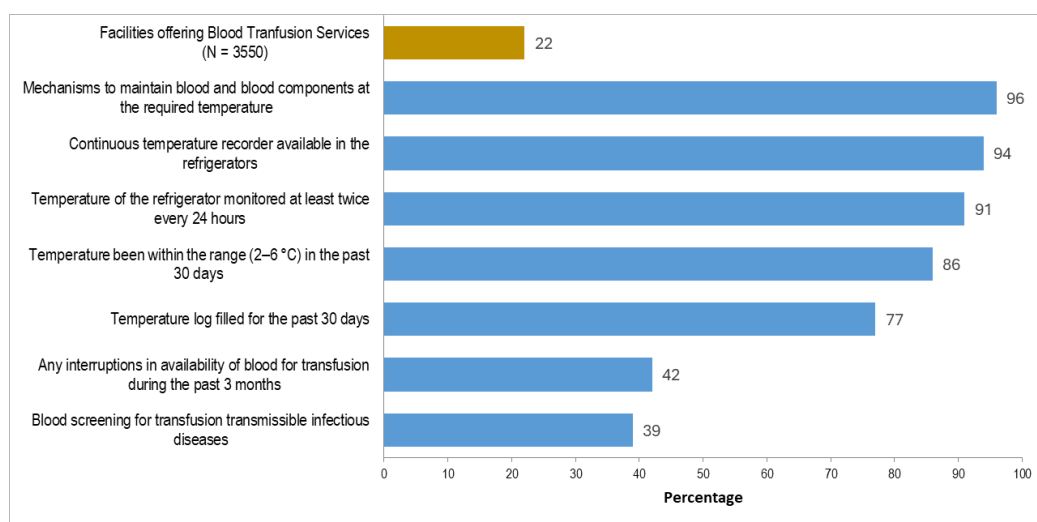
Blood transfusion services were offered at 22% of all level 3,4 and 5 facilities (N=3550) nationally.

Among the health facilities offering blood transfusion services,

- Blood screening for transfusion transmissible infectious diseases was 39%.

- One of four facilities had experienced interruption in availability of blood for transfusion in the three months prior to the assessment.
- Mechanisms to maintain blood and blood components at the required temperature and continuous temperature recorder/logger available in the refrigerators were the most available services at 96% and 94% respectively.

Figure 227: Proportion of facilities that offered blood transfusion tracer services (N=795)



Disaggregation by location, KEPH level and ownership (Level 3, 4 and 5)

Annex Table 138 shows the average availability of blood transfusion tracer services disaggregated by location, KEPH level, ownership and by county. Of the facilities offering blood transfusion services (N=795)

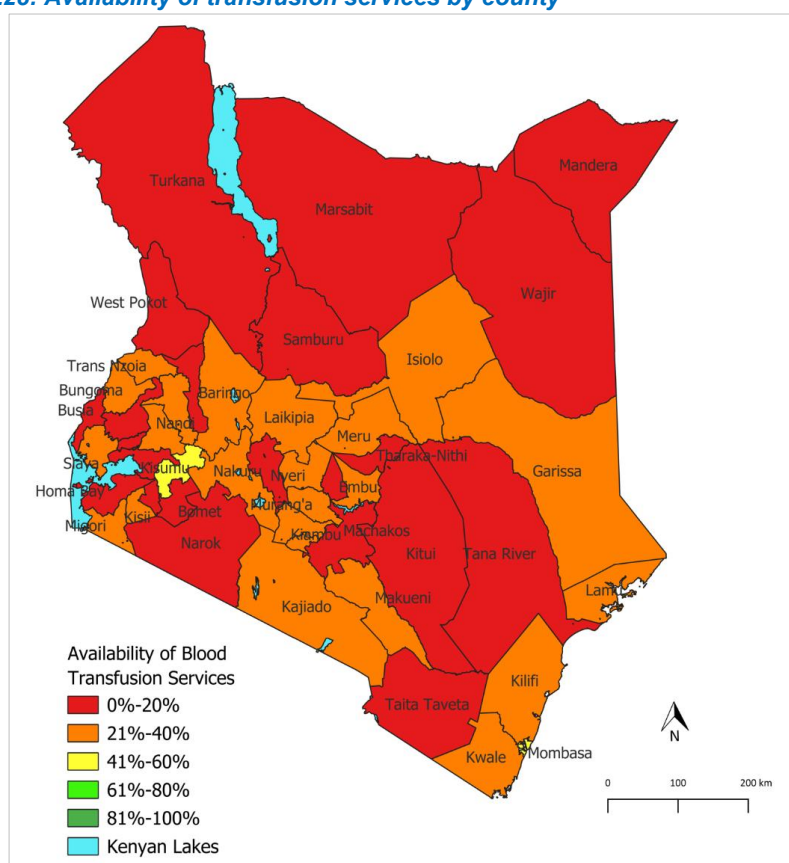
- There were 174 level 3 facilities offering blood transfusion services. Of these, 71% were private and 18% were FBO owned.
- Blood transfusion services were least available in public facilities at 17%, compared to NGO at 21% and FBO and private, both at 28%.
- Almost half (49%) of the public facilities experienced an interruption in the availability of blood for transfusion in the three months prior to the survey. This is much higher than that in NGO (42%), private (41%) and FBO (31%).
- Only 28% of public facilities had blood screening for transfusion transmissible infectious diseases; which was 48%, 45% and 43% in FBO, NGO and private facilities respectively.

County Distribution.

Figure 228 shows the availability of blood transfusion services by county. (Level 3, 4 and 5)

- Availability of blood transfusion services was generally low in the counties with only 6% of facilities in Homa Bay, and 9% each in Kitui and Elgeyo Marakwet.
- Kericho county had the highest availability of blood with 43% of the level facilities offering the service.

Figure 228: Availability of transfusion services by county



Service Readiness

Table 123: Tracer items for blood transfusion services

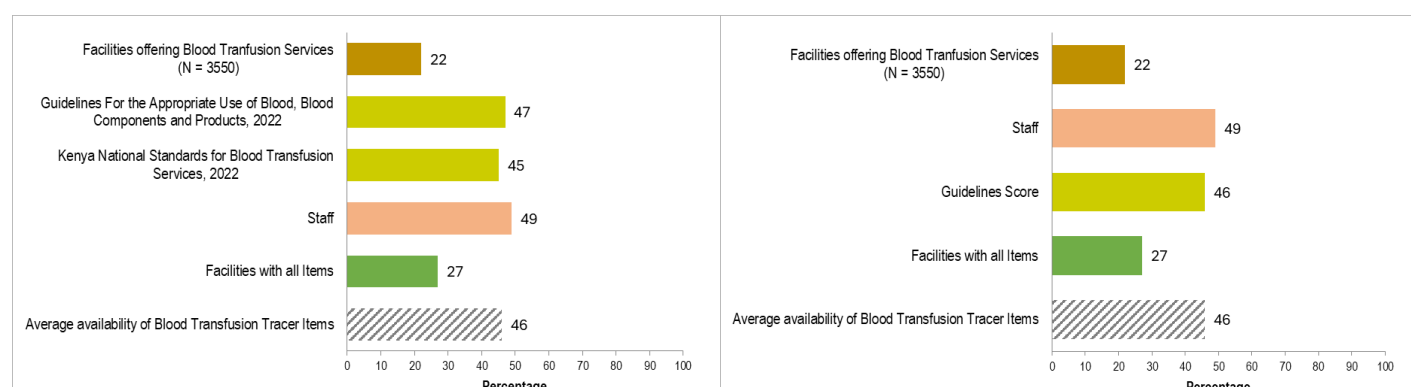
Domain	Blood Transfusion Service Readiness Tracers
Guidelines	- Guidelines For the Appropriate Use of Blood, Blood Components and Products, 2022 - Kenya National Standards for Blood Transfusion Services, 2022
Trained Staff	HCW trained on the appropriate use of blood and safe transfusion practices in the past 2 years

Findings.

Among facilities offering blood transfusion services,

- The Kenya National Standards for Blood Transfusion Services, 2022 was available in 45% of facilities while Guidelines for the Appropriate Use of Blood, Blood Components and Products, 2022 was available in 47% of the facilities. The average guideline score is 46%.
- About half of the health facilities that offered blood transfusion services (49%) had healthcare workers trained on safe blood transfusion in the past 2 years.

Figure 229: Proportion of facilities with blood tracer items (N=795)



Availability of blood transfusion policy documents

Disaggregation by location, KEPH level and ownership (Level 3, 4 and 5)

Annex Table 137 shows the average availability of blood transfusion tracer items disaggregated by location, KEPH level and ownership.

Among level 3,4 and 5 facilities offering blood transfusion,

- Guidelines for the appropriate use of blood, blood components and products, 2022 were more available than the Kenya National Standards for Blood Transfusion Services, 2022. The overall guidelines score was 47%.
- By ownership, Kenya National Standards for Blood Transfusion Services, 2022 were least available at NGO at 30% compared to FBO at 43%, private at 45% and public at 47%.

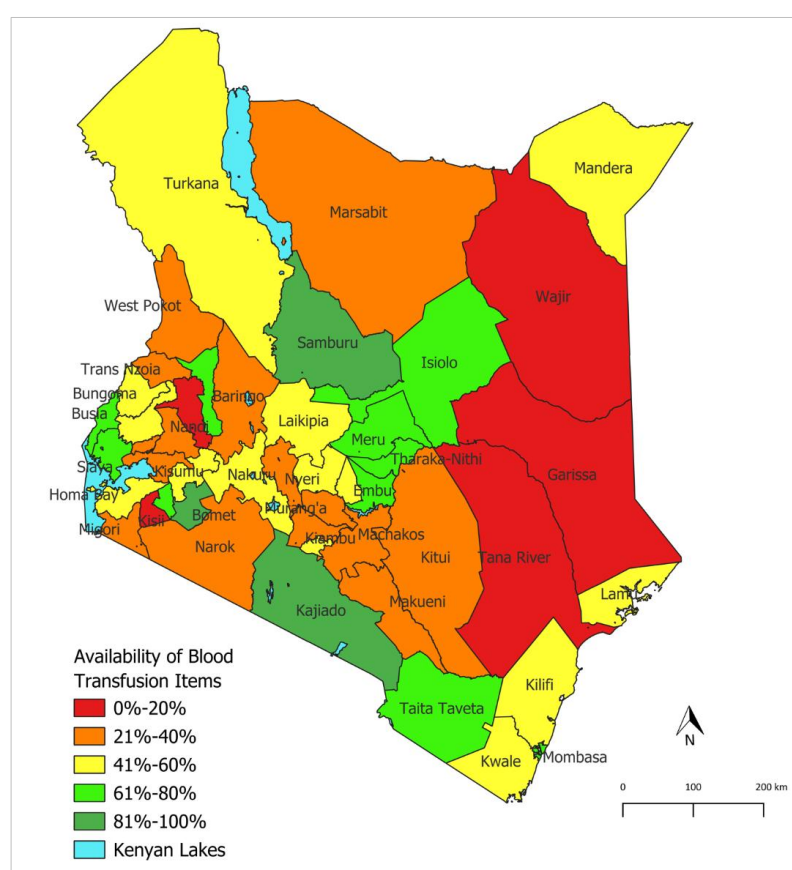
- Trained staff were most available at NGO facilities (67%) compared to private (58%), public (42%) and FBO (36%).
- The average availability of blood transfusion tracer items was 46%.
- All blood transfusion tracer items were available in 27% of facilities.

County Distribution

Figure 230 shows the average availability of blood transfusion tracer items disaggregated by county.

- Average availability of blood transfusion tracer items varied across counties.
- Five counties had the lowest average availability of blood tracer items with Garissa (18%), Kisii (16%), Wajir (14%), Tana River at (11 %) and Uasin Gishu (10%).

Figure 230: Average Availability of tracer items for blood transfusion by county



Discussion

Blood transfusion is a critical service that should be available without interruption in health facilities, especially those offering in-patient services and major surgery services. Access to blood transfusion services was found to be low as the service was available in only 795 level 3,4 and 5 health facilities. In addition, 42% of these facilities reported stock outs of blood in the past 3 months. For optimal blood transfusion outcomes, health facilities are required to ensure screening of blood for infectious pathogens before transfusion. However, only 39% of facilities

conducted this screening. This low coverage could be attributed to the fact that some facilities receive ready to use blood and blood products from blood regional centers. The Ministry of Health has developed guidelines on safe blood transfusion to ensure provision of safe and quality blood transfusion services. These guidelines, developed in 2022, were available in less than half of the facilities (46%). This calls for the need to robustly disseminate these guidelines to all service providers.

Nearly all health facilities (96%) had put mechanisms in place to maintain blood and blood components at the required temperature, in the event of failure of power or equipment while majority of them (86%) had the refrigerators maintained at the recommended temperatures of 2-6°C for the past 30 days based on the temperature logs. This is critical in ensuring safety and efficacy of the blood/blood products.

Recommendations

- The government should scale up access to blood transfusion services by establishing blood banks in all primary and secondary hospitals and other facilities that may be required to offer to offer blood transfusion. Efforts should also be made to ensure seamless supply of blood and blood products for timely provision of transfusion services
- All health facilities offering blood transfusion services should ensure screening of blood and blood products for transfusion transmittable infections before transfusion
- All health facilities that offer blood transfusion services should ensure uninterrupted supply of power to ensure safe and efficacious blood/blood products as well as routinely monitor temperatures in the blood banks

Table 124: Blood transfusion recommendations

Key Findings	Recommendations
• Blood transfusion services were offered at 22% of all level 3,4 and 5 facilities	• The government should scale up access to blood transfusion services by establishing blood banks in all primary and secondary hospitals and other facilities that may be required to offer to offer blood transfusion. Efforts should also be made to ensure seamless supply of blood and blood products for timely provision of transfusion services
• Of the 3 level facilities providing blood transfusion services, 71% are private and 18% FBO.	• There needs to be an assessment of the level 3 facilities offering blood transfusion services to determine if they should be reclassified based on



Key Findings	Recommendations
	services, or if they are correctly classified and offering services beyond their scope.
Less than half (46%) the facilities providing blood transfusion service had staff trained on transfusion in the 2 years prior to the survey.	The Ministry should consider robust dissemination of blood transfusion and protocols as well as training of health care workers on safe blood transfusion.
- Blood screening for transfusion transmissible infectious diseases was 39% among facilities offering the blood transfusion services - Only 28% of public facilities had blood screening for transfusion transmissible infectious diseases	All health facilities offering blood transfusion services should ensure screening of blood and blood products for transfusion transmittable infections before transfusion
One of four facilities had experienced interruption in availability of blood for transfusion in the three months prior to the assessment.	All health facilities that offer blood transfusion services should ensure uninterrupted supply of power to ensure safe and efficacious blood/blood products as well as routinely monitor temperatures in the blood banks

EMERGENCY SERVICES

Emergencies can occur at any time and any place, often without warning. Many proven health interventions are time dependent. Emergency care is an integrated platform for delivering accessible, quality and time-sensitive health care services for acute illness and injury. Emergency care services facilitate timely recognition, management and, when needed, continued treatment of the acutely ill at the appropriate level of the health care system. Occasionally this can involve referrals to the appropriate level of care. Being prepared for emergencies is crucial for saving lives and minimizing harm. Emergency availability and readiness involves taking a proactive approach to identify potential health risks, provide necessary training, and ensure that healthcare workers and facilities are equipped with proper health products and technologies and knowledge to respond effectively.

The Quality-of-Care survey assessed all the -health facilities on their preparedness to manage medical emergencies, focusing on the following; infrastructure for emergency care, emergency equipment and medications, emergency preparedness protocol, emergency preparedness drills, protocols for triage and need for pre-payment before access to emergency care. This was assessed at the outpatient department for the primary care facilities and at the accident and emergency department for secondary and tertiary facilities.

Service availability

During the survey the health facilities declared whether they offered emergency services and the responses were not broken down further.

Service readiness

The tracer items assessed were as summarized in the table below.

Table 125: Emergency tracer items

Infrastructure	Equipment	Medication
i. Isolation room ii. Triage area iii. Resuscitation area iv. Functional phone for communication v. Access to an ambulance	i. BP machine ii. Pulse oximeters iii. Patient monitor iv. Thermometer v. Stethoscope vi. Ambu bag vii. Laryngoscope viii. Endotracheal tubes ix. CPAP machines x. Oxygen face mask xi. Oxygen source xii. Nebulizer	i. Atropine ii. Adrenaline iii. Vitamin K iv. Anticoagulant e.g. heparin v. Salbutamol vi. Dextrose vii. Normal saline viii. Lorazepam/Midazolam/Diazepam ix. Injectable Hydrocortisone/Dexamethasone

Infrastructure	Equipment	Medication
	xiii.IV giving set xiv.Suction machine	x. Medical oxygen xi. Hydralazine

Findings

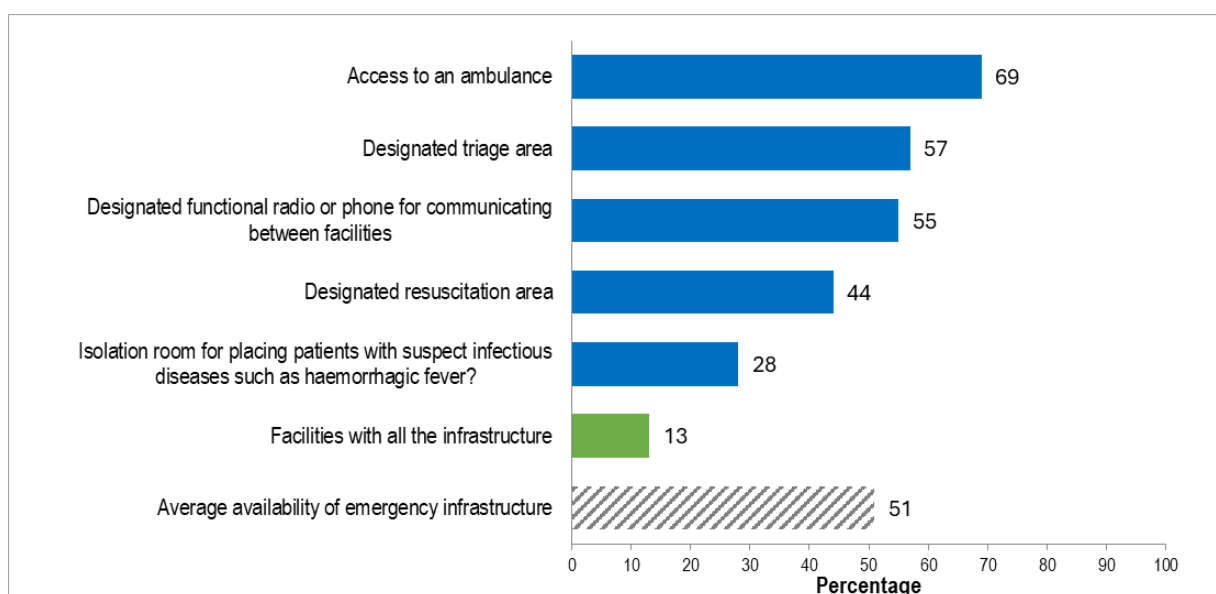
Availability of emergency services

- Nationally, 89% of the health facilities offered emergency services.

Service Readiness

- Thirteen percent (13%) of all the facilities had all the necessary emergency infrastructure
- The most available emergency infrastructure item was access to an ambulance at 69% while the least available was an isolation room at 28% as shown in the figure below.

Figure 231: Percent of facilities that have infrastructure for emergencies (N=12039)



Annex Table 124 shows the availability of emergency infrastructure by health facility location, type, managing authority and by county

Facility type

- In general, the higher-level facilities had better emergency infrastructure availability than the lower-level facilities.
- All level 5 facilities had access to ambulance services compared to 90% of level 4 facilities, 74% of level 3 facilities and 65% of level 2 facilities
- Majority of level 5 and 4 facilities had isolation rooms compared to primary care facilities;

- Availability of emergency infrastructure was higher in urban compared to rural health facilities
- Isolation rooms and access to ambulances were available in 36% and 75% of urban facilities respectively, compared to 23% and 65% of rural facilities
- Availability of emergency infrastructure in public facilities was the lowest based on facility ownership
- The availability of isolation rooms was highest in FBO facilities at 35% and least in public facilities at 22% Access to ambulance services was highest in FBO facilities at 71% and least in private facilities at 68%

- Only 12 out of 47 counties had at least 60% average availability of emergency infrastructure
- Isolation rooms were available in more than half of the health facilities in Kajiado (56%) and Nyamira (55%) whereas the availability was less than 10% four counties, Marsabit and Lamu (9%), Elgeyo Marakwet (7%) and Kitui (4%)
- All health facilities in Isiolo county had designated triage areas compared to five counties, Wajir & Marsabit (17%), Tharaka Nithi (14%), West Pokot (13%) and Elgeyo Marakwet (11%), which had less than 20% of their health facilities having designated triage areas.
- Health facilities in Kirinyaga county had the highest access to ambulance services at 97% while the least access was in Marsabit county at 21%

**Average availability of
Emergency Infrastructure**

0%-20%	Orange
21%-40%	Yellow
41%-60%	Light Green
61%-80%	Medium Green
81%-100%	Dark Green

Kenyan lakes

Blue

0 100 200 km

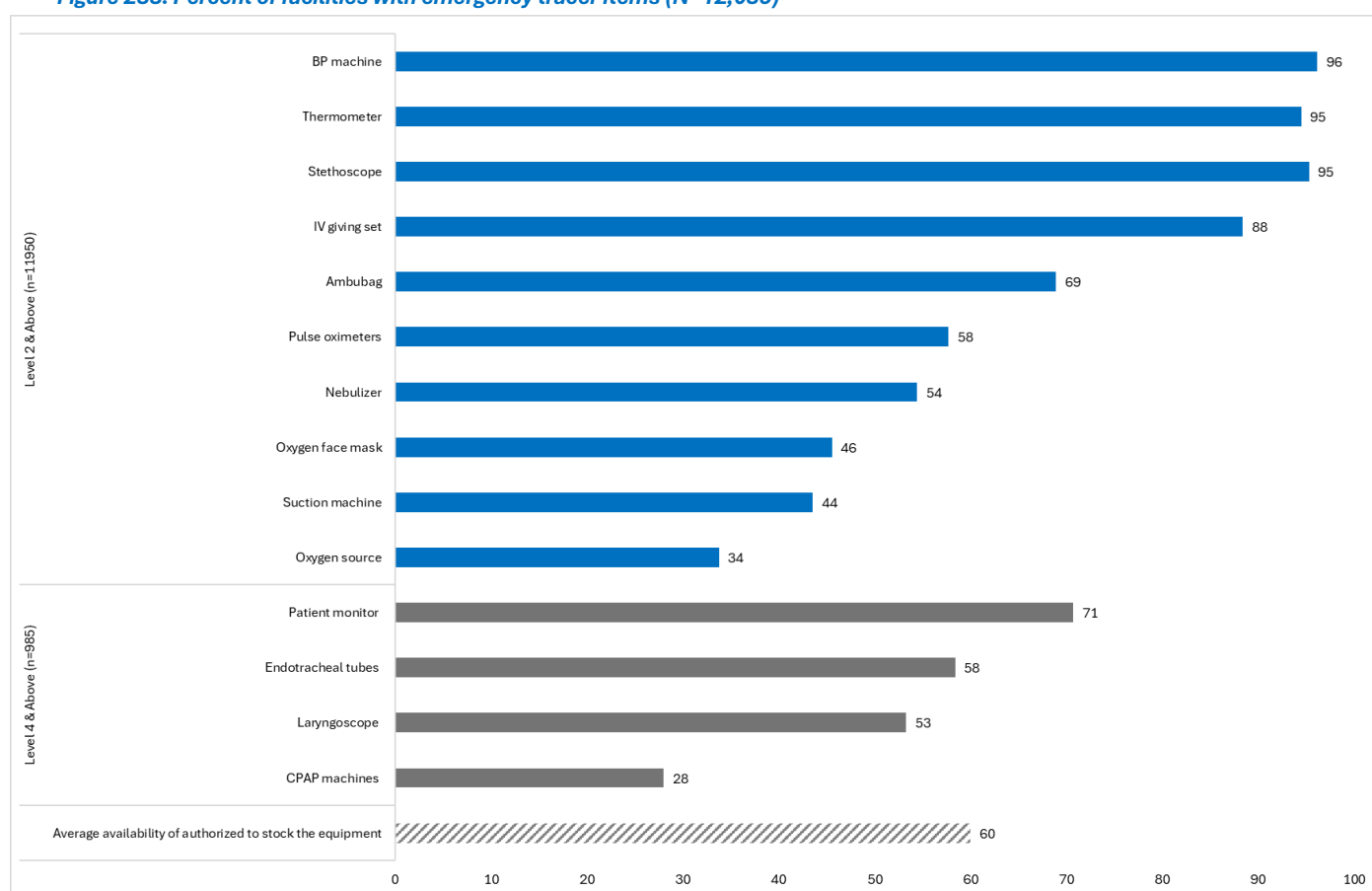
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Availability of tracer Equipment in Facilities offering emergency services

National

- The average availability of emergency tracer items in facilities authorized to stock was 60% nationally.
- Less than half of all facilities had both oxygen face mask and suction machine (46% and 44% respectively)
- Pulse oximeter and nebulizer were available in 58% and 54% respectively in all health facilities as summarized in the figure 233 below.

