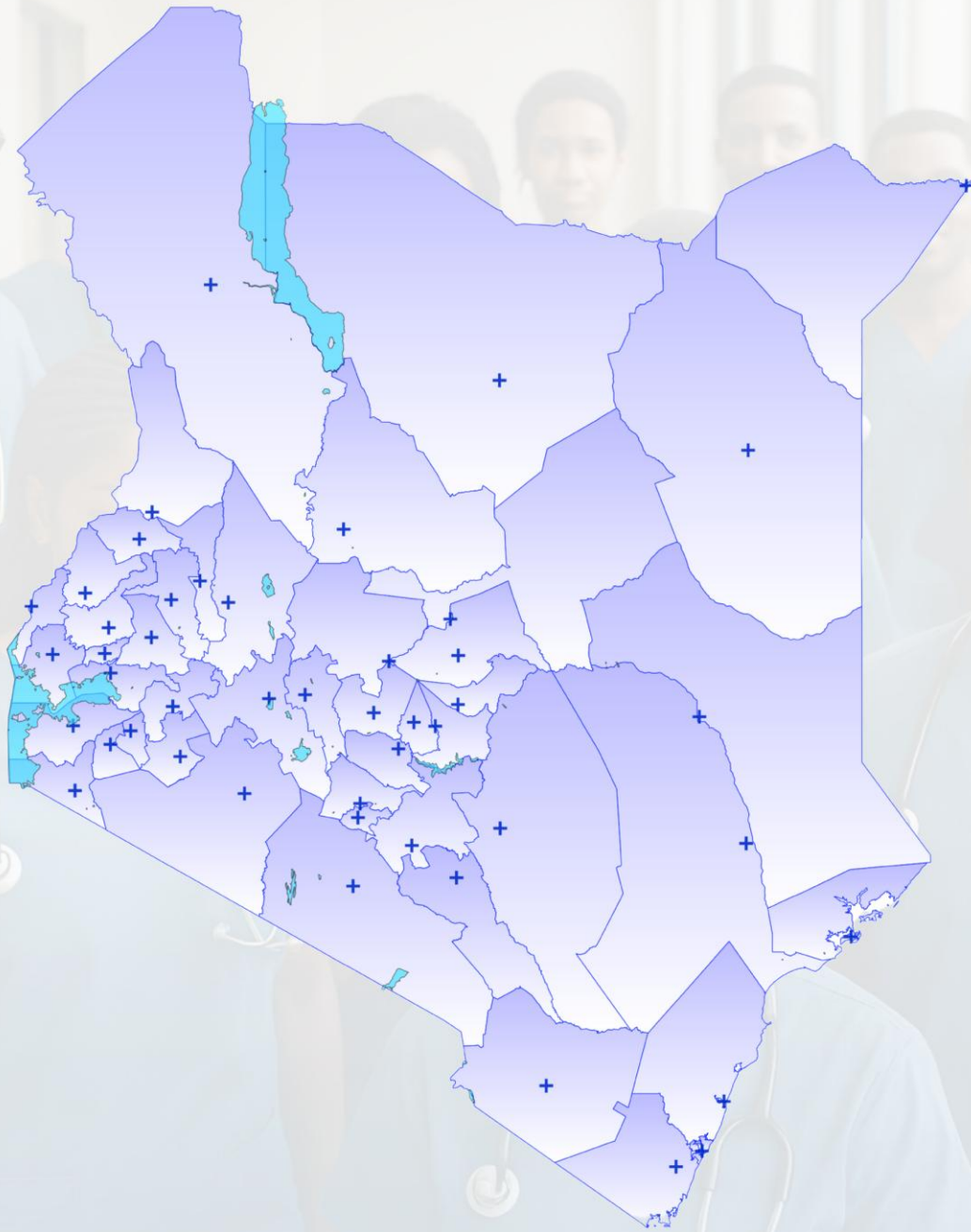




MINISTRY OF HEALTH



KENYA HEALTH FACILITY ASSESSMENT : QUALITY OF CARE AND HUMAN RESOURCES FOR HEALTH REPORT

Preface



In the journey towards achieving Universal Health Coverage (UHC), the Government of Kenya reaffirms its commitment to providing equitable, affordable, and high-quality healthcare services to all citizens. Health is a key priority in the government's Bottom-Up Economic Transformation Agenda (BETA), which focuses on strengthening health systems, expanding access to care, reforming health financing, and advancing health innovations. This comprehensive approach ensures that all Kenyans, regardless of their socio-economic status or geographical location, have access to the highest quality healthcare without experiencing financial hardship. The quest for UHC is not merely a policy objective; it is a moral imperative that reflects our collective responsibility to ensure that every Kenyan has access to the healthcare they deserve.

This commitment is rooted in the principles enshrined in the Constitution of Kenya 2010, which emphasizes the right to health as a fundamental human right. Recent findings from the Kenya Demographic and Health Survey (KDHS) 2022 highlight notable progress in health coverage, such as increased skilled birth attendance and a reduction in unmet family planning needs. However, despite these advancements, challenges persist, particularly in maternal and child health. The persistently high maternal mortality rates and stagnant childhood mortality figures reveal significant gaps in the quality of care that need to be addressed. This report presents the findings of the Harmonized Health Facility Assessment (HHFA) conducted in Kenya, a comprehensive evaluation aimed at understanding the availability and quality of healthcare services being provided in the country. The assessment was initiated in response to the need for accurate data to inform policy decisions and improve healthcare delivery. The insights gathered from this assessment will serve as a critical tool for policymakers, health administrators, and stakeholders to identify gaps in service delivery, enhance the quality of care, and ultimately improve health outcomes for all Kenyans. The findings presented in this report are based on rigorous data collection and analysis, reflecting the experiences and perspectives of county managers, healthcare providers and patients alike. As we share these insights, we emphasize the importance of collaboration among all stakeholders to implement the necessary changes that will lead to a more effective and equitable healthcare system. We believe that the information contained in this report will contribute to informing decision-making and strategic planning, guiding us toward a healthier future for all Kenyans. Together, we can build a healthcare system that is not only accessible and affordable but also of the highest quality.

Hon. Aden Duale, EGH
Cabinet Secretary
Ministry of Health

Foreward



In its pursuit of Universal Health Coverage (UHC), the Government of Kenya reaffirms its steadfast commitment to providing equitable, affordable, and high-quality healthcare to all citizens. The 2022 Kenya Demographic and Health Survey (KDHS) highlights key improvements in the healthcare system, such as increased skilled birth attendance and



a reduction in unmet family planning needs.

While these achievements are encouraging and reflect ongoing efforts to enhance public health, significant challenges remain, particularly in maternal and child health. Alarming maternal mortality rates and stagnant childhood mortality figures indicate critical gaps in care that urgently need to be addressed.

This report presents the results of the Quality of Care-focused Harmonized Health Facility Assessment (QOC-HHFA), a nationwide survey designed to assess the current state of healthcare services. The QOC-HHFA was launched to provide reliable data to inform policy and improve healthcare delivery. The insights gathered will serve as a vital resource for policymakers, health administrators, and stakeholders, helping them identify service gaps, enhance care quality, and improve health outcomes for all Kenyans.

The findings of this assessment provide vital evidence to guide policy and programming toward an accessible, affordable, and high-quality healthcare system for all Kenyans.

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Acknowledgment



The successful design, implementation, and completion of the Quality of Care Health Facility Assessment (QoCHFA) would not have been possible without the invaluable contributions of numerous individuals and institutions. The Ministry of Health extends sincere appreciation to all stakeholders whose collective efforts, technical input, and financial support were instrumental throughout the process.

We sincerely thank the Ministry of Health's top leadership for their guidance and support throughout this assessment. Our gratitude also goes to county governments for their collaboration and support, essential for effective data collection and ensuring that the assessment captured realities on the ground.

We commend the core team for their dedication in steering this work, with special recognition to Dr. Charles Kandie and Dr. Helen Kiarie for their leadership. We further acknowledge the valuable technical 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 appreciate the support of technical officers from the Ministry of Health, the Kenya National Bureau of Statistics, and the National Council for Population and Development (full list annexed). We deeply appreciate the dedication of the research teams and data collectors, whose professionalism ensured the integrity of the findings. Our gratitude also goes to the Countdown to 2030 Kenya Country Collaboration Team (Ministry of Health-Division of Health Sector Monitoring and Evaluation, JKUAT and APHRC) for coordinating the process.

We extend special thanks to healthcare providers and facility managers for their openness and valuable insights, and to the clients whose voices underscored the importance of patient-centered care.

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

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



Table of Contents

Preface	i
Forward	ii
Acknowledgment.....	iii
Table of Contents	iv
List of Figures	vii
List of Tables	xiv
Acronyms and Abbreviations.....	xvii
Executive Summary.....	xviii
1. Introduction.....	1
2. Methodology	5
2.1 Study Design and Approach.....	5
2.2 Data collection tools	6
2.3 Sampling and sample size determination.....	8
2.3.1 Constructing of a sampling frame - health facilities	8
2.3.2 Constructing of a sampling frame - health workers.....	9
2.3.3 Constructing of a sampling frame - record reviews.....	9
2.3.4 Constructing of a sampling frame - client exits	9
2.3.5 Sample size determination for Health Facilities.....	9
2.3.6 Sample size determination - health workers	10
2.3.7 Sample size determination - record reviews	11
2.3.8 Sample size determination – FP client exit.....	11
2.4 Survey Team.....	12
Composition; Training and supervision of survey teams	12
2.5 Pre-testing of tools	13
2.6 Data collection.....	14
2.7 Data Management	14
2.8 Mechanisms for data quality assurance	14
2.9 Data analysis and Report writing.....	15
2.10 Response rate.....	16
2.11 Limitations	19
2.12 Findings	20
2.12.1 Quality of Care: Structures and Processes Indices.....	20
2.12.2 Findings:	22
3. Systems to Support Quality Health Care	26



3.1 Facility Misclassification	26
3.2 Quality Assurance Systems	28
3.2.1 External assessments against standards	28
3.2.2 Supportive supervision	37
3.3 Internal Assessment	41
Systems to Support Quality Improvement/Assurance	41
4. Patient Safety	47
4.1. Case and Death Reviews	51
4.1.1 Maternal and Perinatal Death Reviews	53
4.1.2 Neonatal Deaths	55
4.1.3 Maternal and Perinatal Death and Surveillance Committees (MPDSR)	58
4.2 Surgery Related Deaths and Adverse Events	60
4.2.1 Review of Surgical-Related Deaths (occurring within 24 hours of Surgical Procedure)	60
4.2.2 Systems for Monitoring Adverse Events Specifically Related to Surgery (MOH 384)	62
4.3 Infection Prevention and Control:	64
4.3.1 IPC Committees	64
4.3.2 Availability of IPC Policies, Guidelines	67
4.4 Infections	68
4.5 Antimicrobial Use, Consumption and Resistance	72
4.5.1 Antimicrobial use and consumption monitoring	72
4.5.2 Antimicrobial Resistance	75
4.6 Patient Incidents and Errors	86
4.6.1 Surveillance for patient safety incidents	86
4.6.2 Surveillance for Medication Errors	88
4.6.3 Policies and Guidelines for Patient Safety	91
5. Human Resource Availability	93
5.1 Total Health Workforce	93
5.1.1 Active Health Worker Stock	93
5.1.2 Health Workforce Norms and Standards	106
5.1.3 Health Workforce Density	109
5.2 Health Worker Absenteeism	116
6. Work Environment and Satisfaction	126
6.1 Occupational Health and Safety	126
6.1.1 Exposure to Hazardous Materials in the Workplace	126
6.1.2. Medical Staff Satisfaction with Safety Measures in the Workplace	129



6.1.3 Reasons for Dissatisfaction with the Safety Measures Put in Place Among Medical Place	130
6.1.4 Medical Staff Immunization against Vaccine Preventable Diseases	132
6.2 Health Worker Environment and Satisfaction	137
6.2.1 Promotions in the last 3 years	138
6.2.2 Payment of Salaries	139
6.2.3 Experience of Assault (Physical, Verbal or any other)	142
6.2.4 Workload Distribution	151
7. Human Resource Knowledge.....	162
Clinical Vignettes/ Case Assessment.....	162
7.1 Tracer conditions	162
7.2 Respondents	163
7.3 Area of Analysis	163
7.4 Results	164
8. Human Resource Practice	202
Record Review	202
8.1 Delivery Care Record Review	202
8.2 HIV Services.....	217
8.3 Tuberculosis	238
9. Client-Centered Care	255
9.1 Facility Level	256
9.1.1 Systems for Performance Review and Patient Feedback.....	256
9.1.2 Audio or Visual Privacy.....	260
9.2 Family Planning Client Exit Interview.....	262
9.2.1 Client experiences	262
9.2.2 Client satisfaction	265
10. Contextual Report	270
11. References	271

List of Figures

Figure 1: HR, Clinical Vignettes and Work Environment Assessment Respondents' Selection Algorithm	11
Figure 2: Flow-chart of the survey tools points of administration	14
Figure 3: Steps for selecting healthcare workers included in the work environment and clinical simulation interviews	18
Figure 4: Quality of care structures indices	22
Figure 5: Quality of Care Structures indices by county.....	23
Figure 6: Quality of Care processes indices	23
Figure 7: Quality of care Process indices by County.....	24
Figure 8: Number of facilities offering various services	27
Figure 9: Percentage of facilities which have undergone periodic external assessment by facility location	30
Figure 10: Percentage of facilities which have undergone periodic external assessment by county (N=13361)	31
Figure 11: Percentage of health facilities assessed using various standards (n=7485)	32
Figure 12: Most recent facility-wide external assessment (n=7485)	34
Figure 13: Most Recent Facility-wide External Assessment by Facility Management (n=7485)	35
Figure 14: Most Recent Facility-wide External Assessment by KEPH Levels (n=7485)	35
Figure 15: Percentage of facilities that received any external supervision within the last 12 months (N=13,361)	38
Figure 16: Percentage of facilities that received supportive supervisory visit by (N=13361)	38
Figure 17: Percentage of facilities that received supportive supervisory visit by ownership (N=13361)	39
Figure 18: Percent of Health Facilities with Quality Improvement Team (QIT)	42
Figure 19: Percentage of Facilities with Quality Improvement Teams by county	43
Figure 20: Frequency of Quality Improvement Team Meetings (n=6315).....	43
Figure 21: Percentage of health facilities with staff trained on quality improvement	45
Figure 22: Average Number of Staff Trained on Quality Improvement Per County	46
Figure 23: Percentage of facilities with inpatient services.....	49
Figure 24: Percentage of Facilities that Conducted Formal Death Reviews.....	52
Figure 25: Percentage of facilities that Conduct Formal Death Reviews for any Deaths That Occur by County (n=2929)	52
Figure 26: Percentage of facilities that conducted death review (n=2150)	53
Figure 27: Percentage of facilities that performed Maternal & Perinatal Death Reviews	53
Figure 28: Percentage of facilities that performed maternal and perinatal death reviews by County ...	54
Figure 29: Distribution of maternal mortality (MOH 369) by KEPH level and Ownership(n=427)	54
Figure 30: Number of maternal deaths reported against deaths audited (Oct-Dec 2023): Reported(n=413), Audited(n=394)	55
Figure 31: Percentage of health facilities that conduct Neonatal death review by county	58
Figure 32: Distribution neonatal deaths (MOH 372) Oct-Dec 2023 by facility ownership an KEPH Level. (n=4094).....	56
Figure 33: Number of neonatal deaths reported, MOH 372 (n=4094) against deaths audited(n=3114).	56
Figure 34: Proportion of facilities with MPDSR committees nationally (N=1350)	59
Figure 35: Percentages of facilities MPDSR committee meetings (N=1350)	59