Figure 233: Percent of facilities with emergency tracer items (N=12,039)



Disaggregation

Annex table 125 shows the disaggregation of emergency tracer equipment disaggregated by location, KEPH level, ownership and by county.

By KEPH level,

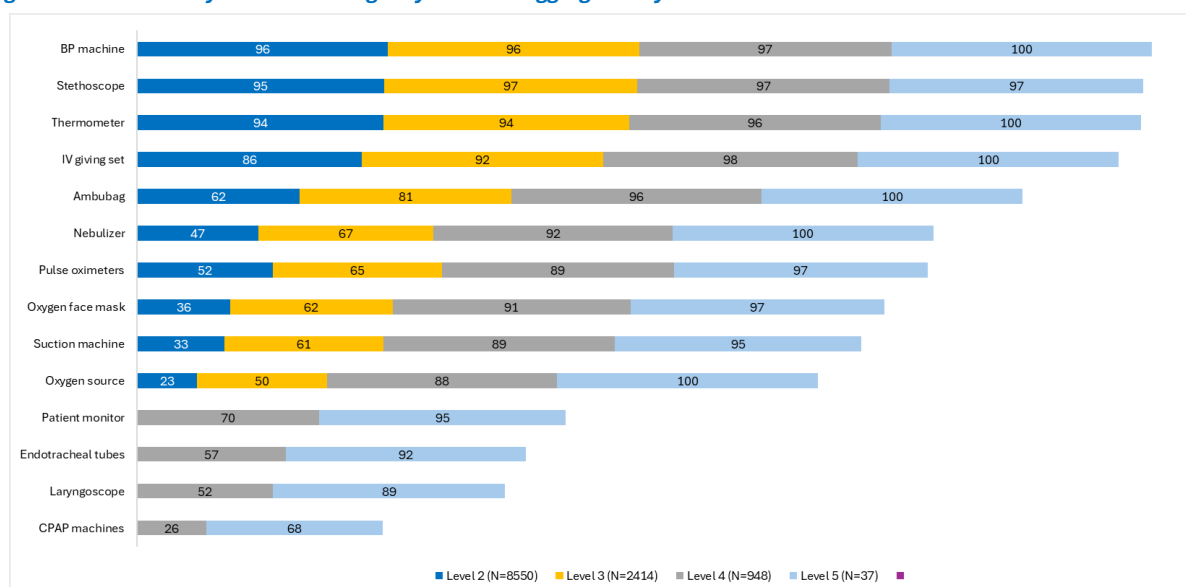
- Availability of emergency tracer items was higher in hospitals (levels 4 and 5) compared to primary care facilities
- The average availability of these items for level 5 facilities was 95%, followed by level 4 facilities (81%), level 3 facilities (77%) and level 2 facilities (62%)

- Pulse oximeters and oxygen sources were available in 97% and all level 5 health facilities respectively, compared to 52% and 23% of level 2 facilities
- Less than half of level 2 facilities had nebulizers (46%) which were available in all level 5 facilities

Availability of CPAP machine, laryngoscope, endotracheal tube and patient monitors was analyzed for level 4 and 5 facilities while all other items were analyzed for all levels of care

- The most available item for all levels of care was blood pressure machine at 96% of health facilities while the least available was oxygen source at 34%
- For items expected at level 4 and above facilities only, patient monitor was the most available item at 71% while CPAP machine was the least available at 28%.

Figure 234: Availability of tracer emergency items disaggregated by KEPH level.



By location

- All emergency tracer items were more available in urban compared to rural health facilities
- The average availability of these emergency tracer items was 71% in urban health facilities and 55% in rural facilities
- Pulse oximeter was available in 75% of urban facilities compared to 45% of rural facilities
- Oxygen source was available in 49% of urban facilities and 22% of rural facilities
- Seven in every ten urban facilities had nebulizers (70%) while they were available in about four in every ten rural facilities (42%)
- Slightly over half of urban facilities had suction machines (53%) compared to rural health facilities at 36%

By ownership

- Suction machines were most available in level 5 health facilities at 95% and least available level 2 facilities at 33. The average availability of most emergency tracer items was highest

in NGO health facilities at 72%, followed by private and FBO facilities at 70% and least in compared to public facilities at 56%

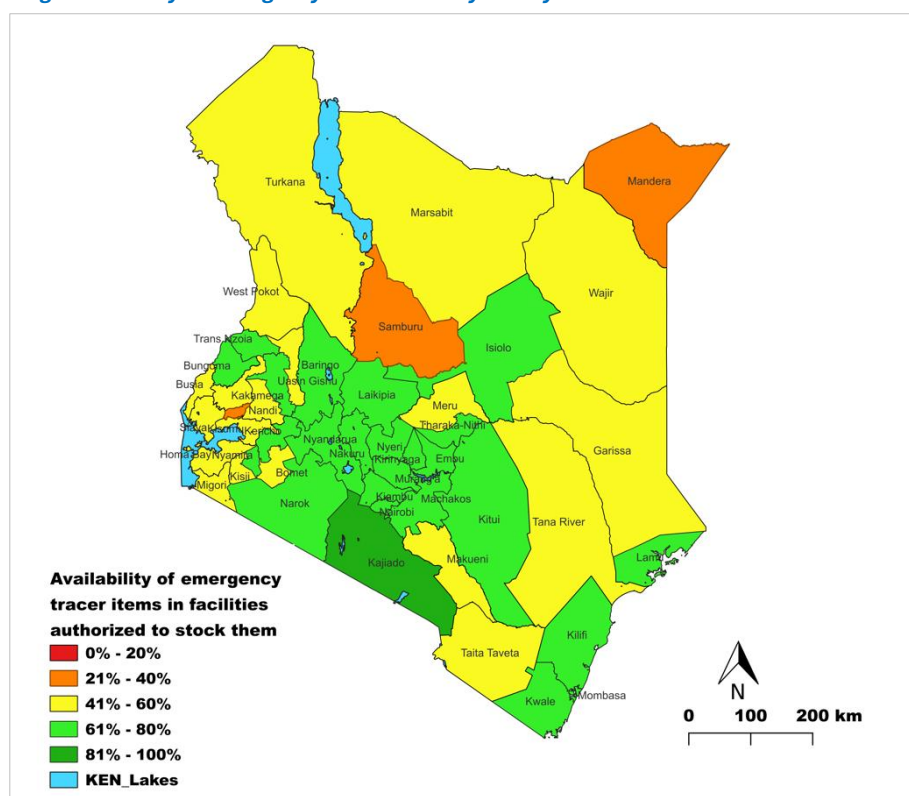
- All NGO facilities had a patient monitor, followed by private facilities at 80%, FBO facilities at 78% and public facilities at 62%
- The availability of pulse oximeters was highest in NGO health facilities at 75% and least in public facilities at 41%
- Less than half of public facilities had nebulizers (37%) which were available in 72% of FBO facilities, 69% of private facilities and 64% of NGO facilities
- More than half of FBO and NGO facilities had suction machines available (55% and 53% respectively) while their availability was less than half in public and private health facilities at 38% and 46% respectively

County Distribution

Figure 235 shows the disaggregation of emergency tracer equipment disaggregated by county,

- The average availability of all emergency tracer items varied significantly across the 47 counties ranging from 81% in Kajiado to 41% in Vihiga County Pulse oximeters were most available in health facilities in Nairobi County at 88% and least available in Bomet County at 19% All hospitals in Kajiado, Kwale, Lamu, Nyandarua and West Pokot had patient monitors while they were least available in Samburu County at 20%
- More than 80% of the health facilities in Mombasa (90%), Kirinyaga (88%) and Kiambu (82%) had nebulizers while they were available in only 17% of the counties in West Pokot County

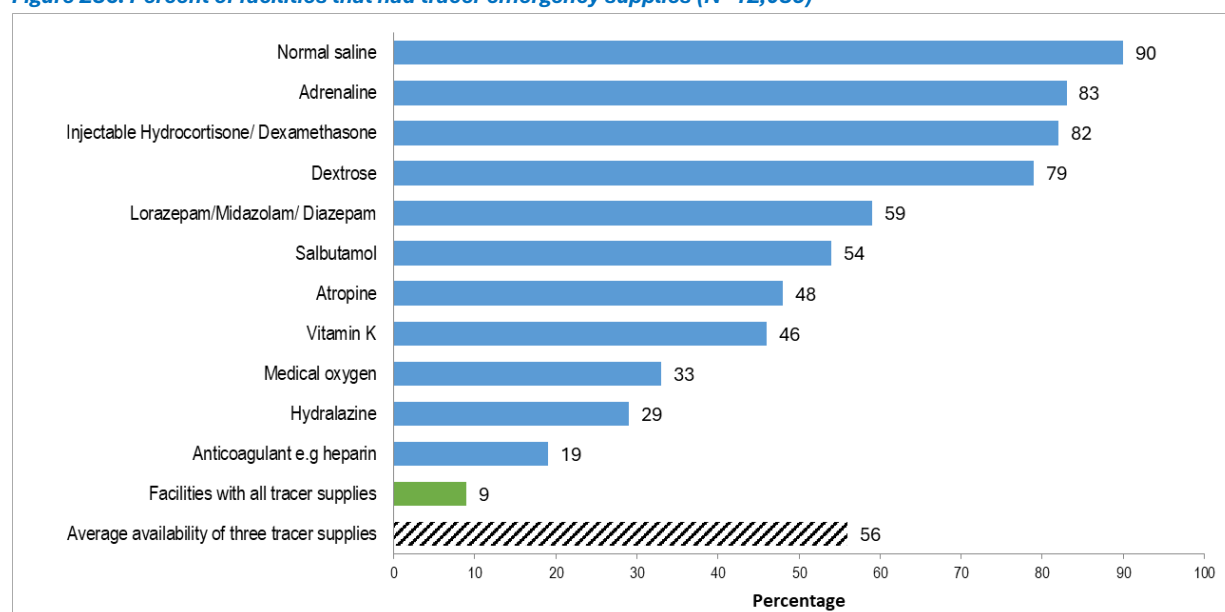
Figure 235: Average availability of emergency tracer items by county



Availability of emergency tracer supplies

- Nationally, only 9% of the facilities had all the tracer pharmaceutical items for offering emergency services. The average availability of three tracer supplies was at 56% of the health facilities offering emergency services.
- Normal saline was available in most of the health facilities at 90%, while anticoagulants such as heparin were found in only 19% of the facilities.
- Less than half of the facilities had atropine (48%), vitamin K (46%), medical oxygen (33%) and hydralazine (29%) as shown below.

Figure 236: Percent of facilities that had tracer emergency supplies (N=12,039)



Disaggregation

Annex table 126 shows the disaggregation of emergency tracer equipment disaggregated by location, KEPH level, ownership and by county.

By location

- All emergency tracer supplies were more available in urban compared to rural health facilities with an average availability of 67% and 48% respectively
- Atropine was available in 61% of urban compared to 38% of rural health facilities
- Anticoagulants were available in 10% of the rural health facilities compared to 31% of urban health facilities.
- Less than half of rural health facilities had diazepam/midazolam/lorazepam (47%) while about three quarters (74%) of urban facilities had these class of medicines

By level of care

- Emergency medicines were most available in higher level facilities, with an average availability of 91% in level 5 facilities, 83% of level 4 facilities, 64% of level 3 facilities and 51% of level 2 facilities

- 
- Atropine was available in 97% of level 5 and 39% of level 2 health facilities while vitamin K was available in 86% and 39% of these facilities respectively
 - Half of level 2 facilities had salbutamol (50%) compared to 61% of level 3 facilities, 80% of level 4 facilities and 92% of level 5 facilities
 - More than 95% of the level 4 and 5 health facilities had Dextrose available compared to about three quarters of level 2 facilities
 - The availability of normal saline was at least 88% in all health facilities regardless of their level
 - Medical oxygen was most available in level 5 and 4 health facilities at 95% and 85% respectively, while it was least available in level 2 at 22%

By ownership

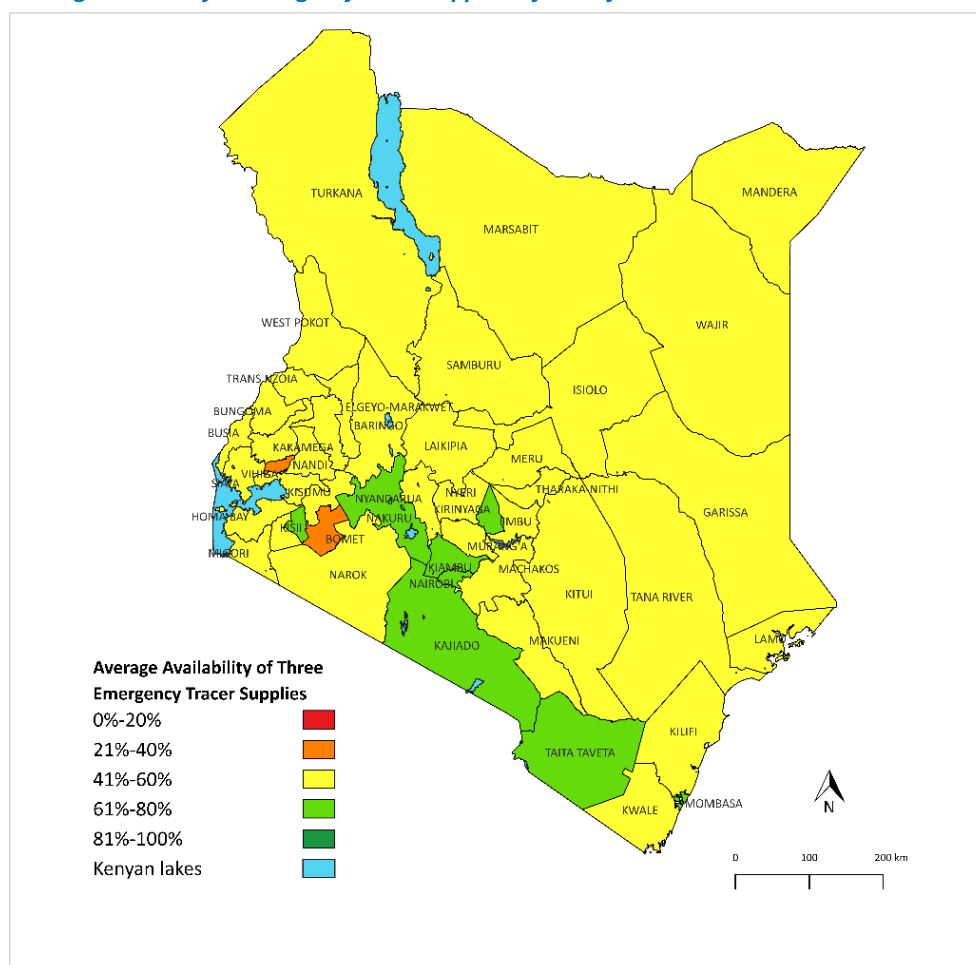
- The average availability of emergency medicines was lowest in public at 44% and highest in private health facilities at 68
- About three in every ten (32%) of public health facilities had atropine available compared to six in every ten private (61%), FBO (61%) and NGO (60%) facilities
- Dextrose was available in 88% of both FBO and private health facilities compared to 69% of public facilities
- The availability of normal saline was highest in FBO health facilities at 95% and lowest in NGO facilities at 83%
- Slightly more than half (54%) of NGO health facilities had medical oxygen available compared to a fifth of public facilities.

County distribution

Figure 237 shows the disaggregation of emergency tracer supplies disaggregated by county.

- The average availability of these medicines differed across the counties, ranging between 35% in Bomet county to 73% in Kajiado
- Only 6 counties had over 61% average availability of selected emergency items.
- 2 counties: Bomet and Vihiga, had an average availability of between 21-40%.
- Majority of the counties had an average availability of between 41-60%
- Atropine had the least average availability in West Pokot at 25% and highest availability in Mombasa County at 72%.
- All health facilities providing emergency services in Mombasa County had normal saline while it was least available in Vihiga county at 72%.
- Dextrose was available in 99% of health facilities providing emergency services in Mombasa County compared to 38% in Vihiga county
- Average availability of medical oxygen was highest in Nairobi at 62% and Kajiado at 58% while Bomet county had the least availability at 10%.

Figure 237: Average availability of emergency tracer supplies by county



Medical Emergency Preparedness Systems

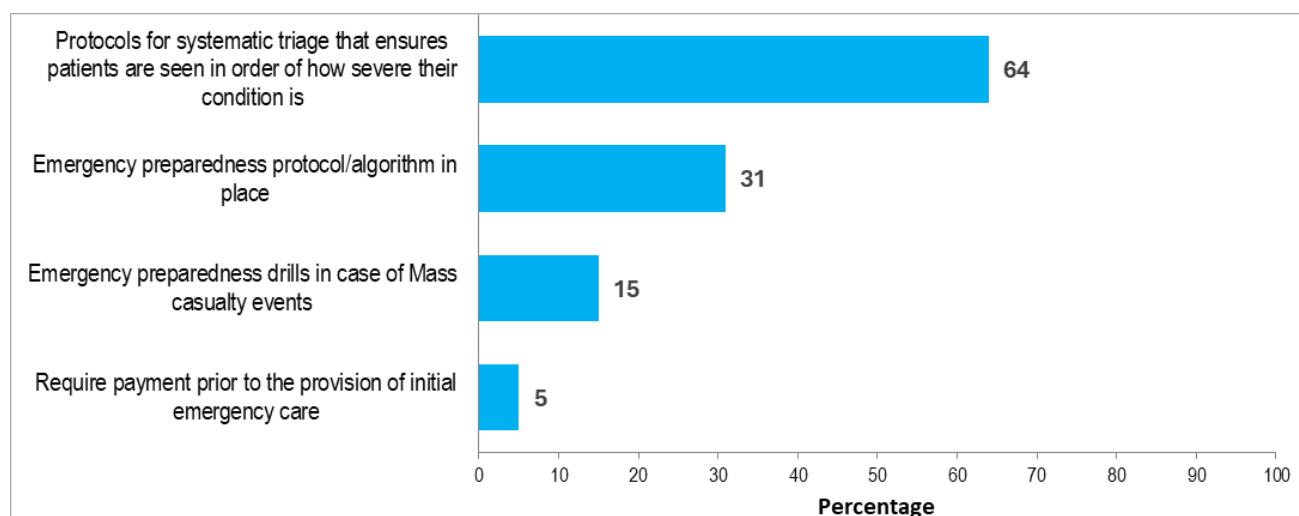
The survey aimed to assess facilities with emergency systems in place focusing on emergency preparedness protocols, emergency preparedness drills in case of Mass casualty events, and the requirement for payment prior to the provision of initial emergency care.

Findings

National

- Majority (64%) of health facilities that offered emergency medical services had protocols for triage of patients that ensures patients are seen in reference to severity of their condition
- About one in three facilities (31%) had emergency preparedness protocol while only 15% conducted emergency preparedness drills.
- A small fraction of these facilities (5%) required for an upfront payment before offering emergency medical care.

Figure 238: Percent of facilities that had emergency system (N=12,039)



Disaggregation by location, KEPH level and ownership.

Annex 127 show the disaggregation of emergency preparedness systems disaggregated by location, KEPH level ,ownership and by county.

By location,

- Urban facilities were more prepared to handle medical emergencies compared to rural facilities
- More urban health facilities (42%) had an emergency preparedness protocol compared to of rural facilities (22%)
- Emergency drills were conducted more by urban health facilities compared to of rural facilities

By KEPH level,

- The higher-level facilities were more prepared to handle medical emergencies compared to primary care facilities
- More than half of level 4 and 5 facilities had an emergency preparedness protocol at 53% and 68% respectively, compared to 26% and 38% of level 2 and 3 facilities respectively
- One in every 10 level 2 health facilities conducted emergency drills (10%) compared to 7 out of 10 of level 5 facilities

By ownership

- Emergency preparedness protocols were mostly available in NGO facilities at 37% and least available in public facilities at 26%
- Three out 10 NGO health facilities are likely to conduct emergency preparedness drills in case of mass casualty events compared to one out of ten public facilities

- Public health facilities were less likely to demand for upfront payment (2%) before providing emergency medical care compared to 9% of private facilities, 5% of FBO facilities and 3% of NGO facilities

County distribution

Annex 127 shows the disaggregation of emergency preparedness systems disaggregated by county.

- Only six counties had more than half of their health facilities having emergency preparedness protocols; Uasin Gishu (70%), Bungoma (64%), Nairobi (63%), Nyamira (60%), Kajiado (58%) and Kakamega (55%) while Mandera had the least at 2%
- None of the health facilities in Vihiga and Marsabit counties conducted emergency drills while Kajiado had 38%
- All health facilities in Nyeri, Samburu, Kirinyaga, Isiolo and Bomet counties did not require pre-payment before providing emergency medical care as opposed to 21% of facilities in Trans Nzoia County.

Discussion

A significant majority of health facilities offered emergency medical care with a small fraction of facilities not providing the services at 10%. All healthcare providers and facilities should be well resourced and prepared to handle any form of medical emergency at the bare minimum to stabilize emergency patients before referral to higher level facilities.

For health facilities to optimally respond to medical emergency cases, they must have all the requisite emergency equipment, medication and health personnel. Only 13% of the facilities that offered emergency medical services had all the tracer emergency infrastructure while the average availability of emergency equipment was 63%. In addition, the average availability of emergency medicines was 56%. Both items were less available in primary care facilities, meaning reduced capacities of these facilities to offer quality medical emergency care.

Access to emergency medical care is a right granted by the 2010 Kenyan constitution. All health care providers and facilities should provide emergency medical care regardless of the client's capacity to pay. However, the survey showed that a small fraction of facilities (5%) demanded an upfront payment before providing emergency medical care. This would hinder access to the much-needed care and impact negatively on the emergency patients' outcomes.

Table 126: Emergency recommendations

Key Findings	Recommendations
Lack of adequate emergency infrastructure in facilities	There is need to have all health facilities well-resourced with emergency infrastructure, emergency equipment and emergency medicines to ensure optimal quality emergency medical services.



Key Findings	Recommendations
Few facilities require payment upfront before providing emergency medical treatment	All health facilities should endeavor to provide emergency medical treatment regardless of patients' capacity to pay upfront. In addition, the government should seamlessly implement the emergency, chronic and critical illness fund under the Social Health Authority to enhance access to emergency medical care.



LABORATORY SERVICES

Medical laboratory services are crucial in inpatient curative and preventive healthcare. Laboratory results are essential for clinical assessment and guiding treatment decisions, leading to improved disease recognition and more accurate reporting. This also contributes to effective national health planning. Additionally, laboratory investigations are vital for managing and controlling diseases of public health significance.

Recognizing the healthcare providers' responsibilities to patients, laboratory activities are conducted on time to meet the needs of all patients and the personnel responsible for their care. This promotes patient welfare and satisfaction among laboratory users by instilling confidence in the quality and competence of medical laboratories.

Significance of quality in medical laboratory services

- Quality of care is the extent to which health services for individuals and populations increase the probability of the desired health outcomes and conform with current professional knowledge.
- The robustness of the healthcare system relies on the medical laboratory because a majority of clinical decisions arrived at by clinicians depend on laboratory reports. About 70-75% of medical diagnoses are based on these reports, so the quality of laboratory services directly impacts healthcare quality.
- To achieve improved quality diagnostic testing, it is essential to apply standardization, which ensures the accuracy and reproducibility of test results. Standardization also guarantees that the tests are appropriately applied to the correct patient. The implementation of quality management systems in the laboratory is vital in reducing the likelihood of obtaining invalid results and minimizing potential harm to patients, laboratory personnel, the public, and the environment.
- Accurate, precise, and reliable laboratory results, reported promptly, are pivotal for effective patient care. Errors during any step of the laboratory process, from sample collection and examination to reporting, can lead to serious consequences such as complications, inadequate treatment, and delays in diagnosis. This can result in unnecessary treatment and diagnostic testing.
- Tracer laboratory tests, equipment, reagents, and commodities are key elements used to assess and monitor the quality of care provided in healthcare settings. These elements are used to identify gaps in service delivery, determine the availability of essential diagnostic services, and ensure the accuracy and reliability of laboratory testing. They act as proxies for broader quality management system functionality regarding quality, competence, and resource availability.

Service Availability (Level 3,4 and 5)

Service availability measures assess the extent to which laboratory services are offered and available in various settings. Refers to the actual provision of laboratory diagnostic services observed onsite on the day of the survey. This was assessed based on the availability of laboratory tracer common diagnostic tests.

Laboratory diagnostic capacity was assessed based on the availability and capacity to conduct selected ten tracer-specific diagnostic tests that are commonly used and essential for patient care at all levels of care, as listed in Table 127 below.

Table 127: Tracer tests by KEPH Level

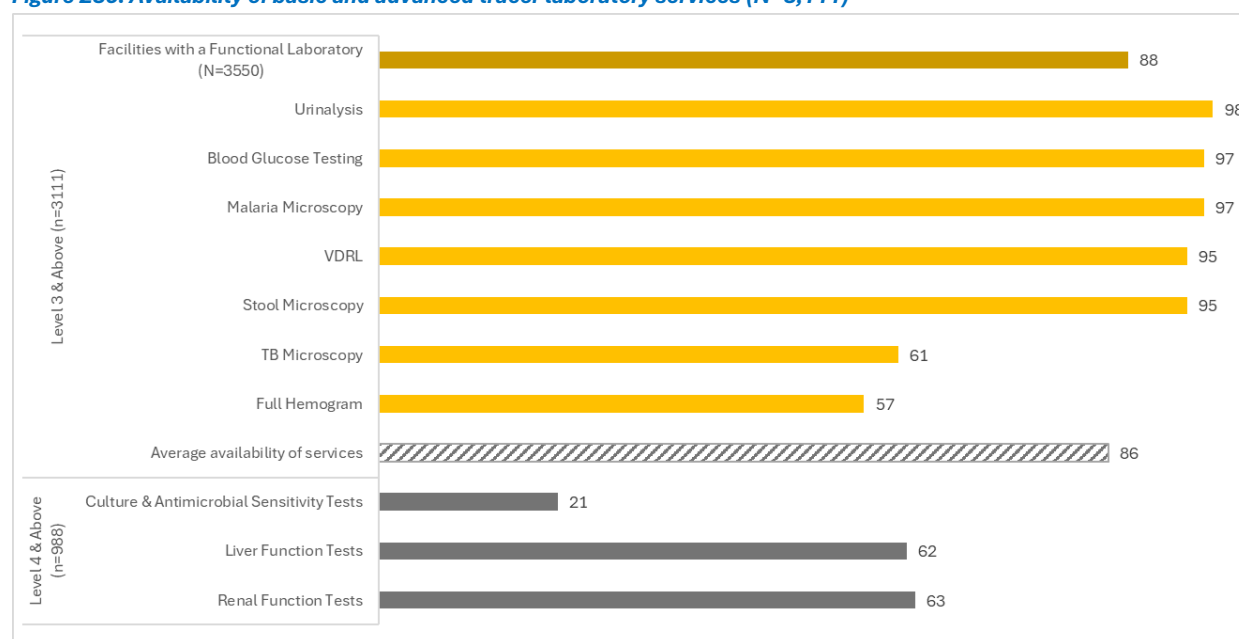
TRACER TESTS BY LEVEL	
Level 2 Lab Class B	• Blood Glucose Testing • Malaria Microscopy • Stool Microscopy • Urinalysis • VDRL • TB Microscopy
Level 3 Lab Class C	• Blood glucose testing • Malaria microscopy • Stool microscopy • Urinalysis • VDRL • Full Hemogram • TB microscopy
Level 4 & 5 Lab Class D, E, F	• Blood glucose testing • Malaria microscopy • Stool microscopy • TB Microscopy • Urinalysis • VDRL • Full Hemogram • Liver function tests • Renal Function Tests • Culture and Antimicrobial Sensitivity tests

Key Findings

The average availability of laboratory services in Level 3, 4, and 5 facilities was 86%.

- At least 95% of these facilities had Urinalysis, Blood Glucose Testing, Malaria Microscopy, VDRL, and Stool Microscopy services available.
- TB Microscopy and Full Haemogram were the least available services, at 61% and 57% respectively.
- Level 4 and 5 health facilities had additional tests available, including Renal Function Tests (63%), Liver Function Tests (62%), and Culture and Antimicrobial Sensitivity Tests (21%) nationally.

Figure 239: Availability of basic and advanced tracer laboratory services (N=3,111)



Disaggregation by location, KEPH level, and ownership

Annex table 128 shows the disaggregation of basic and advanced tracer laboratory services by location, KEPH level, ownership and by county.

- The average availability of Laboratory services was higher in urban facilities (78%) compared to rural facilities (67%)
- TB microscopy services were more available in rural (76%) than in urban facilities (47%)
- Seven out of every ten urban facilities had Liver and Renal Function Tests available, compared to 4 out of every 10 rural facilities.
- Full Hemogram services were more available in urban facilities at 77% compared to rural facilities (35%)
- Urinalysis, Blood Glucose Testing, Malaria Microscopy, VDRL, and Stool Microscopy services were universally available across all facilities, regardless of level or ownership.
- Full Hemogram and TB Microscopy were least available in Level 3 facilities, at 47% and 56%, respectively.
- Culture and Antimicrobial Sensitivity Testing were available in 19% of Level 4 and 73% of Level 5 health facilities.
- TB Microscopy was available in 9 out of 10 public facilities, compared to only 2 out of 10 private facilities.
- Full Hemogram was most available in NGO facilities (79%) and least available in public facilities (32%).
- Eight out of 10 FBO facilities had Liver and Renal Function Tests available, compared to 4 out of 10 public facilities.

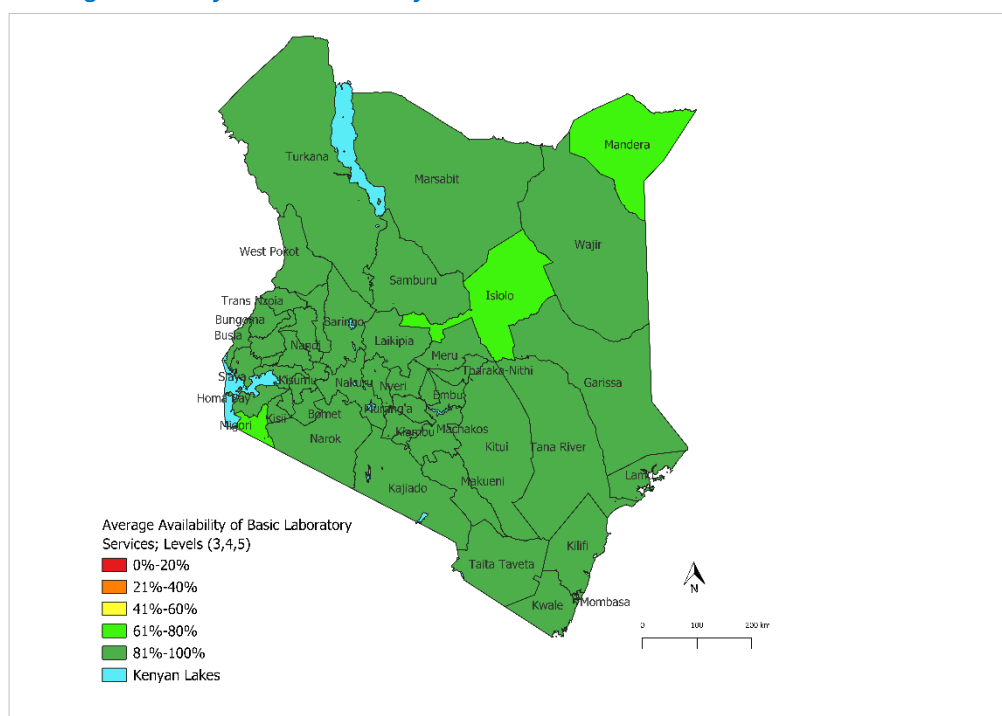
- Culture and Antimicrobial Sensitivity Testing were the least available laboratory tests across all facility ownership types.

County Distribution

Figure 240 shows the average availability of basic and advanced tracer laboratory services by county.

- The average availability of laboratory services was highest in Kericho and Turkana Counties at 91%.
- The majority of counties (94%) had an average laboratory service availability of at least 80% in their health facilities.
- Only three counties, Isiolo (73%), Mandera (78%), and Migori (79%), had an average availability below 80%.

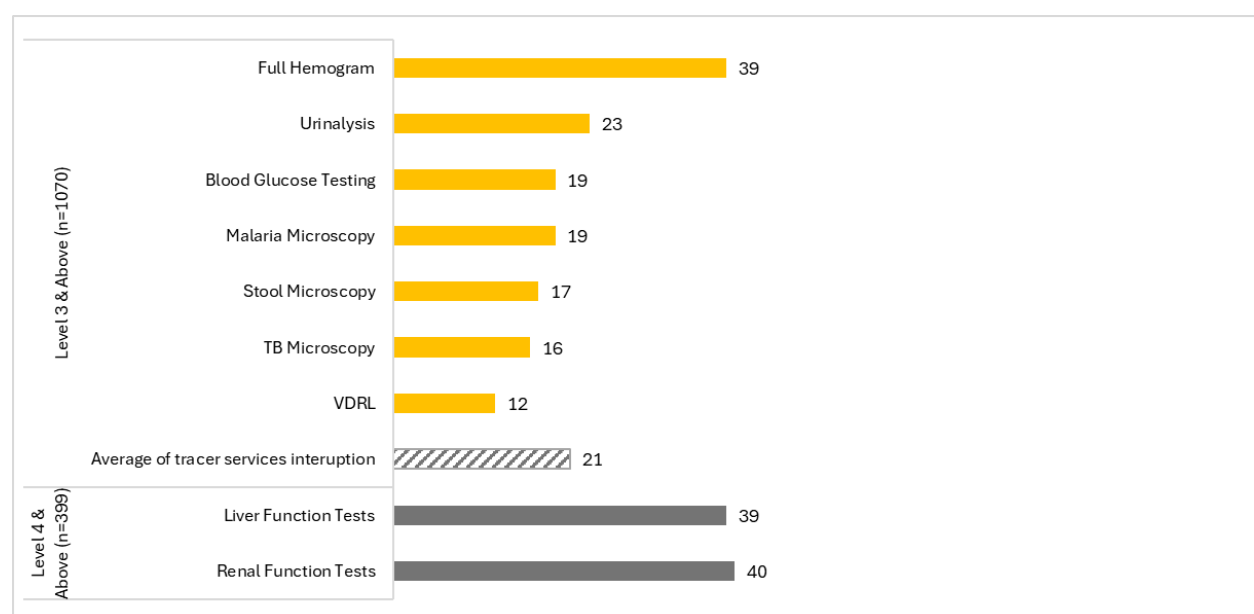
Figure 240: Average availability of Basic Laboratory Services Levels



Nationally, 34% of facilities with functional laboratories experienced interruptions in laboratory services due to equipment breakdowns and/or reagent stockouts during the review period (October–December 2023), as shown in Figure 241 below.

- On average, laboratory tracer service interruptions occurred in 21% of facilities.
- Full Hemogram was the most frequently interrupted service (39%), while VDRL was the least interrupted (12%).
- Four out of ten Level 4 and 5 facilities experienced interruptions in Liver and Renal Function tests.

Figure 241: Percent of facilities that have services interrupted (N= 1070)



Disaggregation by location, KEPH level and ownership

Annex Table 132 presents the interruption of basic and advanced tracer laboratory services, disaggregated by location, KEPH level, and ownership.

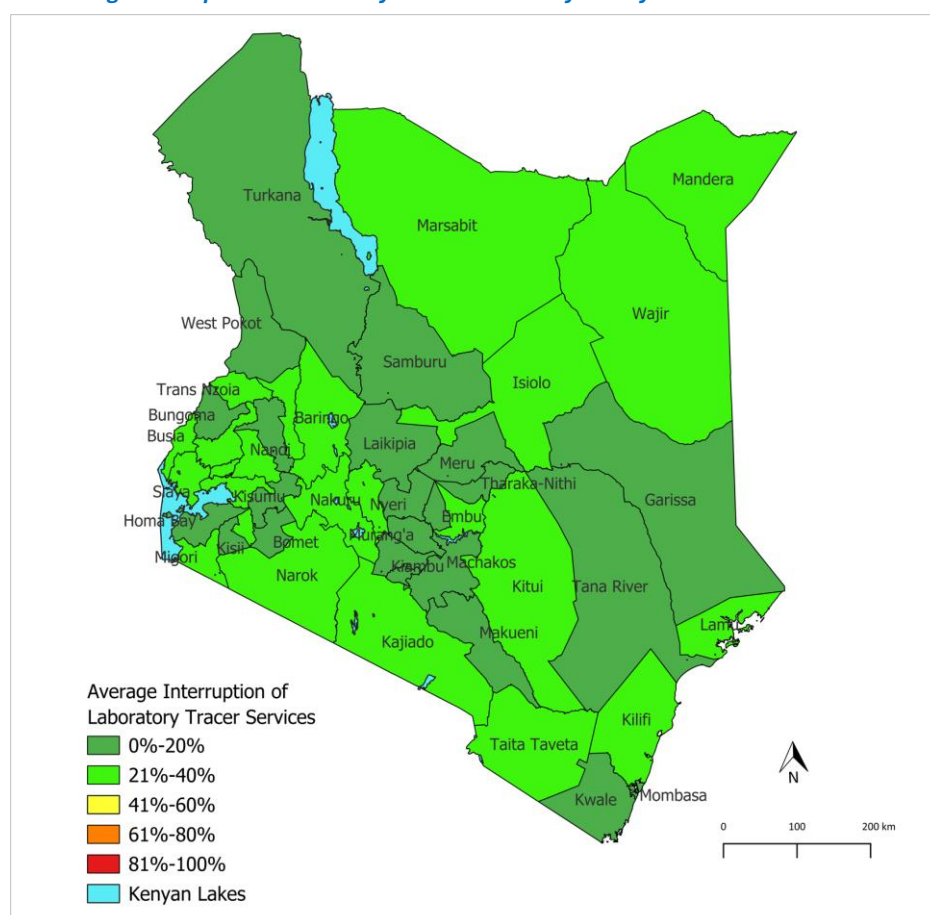
- On average, tracer service interruptions occurred in 24% of rural facilities and 17% of urban facilities.
- Four in ten urban facilities and three in ten rural facilities experienced interruptions in Liver and Renal Function tests.
- By level of care, interruptions were reported in 25% of Level 3 facilities, 14% of Level 4 facilities, and 9% of Level 5 facilities.
- Four in ten Level 4 facilities reported interruptions in Liver and Renal Function tests.
- Full Hemogram interruptions occurred in 33% of Level 3, 50% of Level 4, and 44% of Level 5 facilities.
- Eight in ten Level 5 facilities experienced interruptions in Liver Function tests, and seven in ten in Renal Function tests.
- Level 5 facilities had no interruptions in Malaria Microscopy, TB Microscopy, Blood Glucose Testing, or VDRL services.
- By ownership, interruptions were reported in 12% of NGO facilities, 15% of FBO facilities, 18% of private facilities, and 22% of public facilities.
- Four in ten public facilities experienced interruptions in Liver and Renal Function tests.
- All NGO facilities experienced interruptions in Renal Function tests, while Urinalysis, Blood Glucose Testing, VDRL, and Stool Microscopy remained uninterrupted.
- Full Hemogram interruptions occurred in 51% of private facilities, 36% of public facilities, 38% of FBO facilities, and 22% of NGO facilities.

Interruption of Laboratory Services distributed by County.

Figure 242 presents the average interruption of basic and advanced tracer laboratory services disaggregated by county.

- In most counties, the average interruption of basic laboratory tracer services ranged between 21% and 40%.
- Baringo and Kajiado Counties recorded the highest average interruption at 37%.
- No facilities in Tharaka Nithi County experienced interruptions in laboratory tracer services.
- West Pokot (9%), Kirinyaga (9%), and Mombasa (8%) Counties reported interruptions in less than 10% of their health facilities.

Figure 242: Average interruption of laboratory tracer services by county



Service Readiness

Service readiness assesses the laboratory's overall preparedness to deliver quality services. The ability of the laboratory to provide accurate, timely, and reliable test results. Service readiness assesses whether facilities have key components essential for service delivery, such as laboratory policies and guidelines.

Table 128: Tracer items for Laboratory services

Service Readiness
• Equipment (KEPH level appropriate) • Reagents (KEPH level appropriate) • Guidelines ○ Laboratory Biosafety and Biosecurity Policy Guidelines. 1st Edition, 2014. ○ Point of Care Testing Policy Guideline. 1st Edition, 2016. ○ Kenya National Specimen Referral Guideline, 2019.

2.2.1 Select Tracer Equipment

Tracer equipment refers to key diagnostic instruments that are essential for running the tracer tests. To assess whether labs have the necessary infrastructure and maintenance practices. During the assessment, Level 2 and above were assessed for 9 standard tracer equipment, 11 in level 3 and 14 in levels 4 and 5 shown in table 129 below.

Table 129: Tracer Equipment by KEPH Level

Tracer Equipment by Level of care		
Level 2	Level 3	Level 4&5
Electric/Light microscope	Electric/Light microscope	Electric/Light microscope
Centrifuge	Centrifuge	Centrifuge
Vortex mixer	Vortex mixer	Vortex mixer
Rocker/shaker	Rocker/shaker	Rocker/shaker
pH Meter	pH Meter	pH Meter
Autoclave	Autoclave	Autoclave
Westergren tube and rack	Westergren tube and rack	Westergren tube and rack
Micro-centrifuge	Micro-centrifuge	Micro-centrifuge
Pipettes/Micro-pipettes	Pipettes/Micro-pipettes	Pipettes/Micro-pipettes
	Hematology analyzer	Hematology analyzer
	Incubator (37 °C)	Incubator (37 °C)
		Agar plates for culture
		Blood chemistry analyzer
		Coagulometer

Select Tracer Reagents

These include essential consumables and reagents needed to perform the tracer tests and operate the equipment. During the assessment, level 3 facilities were assessed for two tracer reagents and level 4 and 5 health facilities for seven.

Table 130: Tracer Reagent by KEPH Level

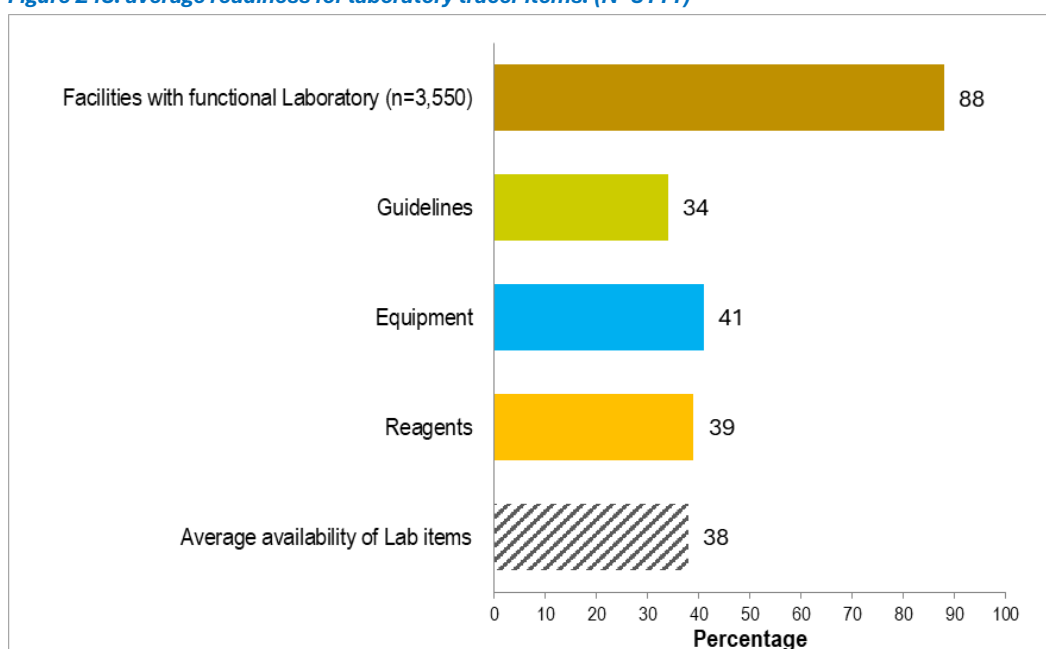
Tracer Reagents	
Level 3	Levels 4 and 5
Giemsa Stain	Giemsa Stain
Gram Stain	Gram Stain
	Culture Media

Tracer Reagents	
Level 3	Levels 4 and 5
	Drug Sensitivity Disks Romanowsky stains (May Grunwald, Wrights) Biochemistry and Hematology Assay Kits/reagents Indian ink

Findings:

Among facilities that had functional laboratories, the average availability of laboratory tracer items was 38%. The equipment score was 41%, the reagents at 39% and the guidelines at 34%.

Figure 243: average readiness for laboratory tracer items. (N=3111)

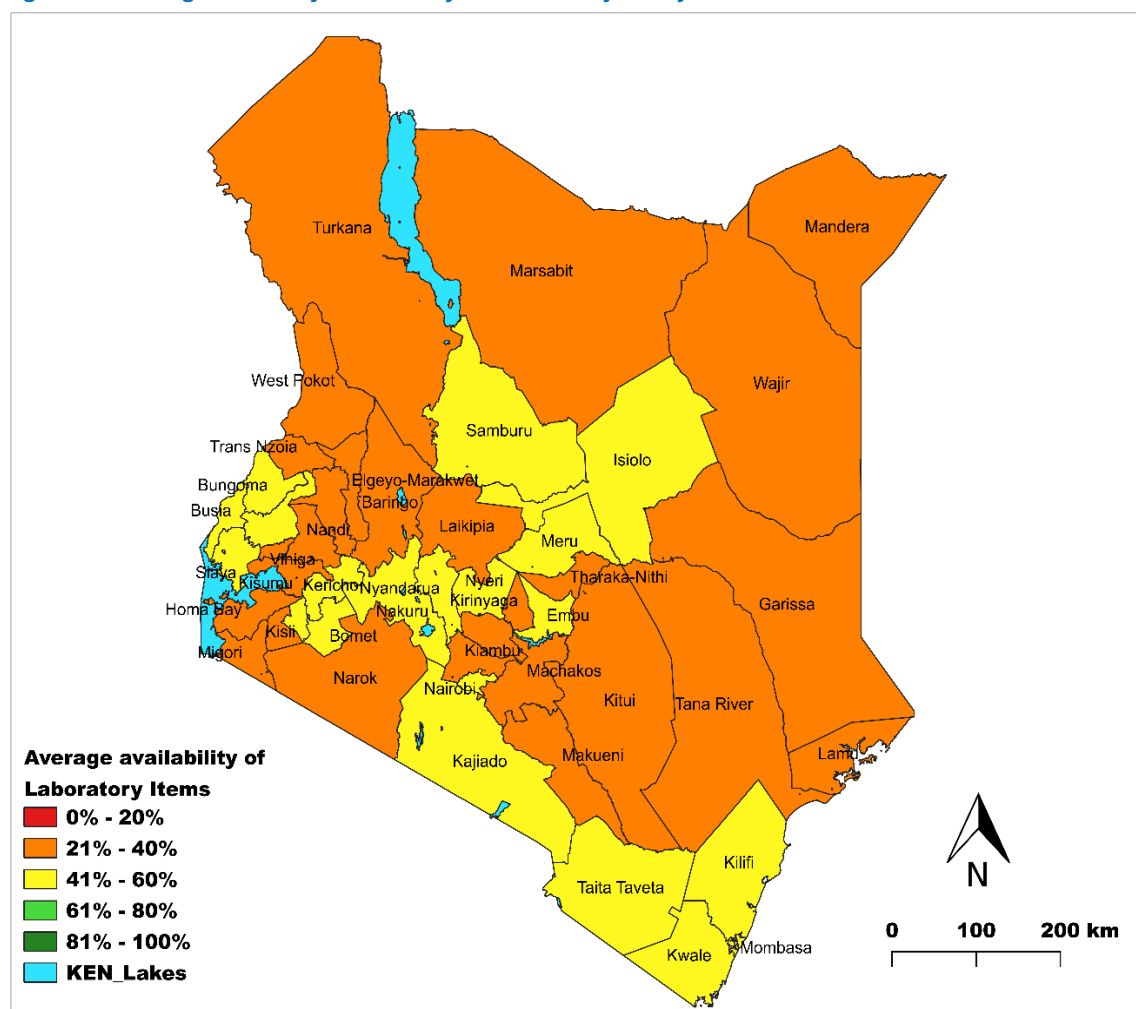


Average availability of laboratory tracer items by County

Figure 244 below shows the average availability of laboratory tracer items by county:

- Kajiado County recorded the highest average availability of laboratory tracer items at 59%, while Vihiga County had the lowest at 20%.
- Only two counties, Kajiado (59%) and Isiolo (51%), had at least 50% of their facilities equipped with laboratory tracer items.
- More than half of the counties (57%) had fewer than 40% of their health facilities with laboratory tracer items.