Figure 36: Proportion of facilities that had MPDSR committees by county (N=1350)	60
Figure 38: Percentage of Facilities that conducted formal death reviews for Surgical-related Deaths (within 24 hours of a surgical procedure) n=2150	61
Figure 39: Percentage of Facilities that conduct formal death reviews for Surgical-related Deaths (within 24 hours of a surgical procedure), n=2150.	62
Figure 40: Percentage of Facilities With a System for Monitoring Adverse Events Specifically Related to Surgery (MOH 384).....	63
Figure 41: Percentage of Facilities with a System for Monitoring Adverse Events Specifically Related to Surgery Per County (MOH 384)	63
Figure 42: Percentage of health facilities offering in-patient services that had Technical Infection Prevention Committee (IPC)committees	65
Figure 43: Percentage of health facilities offering in-patient services that had Technical Infection Prevention Committee (IPC)committees by County	65
Figure 44: Frequency of IPC Committee meetings (n=1804)	66
Figure 45: Percentage of health facilities offering in-patient services that had the Kenya National Infection Prevention and Control Policy for Health Care Services 2021	68
<i>Figure 46: Percentage of health facilities with the Kenya National Infection Prevention and Control Policy for Health Care Services 2021 by County</i>	<i>68</i>
Figure 47: Percentage of health facilities offering in-patient services that conducted surveillance for specific Healthcare Associated Infections (N=620)	69
Figure 48: Percentage of health facilities offering in-patient services that conducted surveillance for Healthcare Associated Infections by County	70
Figure 49: Percentage of Level 4 and 5 health facilities services that conducted surveillance for specific HAIs	70
Figure 50: Percentage of health facilities conducting surveillance on antimicrobial use and consumption (Source: MOH 285 (N=13361)	73
Figure 51: Percentage of health facilities conducting surveillance on antimicrobial use and consumption by KEPH Level, MOH 285	73
Figure 52: Percentage of health facilities conducting surveillance on antimicrobial use and consumption by Ownership, MOH 285	74
<i>Figure 53: Percentage of health facilities that monitored WHO priority Pathogens MOH 289 (n=1002)</i>	<i>75</i>
Figure 54: Percentage of health facilities that monitored WHO priority Pathogens Surveillance by KEPH Level, MOH 289.....	76
Figure 55: Percentage of levels 4 and 5 health facilities that reported on Laboratory AMR data to the Central Data Warehouse at National Level.....	78
<i>Figure 56: Percentage of level 4 and 5 health facilities that reported Laboratory AMR Data to the Central Data Warehouse at National Level by County</i>	<i>79</i>
Figure 57: Percentage of health facilities that had the National Action Plan on Prevention & Containment of Antimicrobial Resistance, 2017	80
Figure 58: Percentage of health facilities that had the National Action Plan on Prevention & Containment of Antimicrobial Resistance, 2017 by county	80
Figure 59: Percentage of health facilities that had the National Antimicrobial Resistance Surveillance Strategy (2017-2022)	81
Figure 60: Percentage of health facilities that had the National Antimicrobial Resistance Surveillance Strategy (2017-2022) by county.....	82



Figure 61: Percentage of health facilities that had a functional Multidisciplinary Antimicrobial Stewardship committee/team	82
Figure 62: Percentage of health facilities that have a functional Multidisciplinary Antimicrobial Stewardship committee meeting at National Level (N=317)	83
Figure 63: Percentage and frequency of facilities that have a functional Multidisciplinary Antimicrobial Stewardship Committee	84
Figure 64: Percentage of health facilities that conducted surveillance for patient safety incidents ((MOH 288)	87
Figure 65: Percentage of Health Facilities That Conduct Surveillance for Patient Safety Incidents by County (MOH 288) (N=13361)	87
Figure 66: Percent of health facilities that monitored specific patient safety incidents (n=3490).....	88
Figure 67: Percentage of health facilities that monitored specific patient safety incidents by KEPH level (MOH 288) n=3490	89
Figure 68: Percentage of health facilities that monitored specific patient safety incidents by ownership category (MOH 288) n=3490	89
Figure 69: Percentage of health facilities that had the National Policy on Patient Safety, Health Worker Safety and Quality of Care, 2022.....	92
Figure 70: Percentage of Health Facilities That Have the National Policy on Patient Safety, Health Worker Safety and Quality of Care, 2022 By County	92
Figure 71: Distribution of personnel in the health facilities	95
Figure 72: Distribution of the medical and non-medical personnels in Kenya.....	96
Figure 73: Distribution of the medical and non-medical personnels in the Counties	97
Figure 74: Distribution of the medical and non-medical personnel in the Counties among public facilities.....	97
Figure 75: Distribution of Health Workers by Gender (N=120,547).....	98
Figure 76: Distribution of Health Workers by Gender in the Counties (N=120,547).....	99
Figure 77: Distribution of Health Workers by Cadre (N=120,547).....	101
Figure 78: Medical Cadre Distribution by Gender.....	102
Figure 79: Health workers by age N=120=120,547.....	103
Figure 80: Health Workforce Distribution by Age across the Facilities.....	103
Figure 81: Distribution of Health Workers by their terms of engagement in Kenya.....	104
Figure 82: Distribution of Health Workers by their terms of engagement across Facilities by ownership (N=120,547).....	104
Figure 83: Percent of level 2 to 4 facilities that meet cadre norms.....	107
Figure 84: Staffing norms and Average Health Workers-Level 2 (N=38,635)	108
Figure 85: Staffing norms and Average Health Workers-Level 3 (n=23,868).....	109
Figure 86: Staffing norms and Average Health Workers-Level 4 (N=49,006)	109
Figure 87: Core Cadres density per 10,000 population across the Counties	111
Figure 88: Nurses Workforce Density across the Counties in 2018(left) against 2024(right)	112
Figure 89: Clinical Officers Workforce Density across the Counties in 2018(left) against 2024(right).....	112
Figure 90: Medical Officers Workforce Density across the Counties in 2018(left) against 2024(right)	113
Figure 91: Laboratory Technicians Workforce Density across the Counties in 2018(left) against 2024(right).....	114
Figure 92: Reasons for absenteeism by category (n= 78586)	117
Figure 93: Percentage of health worker availability by cadre.....	118



Figure 94: Disaggregation of healthcare worker absenteeism by location, KEPH level and facility ownership.....	119
Figure 95: County distribution of overall absenteeism	120
Figure 96: health worker absenteeism by county by type.....	121
Figure 97: Percentage of Workers Exposed to Hazardous Materials in the Workplace (n=34,531)	127
Figure 98: Percentage of Medical Staff Exposed to Hazardous Materials in the Workplace by County (n=34,531).....	127
Figure 99: Percentage of Medical Staff Exposed to Hazardous Materials by Type (n=9861).....	128
Figure 100: Percentage of Workers Exposed to Hazardous Materials by Material Type by Facility Management (n=9861)	128
Figure 101: Medical Staff Satisfaction with Measures Put in Place to Ensure Safety in the Workplace(n=34,531)	129
Figure 102: Percentage Medical Staff Satisfied measures put in place to ensure their safety in the workplace by County (n=34,531)	130
Figure 103: Reasons for Dissatisfaction on Safety Measures among Medical Staff (n=7738)	131
Figure 104: Reasons for Non-satisfaction on Safety Measures among Medical Staff (n=7738)	131
Figure 105: Medical Staff Immunized against any Vaccine Preventable Diseases that May Arise Due to Exposure in the Work Place(n=34,531).....	133
Figure 106: Medical Staff Immunized against any Vaccine Preventable Diseases that may arise Due to Exposure in the Work Place by County (n=34,531)	134
Figure 107: Medical Workers Immunization by Vaccine Type (n=33,217).....	134
Figure 108: Medical Staff Immunization by Vaccine Type and Facility Management(n=33,217)	135
Figure 109: Percentage of medical staff promoted in the last 3 years.....	138
Figure 110: Percentage of medical staff promoted in the last 3 years by county (n=34,531).....	139
Figure 111: Average time sampled medical staff received their salary (n=34,531).....	140
Figure 112: Average time sampled medical staff received their salary by KEPH Level(n=34,531).....	140
Figure 113: Average time sampled medical staff received their salary by facility management (n=34,531).....	141
Figure 114: Average time sampled medical staff received their salary by County (n=34,531)	141
Figure 115: Percent of last pay dates	142
Figure 116: Percentage of medical staff who have ever experienced any form of assault in their work environment(n=34,531)	143
Figure 117: Proportion of assaulted medical staff by gender and cadre among all assaulted staff (n=5,834).....	143
Figure 118: Percentage of medical staff who have ever experienced any form of assault in their work environment by county (n=34,531)	144
Figure 119: Perpetrators of Assault on Medical Staff (n= 5,834).....	144
Figure 120: Perpetrators of Assault on Medical Staff by facility location (n=5,834).....	145
Figure 121: Percentage of medical staff who were assaulted and reported the case(n=2446)	146
Figure 122: Percentage of medical staff who were assaulted and reported the cases by county (n=2,446).....	146
Figure 123: Reporting Patterns of Assaulted Medical Staff to Various Authorities(n=2,446)	147
Figure 124: Reporting Patterns of Assaulted Medical Staff to Various Authorities by facility location(n=2,446).....	147
Figure 125: Reporting Patterns of Assaulted Medical Staff to Various Authorities by Facility Management(n=2,446).....	148
Figure 126: Percentage of reported assaulted cases where action was taken	150



Figure 127: Percentage of reported assaulted cases where action was taken by county (n=2446)....	151
Figure 128: Percentage of medical staff who felt workloads were fairly distributed among health workers in their facility (n=34,531).....	152
Figure 129: Percentage of medical staff who felt workloads were fairly distributed among health workers in their facility by county (n=34,531).....	152
Figure 130: Medical staff who felt workloads were fairly distributed among health workers in their facility by age group(n=34,531)	153
Figure 131: Levels of Satisfaction Among Medical Staff in the Health Facility(n=34,531)	153
Figure 132: Levels of Satisfaction among Medical Staff by Health Facility location (n=34,531)	154
Figure 133: Levels of Satisfaction Among Medical Staff in the Health Facility by Facility management(n=34,531)	154
Figure 134: Proportion of Medical Staff who were satisfied working in the health facilities by county (n=34,531).....	155
Figure 135: Reasons of Dissatisfaction Among Medical Staff (n=2,459)	155
Figure 136: Reasons of Dissatisfaction among Medical Staff by Facility KEPH Level(n=2,459)	156
Figure 137: Reasons of Dissatisfaction among Medical Staff by facility management (n=2,459)	156
Figure 138: Percentage of factors likely to improve the medical staff's ability to provide good quality of care services in all facilities (n=34,531)	159
Figure 139: Factors likely to improve the Healthcare Provider's ability to provide good quality of care services in facilities by Facility Ownership (n=34,531)	159
Figure 140: Correct diagnosis for each of the cases (N=34,712)	165
Figure 141: Proportion of healthcare providers who correctly diagnosed the cases by cadre (N=34,712)	166
Figure 142: Proportion of healthcare providers who correctly diagnosed the cases by level of care (N=34,712)	167
Figure 143: Proportion of healthcare providers who correctly diagnosed the cases by facility location (N=34,712)	168
Figure 144: Proportion of healthcare providers who correctly diagnosed the cases by facility ownership (N=31,712)	169
Figure 145: Proportion of healthcare providers who correctly diagnosed the cases by years of experience of the providers (N=34,688).....	170
Figure 146: Diagnostic accuracy by healthcare workers	173
Figure 147: Proportion of six cases accurately diagnosed by healthcare providers by cadre; level of care; location; ownership and years of experience (N=34,712)	174
Figure 148: Proportion of healthcare providers who adhered to the clinical guidelines in the diagnostic process (N=34,712)	178
Figure 149: Proportion healthcare providers adhering to clinical guidelines in the diagnostic process by cadre (N=34,712)	179
Figure 150: Proportion of healthcare providers adhering to clinical guidelines in the diagnostic process, by KEPH level (N=34,712)	180
Figure 151: Proportion healthcare providers adhering to clinical guidelines in the diagnostic process, by facility location (N=34,712)	180
Figure 152: Proportion of healthcare providers adhering to clinical guidelines in the diagnostic process, by facility ownership (N=34,712)	181
Figure 153: Proportion healthcare providers adhering to clinical guidelines in the diagnostic process, by years of experience (N=34,688)	182