Figure 244: Average availability of laboratory tracer items by county



Laboratory Tracer Equipment

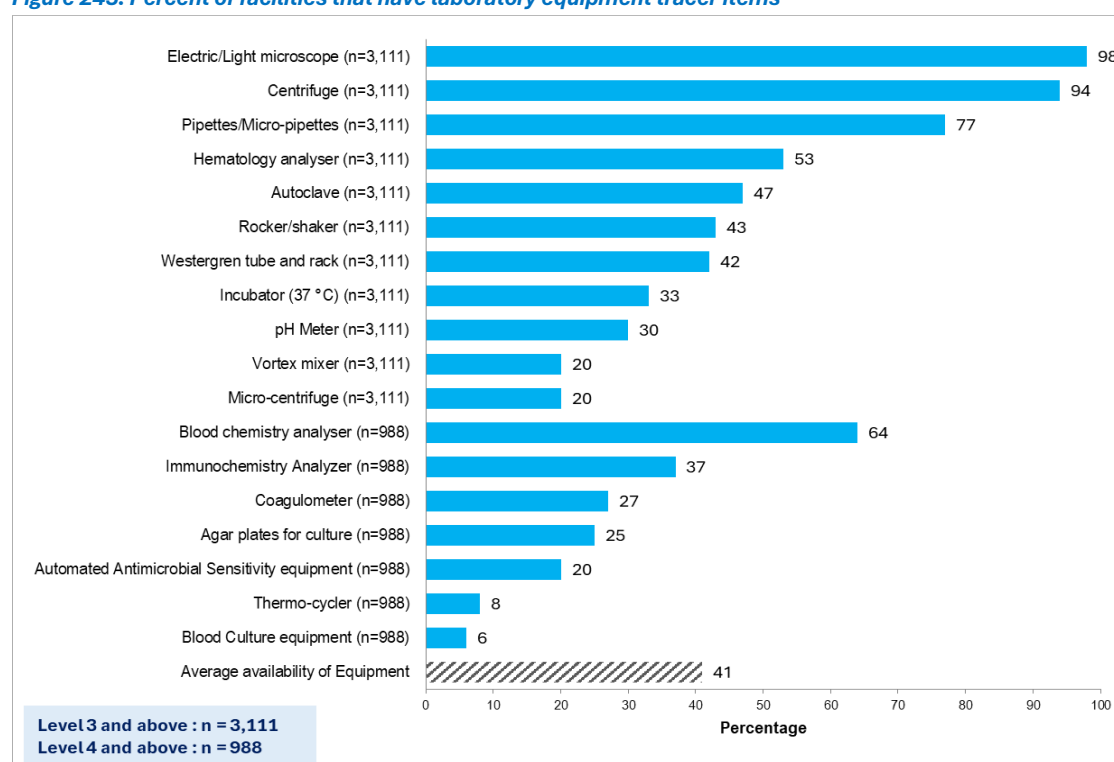
Among the health facilities offering laboratory services, the average availability of tracer laboratory equipment was 41%, as shown in Figure 245 below:

- The most available tracer equipment was electric/light microscopes (98%) and centrifuges (95%).
- The least available were micro-centrifuges and vortex mixers (20%).
- Pipettes and micro-pipettes were available in slightly more than three-quarters of the facilities (77%).

Among Level 4 and 5 facilities:

- The most available tracer equipment was the blood chemistry analyzer (64%), while blood culture equipment (6%) and thermo-cyclers (8%) were the least available.
- Agar plates for culture were available in a quarter of the facilities (25%), while automated antimicrobial sensitivity equipment was available in a fifth (20%).
- About four out of every ten Level 4 and 5 facilities had an immunochemistry analyzer.

Figure 245: Percent of facilities that have laboratory equipment tracer items



Disaggregation by location, KEPH level and ownership

Annex Table 129 shows the distribution of facilities with tracer laboratory equipment, disaggregated by location, KEPH level, ownership, and county:

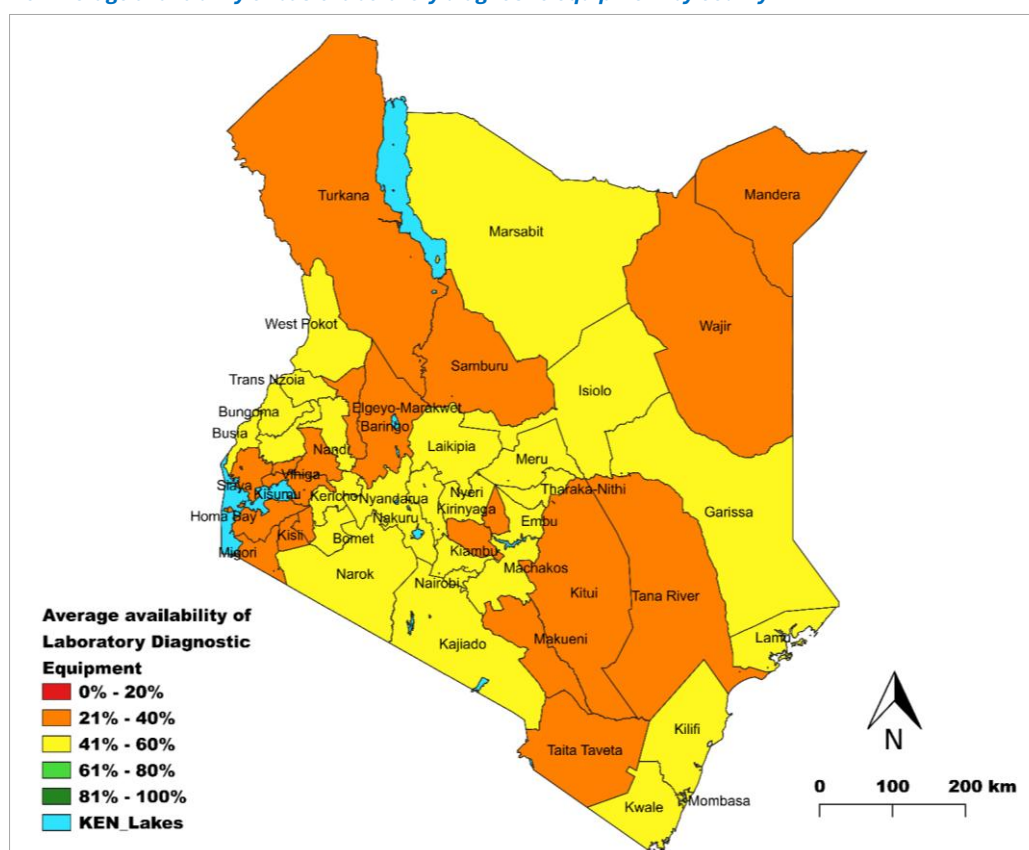
- At least 90% of facilities had electric light microscopes and centrifuges available, regardless of location, level, or ownership.
- Urban facilities (43%) recorded a higher average availability of tracer laboratory equipment compared to rural facilities (31%).
- Availability of blood culture equipment and automated antimicrobial sensitivity equipment was very low, at 3% and 1% in rural areas, and 8% and 11% in urban areas, respectively.
- Level 5 facilities (74%) had a higher average availability of tracer laboratory equipment compared to Level 4 (49%) and Level 3 (40%) facilities.
- Thermocyclers and automated antimicrobial sensitivity equipment were the least available, at 7% in Level 4 facilities and 32% and 35% in Level 5 facilities, respectively.
- Private (46%) and FBO (43%) facilities had a higher average availability of tracer laboratory equipment compared to public facilities (35%).
- Thermocyclers were least available in FBO facilities (3%), while no NGO facility had automated antimicrobial sensitivity equipment.
- Haematology analyzers were least available in public facilities (34%), compared to 69% in private facilities and 68% in FBO and NGO facilities.

County Distribution of Basic Laboratory Equipment.

Figure 246 shows the average availability of basic laboratory equipment tracer items disaggregated by county:

- Nairobi County had the highest availability of tracer laboratory equipment, while Migori County had the lowest at 25%.
- Only four counties—Nairobi (52%), Mombasa (51%), Isiolo (51%), and Embu (50%)—had at least half of their health facilities equipped with tracer laboratory equipment.
- Kirinyaga (29%), Kisii (27%), and Migori (25%) had less than one-third of their health facilities equipped with tracer laboratory equipment.
- Overall, 43% of counties recorded less than 40% availability of tracer laboratory equipment.

Figure 246: Average availability of basic laboratory diagnostic equipment by county

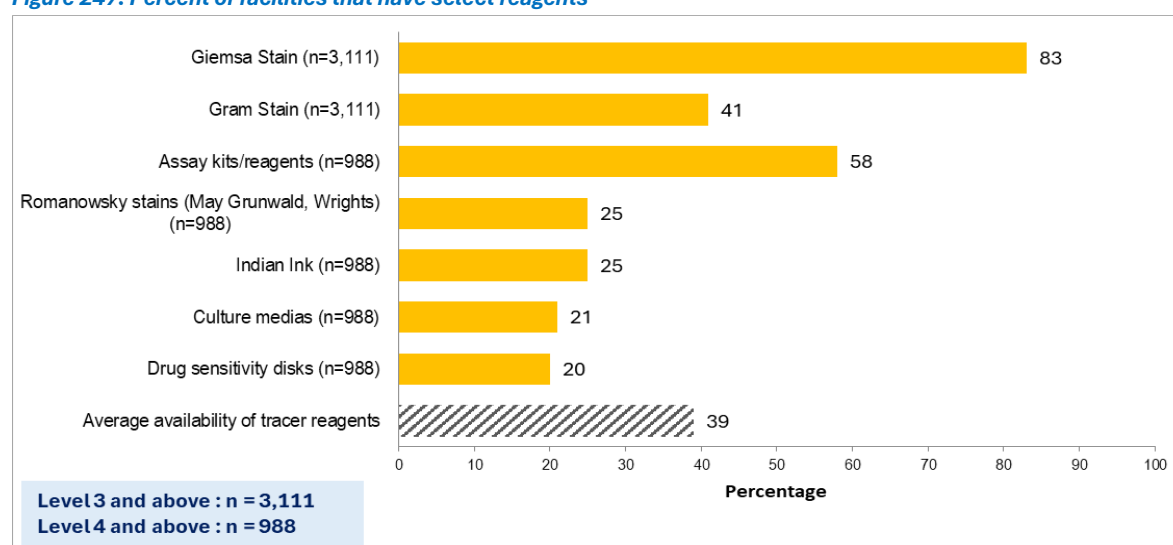


Laboratory Tracer Reagents

Figure 247 shows the availability of tracer laboratory reagents in health facilities:

- Nationally, the average availability of tracer laboratory reagents was 39%.
- Giemsa stain was the most available laboratory reagent, at 83%.
- Slightly more than half (58%) of Level 4 and 5 facilities had assay kits/reagents available, while only a fifth (20%) had drug sensitivity disks.

Figure 247: Percent of facilities that have select reagents



Disaggregation by location, KEPH level and ownership

Annex Table 131 presents the availability of tracer laboratory reagents disaggregated by location, KEPH level, ownership, and county:

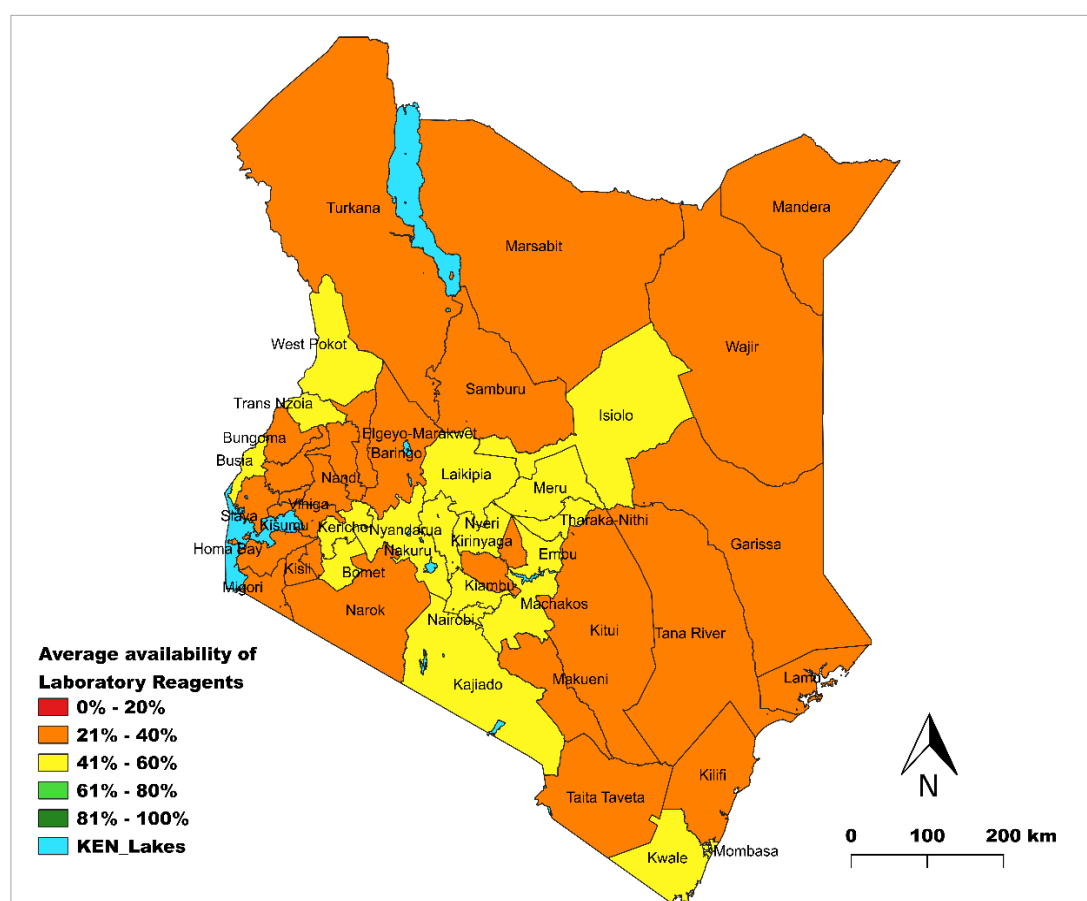
- The average availability of tracer laboratory reagents was higher in urban facilities (44%) compared to rural facilities (31%).
- Availability of drug sensitivity disks and culture media was 26% and 27% in urban facilities, compared to only 8% and 9% in rural facilities.
- Giemsa stain availability was similar across facilities regardless of location.
- By ownership, availability was highest in NGO facilities (49%) and lowest in public facilities (36%).
- Eight out of every ten facilities had Giemsa stain, irrespective of ownership.
- Availability of drug sensitivity disks and culture media remained low across facilities, with the lowest in public facilities (15%) and the highest in FBO (31%) and NGO facilities (48%).
- Assay kits/reagents were least available in NGO facilities (39%).
- At KEPH levels, drug sensitivity disks (19%) and culture media (19%) were low in Level 4 facilities compared to 68% and 73% in Level 5 facilities, respectively.
- All Level 5 facilities had assay kits/reagents, compared to 56% in Level 4 facilities.
- Giemsa stain was more available in Level 4 and 5 facilities compared to Level 3 facilities.
- The availability of Romanowsky stains (May-Grünwald, Wright's) was higher in Level 5 facilities (59%) than in Level 4 facilities (24%).

Availability of Tracer Laboratory Reagents in Counties

Figure 248 shows the availability of tracer laboratory reagents, disaggregated by county.

- Nyeri, Embu, Nyandarua, and Kwale Counties recorded the highest average availability of tracer laboratory reagents at 59%, while Uasin Gishu had the lowest at 22%.
- Only eight counties, Nyeri, Embu, Nyandarua, Kwale (59%), Kericho, Bomet (52%), Nairobi, and West Pokot (50%) had at least 50% average availability of tracer laboratory reagents in their health facilities.

Figure 248: Average availability of laboratory reagents

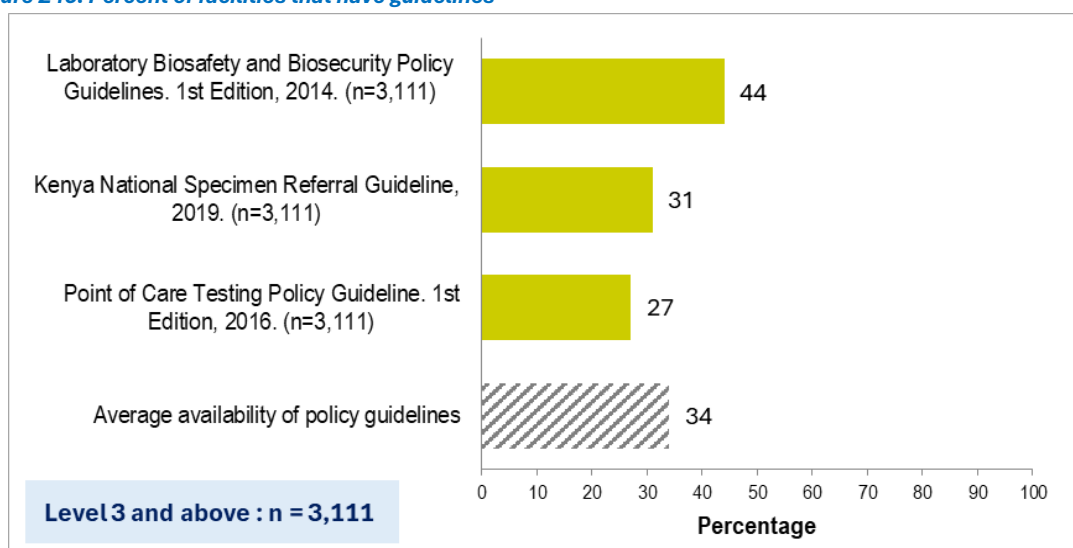


Laboratory Guidelines

Of the three tracer guidelines assessed:

- The average availability of the guidelines was 34%.
- The most available was the Laboratory Biosafety and Biosecurity Policy Guidelines, 1st Edition (2014), found in 44% of health facilities, while the Point of Care Testing Policy Guideline, 1st Edition (2016) was the least available at 27%.

Figure 249: Percent of facilities that have guidelines



Disaggregation by location, KEPH level and ownership

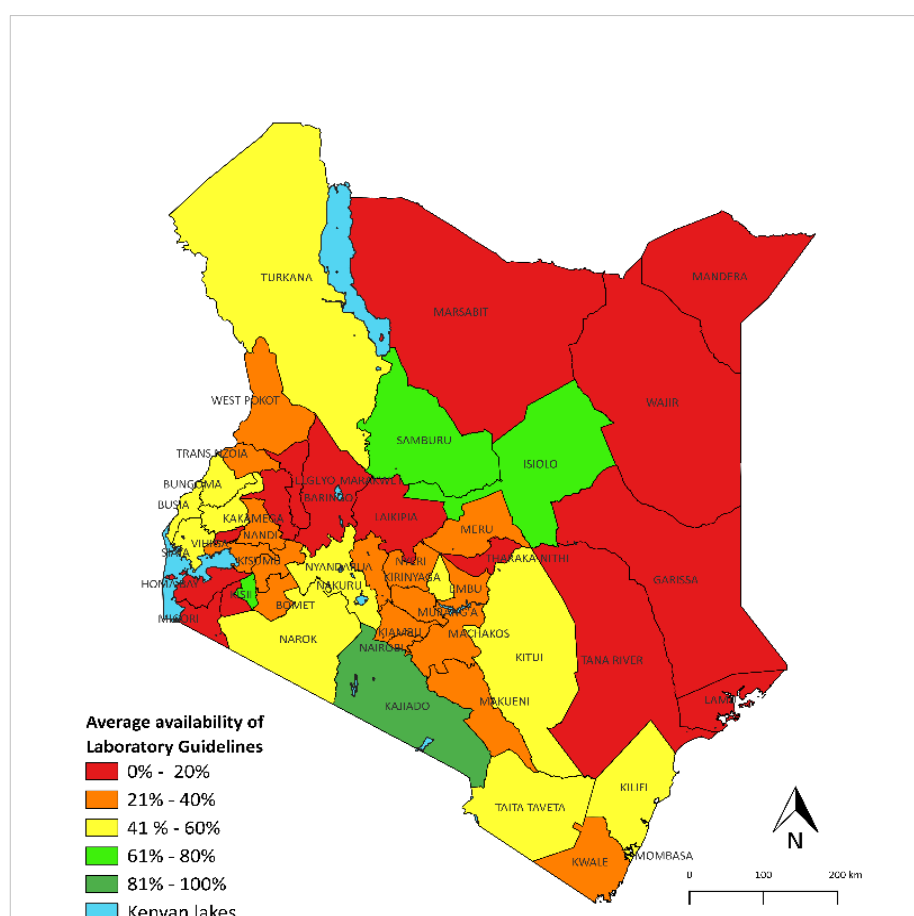
Annex Table 133 presents the availability of tracer laboratory guidelines disaggregated by location, KEPH level, ownership, and county:

- The average availability of tracer laboratory guidelines was 24% in rural facilities and 30% in urban facilities.
- By level, availability was highest in Level 5 facilities (60%), compared to 39% in Level 4 and 31% in Level 3 facilities.
- The Laboratory Biosafety and Biosecurity Policy Guidelines, 1st Edition (2014) had the highest availability in Level 5 facilities at 68%.
- The Point of Care Testing Policy Guideline, 1st Edition (2016) was available in 29% of Level 4 and 43% of Level 5 facilities.
- By ownership, availability was highest in FBO facilities (36%), followed by public (35%), private (33%), and lowest in NGO facilities (27%).
- NGO facilities also had the lowest availability of the Point of Care Testing Policy Guideline, 1st Edition (2016) at 18%.

County Distribution.

Figure 250 shows the average availability of tracer laboratory guidelines by county.

- Kajiado County recorded the highest average availability at 84%, while Tana River County had the lowest at 3%.
- Only four counties, Kajiado (84%), Samburu (69%), Nyamira (65%), and Isiolo (63%) had an average availability of at least 60% in their health facilities.
- Fourteen counties had fewer than one-fifth of their health facilities with the tracer laboratory guidelines.



Systems to Support Quality Laboratory Services

The QOC assessed the following 9 main laboratory structures necessary to ensure the quality of laboratory services offered.

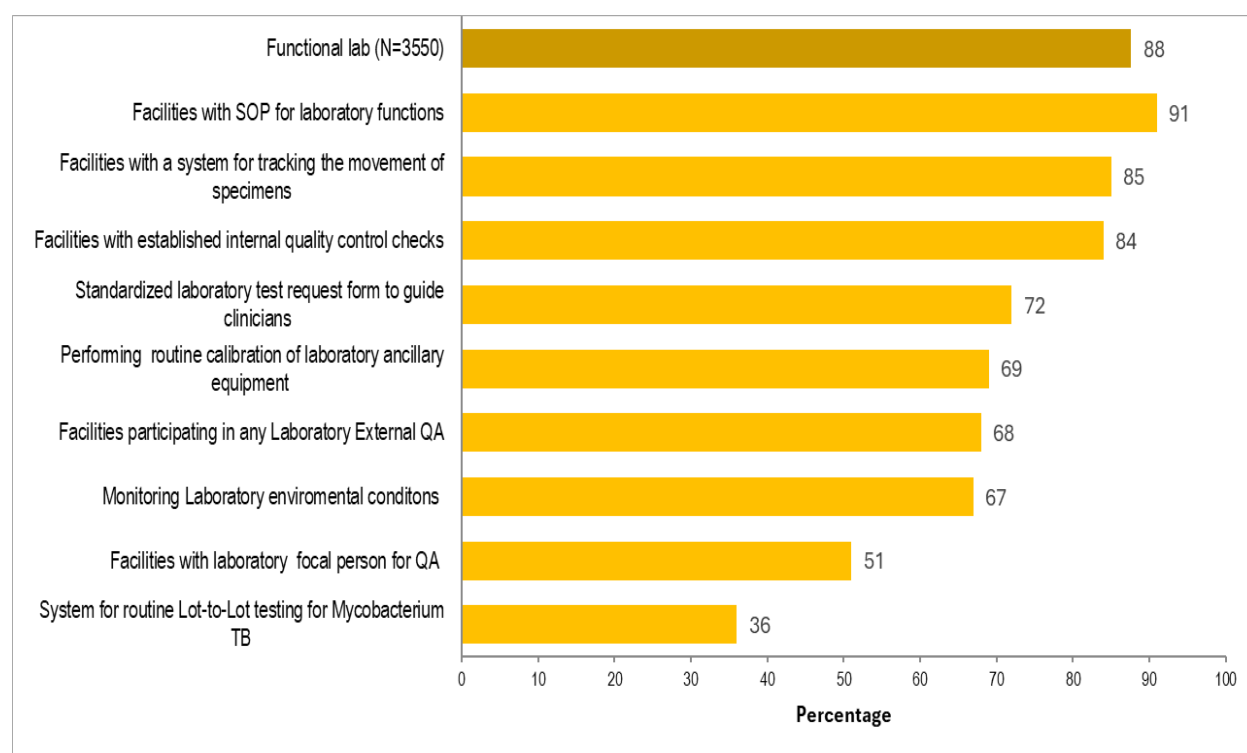
Table 131: Structures for quality laboratory services

Structures for Quality Laboratory Services
• Monitoring of laboratory environmental conditions. • Performing routine calibration of laboratory ancillary equipment. • Current standard operating procedures for laboratory functions, technical and managerial procedures. • Quality assurance laboratory focal persons. • Laboratory system for tracking the movement of specimens. • Laboratory internal quality control checks. • Standardized laboratory test request form to guide clinicians • Laboratory External Quality Assurance for Malaria testing, Sputum TB Testing and Alanine Transferase testing • System for routine lot-to-lot testing for mycobacterium TB

Findings:

- Of the nine laboratory structures assessed, the most available were SOPs for laboratory services (91%), systems for tracking specimen movement (85%), and internal quality control checks (84%).
- External quality assessments were conducted in 68% of facilities, and about half (51%) had a focal person for quality assurance in place.
- The least available structure was a system for routine Lot-to-Lot testing for Mycobacterium TB, reported in only 36% of facilities.