Figure 154: Proportion of healthcare workers who offered the correct treatment as per the guidelines (N=34,712)	186
Figure 155: Proportion of healthcare workers who offered correct treatment by cadre (N=34,712) ..	187
Figure 156: Proportion of healthcare workers who offered correct treatment by level of care (N=34,712)	188
Figure 157: Proportion of healthcare workers who offered correct treatment by facility location (N=34,712)	188
Figure 158: Proportion of healthcare workers who offered correct treatment by facility ownership (N=34,712)	189
Figure 159: Proportion of healthcare workers who offered correct treatment by providers' years of experience (N=34,688)	190
Figure 160: Treatment accuracy disaggregated by cadre, facility level, location, ownership and years of experience (N=34,712, (N=34,688 for years of experience))	193
Figure 161: Proportion of healthcare providers giving correct diagnosis, correct treatment for all the six for cases (N=34,712)	196
Figure 162: Documentation of mother's basic information	204
Figure 163: County distribution on proportion of files with all mother's documentation	205
Figure 164: Partograph documentation	208
Figure 165: County distribution on files with all relevant information captured in the partograph	209
Figure 166: Post partum examination documentation	212
Figure 167: County disaggregation of completed documentation of post-partum examination	213
Figure 168: Documentation of HIV Testing and Counselling 10-19 years of age distribution by county	219
Figure 169: Documentation of select services in paediatric HIV Care (N=1734)	222
Figure 170: Quality of HIV care services for children below 15yrs distribution by county	224
Figure 171: Showing TB screening and treatment status amongst patients on ART (N=1734)	227
Figure 172: TB screening documentation in HIV positive children <15yrs documentation	229
Figure 173: Treatment Status for Active TB Patients on ART (N=59)	233
Figure 174: Percentage of children under 5 on ART with select growth monitoring interventions.	234
Figure 175: Percentage of TB clients with tracer quality indicators documented (N=4999)	239
Figure 176: Quality of TB services county distribution	240
Figure 177: Basis for TB diagnosis	244
Figure 178: Basis for TB diagnosis county distribution	245
Figure 179: Percentage of screening of contact persons of TB patients documented.	247
Figure 180: Screening of contacts documented in the TPT/Contact Management Register	248
Figure 181: Percentage of TB clients tested for HIV and documented.	251
Figure 182: Documentation of ART initiation in patients with TB/HIV Coinfection	252
Figure 183: Percentage of facilities with a routine process for performance review based on data on facility services, outcomes, or patient feedback (N=13,361)	257
Figure 184: Percentage of facilities with a routine process for performance review based on data on facility services, outcomes, or patient feedback by county (N=13,361)	257
Figure 185: Percentage of Facilities that implemented any mechanism to engage the community/client (N=13,361)	258
Figure 186: Percentage of Facilities that implemented any mechanism to engage the community/client by county (N=13,361)	259
Figure 187: Percentage of facilities implementing mechanisms to engage clients by ownership	260



Figure 188: Proportion of Facilities Providing HIV Services with A Room with Visual and Auditory Privacy (N=11,071)	261
Figure 189: Proportion of Facilities Providing Post-Partum Services with a Room with Visual and Auditory Privacy (n=6827)	262
Figure 190: Percentage of FP client experiences on the FP services provided (n=1,601)	263
Figure 191: Percentage of FP clients satisfied with the care provided (n=1,601).....	266

List of Tables

Table 1: Structures and Systems assessed in facilities.....	xix
Table 2: Patient safety assessment	xxi
Table 3: Percent of Health care workers level of medical training.....	xxv
Table 4: Percent of highest levels of education	xxv
Table 5: Percent of staff cadres/Staff composition	xxvi
Table 6: Percent of age group composition of health care workers	xxvii
Table 7: Human Resources for Health densities	xxviii
Table 8: Donabedian Model.....	3
Table 9: Focus services areas assessed	5
Table 10: QoC-HHFA 2024 survey tools	6
Table 11: List of Pretest Health Facilities - Machakos County (n = 28)	13
Table 12: Target and number of facilities assessed (unweighted).....	16
Table 13: Summary of the target, unweighted and weighted number of participants in the sample	18
Table 14: Indicators, data sources for structures & processes from the Kenya Health Facility QoC Assessment 2024(QOC) and the Kenya Health Facility Census 2023(KHFC).....	21
Table 15: Quality of care effectiveness, patient and centeredness indices, structures & processes ...	24
Table 16: Facility-wide assessments	28
Table 17: External assessment areas	29
Table 18: Percent of facilities that have the following QoC external assessment.....	32
Table 19: Frequency of facilities having external supervision.....	36
Table 20: Percentage of facilities that received supportive supervisory visits within the last 3 months by County and more than 4 months by county	39
Table 21: Structures and processes assessed under quality improvement.....	41
Table 22: County performance on Frequency of QIT/WIT meetings.....	44
Table 23: Quality Assurance key findings	46
Table 24: Percentage of facilities with Inpatient Facilities	49
Table 25: Case review structures and processes	51
Table 26: Surgery related deaths and adverse events structures.....	60
Table 27: MPDSR & Neonatal death reviews recommendations	64
Table 28: Frequency of IPC committee meetings in counties	66
Table 29: Surveillance for HAIs in In-patient Facilities structures	68
Table 30: Percentage of health facilities services that conducted surveillance for specific HAIs by county	71
Table 31: Antimicrobial Use, Consumption and Resistance structures and processes	72
Table 32: Percentage of health facilities conducting surveillance on antimicrobial use and consumption by county.....	74
Table 33: Percentage of health facilities that monitored WHO priority Pathogens MOH 289 (n=1002) by county	77
Table 35: Infections and AMR key findings and recommendations	83
Table 36: Patient incidents and errors structures	86
Table 37: Facilities monitoring errors by county	90
Table 38: HRH assessment focus	93
Table 39: Healthcare workers methodological note	93
Table 40: Other Cadre Categories	99
Table 41: Percent of staff terms of engagement.....	104



Table 42: Number of Healthcare Workers Interviewed	105
Table 43: HR core cadres Norms	106
Table 44: Health workforce Densities	110
Table 45: Health workforce Densities across the counties	114
Table 46: Healthcare worker absenteeism recommendations	122
Table 47: Healthcare worker absenteeism	122
Table 48: Healthcare worker absenteeism (Continued).....	124
Table 49: Percent composition of reasons for absence	125
Table 50: Health worker safety structures	126
Table 51: Percent of hazardous exposures	128
Table 52: Percent of reasons behind dissatisfaction with safety	132
Table 53: Percent immunized against any vaccine preventable diseases that may arise due to exposure in the work place.....	135
Table 54: Work environment structures	137
Table 55: Percentage of health worker safety measures put in facilities	139
Table 56: Percent of Assault Perpetuator.....	145
Table 57: Percent of staff reporting patterns of assaulted staff	148
Table 58: Percent of reasons for dissatisfaction in the workplace among medical staff	157
Table 59: Percentage of factors likely to improve the medical staff's ability to provide good quality of care services in all facilities (n=34,531)	160
Table 60: Tracer conditions assessed	162
Table 61: Number of healthcare providers by Level of care and Cadre (Weighted)	163
Table 62: Diagnosis cases assessed.....	164
Table 63: Proportion of healthcare providers who correctly diagnosed different cases, and all cases by different variables, (N=34,712)	171
Table 64: Accuracy in diagnosis of the six cases by county	174
Table 65: Health conditions and their examinations	176
Table 66: Proportion of healthcare providers who followed the recounted clinical process in diagnosis for the difference cases and variables (n=34,712).....	182
Table 67: Standard treatment guidelines based on clinical diagnosis.....	185
Table 68: Proportion of healthcare workers who offered the correct treatment as per the guidelines	190
Table 69: Proportion of healthcare workers who offered the correct treatment as per the guidelines	191
Table 70: Treatment accuracy of healthcare workers	192
Table 71: Proportion of healthcare providers who followed the recommended clinical process in treatment of patients stratified by categories (n=34,712)	193
Table 72: Accuracy in diagnosis vs treatment of the four cases by county	194
Table 73: Accuracy in diagnosis vs treatment in four cases	196
Table 74: Proportion of healthcare providers who followed the recommended clinical process in diagnosis and treatment by the different categories (n=34,712).....	196
Table 75: Areas of Assessment for health education	197
Table 76: Proportion of healthcare worker that provided health education as per guidelines.....	198
Table 77.....	203
Table 78: Percentage availability of documentation on Mother's basic information records	205
Table 79: Partograph records assessed	207
Table 80: Percentage availability of records for Completion of Partograph	209
Table 81: Parameters documentation of the postpartum examination of the mother and the baby ...	211
Table 82: Post partum examination documentation in different categories	214



Table 83: Postpartum examination findings and recommendations	216
Table 84.....	217
Table 85: Documentation of HIV Testing and Counselling 10-19 years of age	219
Table 86: Services for children under 15 years.....	221
Table 87: Percentage availability of records for Quality of ART Services (Age=<15yrs)	224
Table 88 :TB screening in patient on ART Children< 15 years of Age parameters	226
Table 89: Percentage availability of records for TB Screening and Treatment Status	229
Table 90: HTS and HIV care recommendations.....	231
Table 91: Percentage of records for Active TB Patients.....	233
Table 92: Percentage availability of records for Growth Monitoring of Children under 5.....	235
Table 93: HTS and HIV care recommendations.....	236
Table 94: TB Services assessed	238
Table 95: Quality of TB services	238
Table 96: Percentage availability of records for Quality of TB Services	240
Table 97: Percentage availability of records for Quality of TB Services (Continued)	242
Table 98: Percentage availability of records for Basis for diagnosis.....	245
Table 99: Parameters for documentation of screening of contact persons of TB patients.....	247
Table 100: Percentage availability of records for Screening of Contact Persons	248
Table 101: Parameters for TB/HIV co-infection	250
Table 102: Percentage availability of records for Patients with HIV/TB Co-infection	252
Table 103: Finding and Recommendations for TB/HIV co-infection	254
Table 104: Patient Feedback structures and process	256
Table 105: Percentage availability of records for Patient Experiences.....	263
Table 106: Percentage availability of records for Quality of Care	266



Acronyms and Abbreviations

AMR	Anti-Microbial Resistance
AMS	Antimicrobial Stewardship
CAB	Conformity Assessment Bodies
CAUTI	Catheter Associated Urinary Tract Infections
CLABSI	Central Line Associated Blood Stream Infections
FBO	Faith Based Organizations
HAIs	Healthcare Associated Infections
HFFA	Harmonized Health Facility Assessment
IPC	Infection Prevention and Control
ISQHCEEA	International Society for Quality in Health Care External Evaluation Association
JHIC	Joint Health Inspection Checklist
KENAS	Kenya National accreditation services
KEPH	Kenya Essential Package for Health
KQMH	Kenya Quality Model for Health
MOH	Ministry of Health
MPDSR	Maternal Perinatal Death Surveillance and Response
NGOs	Non-Governmental Organizations
NHIF	National Hospital Insurance Fund
OPD	Outpatient Department
QIT	Quality Improvement Teams
QOC	Quality of Care
SGBV	Sexual Gender Based Violence
SSI	Surgical Site Infections
TB	Tuberculosis
VAP	Ventilator Associated Pneumonia
WHO	World Health Organization
WIT	Work Improvement Teams



Executive Summary

Background

In February 2024, Kenya embarked on a journey to assess the quality of health services across its health facilities.

The quality-of-care assessment aimed at bridging the gap between high coverage of indicators and slower progress in health outcomes and impact indicators. This was against the background of the fact that Kenya has made notable strides in access and coverage of health services over the past decade, evident in the increased rates of skilled birth attendance, antenatal care coverage, and childhood vaccinations. However, alongside these achievements loom persistent challenges: alarmingly high maternal and childhood mortality rates, stagnant declines in infant and neonatal deaths, and a rising burden of Non-Communicable Diseases (NCDs) contributing to overall mortality. The QOC HFA was planned as a response to these challenges, recognizing that achieving Universal Health Coverage (UHC) hinges not just on expanding access to healthcare services but also on ensuring those services meet high standards of quality.

The assessment leveraged the 2023 facility census, which took stock of services, infrastructure (including equipment), and human resource availability and gaps/needs at each facility.

The facility census answered the following questions.	The QOC aims to answer the following questions.
• What services are available and what is the readiness capacity to provide the services for the various types and levels of health facilities? • How equitable and appropriately distributed are services and resources across the health system blocks, particularly Infrastructure, equipment, HRH and HPTs?	• Are health workers equipped to identify and manage the major causes of illness and death in the population? • What processes exist to institutionalize and sustain quality care in all health facilities? • Do health care workers adhere to standards while providing care to patients? • What are the patient experiences and how satisfied are clients with health services (family planning) provided at the various types and levels of health facilities?



The QOC assessment scrutinized the structures, processes, and outcomes within healthcare facilities across all levels and ownership categories in Kenya as in Table 1

Table 1: Structures and Systems assessed in facilities

Structures	Processes	Outcomes
● Facility Certification ● Monitoring/surveillance systems ● Supplies ● Equipment ● Health workforce- Staff certification ● Amenities like access to electricity; water, ambulance etc	● Guidelines ● Protocol ● Pathways of Care (Diagnosis)	● Patient Safety ● Client Satisfaction

- The Structures Index that quantified the extent to which health facilities are equipped with the necessary building blocks to enable the delivery of effective, safe, and patient-centered care was 61%
- Generally, hospitals and FBO/ NGO facilities had a high score compared to primary level facilities and public facilities
- The process Index that measured the degree to which standardized, evidence-based clinical and administrative procedures are in place and routinely followed to support consistent, high-quality service delivery aligned with the principles of effectiveness, safety, and patient responsiveness was 61%
- Hospitals and FBO & private facilities had a higher process index compared to level 2 & 3 facilities and public facilities

Sample of facilities assessed

A total sample of 3605 facilities were sampled from the KMHFL to ensure a representative sample for each of the 47 counties through;

- Census of all public level 4,5 public hospitals and port Health facilities
- Random Sampling was done for level 2,3 and non-public level 4 facilities



FINDINGS

Key findings are based on the following areas.

- Quality of care systems
- Antimicrobial resistance (AMR)
- Supportive Supervision
- HR Work Environment and Occupational Health and Safety
- Patient Centered care
- Contextual issues that were found in the field

SYSTEMS TO SUPPORT QUALITY HEALTH CARE

External Assessment

- Above half of the facilities (56%) undertook periodic external assessment. The majority of the higher-level facilities (levels 4 and 5) reported receiving external assessment 72% and 95%, respectively.
- About half of level 2 facilities (53%) had undergone periodic external assessment.
- Just below half (48%) of health facilities received an assessment through the Joint health inspection checklist (JHIC) while 32% reported receiving assessment through the KQMH standards.
- Few facilities reported using international standards for external assessment through the Joint Commission Accreditation at 14% and self-care standards at 15%

Internal Assessment

Quality assurance in healthcare is a comprehensive and ongoing process that involves setting standards, monitoring performance, and making continuous improvements with the intention of increasing customer satisfaction. The Quality-of-Care survey focused on the management aspects of quality assurance at facility level particularly availability of quality *improvement focal persons* in dispensaries, *quality improvement teams (QIT)*, in Level 3 facilities, *work improvement teams (WIT)* in high volume facilities

- Work improvement teams were available in almost all level 5 and 4 facilities at 92% and 85%, while 63% of level 3 facilities had QITs.
- In the rural areas, 62% of the facilities had QIT teams compared to 76% in the urban areas.

Training of Health Care Workers on Quality Improvement

Nationally, 20,044 healthcare workers had been trained on quality improvement initiatives in the last two years. The majority of those trained in quality improvement initiatives were from Level 5 facilities at 25%.

Supportive supervision

Supportive supervision is a transformative approach that shifts the focus from traditional oversight to mentorship and collaboration. By implementing supportive supervision, healthcare facilities can enhance staff performance, improve job satisfaction, and ultimately deliver better patient care.

- Nationally, most facilities (91%) in Kenya had received external supportive supervision within the last 12 months.
- Nearly all level 4 and 5 facilities received supervision in the last 12 months (98% and 97%, respectively).
- Regarding the frequency of supervision, more than half of all facilities (51%) received monthly supportive supervision while 9 percent of health facilities had not received any form of supportive supervision from the national and county departments within 6 months before the assessment
- Most public facilities (63%) reported having received monthly supervision compared to 34% of private facilities

PATIENT SAFETY

The following surveillance systems that detect negative/ undesired patient outcomes were assessed.

- Review of deaths
- Surgical Related Adverse Events
- Medical errors
- Infections and Infection Prevention
- Antimicrobial use, consumption and resistance

Table 2: Patient safety assessment

Services	N	National (13361)	Facilities with Inpatient Service (N=2929)
All facilities with Inpatient services	2929	22%	-
I) Any Death reviews	2150	-	73%
<i>Maternal and Perinatal Death Reviews</i>	1808		84%



Services	N	National (13361)	Facilities with Inpatient Service (N=2929)
<i>MPDSR Committees</i>	1350	10%	63%
<i>Surgical Deaths (within 24 hours of surgery)</i>	753		35%
ii) Surgical Adverse Events (MOH 384) (deaths and infections) within 24 hours of surgery	815		28%
iii) IPC Committees	1804	14%	62%
All Level 4's and 5's (with inpatient)	957		
Infections: HAI surveillance	620		65%
All Level 4's and 5's	1002	7.5%	
AMR			
AMR priority pathogens * all 8	90		9%
Report AMR Lab Data to Central Data Warehouse	461		46%
Functions AMR Stewardship Committee	321		32%

Review of deaths

- Overall, 73% of health facilities conduct formal death reviews for any deaths occurring in the facility.
- All level 5 facilities conducted formal death reviews compared to only 58% in level 2 facilities. Public facilities had the majority of their facilities conducting formal death reviews (96%) compared to 64% of private facilities.
- The most implemented death reviews were Maternal (84%), Neonatal (82%) while the least were surgical-related deaths (35%)
- Nine percent of facilities did not conduct reviews for any of the deaths
- The QOC survey revealed that out of the 427 *maternal deaths that were reported across the assessed facilities over the period Oct-Dec 2023, about 98% (407 deaths were audited.)*
- In the same period, out of 4094 neonatal deaths, 3114 (76%) were audited.

Maternal Perinatal Death Surveillance and Response (MPDSR) Committees

- 
- 63% of health facilities reported having (MPDSR) committees. Public facilities scored highest at 80% in establishing the committees while private facilities scored lowest at 48%.
 - Additionally, almost all (89%) Level 5 facilities have established committees on MPDSR.
 - Less than 20% of health facilities in Kilifi and Mandera have MPDSR committees in place.

Surgery Related Deaths and Adverse Events

- A third of health facilities (35%) conducted surgical-related death reviews (deaths occurring within 24 hours of surgical procedures)
- 45% of private facilities conducted surgical death reviews compared to 24% of public facilities.
- Majority of level 5 facilities (83%) reviewed their surgical deaths compared to 51% and 22% of levels 4 and 3 respectively

Systems for Monitoring Adverse Events Specifically Related to Surgery

- Generally, the capacity of health facilities to monitor surgery related adverse events was poor
- Of all facilities offering in-patient services, only 28% had systems to monitor surgery related adverse events, with the majority of level 5 facilities (83%) and a minority of level 2 facilities (18%) having those systems
- NGO facilities had the highest proportion of their facilities (55%) having a system to monitor these adverse events related to surgery, as compared to 25% of public facilities
- Majority of health facilities in Kajiado county could monitor surgery related adverse events (90%) followed by Bomet county at 66%. None of the facilities in Tana River had a system to monitor surgery related adverse events.

Patient Safety Incidents

Health care systems are required to have mechanisms in place to prevent and reduce risk, errors and avoidable harm that occur to patients during the provision of health care

- Nationally, few health facilities (26%) conducted surveillance for patient safety incidents.
- Surveillance for patient safety incidents in health facilities was generally low, with only level 5 facilities performing above average (65%).
- Medication errors were the most monitored patient safety incident (74%), while blood transfusion errors were the least monitored (14%)
- Surveillance for all patient safety incidents was better at higher levels of care.

Policies and Guidelines for Patient Safety

- Availability of the National Policy on Patient Safety, Health worker safety and Quality of care, 2022 in health facilities was generally low (25% nationally) with wide variations in availability across the counties

Infection Prevention and control

Surveillance for Healthcare Associated Infections (HAIs) in In-patient Facilities

Surveillance for health care associated infections was assessed in health facilities offering in-patient services.

- Nationally, 65% of facilities conducted surveillance for healthcare associated infections. This was mostly in level 5 facilities

IPC Committees

- Nationally, 40% of health facilities had technical IPC focal persons or committees which included 95% of level 5 and 26% of level 3 facilities.
- Almost half of facilities had IPC Committees met on a monthly basis (48%)

IPC Policies, Guidelines

- Nationally, 68% of the facilities had the Kenya National IPC guidelines with 81% of level 5 facilities having them compared to 60% of level 2 facilities

Antimicrobial Use, Consumption and Resistance

- Monitoring of antimicrobial use and consumption in health facilities was below average
- Nationally, 38% of facilities monitored antibiotic use antibiotic consumption with only 32% monitoring prescription audits

Monitoring of WHO Priority Pathogens

- More than half of the facilities (56%) did not conduct surveillance for the WHO Priority Pathogens.

HUMAN RESOURCE AVAILABILITY, KNOWLEDGE AND PRACTICE

Occupational Health and safety and work environment

- Nationwide, only 24% of all facilities implemented health worker safety surveillance
- Nationally, about a fifth (21%) of the medical staff in the health facilities reported having been promoted in the last 3 years
- Overall, salaries for medical staff were paid in a timely way with 85% reporting having received their salaries within the previous month
- 17% of health workers have been assaulted (physical or verbal abuse)
- Most assault is perpetrated by patients (77%) or their care givers (22%)
- Most (22%) happens in public facilities; Busia Counties had the highest rate (33%)
- Almost seven out of ten (68%) of the medical staff felt that the workload was fairly distributed among the health workers in their facilities

- Nationally, slightly more than a quarter (29%) of the medical staff reported having been exposed to hazardous materials in the workplace
- Nationally, 96% of the medical staff had been vaccinated against any vaccine preventable diseases that may arise due to exposure in the workplace

Health Workers Distribution:

The survey collected data for 22 cadres of interest whose distributions were as follows,

- Medical officers 4%, General clinical officers 13%, Nurses (registered) 28%, nurses (enrolled) 5%, Specialist M.O, C.O and nurse 3% each, Lab staff (technician or technologist) 10%.
- Education: 67% were trained at diploma level, 13 % had completed an undergraduate degree (mostly the M.O, pharmacists, dentists) while 8% had done certificate courses (mostly the enrolled nurses)
- Terms of employment: 49% were permanent, 33 on contract and 13 % on other terms (Locum, county, NGO and faith-based mechanisms)

Table 3: Percent of Health care workers level of medical training

	Certificate	Diploma	Advanced Diploma	Degree	Postgraduate Diploma	Masters / Fellowship	Doctorate	Other	Not applicable	Any other health service related Professional training in the last two	Staff regularly perform outpatient consultation	Staff present	Number of Facilities
By location													
Rural	10%	73%	3%	9%	0%	1%	0%	1%	2%	40%	45%	59%	39447
Urban	6%	64%	7%	16%	1%	5%	0%	0%	1%	43%	25%	57%	81101
By type													
Level2	10%	71%	4%	11%	0%	2%	0%	0%	1%	44%	49%	65%	38635
Level3	8%	73%	4%	12%	0%	2%	0%	1%	1%	42%	40%	55%	23868
Level4	6%	64%	8%	15%	1%	5%	0%	0%	0%	42%	18%	52%	49006
Level5	3%	54%	9%	18%	3%	8%	0%	0%	5%	32%	7%	64%	9039
By managing authority													
FBO	8%	70%	4%	10%	0%	3%	0%	1%	3%	57%	28%	64%	17944
NGO	6%	71%	4%	14%	1%	2%	0%	2%	0%	66%	33%	69%	3090
Private	7%	66%	6%	14%	1%	4%	0%	0%	1%	50%	36%	55%	37086
Public	8%	67%	6%	14%	1%	3%	0%	0%	1%	32%	30%	57%	62428
All	8%	67%	6%	13%	1%	4%	0%	0%	1%	42%	31%	58%	120547

Table 4: Percent of highest levels of education

	Primary school	Secondary school	College (certificate, diploma or advanced diploma)	Undergraduate Degree	Masters	Doctorate	Other	Not applicable	Total
By location									
Rural	0%	2%	86%	9%	2%	0%	0%	0%	39447
Urban	0%	2%	76%	16%	5%	0%	0%	0%	81101



	Primary school	Secondary school	College (certificate, diploma or advanced diploma)	Undergraduate Degree	Masters	Doctorate	Other	Not applicable	Total
By type									
Level2	0%	2%	83%	12%	2%	0%	0%	0%	38635
Level3	0%	2%	83%	12%	2%	0%	0%	0%	23868
Level4	0%	2%	76%	16%	5%	1%	0%	0%	49006
Level5	0%	0%	74%	19%	7%	0%	0%	0%	9039
By managing authority									
FBO	0%	2%	82%	12%	3%	1%	0%	0%	17944
NGO	0%	2%	81%	15%	1%	0%	0%	0%	3090
Private	0%	2%	78%	15%	5%	0%	0%	0%	37086
Public	0%	2%	80%	14%	3%	0%	0%	0%	62428
All	0%	2%	79%	14%	4%	0%	0%	0%	120547

Table 5: Percent of staff cadres/Staff composition

	By location		By type				By managing authority				All
	Rural	Urban	Level2	Level3	Level4	Level5	FBO	NGO	Private	Public	
Medical Doctor Specialist	1%	4%	1%	1%	4%	7%	2%	1%	4%	3%	3%
Medical Officer	2%	5%	2%	3%	5%	5%	3%	2%	5%	3%	4%
Medical Officer Interns	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%
Clinical Officer (Specialist)	2%	3%	2%	1%	3%	4%	2%	1%	3%	3%	3%
Graduate Clinical Officer	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Clinical Officer	14%	12%	15%	16%	11%	5%	13%	17%	16%	10%	13%
Clinical Officer Interns	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%	0%
Nurse (Specialist)	1%	3%	1%	1%	4%	6%	2%	1%	2%	3%	3%
Nursing Officer	8%	9%	8%	8%	10%	8%	11%	7%	8%	8%	9%
Registered Nurse	32%	26%	28%	30%	27%	30%	27%	28%	22%	32%	28%
Enrolled Nurses	7%	4%	6%	5%	4%	4%	3%	2%	4%	6%	5%
Laboratory Technician/Technologist	10%	10%	13%	12%	8%	6%	12%	9%	12%	8%	10%
Pharmacist	1%	1%	1%	1%	2%	2%	1%	1%	1%	1%	1%
Pharmaceutical Technologist	4%	5%	4%	5%	5%	2%	5%	5%	6%	3%	4%
Dentist	0%	1%	1%	0%	1%	1%	1%	1%	1%	0%	1%
Community Oral Health Officer (COHO)	1%	1%	1%	1%	1%	0%	1%	0%	1%	1%	1%
Nutritionist	2%	2%	2%	2%	2%	2%	1%	5%	1%	3%	2%
Physiotherapist	0%	1%	0%	1%	2%	2%	1%	1%	1%	1%	1%
Orthopedic technologist	0%	1%	0%	0%	1%	1%	0%	0%	0%	1%	1%
Occupational therapist	0%	0%	0%	0%	1%	1%	0%	0%	0%	1%	0%
Radiographers	1%	2%	1%	1%	2%	2%	2%	2%	2%	1%	2%
Counselling Psychologists/Medical social workers	1%	1%	1%	1%	1%	1%	1%	5%	0%	1%	1%
Other Staff	2%	1%	1%	2%	1%	1%	1%	1%	1%	1%	1%
Total	39447	81101	38635	23868	49006	9039	17944	3090	37086	62428	120547

Table 6: Percent of age group composition of health care workers

	< 20	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	>= 60	Total
By location											
Rural	0%	2%	22%	27%	20%	12%	7%	5%	4%	2%	39447
Urban	0%	3%	22%	26%	19%	12%	7%	5%	4%	2%	81101
By type											
Level2	0%	3%	25%	26%	17%	11%	6%	5%	3%	3%	38635
Level3	0%	3%	26%	27%	19%	11%	6%	4%	3%	1%	23868
Level4	0%	3%	19%	27%	21%	13%	7%	6%	4%	1%	49006
Level5	0%	2%	17%	23%	20%	12%	9%	8%	8%	1%	9039
By managing authority											
FBO	0%	3%	30%	28%	16%	9%	5%	4%	2%	2%	17944
NGO	0%	4%	28%	30%	18%	9%	4%	4%	1%	1%	3090
Private	0%	5%	35%	28%	14%	8%	4%	3%	1%	4%	37086
Public	0%	2%	12%	25%	23%	15%	9%	7%	6%	0%	62428
All	0%	3%	22%	26%	19%	12%	7%	5%	4%	2%	120547

Distribution: HRH Standards:

- In reference to the 2014 HRH Norms and Standards, no cadre attained the recommended requirements per level of care
- At Level 2 facilities, registered nurses at 50% of the requirement (1.1/2) and enrolled nurses at 7.5% of the norm.
- At Level 3 facilities, medical officers were at 10%, CO's at 40% and registered nurses at 35% of norm
- Level 4; Registered nurses were at 27%; CO's 18.3%, MO's at 17% and Lab 10% of the norm
- Level 5; MOs were at 31%, C.O specialist at 32% and registered nurses at 36% of norm.

HRH Densities:

Comparison based on the <http://gh.bmj.com/> Adam Ahat et al estimating the threshold of health workforce densities towards universal health coverage in Africa

In reference to WHO guidance on the HR requirements to achieve 70% of UHC, the density for all assessed cadres, except clinical officers, is far below the required threshold

Table 7: Human Resources for Health densities

HRH Densities	Kenya QOC 2024	Current average regional (AFRO) density per 10,00 population	Requirement for population for at least 70% of UHC service index
Medical Doctors, all generalists and specialists	0.89	3.29	7.7
Clinical Officers	3.23	0.28	0.90
Nurses	10.14	13.99	58.64
Lab Technologists	2.31	1.25	14
Pharmacists	1.28	1.28	14.72
Dentists	0.14	0.74	5.28
Core Cadres (Nurses, Clinical Officers and Medical Officers)	14.25		23

CLIENT EXPERIENCE AND SATISFACTION

The QOC focused on assessing to what extent facilities were providing care that responds to individual preferences, needs and values by assessing the process, mechanism and models used to collect patient feedback to inform the quality-of-care services provided.