Figure 251: Percent of facilities that have lab functions (N=3111)

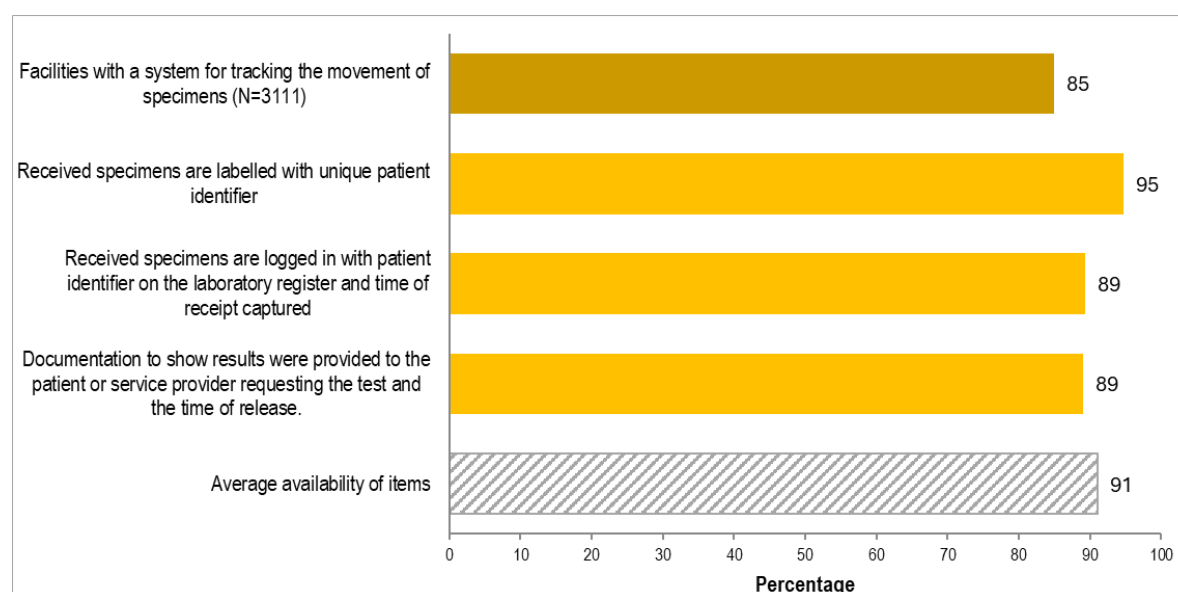


System for Specimen Tracking in the Laboratory

Figure 252 illustrates the availability of systems used to document and track the movement of specimens, from the time they are received in the laboratory to when results are delivered to the patient or service provider.

- The average availability of specimen tracking systems in laboratories was 91%.
- Almost all laboratories (95%) reported receiving specimens labeled with unique patient identifiers.
- Nine in ten laboratories received specimens in the laboratory register with patient identifiers and time of receipt, and documented the release of results to the patient or requesting service provider along with the time of release.

Figure 252: Percent of facilities that have select tracer items (lab systems) (N=2636)



Annex Table 134 presents the availability of systems for specimen tracking in laboratories, disaggregated by facility location, KEPH level, and ownership.

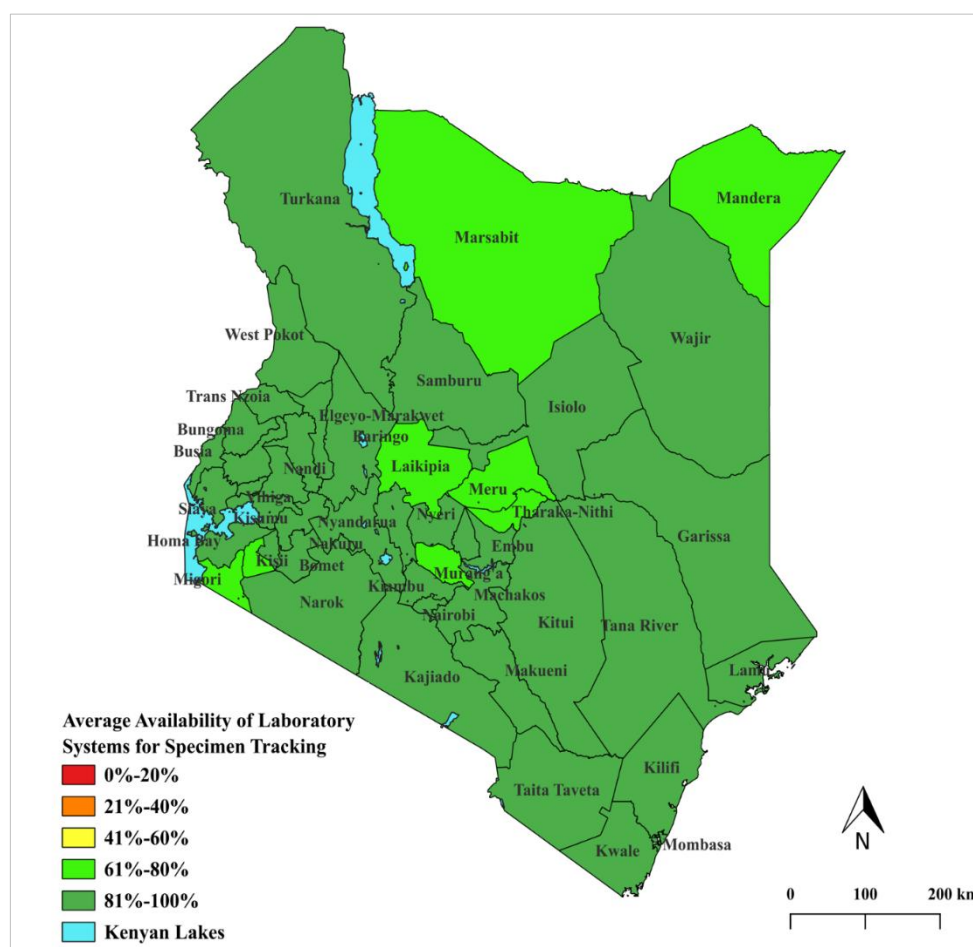
- Urban facilities had slightly higher average availability (93%) compared to rural facilities (89%).
- Availability was highest in NGO facilities (96%), followed by private (93%), FBO (92%) and public facilities at 89%.
- By KEPH level, availability was highest in Level 4 facilities (93%), followed by Level 5 (91%) and Level 3 (90%).
- Overall, 9 out of every 10 facilities had systems for specimen tracking in laboratories, regardless of the facility level, location and ownership.

County Distribution

Figure 253 shows the average availability of systems for specimen tracking, disaggregated by county.

- Bomet, Kajiado and Lamu recorded the highest average availability at 100%, while Marsabit had the lowest at 61%.
- Eighty-seven percent (87%) of the counties had at 80% average availability of systems for specimen tracking in laboratories.
- All the counties had at least 60% average availability of systems for specimen tracking in laboratories.
- Only 6 counties, Murang'a (74%), Mandera (72%), Tharaka Nithi (72%), Meru (69%), Migori (69%) and Marsabit (61%) had less than 80% average availability of systems for specimen tracking in laboratories.

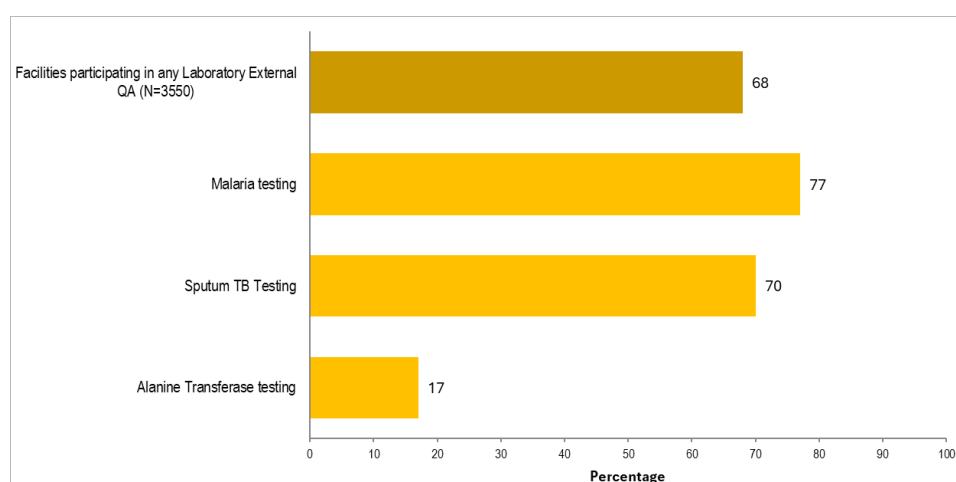
Figure 253: Average availability of systems for specimen tracking in laboratories by county



Laboratory External Quality Assurance Systems.

Nationally, the select external quality assessment checks were: malaria testing at 77%; sputum TB testing at 70%; and alanine transferase testing at 17%.

Figure 254: Percent of facilities that have select External Quality Assessment (N=2105)



Disaggregation

Annex Table 135 presents the proportion of facilities with external quality assurance (EQA) checks for laboratories, disaggregated by location, KEPH level, ownership, and county.

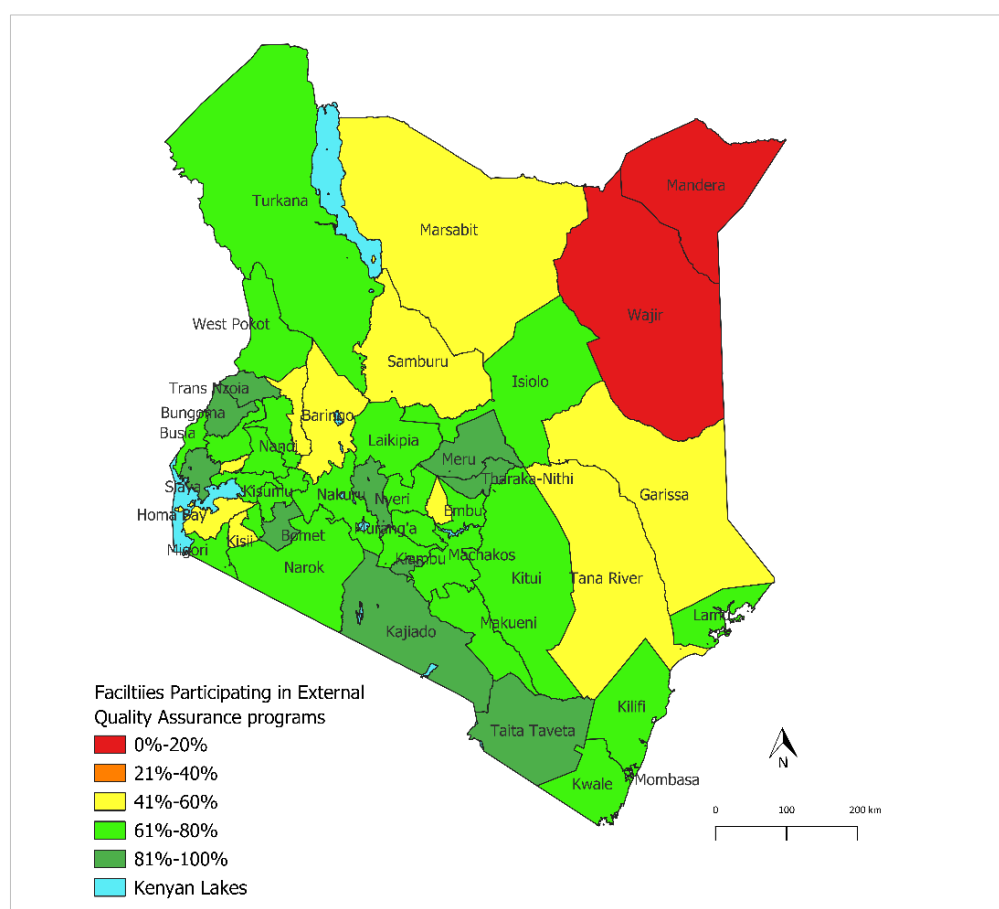
- Participation in laboratory EQA was slightly higher in rural facilities (69%) compared to urban facilities (67%).
- By ownership, public facilities had the highest participation (80%), followed by NGO-owned facilities (77%), FBO-owned facilities (71%), and private facilities (52%).
- By level of care, Level 5 facilities recorded the highest participation (89%), followed by Level 4 (79%) and Level 3 (62%).

County Distribution

Figure 255 shows the proportion of facilities with external quality assurance (EQA) checks for laboratories, disaggregated by county:

- Tharaka Nithi (92%) and Bungoma (91%) counties had the highest proportion of facilities participating in laboratory EQA.
- Mandera (12%) and Wajir (20%) counties had the lowest participation.
- Five counties, Vihiga (48%), Marsabit (42%), Garissa (42%), Wajir (20%), and Mandera (12%), had less than half of their facilities enrolled in laboratory EQA.

Figure 255: Facilities participating in external QA programs by county





Discussion

Medical laboratory services are a cornerstone of healthcare delivery, underpinning both preventive and curative care. With up to 75% of clinical decisions reliant on laboratory reports, the availability, reliability, and quality of these services directly influence patient outcomes and the effectiveness of the health system. The findings show that while basic diagnostic services such as urinalysis, blood glucose testing, malaria microscopy, and stool microscopy are almost universally available across all facilities, significant disparities remain in the availability of more advanced tests like full haemogram, liver and renal function tests, and culture with antimicrobial sensitivity testing. These gaps are particularly evident in Level 3 and rural facilities, which lag behind higher-level and urban facilities, limiting timely diagnosis and treatment for patients in underserved areas.

Despite high overall availability of laboratory services (86%), service interruptions remain a critical challenge, with one-third of facilities experiencing disruptions due to equipment breakdowns and stockouts. These interruptions disproportionately affect advanced diagnostics such as haemograms and renal/liver function tests, undermining continuity of care. Service readiness is also weak, with only 38% average availability of tracer laboratory items (equipment, reagents, and guidelines), highlighting systemic gaps in infrastructure and supply chains. On a positive note, most laboratories have established systems to ensure quality, such as specimen tracking and internal quality controls. However, participation in external quality assurance remains uneven, with stark regional disparities, counties such as Mandera and Wajir reporting very low engagement. Addressing inequities in service availability, strengthening supply chain reliability, and scaling up quality management systems will be critical to ensuring that laboratories consistently support accurate diagnoses and contribute to better health outcomes nationally.

Conclusion

Laboratory services in Kenya are widely available for basic diagnostics but face significant gaps in advanced testing, service readiness, and quality assurance. Frequent interruptions from stockouts and equipment failures further compromise reliability. Strengthening supply chains, expanding access to advanced tests in lower-level and rural facilities, and enhancing participation in external quality assurance are essential for improving diagnostic capacity and supporting better patient outcomes.

Table 132: Laboratory recommendations

Key Findings	Recommendations
Average availability of laboratory services was 86%; basic tests were widely available, but advanced tests (e.g., haemogram 57%, renal function	Expand availability of advanced diagnostics at Level 3 and rural facilities through targeted investment and resource allocation.



Key Findings	Recommendations
63%, culture & sensitivity 21%) were limited.	
Service interruptions affected 34% of facilities, mainly due to equipment breakdowns and reagent stockouts; haemogram and renal/liver function tests were most affected.	Strengthen supply chain management and preventive equipment maintenance to minimize service disruptions.
Laboratory service readiness was low, with tracer items availability averaging 38% (equipment 41%, reagents 39%, guidelines 34%).	Improve procurement and distribution of essential laboratory equipment, reagents, and guidelines, prioritizing low performing counties.
Quality systems were partially in place: 91% specimen tracking, 84% internal QC, but only 51% had QA focal persons; routine lot-to-lot TB testing was available in 36%.	Scale up quality management systems, appoint QA focal persons in all facilities, and strengthen lot-to-lot testing capacity.
Participation in external quality assurance (EQA) was uneven: 77% malaria, 70% TB, but only 17% for ALT; some counties had less than 20%.	Enforce EQA participation for all facilities, with special support to low-performing counties.
Urban facilities had higher availability of services, equipment, and reagents compared to rural ones.	Reduce inequities by prioritizing investments in rural and remote facilities.



PHARMACY

Pharmacy services are integral to the healthcare system by ensuring a smooth, uninterrupted supply chain, medication management and optimal treatment outcomes. The delivery of quality pharmacy services guarantees patient safety by reducing medication errors, preventing drug interactions, and enforcing proper usage and adherence.

Their proper management relies on comprehensive policies and HPT guidelines that standardize selection, procurement, storage, distribution, and use, thus promoting safe, effective, equitable, and efficient healthcare delivery. Their designation for use at specific levels of healthcare facilities (L2, L3, L4, L5) is usually based on the complexity of care required and the capacity of those facilities to safely administer and monitor treatments. Medicines/HPT intended for higher levels of care are often not expected to be available in lower facilities without demonstration of systems investments in support of their appropriate use

Their availability and readiness are essential to ensure effective patient care. The KHFQOC assessment focused on key processes essential for provision of quality pharmacy services with broad focus on clinical governance in medicines use as well as robustness of the health supply chain. This covered governance structures, access to essential guidelines, adverse event management, supply chain oversight, digitization, antimicrobial stewardship, medicine availability, and the appropriate disposal of expired and obsolete health products.

Definitions

Essential medicines, selected based on public health relevance, efficacy, safety, cost-effectiveness, and affordability, are vital treatments that must be consistently available in adequate quantities within health systems and are documented in the Kenya Essential Medicines Lists (KEML) to address population healthcare needs. Essential tracer medicines are a select group of key medications used to monitor and evaluate the availability, accessibility, and functionality of health systems. Tracer non-pharmaceuticals refer to critical medical supplies, equipment, or diagnostics that are equally vital for assessing health system performance and service delivery. Guidelines are evidence-based recommendations or protocols that provide standardized approaches for the selection, use, and management of these medicines and supplies, ensuring safe, effective, and equitable healthcare delivery. Together, these components help strengthen health systems and improve patient outcomes.

Service Availability

This is the physical presence of pharmacy services and resources required to deliver them, including the availability of medicines, trained healthcare personnel and function healthcare infrastructure within the health facilities. It means ensuring that essential medicines are consistently accessible to patients when needed, without stockouts or delays, as part of a functioning health system.

Table 133: Service availability in pharmacies

Availability
● Essential Medicine Stock-Outs ● Non-Pharmaceutical (Medical Supplies) Stock-Outs

Stock-Out of Tracer Medicines

- Tracer essential medicines are a subset of essential medicines that are used to monitor the availability, accessibility, and quality of healthcare services in a particular setting.
- They should be available in health facilities at all times.
- They serve as indicators to assess the overall performance of the health system.
- These drugs are typically selected based on their importance in treating common and significant health conditions.
- Facilities were assessed on whether they had stockouts of any of these 22 tracer medicines for the last 7 days prior to the visit, as shown in Table 134.

Table 134: Select tracer medicines stock out 7 days prior to the visit

Domain	Tracer items
Tracer medicines	● Adrenaline Injection 1mg/ml ● Albendazole Tab. 400mg ● Amoxicillin Capsules, 500mg ● Amoxicillin Dispersible Tablets, 250mg ● Benzyl penicillin Injection 1 MU ● Benzyl penicillin Injection 5 MU ● Chlorhexidine gel, 7.1% (as digluconate) (20 g tube) ● Gentamicin Injection, 40mg/2ml ● Hydrocortisone Injection 100mg ● Insulin, Premix Injection 70/30 ● Loratadine Tablets, 10mg ● Magnesium Sulphate Injection, 500mg/mL (50%), 10mL ● Metronidazole Tablet, 400mg ● Midazolam Injection 5mg/mL, 3ml ● Nystatin oral suspension 100IU/mL ● ORS Co-Pack ● Oxytocin Injection 10 I.U. ● Paracetamol Syrup/Suspension, 120mg/5ml

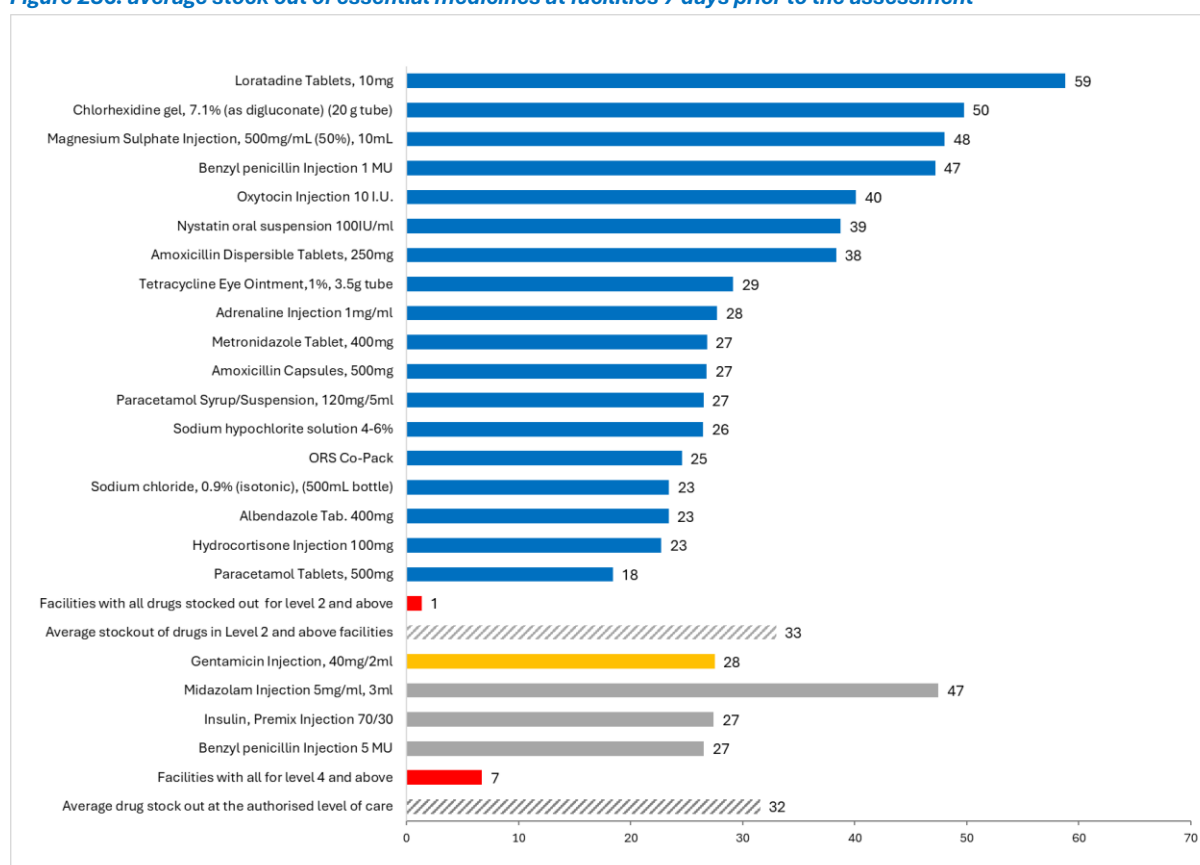
Domain	Tracer items
	- Paracetamol Tablets, 500mg - Sodium chloride, 0.9% (isotonic), (500mL bottle) - Sodium hypochlorite solution 4-6% - Tetracycline Eye Ointment, 1%, 3.5g tube

Findings:

Nationally, 89% (n=11,879) of facilities offered pharmacy services.

On average, a third (33%) of the 23 essential medicines were stocked out in 7 days prior to the assessment at facilities offering pharmacy services.

Figure 256: average stock out of essential medicines at facilities 7 days prior to the assessment



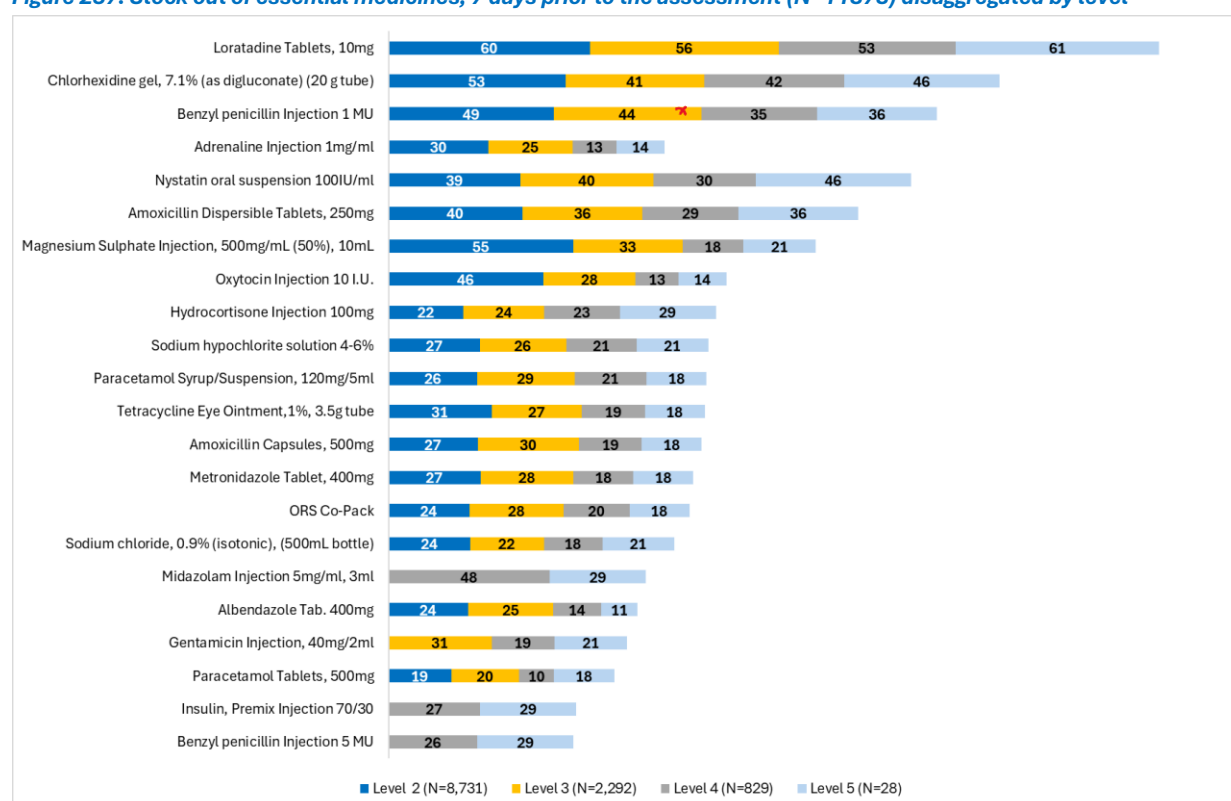
Disaggregation by location, KEPH level and ownership

Annex Tables 174 and 175 present stock-outs of essential medicines disaggregated by location, KEPH level, ownership, and county.

- Rural facilities reported higher stock-outs than urban facilities, at 35% and 31% respectively.

- NGO and private facilities experienced more stock-outs (37% and 38%, respectively), while public and FBO facilities had the lowest levels at 30% and 27%.
- Level 4 and 5 facilities recorded the lowest stock-outs (23% and 25%, respectively), compared to Level 2 (35%) and Level 3 (31%) facilities.
- Among tracer drugs, the medicines with the highest stock-outs were Loratadine tablets 10mg (59%) and Chlorhexidine gel 7.1% (as digluconate) 20g tube (50%), followed by Magnesium Sulphate Injection 500mg/ml 10mL at 48%.
- The medicines with the lowest stock-outs were Paracetamol tablets 500mg (18%), Hydrocortisone injection 100mg (23%), Albendazole tablets 400mg (23%), and Sodium Chloride 0.9% (isotonic 500ml bottle) at 23%.

Figure 257: Stock out of essential medicines, 7 days prior to the assessment (N=11878) disaggregated by level



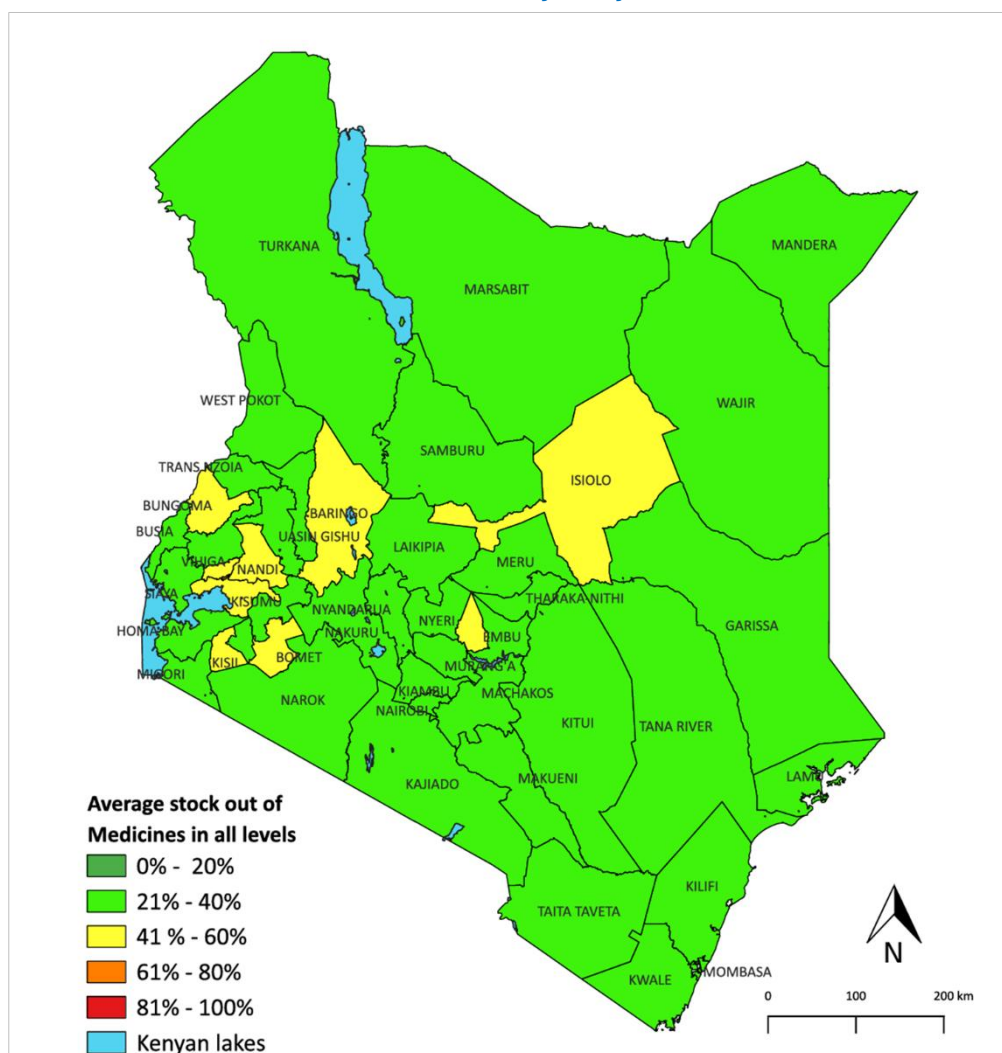
County Distribution

Figure 258 shows the stock out of essential medicines disaggregated by county.

- Nine counties, Kisumu (59%), Bomet (54%), Nandi (43%), Kirinyaga (43%), Baringo (41%), Isiolo, Kisii, Vihiga, and West Pokot (all at 40%), had poor readiness with stockout of at least 40% of the essential medicines.
- Kisumu and Bomet Counties had the highest stockouts of 59% and 54% respectively.
- Five (5) counties with the lowest stockout for essential tracer medicines were Kajiado (22%), Nyandarua (22%), Narok (23%), Mombasa and Tana River, both at 24%.

- All 47 Counties reported stockouts for essential medicines.
- Twenty-one (21) counties had stockouts of essential medicines high above the national average of 33%.

Figure 258: Distributions for stock out of essential medicines by county



Discussion

The results indicate an improvement in the availability of essential tracer medicines across health facilities, with a stock-out rate of 33% (67% availability) compared to 44% availability in 2018. However, essential medicines should be consistently available in health facilities at all times.

This improvement may be attributed to several strategic efforts to strengthen service delivery, governance, and resource mobilization within the health sector under the implementation of UHC. In particular, national forecasting and quantification exercises, the development of various HPT management guidelines, the establishment of Health Products and Technologies Units (HPTUs) in all 47 counties, and the introduction of the MOH 647 monitoring tool have

likely enhanced the health supply chain, thereby contributing to improved availability of tracer medicines.

Stockout of Medical Supplies 7 days prior to Assessment

- Essential non-pharmaceuticals, also referred to as medical supplies, are also specific items identified as representative of the essential medical supplies that are tracked to monitor the availability, accessibility, and quality of healthcare services within a health system.
- These supplies must be available in health facilities at all times and are considered critical for the functioning of healthcare facilities and for the provision of effective medical care.
- In this assessment, 23 tracer items were considered as shown in Table 135.

Table 135: Tracer medical supplies

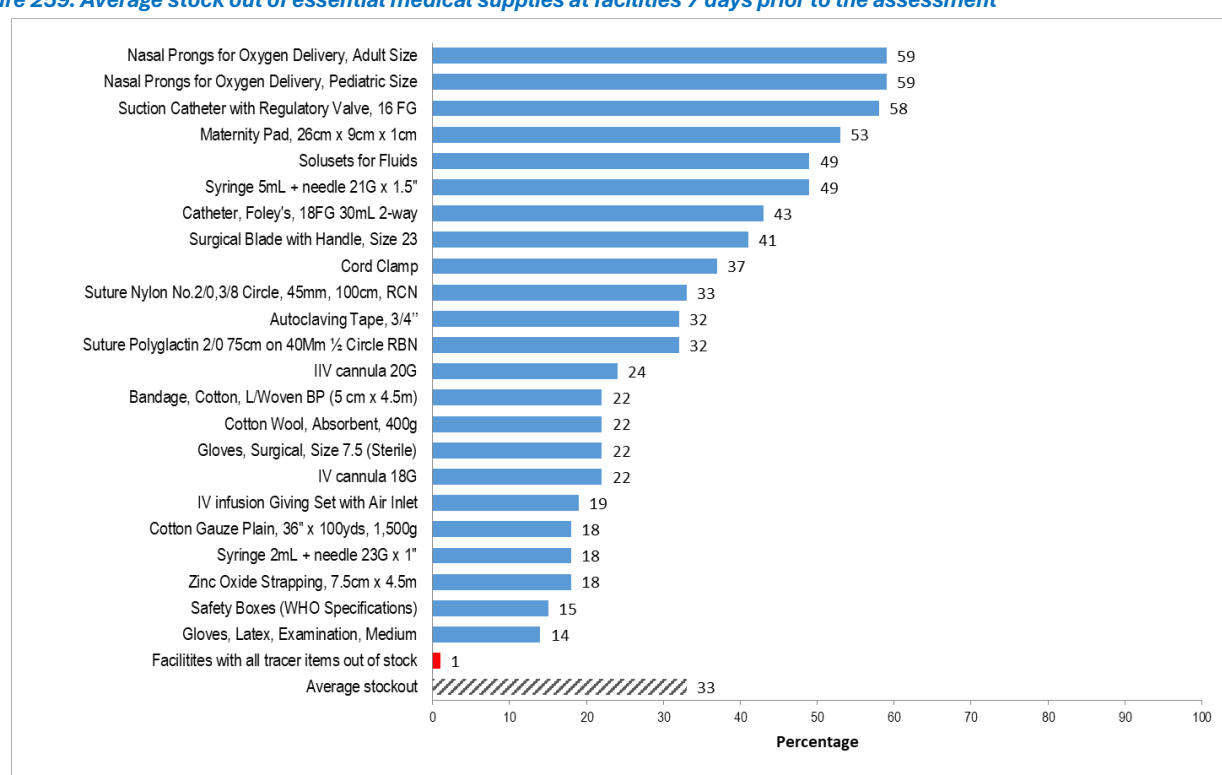
Domain	Tracer items
Essential medical supplies	● Autoclaving Tape, 3/4" ● Bandage, Cotton, L/Woven BP (5 cm x 4.5m) ● Catheter, Foley's, 18FG 30mL 2-way ● Cord Clamp ● Cotton Gauze Plain, 36" x 100yds, 1,500g ● Cotton Wool, Absorbent, 400g ● Gloves, Latex, Examination, Medium ● Gloves, Surgical, Size 7.5 (Sterile) ● IV cannula 18G ● IIV cannula 20G ● IV infusion Giving Set with Air Inlet ● Maternity Pad, 26cm x 9cm x 1cm ● Nasal Prongs for Oxygen Delivery, Adult Size ● Nasal Prongs for Oxygen Delivery, Pediatric Size ● Safety Boxes (WHO Specifications) ● Soluset for Fluids ● Suction Catheter with Regulatory Valve, 16 FG I ● Surgical Blade with Handle, Size 23 ● Suture Nylon No.2/0,3/8 Circle, 45mm, 100cm, RCN ● Suture Polyglactin 2/0 75cm on 40Mm ½ Circle RBN ● Syringe 2mL + needle 23G x 1"

Domain	Tracer items
	- Syringe 5mL + needle 21G x 1.5" - Zinc Oxide Strapping, 7.5cm x 4.5m

Findings

- On average, the stockout of tracer medical supplies in the 7 days prior to the assessment was 33% among the facilities offering pharmacy services.
- Only one percent (1%) of the facilities had all the tracer medical supplies stocked out seven days prior to the assessment.

Figure 259: Average stock out of essential medical supplies at facilities 7 days prior to the assessment



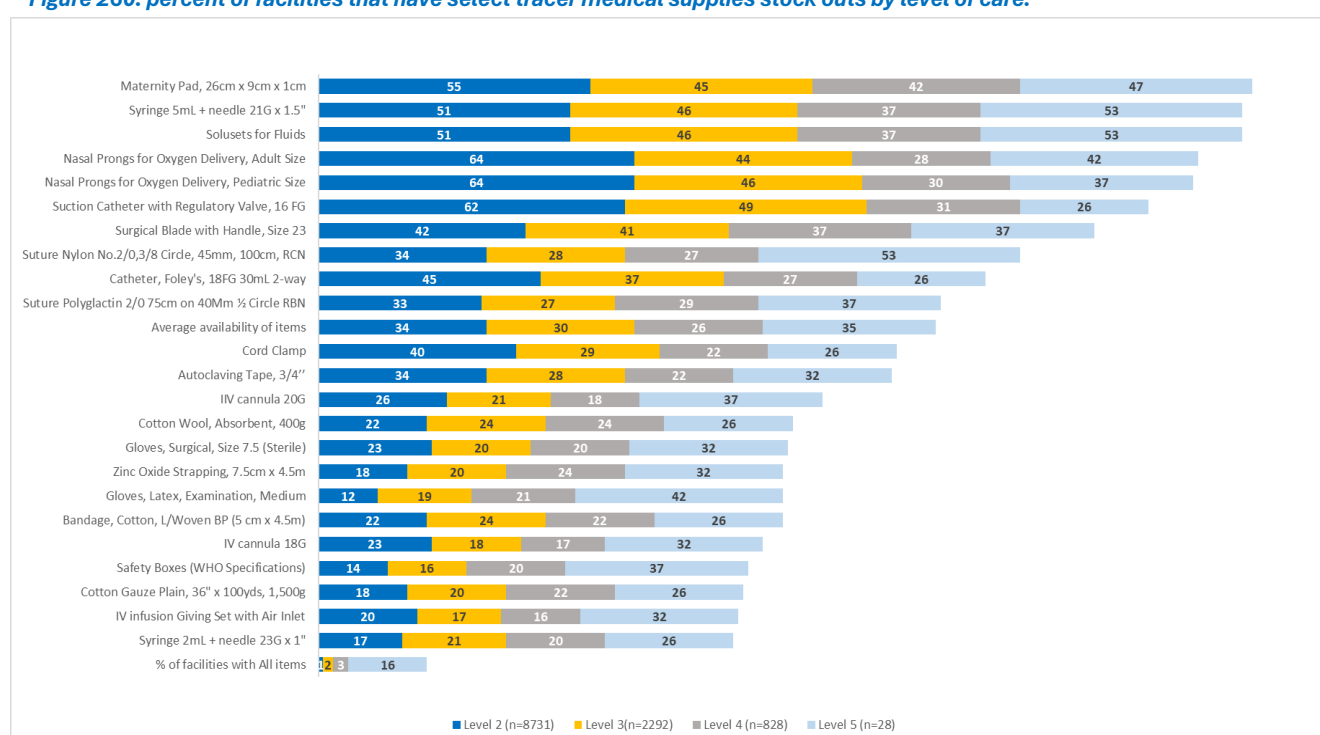
Disaggregation by location, KEPH level and ownership

Annex Tables 145 and 146 present stock-outs of essential medical supplies disaggregated by location, KEPH level, ownership, and county.

- By location, most stock-outs were reported in rural facilities (34%) compared to urban facilities (31%).
- Level 5 and Level 4 facilities recorded the highest stock-outs at 35% and 34%, respectively, compared to Level 3 (30%) and Level 2 (26%) facilities.
- Public facilities reported the highest stock-outs of tracer medical supplies at 35%, indicating the lowest readiness, compared to FBO, NGO, and private facilities, all at 31%.

- No public facility was completely stocked out of tracer medical supplies, compared to 3% of NGO and private facilities and 1% of FBO facilities.
- Among individual tracer items, the highest stock-outs were recorded for nasal prongs for oxygen delivery (58% for adults and 59% for pediatrics), maternity pads (26cm x 9cm x 1cm) at 53%, suction catheters with regulatory valve (16 FG) at 58%, syringes 5mL + needle 21G x 1.5" (49%), and solusets for fluids (49%).
- The tracer items with the lowest stock-outs were latex examination gloves, medium (14%), WHO specification safety boxes (15%), syringes 2mL + needle 23G x 1" (18%), cotton gauze plain, 36" x 100yds, 1,500g (18%), zinc oxide strapping (7.5cm x 4.5m) at 18%, and IV infusion giving sets with air inlet (19%).

Figure 260: percent of facilities that have select tracer medical supplies stock outs by level of care.

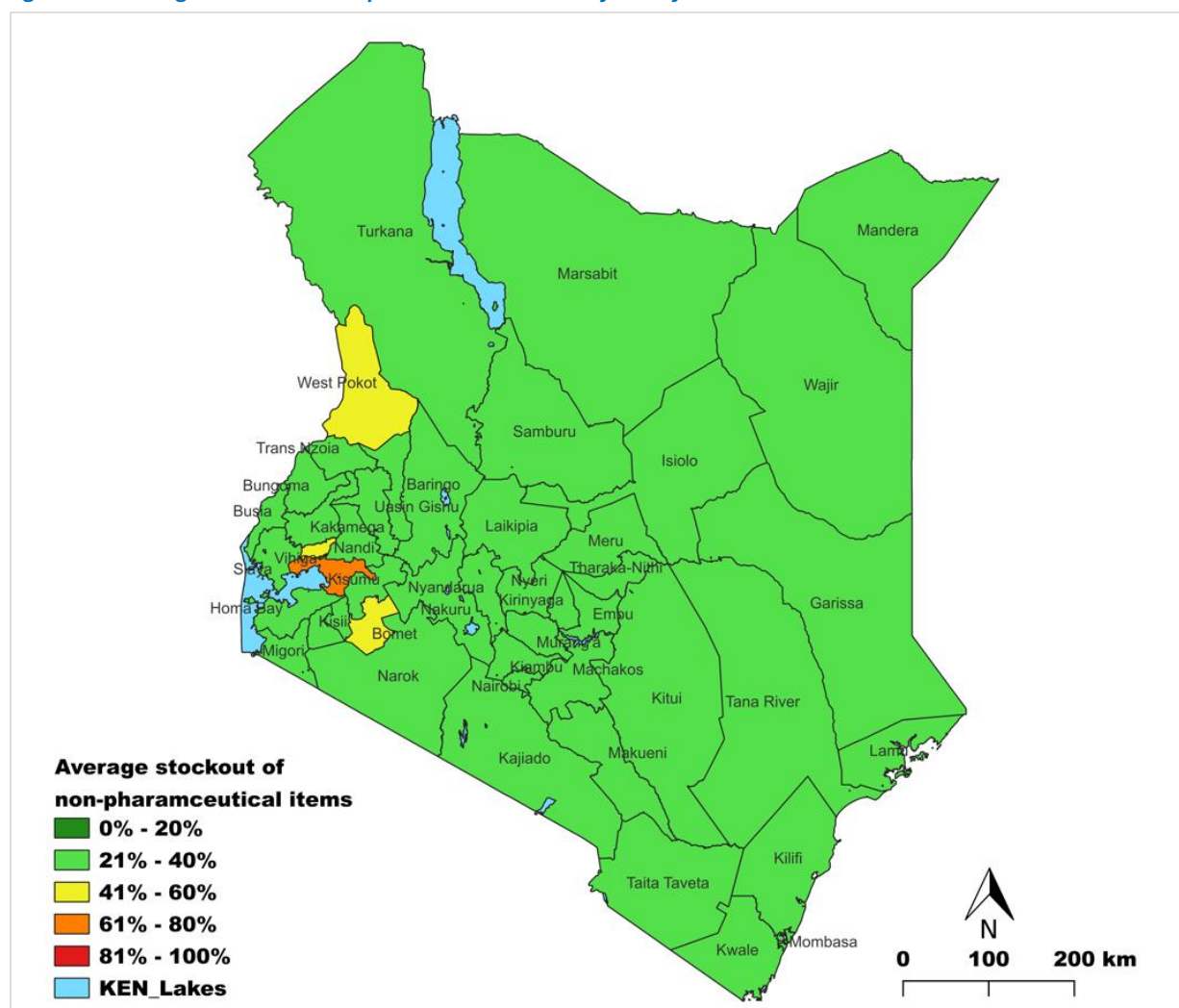


County Distribution

Figure 261 shows the stock out of medical supplies disaggregated by county.

- Kisumu County demonstrated the lowest readiness for tracer medical supplies, with a high stock-out rate of 62%.
- Three counties—Bomet (44%), West Pokot (44%), and Vihiga (46%)—also reported high stock-outs of medical supplies, ranging between 41% and 60%.
- The majority of counties (91%) recorded stock-outs of medical supplies ranging between 21% and 40%.

Figure 261: Average stock out of non-pharmaceutical items by county



Discussion

High-quality medical supplies are indispensable for ensuring the safety, accuracy, and effectiveness of medical interventions. One of the most unavailable items was the nasal prong for oxygen delivery, which should be available in different sizes to support the provision of lifesaving supplemental oxygen therapy. The disproportionately high stock-outs of tracer medical supply items in Level 2 (29%) and Level 3 (24%) facilities, coupled with higher unavailability in rural facilities (31%) compared to urban facilities (22%), compromise the delivery of primary healthcare, particularly for underserved populations.

The average stock-out of tracer medical supply items in the 2024 assessment was 33% (67% availability), which is comparable to the mean availability of non-pharmaceuticals (76%) reported in the 2023 Census. Similarly, during the 2023 Health Facility Census, nasal prongs and suction catheters were available in only about one-third of PHC facilities.

Conclusion

Stock-outs of tracer items compromise the quality of service delivery, and it is concerning that 1% of facilities (approximately 118 health facilities) were completely stocked out of medical tracer items. These items are essential not only for direct service delivery—such as nasal prongs and IV giving sets—but also for infection prevention and the maintenance of sterile environments, which are crucial for patient safety and well-being. Ensuring their consistent availability in all health facilities is therefore crucial.

Recommendation

County departments should allocate sufficient funding to ensure availability, readiness and rational use for tracer non-pharmaceutical supplies at all levels so that service delivery as well as patient and health workers' safety are not compromised.

Service Readiness

This assesses the capacity of pharmacy services to deliver quality care effectively. It not only assesses physical presence but also how equipped and prepared the pharmacies are to provide reliable and high-quality healthcare services.