- In terms of performance review, only 63% of facilities had a routine process for performance review based on data on facility services, outcomes, or patient feedback.
- The top three counties with routine processes for performance review are Bomet 96%, Kajiado 91% and Laikipia 90%. While Marsabit 20% Lamu 30% and Embu 36% had the least percentage of facilities with routine processes for performance
- Availability of a health facility-mechanism to collect community/client feedback: 90% of level 4 facilities had implemented a mechanism to collect community/client feedback compared to 71% of level 2 facilities.

Clients attending family planning clinics were interviewed for their experiences in the facility.

- Almost all (98%) of clients felt they were treated with courtesy and 90% of patients were allowed to ask questions during the visit
- 82% of FP clients nationally received their preferred family planning method while 15% felt they were coerced to take another method
- Majority of family planning clients, (95%) across Kenya felt their choices were considered when selecting a family planning method, reflecting strong patient-centered care practices.
- 87% of FP clients reported being informed about the common side effects of their method of choice.



1. 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 Harmonized Health Facility Assessment (HHFA) 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 the Counties, and with support from the development partners, planned to carry out a Harmonized 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-HHFA was used 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 Harmonized 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 8 below

Table 8: 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 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 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 and health facility assessment will be useful in informing policy, programming, and efforts toward Universal Health Coverage (UHC). 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.



2. 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 the 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 9: Focus services areas assessed

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-HHFA 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 CSPro survey software ¹and deployed on tablets, which were then used to conduct Computer-Assisted Personal Interviews (CAPI) for data collection. Table 10 below provides a list of the tools, the main respondents, and a summary description.

Table 10: QoC-HHFA 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

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



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	
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	Clinical records



Survey tool	Main respondent	Description	Structure and Processes assessed
			Structure
		• HIV-ART records • TB records • Maternity 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 Constructing of a sampling frame - health facilities

Sampling for the QoC-HHFA 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.

2.3.2 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.

2.3.3 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 eligibility criteria. A maximum of 10 eligible records for each service area were listed.

2.3.4 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.

2.3.5 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

2.3.6 Sample size determination - health workers

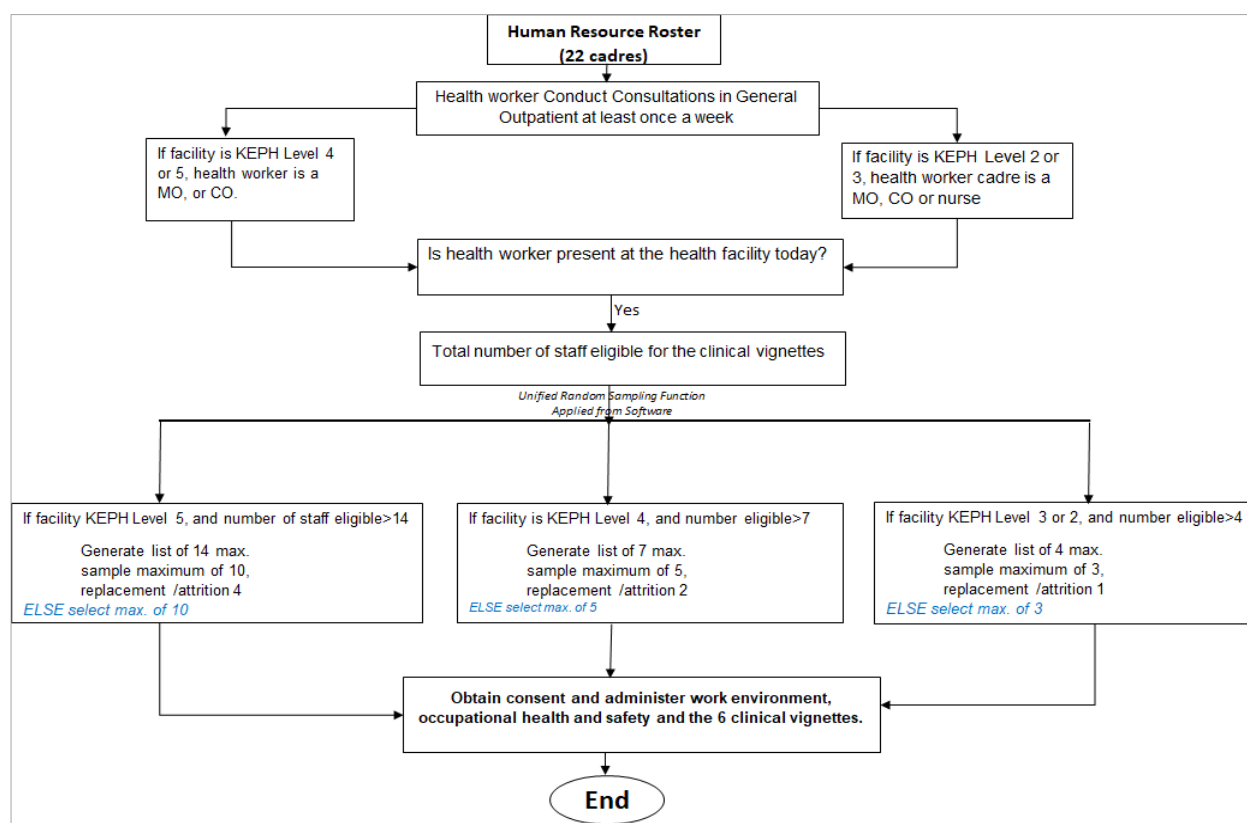
Following the listing of health workers across 22 cadres in sampled facilities, random sampling of clinicians was done through a configured algorithm in the electronic tool

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.

2.3.7 Sample size determination - record reviews

The sampling was based on the standard HHFA 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.

2.3.8 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 centers 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 CSPro 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 11 below,

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

Table 11: List of Pretest Health Facilities - Machakos County (n = 28)

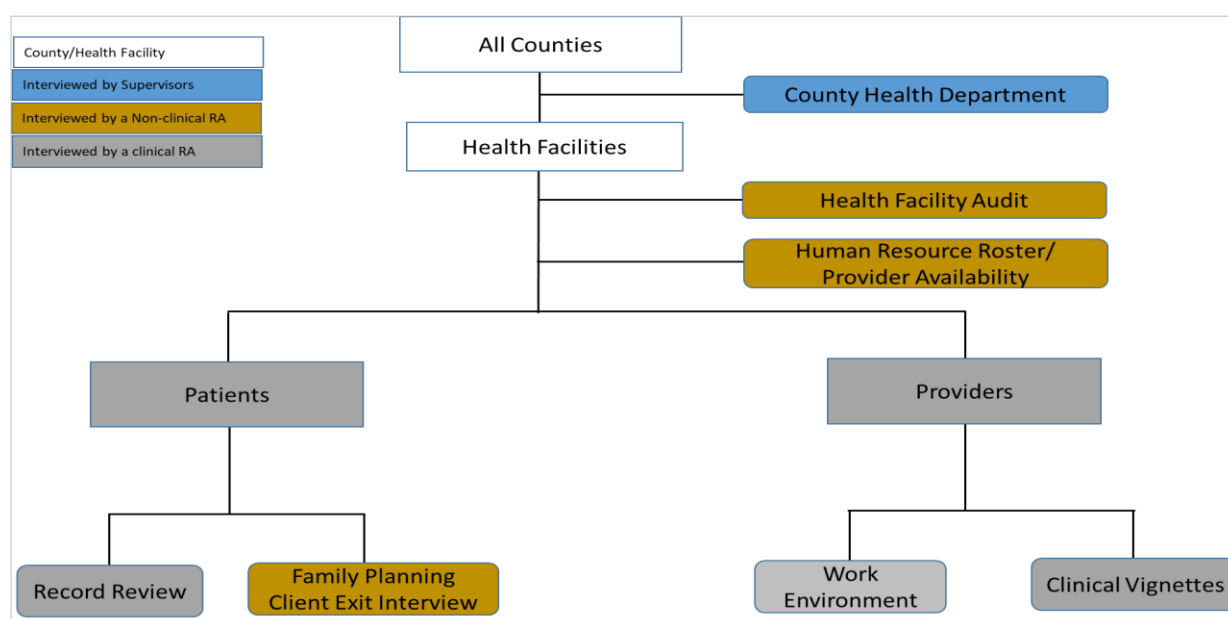
Level 2	Level 3	Level 4
1. Jamia Medical Clinic 2. Katani Dispensary 3. Kitanga Dispensary 4. Masingu Dispensary 5. Machakos children hospital 6. Kitunduni Dispensary 7. Mlolongo Wellness Centre 8. Mua Hills Dispensary 9. Muthanga Dispensary 10. Reigns community hospital 11. Secret heart dispensary 12. 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 below 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 level 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:

- a) Analysis based on existing SARA indicators

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))

- b) Analysis of work environment indicators
- c) Analysis of quality-of-care indicators
- d) Analysis of human resources indicators
- e) 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 QoCHFA 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 12 provides information on the targeted and actual number of facilities included in the sample by county.

Table 12: Target and number of facilities assessed (unweighted)

County	Sampled	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
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

County	Sampled	Assessed facilities				
		Facility Audit	FP	HR Roster	Work Environment / Clinical Vignettes	Provider Availability
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
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

Table 13 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

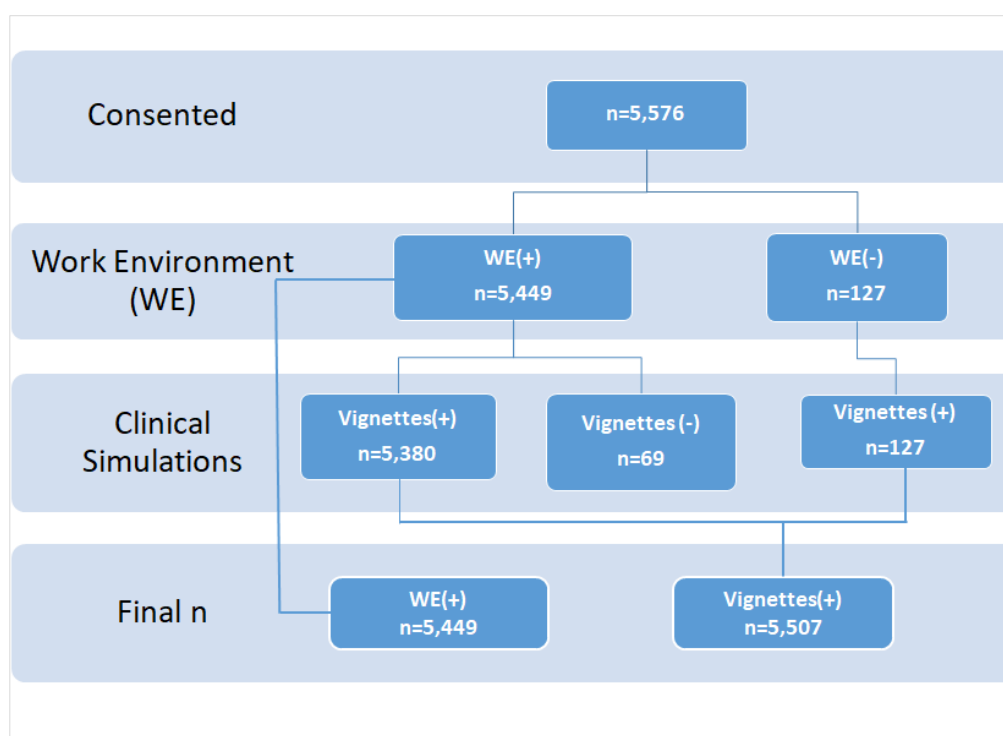
environment, 34,712 for clinical vignettes and 99,773 for provider availability based on the respective unweighted data.

Table 13: Summary of the target, unweighted and weighted number of participants in the sample

	Targeted	Number included in the sample					
		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; the 127 excluded from the work environment interview were also excluded from participating in the clinical case simulations. As a result, 5,507 healthcare workers were included in the clinical case simulations interviews.

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





2.11 Limitations

In the 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.

2.12 Findings

2.12.1 Quality of Care: Structures and Processes Indices.

This section presents findings on the quality of care using two complementary frameworks: the Donabedian model and the Institute of Medicine (IOM) quality domains. The Donabedian framework provides a structured approach for evaluating healthcare by examining the inputs and activities that shape care delivery—specifically, the structures and processes. While the outcomes of care are a critical component of the Donabedian model, they are not included in this analysis. Instead, the focus is on how the available structures and processes align with three core IOM domains: effectiveness, safety, and patient-centeredness. This alignment allows for an assessment of whether the necessary elements of care are in place and whether they reflect key attributes of high-quality care within Kenya.

The Structures Index quantifies the extent to which health facilities are equipped with the necessary building blocks to enable the delivery of effective, safe, and patient-centered care. The Process Index measures the degree to which standardized, evidence-based clinical and administrative procedures are in place and routinely followed to support consistent, high-quality service delivery aligned with the principles of effectiveness, safety, and patient responsiveness.

Table 14 below shows the indicators and the data sources for structures and processes. The data sources included the Kenya Health Facility QoC Assessment 2024 and the Kenya Health Facility Census 2023.

Table 14: Indicators, data sources for structures & processes from the Kenya Health Facility QoC Assessment 2024(QoC) and the Kenya Health Facility Census 2023(KHFC).

Dimensions of Quality	Structures	Processes
Effectiveness	Health Facility Level - General service readiness (Basic amenities (QoC & KHFC), Basic equipment (KHFC), Standard precautions for infection prevention (QoC & KHFC) Diagnostic capacity (QoC), Essential medicines KHFC) - Service Specific Readiness (NCD, CD, RMNCAH, Inpatient, Surgery, Emergency services) QoC - Availability of CMEs (QoC) - Facility undergone external assessment (QoC) - Quality improvement team in place (QoC) - Percentage of public facilities budget funding (FY 2022/2023) above and equal to 75% (QoC) Health workers - Percentage of facilities that meet the HR norms (Levels 2 to 4) (QoC) - Health-provider (knowledge and ability (mean score for diagnostic accuracy and correct treatment) QoC)	- Patient Record Review (Overall score for Childbirth/Delivery, HIV and TB Care) (includes documentation of files with All Mothers's biodata captured, All Partograph Documentation captured, All Post partum Documentation captured, files with CD4 level measured before initiating ART, files with ART regimen according to national guidelines, files with Cotrimoxazole (CTX) prophylaxis according to national guidelines, files with Adherence status recorded at most recent clinical visit, files with Standard screening for TB recorded at most recent clinical visit, files with TB status recorded at most recent clinical visit, files with all Quality of ART & HIV Clinical Care captured, files with all HIV Services for Children, files with Screening of contact persons, files with Basis for diagnosis, files with Quality of TB services) (QoC) - Daily Scheduled ward rounds in medical wards/cadres (QoC) - Multidisciplinary ward rounds per week (QoC) - Supportive supervision in the 12 months prior to the survey (QoC) - Use of electronic medical records or medication order entry systems in the pharmacy (QoC) - Adherence to Clinical Guidelines in Diagnostic Process (QoC)
Patient Safety	- Patient safety incidence monitored (medication errors, surgical errors, HAIs, Blood transfusion Errors) QoC - Mechanism for patient safety identification and management of adverse events (QoC) - IPC committees (QoC) - Functional waste segregation in the wards (QoC) - Have a National policy on patient safety (QoC) - Have a Laboratory system for documenting or tracking movement of specimen (QoC) - Have a functional MDT and Antimicrobial team for Antimicrobial stewardship activities (QoC)	- Have patient safety incidence monitored (medication errors, surgical errors, HAIs, Blood transfusion Errors) (QoC) - Conduct medication reviews on patients on chronic treatment (QoC) - Conduct surveillance for patient safety incidence (QoC) - Conduct Death reviews (QoC)

Dimensions of Quality	Structures	Processes
Patient Centeredness	Protocol for systematic triage for patient in order of severity (QoC)	- Payment prior to the provision of emergency care isn't required (QoC) - Provision of health education for acute diarrhea with severe dehydration (QoC) - Provision of health education for hypertension (QoC)

2.12.2 Findings:

Structures Index:

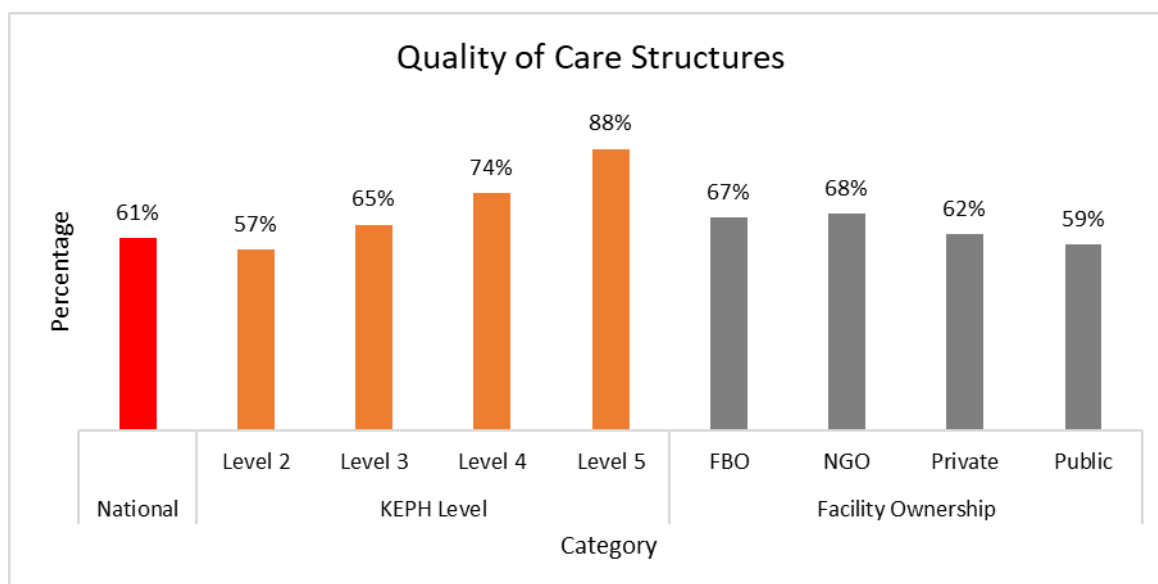
Nationally, the overall structures index score is 61%.

Disaggregation by KEPH Level and Ownership:

Table 15 shows structures indices disaggregated by KEPH Level and Facility Ownership

- Hospitals have a higher structures score at 88% for Level 5 and 74% for Level 4, compared to primary health facilities which have a score of 65% for level 3 and 57% for level 2.
- NGO owned facilities have the highest structures score at 68%, followed by FBO (67%) and private (61%)
- Public facilities have the lowest structures index score at 59%.
- Figure 4 showing structures index disaggregated by KEPH Level and Facility Ownership

Figure 4: Quality of care structures indices



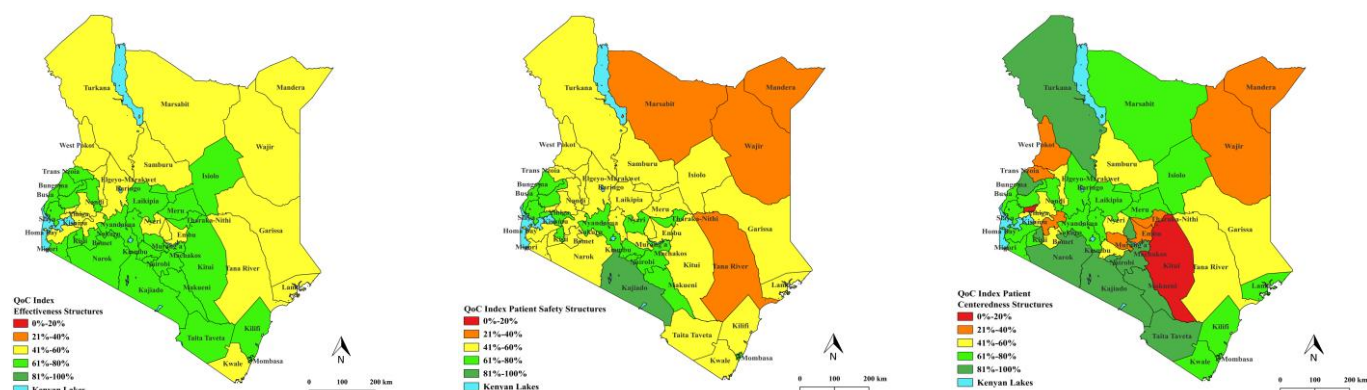
County Distribution:

Table 15 shows the county distribution of structures indices by IOM domain.

- The effectiveness index under structures ranged between 41% to 80 % with majority of the counties falling between 41-60%.
- The Patient safety structures index across counties ranges between 21% to 80%. Four counties, namely Mandera, Wajir and Vihiga have an index less than 41%

- Marked County variability in structures related to patient-centeredness index; 9 counties over 80% score and 2 counties (Vihiga and Kitui) below 20%

Figure 5: Quality of Care Structures indices by County



Processes Index:

Nationally, the processes index score is 61%.

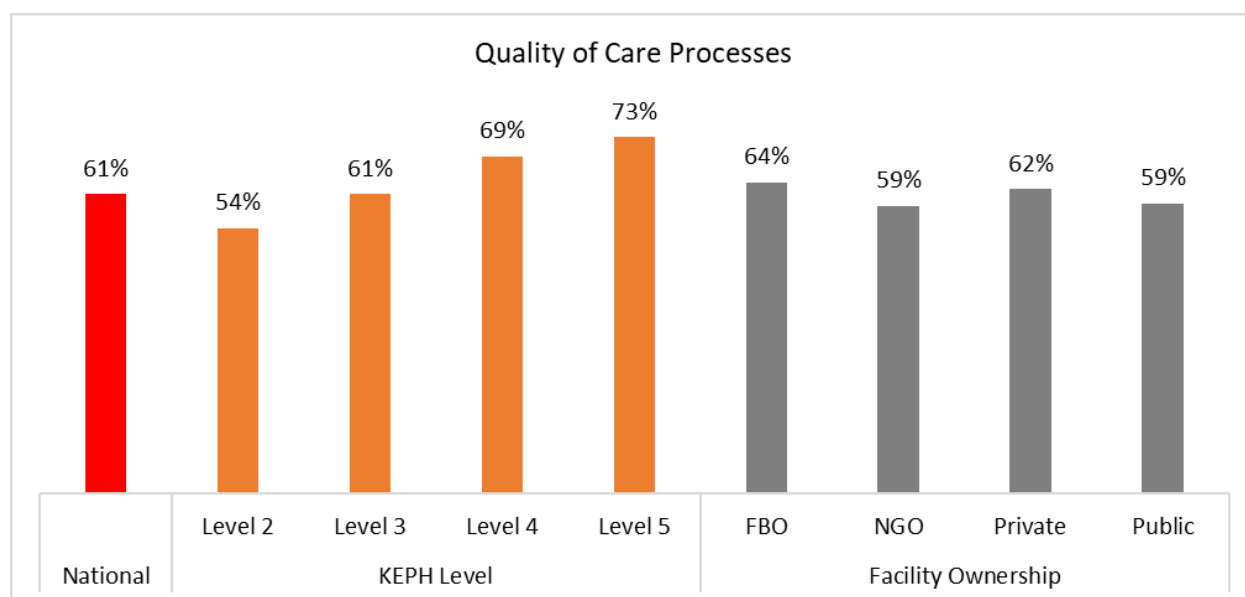
Disaggregation by KEPH Level and Ownership:

Table 15 shows the process index disaggregated by KEPH Level and Facility Ownership

- The processes index score in level 2 and 3 was 54% and 61% respectively. Hospitals had higher process index at 69% and 73% for level 4 and 5 respectively.
- FBO and private facilities had the highest scores for processes at 64% and 62% respectively. Public facilities had the lowest score at 59%

Figure 6 showing structures index disaggregated by KEPH Level and Facility Ownership

Figure 6: Quality of Care processes indices

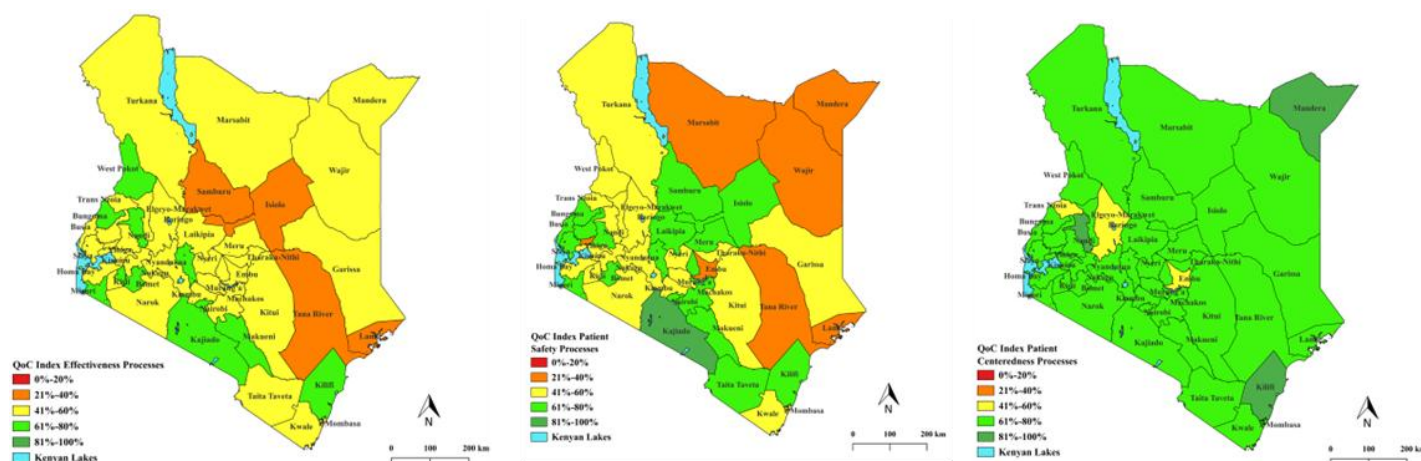


County Distribution:

Table 15 shows the county distribution of processes index score by IOM domain.

- Majority of the counties had an effectiveness process index ranging from 41% to 60%. Four counties namely Samburu, Isiolo, Tana River and Lamu had an index score below 41%.
- A largely average performance (21%-60%) was seen for patient safety processes index score across most counties
- Mandera, Nandi and Kilifi counties had the highest patient-centeredness process index score

Figure 7: Quality of care Process indices by County



The table below contains a summary of the structures and processes across the domains of effectiveness, patient safety and patient centredness by county, management authority and KEPH level.

Table 15: Quality of care effectiveness, patient and centeredness indices, structures & processes

	Effectiveness Structures	Effectiveness Processes	Patient Safety Structures	Patient Safety Processes	Patient Centeredness Structures	Patient Centeredness Processes
By County						
Baringo	55%	59%	56%	48%	72%	57%
Bomet	60%	71%	58%	61%	60%	74%
Bungoma	68%	62%	70%	64%	87%	74%
Busia	62%	54%	65%	63%	62%	65%
Elgeyo-Marakwet	52%	55%	47%	45%	54%	61%
Embu	58%	48%	47%	32%	31%	57%
Garissa	59%	58%	53%	55%	54%	69%
Homa Bay	56%	47%	58%	54%	77%	63%
Isiolo	61%	31%	59%	74%	71%	68%
Kajiado	69%	65%	83%	82%	93%	66%
Kakamega	64%	52%	67%	67%	62%	64%
Kericho	55%	51%	47%	54%	23%	61%
Kiambu	63%	48%	61%	53%	41%	62%
Kilifi	65%	67%	59%	60%	74%	81%



	Effectiveness Structures	Effectiveness Processes	Patient Safety Structures	Patient Safety Processes	Patient Centeredness Structures	Patient Centeredness Processes
Kirinyaga	58%	47%	56%	62%	95%	61%
Kisii	62%	53%	41%	48%	70%	66%
Kisumu	57%	56%	61%	53%	44%	75%
Kitui	60%	57%	54%	47%	16%	72%
Kwale	54%	44%	57%	55%	61%	68%
Laikipia	69%	51%	59%	68%	80%	68%
Lamu	58%	32%	46%	33%	71%	68%
Machakos	62%	55%	60%	62%	90%	71%
Makueni	64%	71%	60%	66%	90%	73%
Mandera	50%	55%	31%	39%	30%	82%
Marsabit	55%	46%	39%	30%	79%	70%
Meru	61%	57%	56%	64%	66%	68%
Migori	61%	73%	54%	65%	79%	66%
Mombasa	67%	57%	62%	60%	71%	75%
Murang'a	61%	57%	58%	56%	28%	70%
Nairobi	69%	66%	67%	66%	87%	68%
Nakuru	63%	58%	66%	59%	70%	67%
Nandi	57%	49%	57%	65%	60%	65%
Narok	64%	52%	55%	51%	86%	70%
Nyamira	63%	63%	75%	41%	92%	78%
Nyandarua	65%	65%	58%	67%	65%	76%
Nyeri	60%	50%	66%	52%	55%	70%
Samburu	55%	37%	46%	63%	57%	72%
Siaya	63%	54%	65%	68%	79%	76%
Taita Taveta	64%	54%	54%	71%	83%	78%
Tana River	51%	30%	34%	29%	49%	62%
Tharaka- Nithi	61%	58%	64%	43%	23%	66%
Trans Nzoia	62%	46%	59%	56%	34%	60%
Turkana	56%	53%	58%	50%	83%	64%
Uasin Gishu	61%	61%	55%	55%	78%	80%
Vihiga	52%	46%	44%	36%	7%	73%
Wajir	56%	43%	31%	37%	30%	75%
West Pokot	57%	63%	54%	46%	26%	80%
By Management Authority						
FBO	67%	60%	63%	65%	71%	67%
NGO	67%	56%	64%	54%	73%	67%
Private	63%	60%	56%	59%	66%	68%
Public	58%	53%	57%	55%	60%	70%
By Type						



	Effectiveness Structures	Effectiveness Processes	Patient Safety Structures	Patient Safety Processes	Patient Centeredness Structures	Patient Centeredness Processes
Level 2	57%	50%	53%	45%	61%	68%
Level 3	64%	56%	63%	59%	68%	68%
Level 4	75%	62%	69%	75%	79%	70%
Level 5	88%	66%	82%	87%	95%	68%
National	61%	56%	58%	60%	64%	69%

3. Systems to Support Quality Health Care

Quality of care is defined as the degree to which health services for individuals and populations increase the likelihood of desired health outcomes. It is based on evidence-based professional knowledge and is critical for achieving universal health coverage. As countries commit to achieving Health for All, it is imperative to carefully consider the quality of care and health services. Quality health care can be defined in many ways but overall quality health services should be:

- **Effective** – providing evidence-based healthcare services to those who need them;
- **Safe** – avoiding harm to people for whom the care is intended; and
- **People-centered** – providing care that responds to individual preferences, needs and values.