- Various guidelines for commodity management are provided to guide good management of the health supply chain to avoid preventable stockouts, wastage and ensure rational use at all times.
- They also serve as essential tools for training and educating healthcare workers, ensuring consistent adherence to current medical standards, and ultimately contributing to better health outcomes and optimized resource utilization within healthcare systems.
- Their dissemination is critical in creating awareness on a wide scale within or across geographic locations, practice settings, and to the networks of end-users, particularly the health care providers, to ensure their practice is up to date.
- It is best practice to disseminate guidelines on time for them to achieve their intended impact.
- The tracer guidelines required for readiness in a health facility are outlined in Table 136.

Table 136: Tracer items for pharmacy services (guidelines)

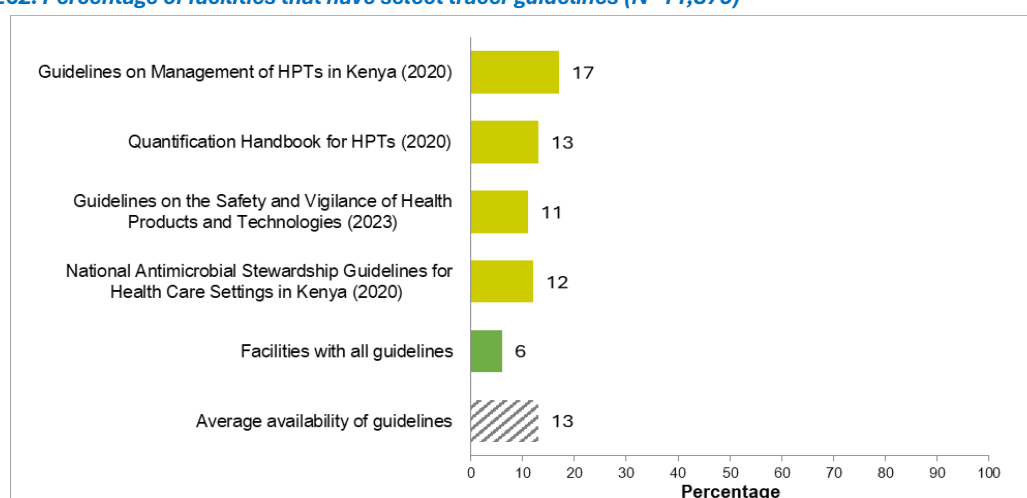
Domain	Readiness of pharmacy tracer items
Guidelines	● Guidelines on Management of HPTs in Kenya (2020) ● Quantification Handbook for HPTs (2020) ● National Antimicrobial Stewardship Guidelines for Health Care Settings in Kenya (2020) ● Guidelines on the Safety and Vigilance of Health Products and Technologies (2023)

Findings

Figure 262 shows the availability of pharmacy guidelines across health facilities offering pharmacy services (n=11,8789).

- Only 6% of facilities reported having all four pharmacy guidelines in place.
- For individual guidelines, similar proportions were reported: Guidelines for Management of HPT in Kenya (2020) (17%), Quantification Handbook for HPT (2020) (13%), National Antimicrobial Stewardship Guidelines for Health Care Settings in Kenya (2020) (12%), and Guidelines on the Safety and Vigilance of Health Products and Technologies (2023) (11%).
- On average, the availability of pharmacy guidelines across health facilities was 13%.

Figure 262: Percentage of facilities that have select tracer guidelines (N=11,879)



Disaggregation by location, KEPH level and ownership

Annex Table 147 presents the availability of pharmacy tracer guidelines, disaggregated by location, KEPH level, ownership, and county.

- By location, facilities in urban areas reported a higher average availability of guidelines (18%) compared to rural facilities (10%). For example, the availability of the National Antimicrobial Stewardship Guidelines was 17% in urban areas versus 7% in rural areas.
- Level 5 facilities, though still very low at 37%, reported the highest average availability of all guidelines, while Level 2 facilities had the lowest availability at 11%.
- NGO (10%) and public facilities (11%) reported the lowest average availability of guidelines, compared to private (16%) and faith-based (16%) facilities.

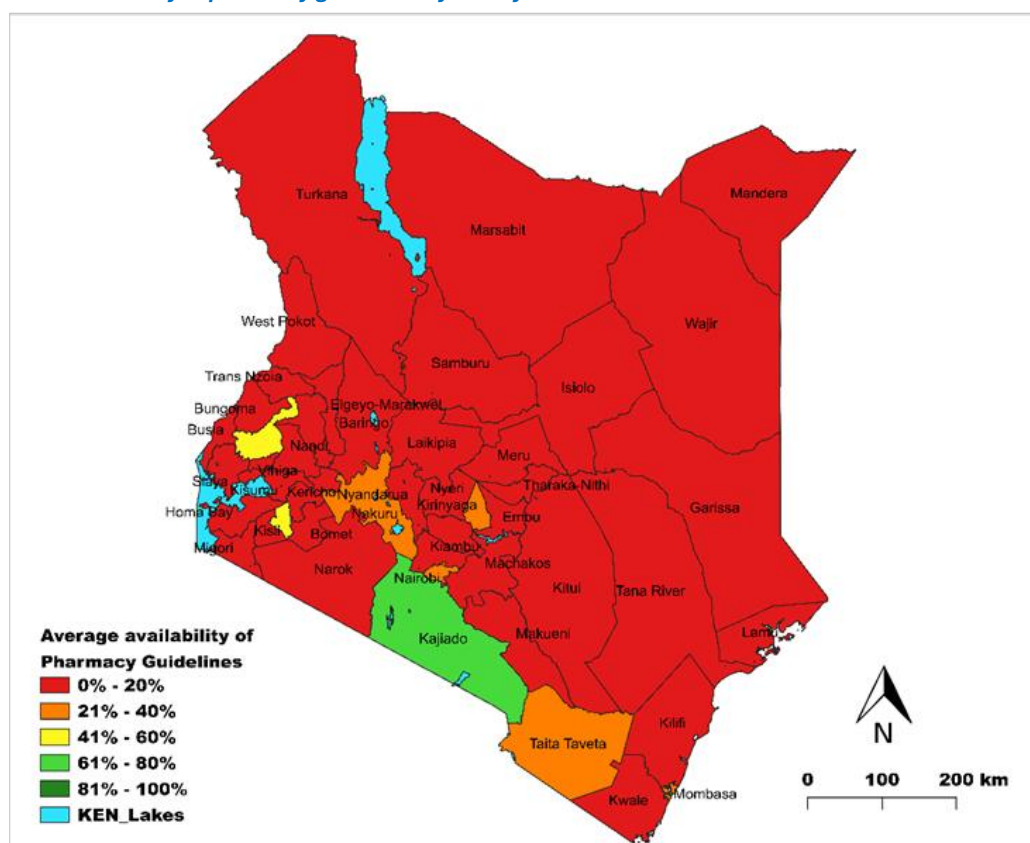
County distribution

Figure 263 shows the average availability of pharmacy guidelines in facilities offering pharmacy services, disaggregated by county.

- Kajiado County reported the highest average availability of pharmacy guidelines at 66%, while Marsabit County had the lowest at 1%.

- Only three counties, Kajiado (66%), Kakamega (45%), and Nyamira (42%), had an average availability of at least 40%.
- In Taita Taveta (26%) and Mombasa (24%), about a quarter of the facilities had the pharmacy guidelines available.
- In Kirinyaga (22%), Nairobi (22%), Nakuru (21%), and Siaya (20%), at least one-fifth of the facilities had the pharmacy guidelines available.
- Majority (81%) of the counties had an average availability of less than 20% for pharmacy guidelines.

Figure 263: Availability of pharmacy guidelines by county



Discussion

The low average readiness of pharmacy guidelines in health facilities highlights significant gaps in dissemination and implementation, with direct implications for service delivery and Health Products and Technologies (HPT) management. Although County Health Management Teams (CHMTs) are responsible for cascading these guidelines, limited resources and weak dissemination mechanisms hinder their effective distribution to facilities. This challenge aligns with findings from the 2018 KHFA report, which documented a nationwide availability of only 39% for drug use management guidelines, underscoring the persistent problem of inadequate guideline uptake. While the guidelines are accessible on the Ministry of Health (MOH) website, reliance on passive dissemination alone has proven insufficient.

Systems to Support Quality Pharmacy Services

The quality of pharmacy services refers to the extent to which pharmacy services meet established healthcare standards and achieve desired patient outcomes. It encompasses accessibility, availability, safety, effectiveness, and patient-centered care. Quality services ensure that medicines are dispensed correctly, stored appropriately, and used rationally, with minimal risk of errors. They also involve patient counseling, adherence to evidence-based guidelines, and continuous monitoring to improve health outcomes. High-quality pharmacy services prioritize equity, efficiency, and patient satisfaction, contributing to the overall effectiveness and reliability of the healthcare system.

The 2024 QOC assessed the systems to support quality pharmacy services based on 5 structures as detailed in table 137 below

Table 137: Systems to support quality pharmacy services

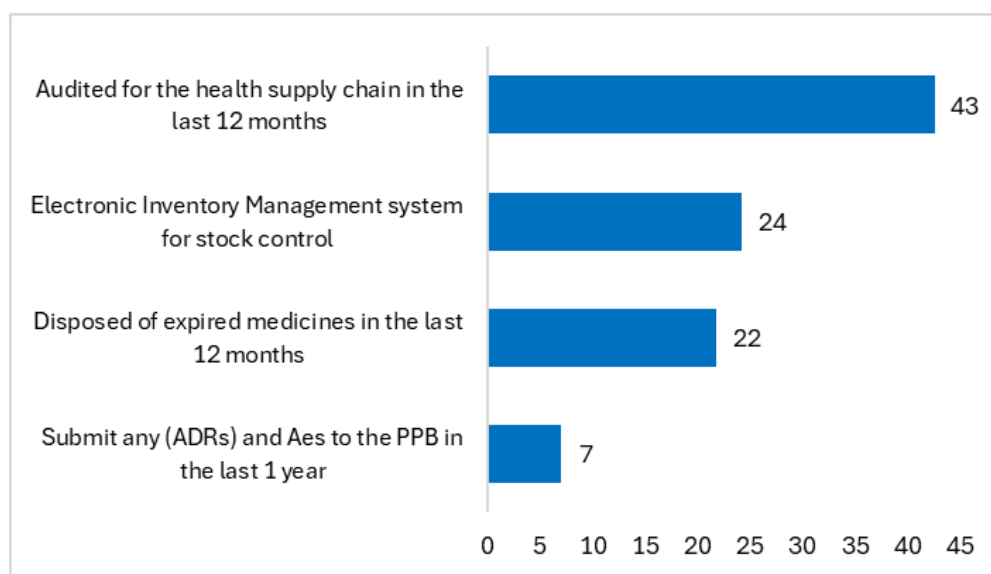
Structures	Processes
● Clinical Governance of Patient facing process ○ Reporting of ADR's ○ Medication Reviews	
● Supply Chain Audit	
● Electronic System Coverage ○ Electronic Inventory management ○ electronic dispensing system ○ electronic dispensing tool linked to the clinical modules and to the stores	
● Disposal systems for expired drugs	Disposal in the last 12 months
● Active medicines and therapeutic committee (Level's 4 and 5	Frequency of MTC meetings

Findings

Among the facilities offering pharmacy services;

- About half (46%) had the health supply chain audited in the 12 months prior to the assessment.
- Only 8% of facilities had submitted Adverse Drug Reactions (ADRs) and Adverse Events (AEs) to the Pharmacy and Poisons Board in the 12 months prior to the assessment.
- About a quarter (24%) had disposed expired medicines in the 12 months prior to the assessment.
- The average availability of these four pharmacy quality structures was 27%.

Figure 264: Percentage of facilities with the systems to support quality pharmacy services (N=11,879)



***MTC's are not included in this chart as only level 4 and 5 facilities were assessed.**

Reporting of ADRs And Medication Reviews

There is an increasing burden of adverse events from adverse drug reactions (ADRs), poor quality products, adverse events following immunization, therapeutic ineffectiveness, medication errors, and irrational use of medical products and health technologies in addition to increase in antimicrobial resistance (AMR). These medicine-related problems not only contribute to morbidity and mortality but also result in higher treatment costs, loss of confidence in the health system, non-adherence to treatment, and economic losses to the pharmaceutical industry and patients. Monitoring the safety, quality, and effectiveness of medical products, including vaccines, is crucial for national healthcare systems. This is a shared responsibility of regulatory authorities, healthcare providers, public health programs, and the pharmaceutical industry with reporting of ADRs, and AEFIs to the regulator. It is important to not only report but also follow up the patients to promote patient safety through comprehensive assessment, risk communication and safe prescribing.

Similarly, medication reviews help assess any problems patients have with their medicines and help develop the patient's knowledge about their medicines. It also improves adherence, minimizes side effects, and helps mitigate ADR's.

Table 138: Tracer items for pharmacy services (processes for clinical governance)

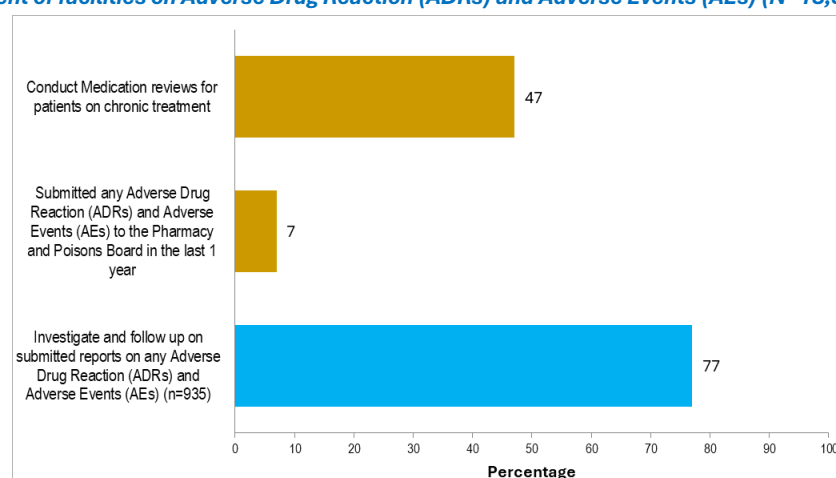
Structures	
ADRs	- Submission of Adverse Drug Reaction (ADRs) and Adverse Events (AEs) to the Pharmacy and Poisons Board - Investigation and follow up on ADRs
Medication reviews	Medication reviews for patients on chronic treatment

Findings

Nationally, all facilities (n=13,361) were assessed on reporting of Adverse Drug Reactions (ADRs) and medication reviews.

- Only 7% of health facilities reported submitting any ADRs or Adverse Events (AEs) to the Pharmacy and Poisons Board in the year preceding the survey.
- Among facilities that reported ADRs, 77% investigated and followed up with the affected patients.
- Overall, 47% of health facilities reported conducting medication reviews.
- Figure 278 shows the percentage of facilities on submission of ADRs, follow up and medication reviews.

Figure 265: Percent of facilities on Adverse Drug Reaction (ADRs) and Adverse Events (AEs) (N=13,361)



Disaggregation by location, KEPH level and ownership

Annex Table 149 presents the percentage of facilities that submitted any Adverse Drug Reaction (ADRs) and Adverse Event (AEs) reports to the Pharmacy and Poisons Board, disaggregated by location, KEPH level, ownership, and county.

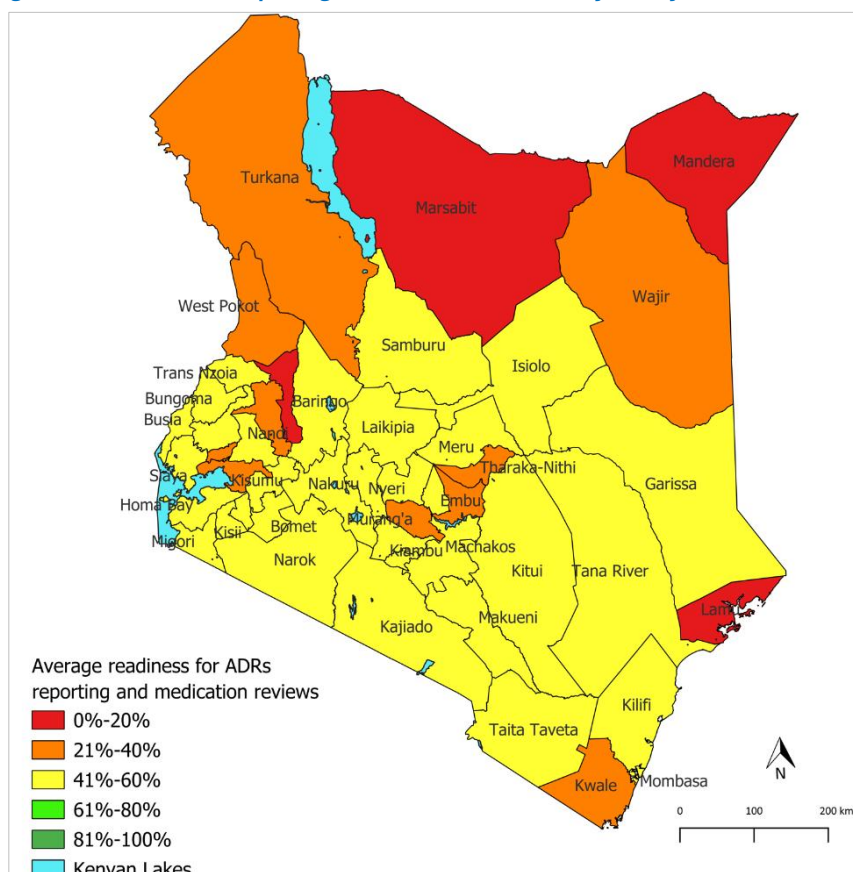
- By location, rural facilities had the lowest submission rate at 5%, compared to 10% for urban facilities.
- At Level 2, only 4% of facilities submitted ADR reports, rising to 9% at Level 3. The proportion increased with level of care, reaching 29% at Level 4 and 68% at Level 5.
- Readiness to investigate and follow up on reported ADRs and AEs was generally high, with over 70% across both location and facility types, and at least 50% across all ownership categories.
- Readiness to conduct medication reviews for patients on chronic treatment also improved with facility level, from 41% at Level 2, to 61% at Level 3, 75% at Level 4, and 84% at Level 5.
- More than half of Faith-Based Organization (FBO) facilities (57%) and private facilities (51%) conducted medication reviews for chronic patients, compared to 42% of public and 38% of NGO facilities.

County Distribution

Figure 266 presents the average readiness for ADR reporting and medication reviews by county.

- Isiolo and Tana River counties recorded the highest average readiness at 59%, while Marsabit had the lowest at 8%.
- Counties with at least 50% average readiness included Isiolo (59%), Tana River (59%), Laikipia (58%), Trans Nzoia (57%), Kajiado (55%), Bomet (54%), Makueni (54%), Nakuru (54%), and Nyamira (54%).
- Four counties—Marsabit (8%), Elgeyo Marakwet (9%), Mandera (11%), and Lamu (17%), had the lowest readiness levels, ranging between 0–20%.
- None of the facilities in Marsabit, Elgeyo Marakwet, Mandera, or Lamu reported investigating or following up on submitted ADR and AE cases.
- Nine counties demonstrated lower readiness, between 21–40%, including Kisumu (24%), Vihiga (25%), Tharaka Nithi (26%), Embu (26%), Wajir (30%), West Pokot (30%), Turkana (38%), Murang'a (35%), and Kwale (37%).
- Overall, 72% of the counties had fair readiness, ranging from 41–60%.

Figure 266: Average readiness for ADRs reporting and medication reviews by county



Discussion

There is a capacity gap in primary facilities (Level 2 and 3) and rural facilities, where reporting of ADRs and medication reviews, among other indicators, is lowest.

ELECTRONIC MANAGEMENT SYSTEMS

Electronic inventory management systems are becoming a cornerstone of pharmaceutical logistics in Kenya, streamlining operations to enhance supply chain efficiency. These systems provide real-time tracking of medicine stocks, reduce wastage, and minimize the occurrence of stockouts. Nationally, initiatives such as the Kenya Health Information System (KHIS) and other digital tools have been implemented to strengthen inventory management and data-driven decision-making, ensuring the consistent availability of essential medicines across healthcare facilities.

Table 139: Tracer items for electronic management systems

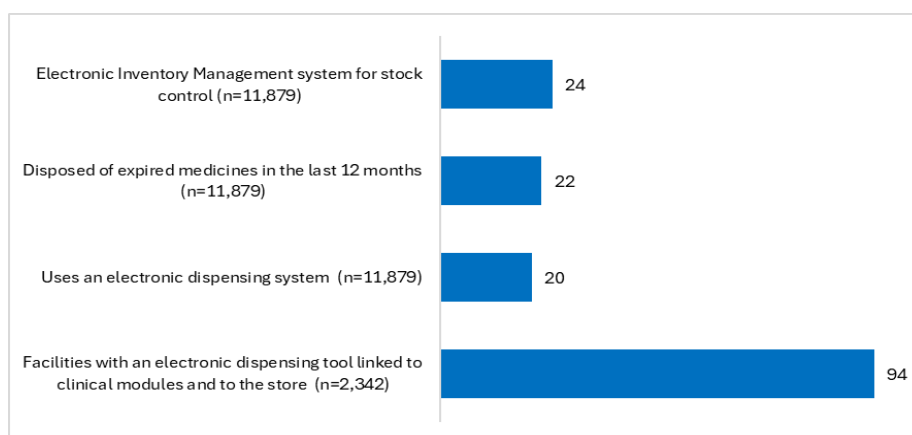
Structure	
Electronic systems	● Facilities with Electronic Inventory management
	● Use an electronic dispensing system
	● Facilities with an electronic dispensing tool linked to the clinical modules and to the stores

Findings.

Among facilities offering pharmacy services:

- Electronic systems for inventory management and dispensing are not widely available in Kenya.
- Only 24% of facilities reported using Electronic Inventory Management Systems (EIMS), while 20% reported using Electronic Dispensing Systems (EDS).
- Among facilities with EDS, 94% had linked dispensing tools to clinical modules and store systems.

Figure 267: Percent of facilities with Electronic Inventory management and those that have disposed of expired medicines in the last 12 months (N=11,879)





Disaggregation by location, KEPH level and ownership

Annex Table 179 presents the percentage of facilities using electronic systems for pharmacy management, disaggregated by location, KEPH level, ownership, and county.

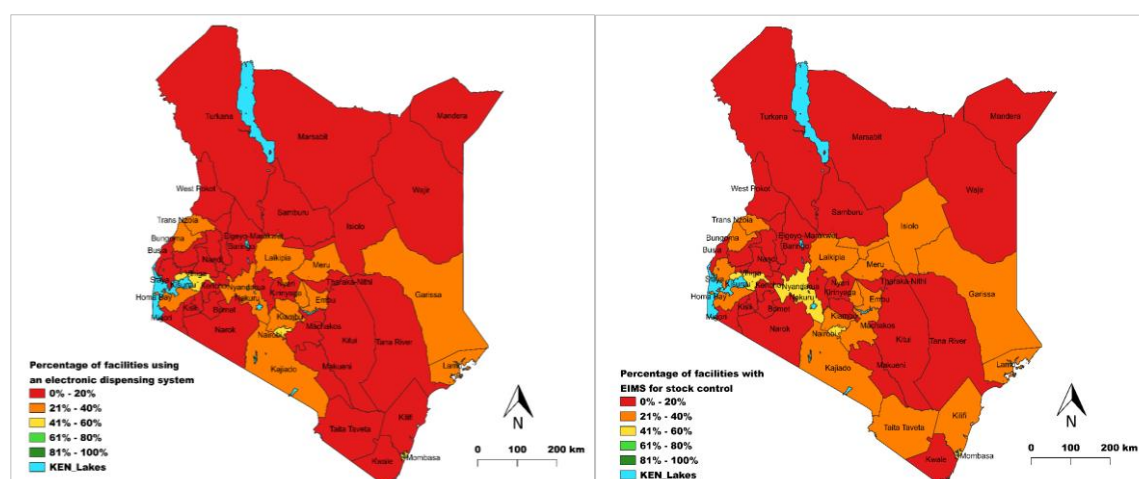
- Urban facilities outperform rural ones in all categories, with 44% using EIMS compared to 11% in rural areas, and 37% using EDS compared to 8% in rural areas.
- Among facilities with EDS, 96% of urban facilities had linked dispensing tools to clinical modules and store systems, compared to 88% of rural facilities.
- By facility type, Level 5 facilities demonstrated the highest readiness across all categories, with 89% using EIMS, 86% using EDS, and 100% linking systems.
- Sixty-two percent (62%) of Level 4 facilities used EIMS for stock control, while Levels 3 and 2 reported the lowest adoption rates, at 32% and 18% respectively.
- By ownership, NGO facilities exhibited the highest readiness, with 51% using EIMS, 42% using EDS, and 91% linking systems.
- Faith-Based Organizations (FBOs) and private facilities showed moderate uptake, while public facilities lagged significantly, with only 10% using EIMS, 7% using EDS, and 71% linking systems.