The Donabedian model provides a framework for assessing healthcare quality through three dimensions: structures (the resources and organizational arrangements that support care delivery), processes (the activities, interactions, and compliance with standards in providing care), and outcomes (the health results and changes experienced by patients following care). Together, these dimensions were used to provide a comprehensive lens for evaluating and improving quality of care. In the quality of care assessment.

3.1 Facility Misclassification

The KEPH (Kenya Essential Package for Health) levels are a system for organizing health service delivery in Kenya, ranging from community-based services to specialized national referral hospitals. The levels are as follows: Level 1 (community health services), Level 2 (dispensaries and clinics), Level 3 (health centers and maternity homes), Level 4 (sub-county and county hospitals), Level 5 (county referral hospitals and teaching hospitals), and Level 6 (national referral hospitals).

Through KQMH, the Health Services Standards and corresponding checklists exist for Levels 2, Level 3, Level 4, and Level 5 & 6 separately so as to focus on the unique characteristics of these levels/ a set of levels.

The 2024 QOC used KEPH levels as a facility descriptor but also as a check for the right services being offered at the right KEPH level.

Findings:

- There were level 2 and 3 facilities found to offer health services such as delivery services, inpatient, major surgery and caesarean sections, which are expected to be offered at hospitals.

Using unweighted numbers and shown in the figure below,

- 592 KEPH level 2 and 3 facilities offer inpatient services, 79 conduct major surgeries while 82 perform caesarian sections.
- Further breakdown of these services by ownership shows that most of these facilities are privately owned.
- The detailed breakdown is found in the complementary **Kenya Quality of Care Health Facility Assessment Report: Service Availability and Readiness** under the inpatient, delivery (CEmONC) and major surgical services sections.

Figure 8: Number of facilities offering various services

	Inpatient	Major Surgery	Cesarean Section	Delivery Services
Location				
Urban	284	61	63	349
Rural	308	18	20	1,047
Service Level				
Level 2	128	19	16	671
Level 3	464	60	67	725
Managing Authority				
FBO	108	16	16	185
NGO	10	1	2	21
Private	310	57	59	301
Public	164	5	6	889
Total	592	79	83	1,396

Discussion:

There is a need to determine whether facilities are misclassified by KEPH level or they are offering services beyond their capacity/scope. Alternatively, the private facilities could be utilizing a different classification system under the regulatory body Kenya Medical Practitioners and Dentist Council.

Recommendation.

All facilities with misaligned KEPH levels and services require to be reassessed and reclassified where necessary.

3.2 Quality Assurance Systems

3.2.1 External assessments against standards

Periodic external assessment plays a critical role in maintaining and enhancing the quality of healthcare services. The assessments measure the status of quality of care and determine the centers of excellence in health facilities. The table below shows a summary of common assessments that are used in health facilities in Kenya.

Table 16: Facility-wide assessments

Type of Facility-Wide Assessment	What is it used for?	Periodicity/ Frequency
Joint Health Inspection Checklist	It is mandatory for all health facilities and is used for Registration/Licensure/Gazettement, of health facilities. A facility is licensed if it meets the minimum patient safety standards. The JHIC is also used for periodic assessment to check for continued compliance with minimum standards and reactive inspection following incidents of disgruntlement from the public	For fully compliant facilities- re-Inspection is done once in two years, For minimally, partially and substantially compliant facilities are re inspected within 3,6 and 12 months respectively. If performance drops in two subsequent re-inspections, facilities are shut down.
Kenya Quality Model for Health (KQMH)	Voluntary for health facilities and is conferred upon evaluation by an authorized CAB to establish compliance with designated standards (KQMH) and demonstration of continuous quality improvement. Certification is based on star rating and linked to incentives (NHIF rebates/	A minimum of once in 2 years

Type of Facility-Wide Assessment	What is it used for?	Periodicity/ Frequency
	compensation from other insurers).	
Joint Commission Accreditation	Is an international accreditation assessment for health facilities	Every three years
Safe care standards	Are standards that guide provision of clinical services, management functions, and infrastructure standards in health facilities and is accredited by the International Society for Quality in Health Care External Evaluation Association (ISQuaEEA),	Every two years.

The Kenya quality-of-care certification framework encompasses three main components which outlines standards for health facility registration, licensing, certification and accreditation.

As per the table above, the Joint Health Inspection Checklist and the Kenya Quality Model for Health (KQMH) are assessments widely used by the Ministry of health at the national and county level. The Joint Commission Accreditation and Safe Care are international accreditation assessment tools used to measure quality in higher level facilities.

The quality-of-care survey assessed the following areas with regards to external assessments.

Table 17: External assessment areas

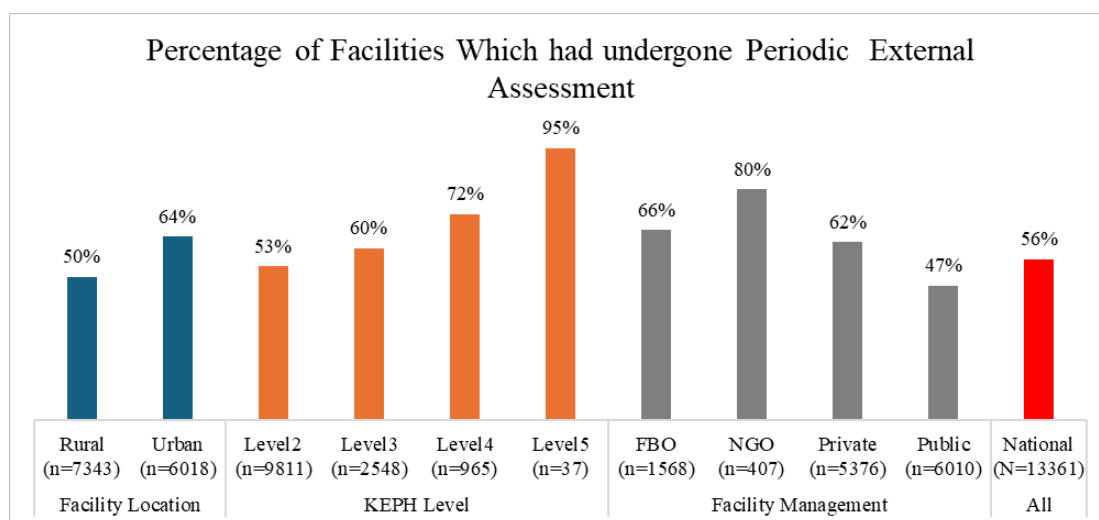
Structures	Processes
Facilities that received periodic external assessments	
The type of external assessment received in the facilities.	
Facilities that had received supportive supervision	Frequency of Supportive Supervision

The survey findings showed that more than half of the facilities (56%) had undergone periodic external assessment. From the findings, most of the higher-level facilities (levels IV and V)

reported receiving external assessment at 72% and 95% respectively. Only half of level 2 facilities (53%) had undergone periodic external assessment. A variation is noted when comparing urban and rural facilities where 64% of urban facilities reported receiving external assessment compared to 50% of rural facilities. Comparison by type of ownership revealed that 80% of non-governmental health facilities had undergone external assessment while only 47% of the publicly owned facilities had been assessed externally.

The figure below summarizes the findings.

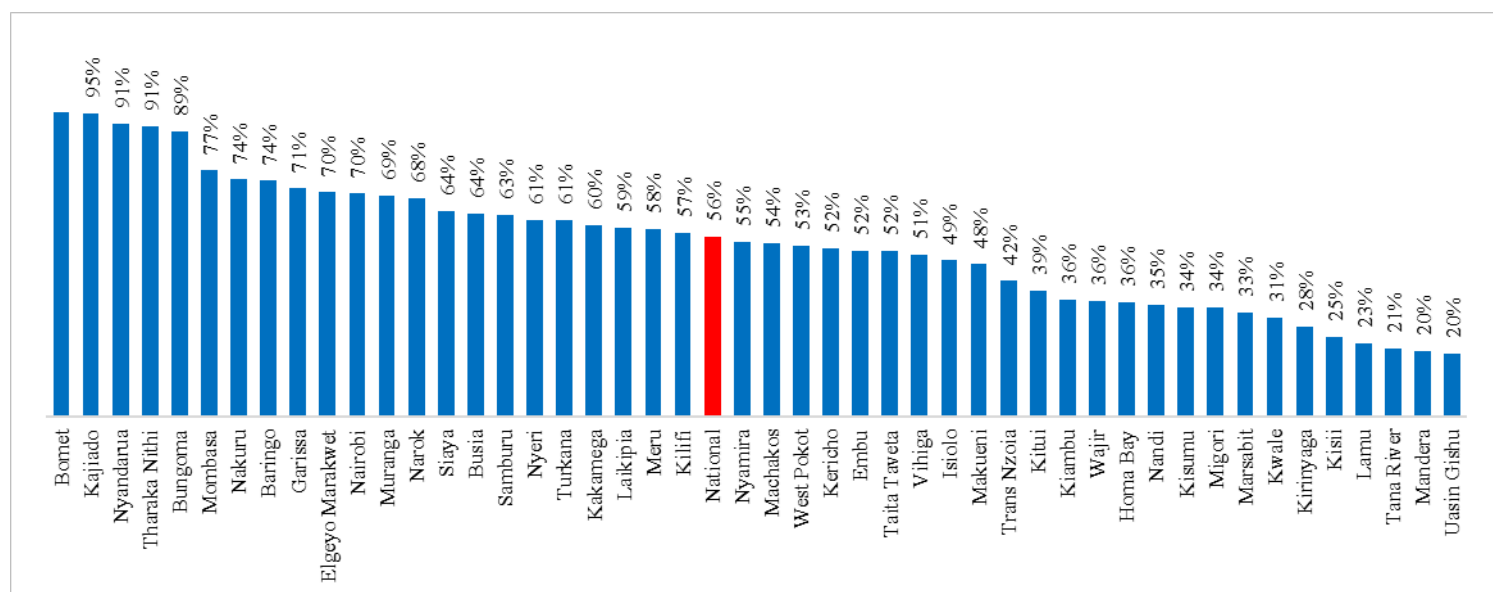
Figure 9: Percentage of facilities which have undergone periodic external assessment by facility location



Bomet and Kajiado counties had the highest percentage of health facilities that had undergone periodic assessment both at 95% while Uasin Gishu and Mandera counties had the least percentage of their facilities that had undergone periodic external assessment at 20%. A summary for the counties is provided below.



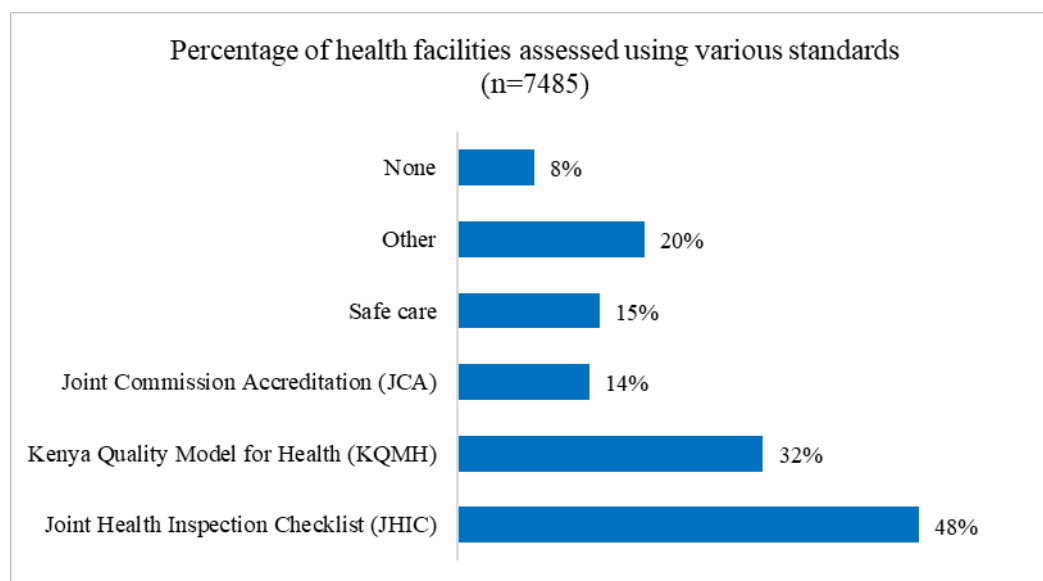
Figure 10: Percentage of facilities which have undergone periodic external assessment by county (N=13361)



Joint health inspection checklist is a mandatory standard inspection checklist administered by health regulatory bodies under the ministry of health in public and private facilities to ensure compliance with minimum standards and informs licensing and gazettement of health facilities. An additional inspection for compliance with the KQMH allows facilities to be certified and get a star rating for continuous improvement of care; for instance, the top star rating is a five-star for scores above 90% in overall facility performance.

The quality-of-care survey findings showed that 48% of health facilities had been assessed using Joint health inspection checklist (JHIC) standards while 32% were assessed using KQMH standards. Few facilities reported using international standards for external assessment through the Joint Commission Accreditation at 14% and selfcare standards at 15% in the period under review. The figure below shows a summary of the proportion of health facilities assessed using four certification/accreditation standards.