Country Distribution

Figure 268 shows the percentage of facilities using electronic systems for pharmacy management by county.

- Only three counties, Nairobi (55%), Kisumu (53%), and Mombasa (53%), achieved at least 50% readiness for HPT Electronic Inventory Management Systems (EIMS).
- Kitui, Nyandarua, and Nandi counties had the lowest proportion of facilities using EIMS, at 9%.
- For HPT Electronic Dispensing Systems (EDS), all counties except Mombasa (51%) recorded less than 50% readiness.
- Busia had the lowest proportion of facilities using HPT EDS at 6%, followed by Nandi at 7%.
- Eight counties, Bomet (9%), West Pokot (9%), Kitui (9%), Nyamira (8%), Migori (8%), Turkana (8%), Nandi (7%), and Busia (6%), had less than 10% of facilities using EDS, reflecting limited adoption of digital tools for supply chain management.
- Only four counties, Siaya (74%), Lamu (72%), Nandi (72%), and Migori (65%), had fewer than three-quarters (75%) of facilities with an electronic dispensing tool linked to clinical modules and the store.

Figure 268: Average availability of electronic system structures by county



Discussion

Electronic inventory and dispensing systems in Kenya remain limited, with adoption patterns showing clear disparities across facility levels, ownership, and regions. Higher-level and urban facilities, as well as those run by NGOs, are leading in digital uptake, while lower-level, rural, and public facilities continue to lag.

Integration of systems among facilities that have adopted them is generally strong, but overall progress remains uneven across counties, with some regions demonstrating relatively higher readiness while others show minimal adoption. These gaps point to the need for targeted investments to expand digital systems in low-performing areas and facility types, ensuring a more efficient, transparent, and equitable pharmaceutical supply chain.

Disposal of Expired Drugs

The management and disposal of expired medicines are critical in Kenya to mitigate risks associated with patient harm, environmental contamination, and drug misuse. Kenyan guidelines emphasize the safe segregation, collection, and disposal of expired pharmaceuticals, adhering to principles outlined in the Pharmacy and Poisons Act and the Ministry of Health protocols. These practices have been increasingly prioritized to ensure safety, compliance, and sustainability in pharmaceutical waste management.

Findings

Among facilities offering pharmacy services:

- Overall, disposal of expired medicines is notably low, with only 22% of facilities across the country reporting the disposal of expired medicines in the last 12 months.

Disaggregation by location, KEPH level and ownership

Annex Table 179 shows the percentage of facilities that disposed of expired drugs disaggregated by location, KEPH level, ownership, and county.

- Rural facilities are slightly less prepared for proper waste management, with only 21% disposing of expired medicines compared to 24% of urban facilities.

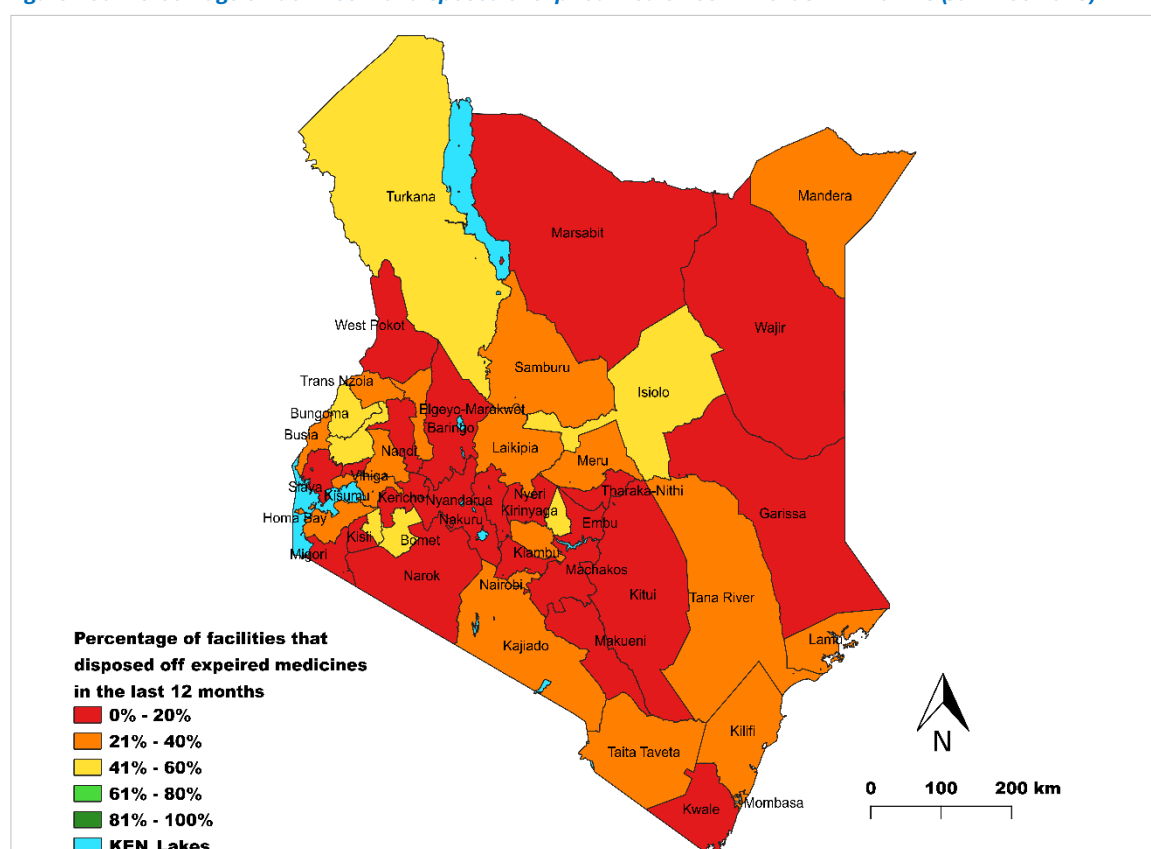
- Level 5 facilities recorded the highest availability across all categories, with 46% disposing of expired medicines, while Level 2 and Level 3 facilities reported lower rates at 19% and 29%, respectively.
- Level 4 facilities also showed low adoption rates for expired medicine disposal, at 35%.
- NGO facilities had the lowest rate of expired medicine disposal at 9%.
- Faith-based organizations (23%) and public facilities (24%) showed moderate disposal rates, while private facilities lagged at 19%.

Country Distribution

Figure 269 shows the percentage of facilities that disposed of expired drugs, disaggregated by county.

- Overall, the disposal rate of expired drugs was low, with most counties reporting less than 50%, indicating widespread challenges in managing expired pharmaceutical products.
- Only three counties, Bungoma (54%), Kirinyaga (54%), and Turkana (50%), had at least half of their facilities disposing of expired drugs in the year before the assessment.
- Several counties reported very low rates, with less than 10% of facilities disposing of expired drugs: Nyeri (9%), Uasin Gishu (6%), Embu (6%), Kitui (6%), Kericho (3%), Vihiga (3%), and West Pokot (3%).

Figure 269: Percentage of facilities that disposed of expired medicines in the last 12 months (Jan-Dec 2023)



Discussion

The disposal of expired medicines in Kenya remains limited despite existing policies and guidelines, exposing communities to risks of harm, misuse, and environmental contamination. While higher-level hospitals demonstrate better compliance, lower-level facilities, which are the first point of care for many, show much weaker practices. Rural facilities generally lag behind urban ones, and differences in ownership reveal that public and faith-based facilities perform moderately, while NGO and private facilities report the lowest disposal rates. County-level disparities are also evident, with only a few counties achieving meaningful progress while many report minimal activity. These findings highlight widespread challenges in pharmaceutical waste management, underscoring the urgent need for strengthened capacity, consistent monitoring, and greater accountability to ensure safe and sustainable disposal practices nationwide.

Supply Chain Audits

An efficient pharmaceutical supply chain is integral to Kenya's healthcare system, ensuring that essential medicines are available, accessible, and affordable across all levels of care. In Kenya, the supply chain is guided by established national policies and frameworks such as the Kenya Essential Medicines List (KEML) and the Kenya Medical Supplies Authority (KEMSA) operational guidelines. Regular audits of the supply chain help address challenges such as stockouts, inefficiencies, and weak accountability, promoting a more transparent and effective system to meet public health demands.

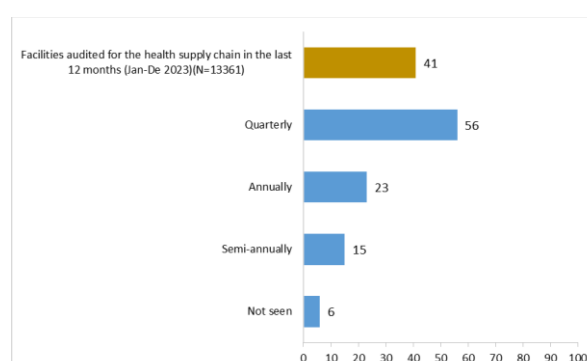
Table 140: Tracer items for supply chain audits

Structures	
Supply chain audits	● Supply chain audits ● Frequency

Findings

- At least 41% of health facilities were audited for the health supply chain in the 12 months preceding the survey (January–December 2023).
- Among the facilities audited, 56% were audited quarterly, 15% semi-annually, and 23% annually.

Figure 270: Percent of facilities conducting supply chain audits in the period (Jan-Dec 2023) and frequency of (N=5,478)





Disaggregation by location, KEPH level and ownership

Annex Table 180 presents the percentage of facilities audited for the health supply chain in the past 12 months, disaggregated by location, KEPH level, ownership, and county.

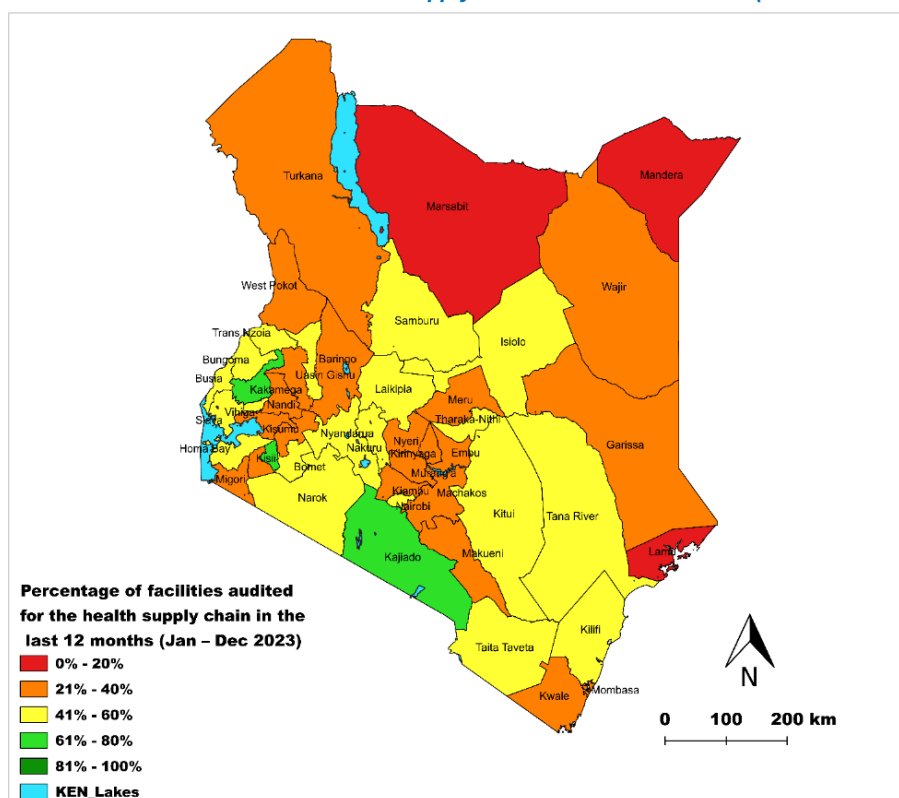
- Overall, a slightly higher proportion of rural facilities (45%) conducted audits compared to urban facilities (37%).
- Rural facilities were more likely to conduct quarterly audits (60%) than urban facilities (51%).
- Annual audits were more common in urban facilities (29%) compared to rural facilities (18%).
- Seventy-three percent (73%) of Level 5 facilities conducted audits, compared to 37% of Level 2 facilities.
- Level 5 facilities had the highest proportion of annual audits (30%), while Level 3 facilities most frequently conducted quarterly audits (60%).
- Levels 2 and 3 facilities primarily conducted quarterly audits.
- Public facilities had the highest proportion of quarterly audits (63%), while private facilities were more likely to conduct annual audits (34%).
- Faith-Based Organizations (FBOs) and NGOs predominantly conducted quarterly audits.

Country Distribution

Figure 271 presents the percentage of facilities audited for the health supply chain in the past 12 months, disaggregated by county.

- Three counties, Lamu (18%), Mandera (19%), and Marsabit (6%), had less than 20% of health facilities conducting supply chain audits during the review period.
- The majority of counties fell into the moderate range, with 21 counties recording 21–40% audit coverage and 20 counties recording 41–60%, highlighting significant room for improvement.
- Three counties—Nyamira (70%), Kakamega (62%), and Kajiado (61%)—recorded supply chain audits in at least 60% of their health facility pharmacies, reflecting stronger governance and compliance in these regions.

Figure 271: Percent of facilities audited for the health supply chain in the last 12 months (Jan-Dec 2023)



Discussion

Supply chain audit practices in the assessment show wide disparities across regions, facility types, and managing authorities. While quarterly audits are common in rural and public facilities, urban and private facilities lean toward annual evaluations, with some reporting no audits at all, raising accountability concerns. NGOs demonstrate strong governance with minimal gaps, while faith-based and public facilities show moderate readiness. Overall, rural facilities perform relatively well despite limited resources, but persistent weaknesses in urban, private, and underserved counties highlight systemic challenges. Strengthening oversight in low-performing regions and facility types is essential to ensure consistent availability and quality of medicines.

Active Medicines and Therapeutic Committee (L4&5 Facilities)

There is increasing complexity of healthcare delivery and the growing burden of medication-related issues, such as adverse drug reactions (ADRs), medication errors, and antimicrobial resistance (AMR), that demand robust oversight and governance within healthcare systems. Active Medicines and Therapeutic Committees (MTCs) play a pivotal role in promoting safe, effective, and rational medicine use, reducing treatment costs, and minimizing risks associated with pharmaceutical care. Regularly scheduled MTC meetings provide a platform for evaluating medicine use trends, addressing medication safety concerns, reviewing formularies, and

improving adherence to treatment guidelines. Through collaborative decision-making, MTCs ensure the alignment of pharmaceutical practices with the clinical and public health priorities.

NB. The assessment for MTCs was conducted for L4 and L5 facilities only.

Table 141: Tracer items for pharmacy services (Medicines and Therapeutics Committees)

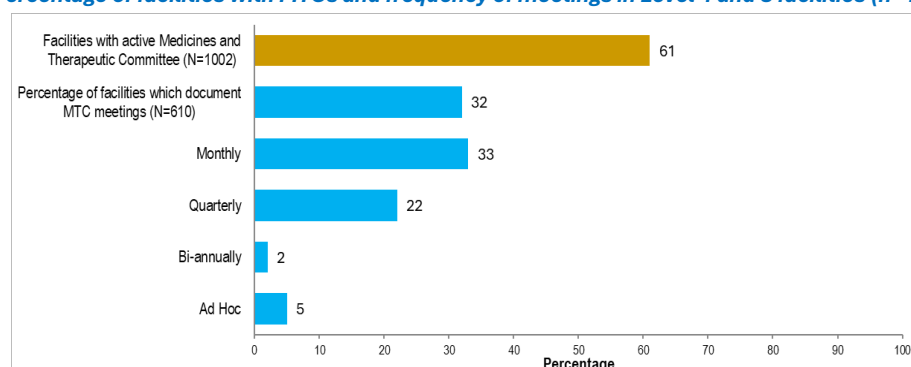
Structures	
Medicines and Therapeutics committees	Availability of active Medicines and Therapeutic Committee
	Frequency of MTC meeting
	Documentation of the MTC activities

Findings:

Figure 272 shows the percentage of facilities with Medicines and Therapeutics Committees (MTCs) and the frequency of their meetings in Level 4 and 5 facilities.

- Nationally, 61% of Level 4 and 5 facilities (hospitals) reported having active MTCs, a key mechanism for ensuring quality. Among these, the majority conducted monthly meetings (33%), followed by quarterly (22%), biannual (2%), and ad hoc (5%) meetings.
- At least 32% of hospitals documented the proceedings of MTC meetings.

Figure 272: Percentage of facilities with MTCs and frequency of meetings in Level 4 and 5 facilities (n=1002)



Disaggregation by location, KEPH level and ownership

Annex Table 148 presents the percentage of facilities with Medicines and Therapeutics Committees (MTCs) and the frequency of their meetings, disaggregated by location, KEPH level, ownership, and county.

- Urban facilities demonstrated slightly stronger oversight structures than rural ones, with MTC activation at 62% and 59% respectively, and similar meeting frequencies.
- Level 5 facilities recorded the highest proportion of active MTCs (84%) and the highest frequency of monthly meetings (62%), reflecting stronger oversight compared to Level 4 facilities (62% activation and 32% monthly meetings).

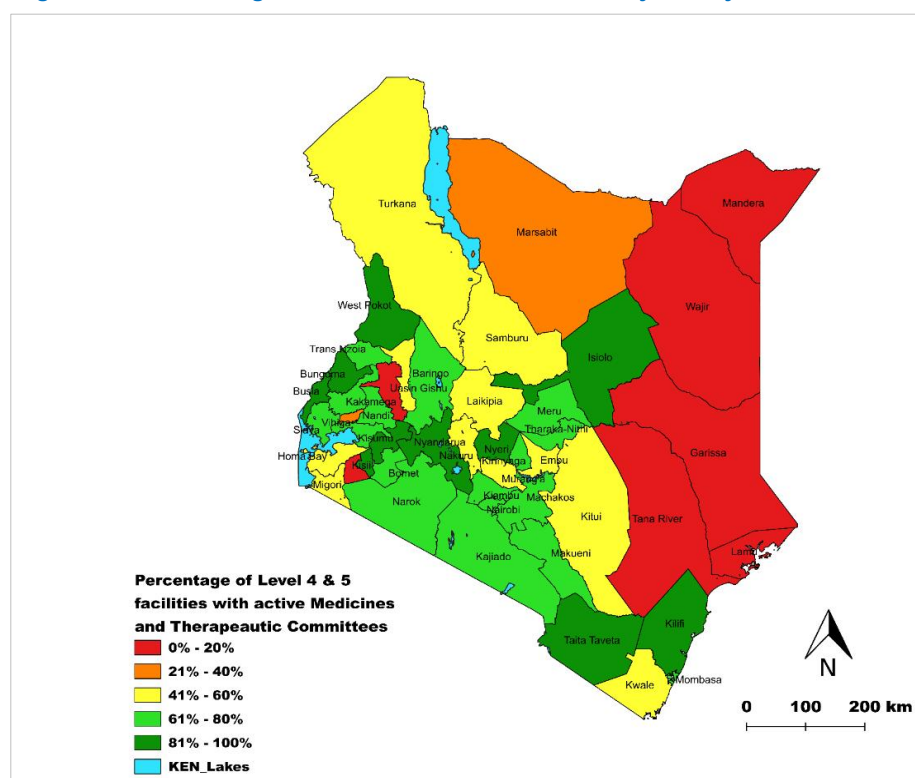
- None of the Level 5 facilities conducted ad hoc MTC meetings.
- Faith-Based Organizations (FBOs) led in MTC readiness, with 73% activation and 45% holding monthly meetings, indicating robust oversight. Public facilities (63%) and private facilities (55%) followed suit.
- NGO facilities reported the lowest MTC activation at 36%, with no quarterly, biannual, or ad hoc meetings, highlighting significant gaps.

County Distribution

Figure 273 shows the percentage of facilities with active Medicines and Therapeutics Committees (MTCs), disaggregated by county.

- Significant regional disparities were observed in the functionality of MTCs in Level 4 and 5 health facilities across Kenya.
- West Pokot County reported full activation, with all Level 4 and 5 facilities having active MTCs, compared to Wajir County with only 5%.
- Six counties recorded the lowest proportions of active MTCs (below 20%): Wajir (5%), Mandera and Tana River (11% each), and Garissa, Kisii, and Uasin Gishu (19% each), indicating critical gaps in pharmaceutical governance and oversight.
- Eleven counties reported high functionality, with at least 80% of Level 4 and 5 facilities having active MTCs. These include West Pokot (100%), Kilifi (94%), Busia (92%), Nyamira (90%), Taita Taveta (86%), Nakuru (86%), Bungoma (85%), Nyeri (84%), Isiolo (83%), and Kericho (81%).

Figure 273: Percentage of facilities with active MTC's by county



Discussion

The findings reveal notable progress in the activation of Medicines and Therapeutics Committees (MTCs), with 61% of Level 4 and 5 hospitals reporting active committees, most meeting monthly or quarterly. However, functionality remains uneven, as only a third of facilities documented proceedings, limiting accountability. Oversight capacity also varies, with Level 5 hospitals and faith-based facilities demonstrating stronger structures, while NGO-managed facilities lag significantly, reflecting governance and resource gaps.

Geographic disparities are stark, with counties such as West Pokot, Kilifi, and Busia achieving near-universal MTC activation, while Wajir, Mandera, and Tana River report less than 20%. These inequities highlight systemic weaknesses in pharmaceutical governance. Strengthening MTCs will require institutionalizing regular, well-documented meetings, enhancing capacity and resourcing in underperforming facilities and counties, and fostering stronger collaboration among stakeholders to ensure equitable, accountable, and effective oversight nationwide.

Conclusion

Pharmacy services remain a vital component of the healthcare system, shaping treatment outcomes, patient safety, and service readiness. The assessment reveals improvements in the availability of essential medicines and supplies compared to past years, yet frequent stock-outs, especially in rural and lower-level facilities, continue to limit equitable access. Availability of non-pharmaceuticals, crucial for lifesaving care, remains inconsistent, highlighting persistent systemic gaps. The limited dissemination and use of pharmacy guidelines, coupled with weak uptake of quality assurance measures such as adverse drug reaction reporting, medication reviews, and expired medicine disposal, further undermine safe and efficient service delivery.

While electronic inventory and dispensing systems are gaining traction, their adoption is uneven, mostly confined to higher-level and urban facilities, leaving primary and rural facilities disadvantaged. Similarly, governance structures such as supply chain audits and Medicines and Therapeutics Committees exist but function inconsistently across counties and ownership types, reducing their impact on rational medicine use and accountability. These gaps point to the need for strengthened county-level oversight, wider dissemination of pharmacy guidelines, investment in lower-level facilities, and expansion of digital systems to ensure reliable access, safe use, and sustainable management of medicines and health technologies across the country.

Table 142: Pharmacy recommendations

Key Findings	Recommendations
Stock-outs of essential medicines	• Sustain and further improve tracer medicine availability through continued investment in supply chain management.



Key Findings	Recommendations
	• Strengthen county-level capacity in forecasting, quantification, resource mobilization, and digitization to ensure consistent access to essential medicines.
Availability of essential medical supplies	• Allocate sufficient county-level funding to guarantee availability, readiness, and rational use of tracer non-pharmaceuticals. • Safeguard service delivery, patient safety, and health worker protection by ensuring uninterrupted supply of critical medical commodities.
Pharmacy guidelines	• Enhance dissemination of national pharmacy guidelines and ensure CHMTs have adequate resources to cascade and reinforce their use across facilities. • Monitor adherence to improve rational medicine use and strengthen supply chain practices.
Medicines and Therapeutics Committees (MTCs)	• Expand functionality of MTCs by supporting training, mentorship, and resources, especially in low-performing counties. • Strengthen accountability to ensure committees meet regularly and deliver on their mandate to promote rational medicine use.
Adverse Drug Reaction (ADR) reporting and Medication Reviews (MR)	• Scale up continuous training to improve ADR reporting and medication reviews, especially for patients on chronic treatment. • Integrate ADR/MR practices into routine care to optimize outcomes, minimize adverse reactions, and reduce long-term healthcare costs.
Supply chain audits	• Increase resource allocation and technical support for regular supply chain audits, particularly in underperforming counties. • Leverage digital tools and data-driven approaches to strengthen audit coverage, improve consistency, and enable corrective actions.
Electronic systems for stock management	• Invest strategically in nationwide digital health infrastructure to expand adoption of electronic inventory and dispensing systems. • Prioritize primary care and rural facilities to close regional gaps and enhance data visibility for supply chain management.
Disposal of expired medicines	• Strengthen pharmaceutical waste management by investing in regional waste disposal infrastructure. • Improve disposal practices through training, capacity-building, and enforcement, with emphasis on rural, lower-level, and underserved facilities.



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