Figure 11: Percentage of health facilities assessed using various standards (n=7485)



A summary on the facilities that had received external assessments by counties; facility ownership; level of care and location is summarized in the table below;

Table 18: Percent of facilities that have the following QoC external assessment

	Joint Health Inspection Checklist (JHIC)	Kenya Quality Model for Health (KQMH)	Joint Commission Accreditation (JCA)	Safe care	Other	Number of facilities
By County						
Baringo	89%	27%	12%	36%	1%	212
Bomet	94%	5%	0%	5%	0%	173
Bungoma	56%	42%	36%	12%	30%	239
Busia	73%	16%	2%	10%	5%	111
Elgeyo Marakwet	40%	14%	3%	3%	3%	100
Embu	35%	16%	11%	6%	56%	103
Garissa	15%	75%	26%	6%	19%	128
Homa Bay	54%	32%	32%	17%	6%	130
Isiolo	35%	39%	34%	15%	0%	36
Kajiado	98%	77%	66%	29%	0%	347
Kakamega	26%	30%	10%	58%	8%	216
Kericho	41%	27%	2%	7%	32%	124
Kiambu	27%	19%	11%	31%	32%	234
Kilifi	34%	23%	6%	23%	20%	234
Kirinyaga	37%	32%	9%	30%	42%	57
Kisii	0%	9%	2%	4%	83%	69
Kisumu	34%	9%	3%	24%	9%	139
Kitui	86%	11%	4%	4%	4%	145
Kwale	45%	41%	13%	13%	30%	86
Laikipia	17%	32%	10%	14%	38%	119
Lamu	39%	60%	0%	6%	20%	17

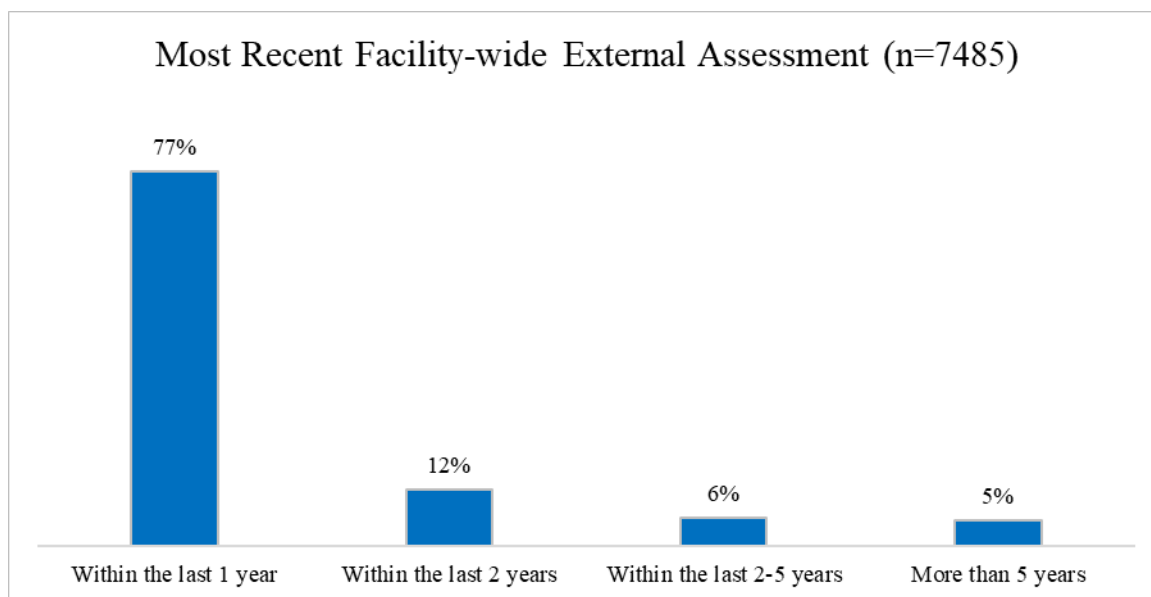
	Joint Health Inspection Checklist (JHIC)	Kenya Quality Model for Health (KQMH)	Joint Commission Accreditation (JCA)	Safe care	Other	Number of facilities
Machakos	34%	45%	20%	11%	23%	247
Makueni	14%	64%	1%	21%	6%	141
Mandera	12%	2%	9%	58%	8%	41
Marsabit	44%	7%	0%	0%	43%	46
Meru	53%	24%	8%	3%	42%	269
Migori	31%	33%	5%	16%	13%	109
Mombasa	51%	42%	5%	4%	6%	285
Muranga	78%	4%	3%	8%	15%	248
Nairobi	24%	43%	14%	17%	23%	853
Nakuru	41%	31%	6%	17%	31%	448
Nandi	35%	16%	1%	22%	57%	81
Narok	42%	73%	16%	0%	4%	136
Nyamira	4%	3%	0%	0%	90%	114
Nyandarua	85%	74%	61%	0%	15%	194
Nyeri	65%	18%	5%	4%	4%	243
Samburu	53%	26%	16%	10%	9%	85
Siaya	57%	21%	13%	34%	14%	159
Taita Taveta	64%	20%	18%	6%	17%	58
Tana River	0%	5%	0%	0%	0%	20
Tharaka Nithi	100%	5%	1%	3%	1%	169
Trans Nzoia	73%	13%	16%	1%	12%	80
Turkana	70%	31%	8%	7%	3%	152
Uasin Gishu	39%	6%	10%	45%	12%	53
Vihiga	2%	0%	4%	3%	90%	90
Wajir	59%	25%	7%	7%	7%	59
West Pokot	20%	37%	3%	0%	2%	86
By type						
Level2	50%	30%	13%	13%	18%	5236
Level3	44%	34%	17%	17%	23%	1523
Level4	44%	43%	14%	23%	24%	691
Level5	37%	40%	17%	34%	23%	35
By managing authority						
FBO	44%	31%	15%	16%	24%	1035
NGO	38%	39%	8%	18%	21%	326
Private	44%	29%	15%	18%	24%	3324
Public	57%	36%	13%	11%	13%	2800
By location						
Rural	54%	30%	13%	11%	18%	3649
Urban	43%	34%	15%	19%	22%	3836
All	48%	32%	14%	15%	20%	7485

The Kenya quality of care certification framework guides that health facilities shall be assessed annually to check for compliance and for certification and once accredited, the status remains for three years for KQMH and for two years for facilities that are fully compliant (scores above 75%) with the Joint health inspection checklist standards. For facilities that are not fully

compliant with JHIC standards, re- inspection is done after 3 months, 6 months and at 1 year depending on the level of risk to patient safety.

The quality-of-care survey analysis revealed that 77% of all health facilities had undergone facility wide external assessment within the last one year while 5% of the facilities were assessed more than 5 years ago as summarized in the figure below,

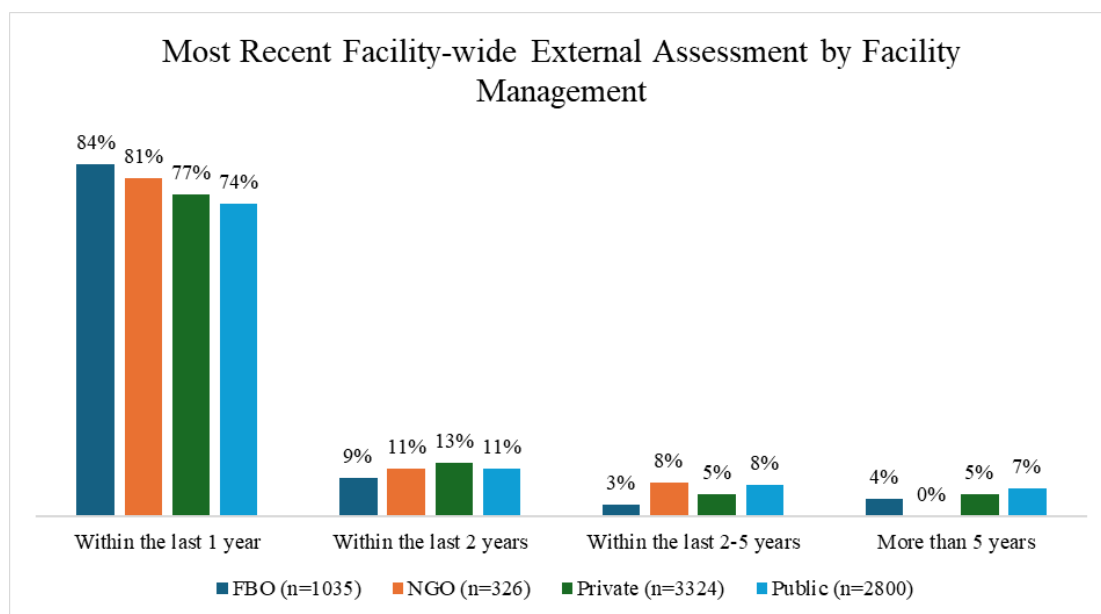
Figure 12: Most recent facility-wide external assessment (n=7485)



The highest percentage of health facilities that had undergone external assessments within the last year were faith based at 84% compared to 74% of public health facilities. A summary of frequency of external assessment by ownership is shown in the figure below.

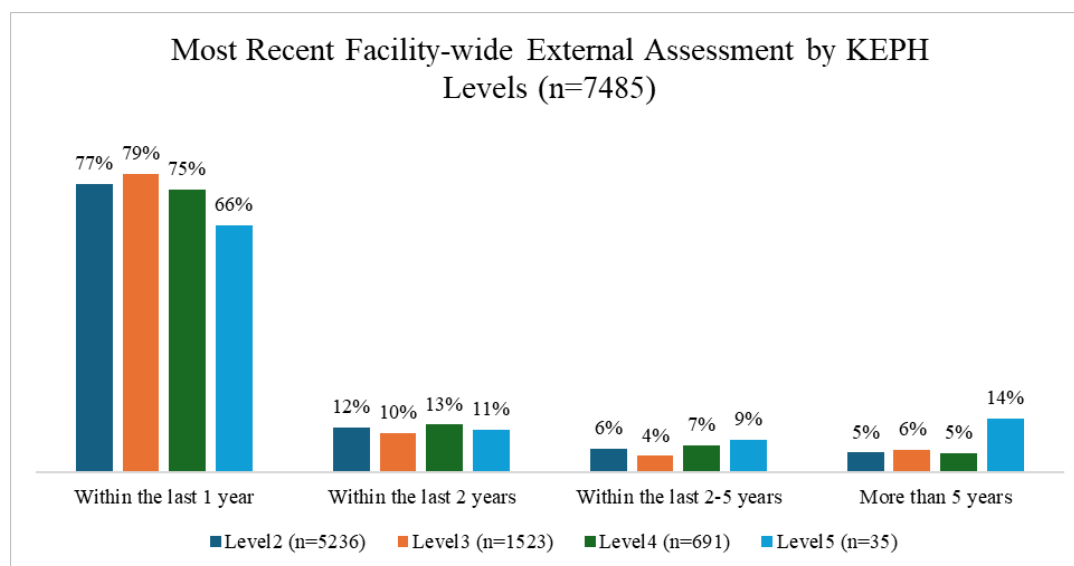


Figure 13: Most Recent Facility-wide External Assessment by Facility Management (n=7485)



By level of care, there was no significant variation in percentage of health facilities that had undergone external assessments within the past one year, ranging from 66% of level 5 to 79% of level 3 health facilities as shown in the figure below.

Figure 14: Most Recent Facility-wide External Assessment by KEPH Levels (n=7485)



A summary on the frequency of external supervisions by county; facility ownership; level of care and location is summarized in the table below;

Table 19: Frequency of facilities having external supervision

		External Supervision	Within the last 1 year	Within the last 2 years	Within the last 2-5 years	More than 5 years	Number of Facilities
By County							
	Baringo	74%	83%	12%	3%	3%	212
	Bomet	95%	86%	11%	2%	2%	173
	Bungoma	89%	95%	5%	0%	0%	239
	Busia	64%	49%	30%	20%	2%	111
	Elgeyo Marakwet	69%	44%	12%	35%	8%	100
	Embu	52%	78%	9%	1%	12%	103
	Garissa	71%	60%	21%	10%	10%	128
	Homa Bay	36%	89%	6%	5%	0%	130
	Isiolo	49%	85%	8%	7%	0%	36
	Kajiado	95%	96%	4%	0%	0%	347
	Kakamega	60%	82%	7%	8%	3%	216
	Kericho	52%	75%	20%	5%	1%	124
	Kiambu	36%	78%	10%	9%	3%	234
	Kilifi	57%	58%	15%	8%	19%	234
	Kirinyaga	28%	87%	5%	4%	4%	57
	Kisii	25%	34%	11%	21%	34%	69
	Kisumu	35%	75%	17%	6%	2%	139
	Kitui	39%	76%	19%	5%	0%	145
	Kwale	31%	66%	18%	16%	0%	86
	Laikipia	59%	55%	23%	7%	15%	119
	Lamu	23%	100%	0%	0%	0%	17
	Machakos	54%	54%	17%	9%	20%	247
	Makueni	48%	39%	7%	28%	27%	141
	Mandera	20%	74%	23%	2%	0%	41
	Marsabit	33%	90%	8%	0%	2%	46
	Meru	59%	81%	9%	1%	9%	269
	Migori	34%	80%	15%	5%	0%	109
	Mombasa	77%	94%	5%	1%	0%	285
	Muranga	69%	90%	9%	0%	0%	248
	Nairobi	70%	77%	12%	5%	5%	853
	Nakuru	74%	78%	12%	5%	5%	448
	Nandi	35%	82%	7%	9%	1%	81
	Narok	68%	81%	15%	3%	1%	136
	Nyamira	55%	54%	15%	5%	26%	114
	Nyandarua	91%	84%	8%	7%	1%	194
	Nyeri	61%	91%	8%	1%	0%	243
	Samburu	63%	91%	1%	4%	4%	85
	Siaya	64%	65%	21%	4%	10%	159

		External Supervision	Within the last 1 year	Within the last 2 years	Within the last 2- 5 years	More than 5 years	Number of Facilities
	Taita Taveta	52%	55%	26%	18%	0%	58
	Tana River	21%	65%	0%	15%	20%	20
	Tharaka Nithi	91%	98%	2%	0%	0%	169
	Trans Nzoia	42%	78%	18%	4%	0%	80
	Turkana	61%	69%	22%	4%	5%	152
	Uasin Gishu	20%	65%	16%	15%	3%	53
	Vihiga	51%	74%	6%	16%	4%	90
	Wajir	36%	59%	27%	9%	5%	59
	West Pokot	53%	88%	10%	1%	1%	86
By type							
	Level2	53%	77%	12%	6%	5%	5236
	Level3	60%	79%	10%	4%	6%	1523
	Level4	72%	75%	13%	7%	5%	691
	Level5	95%	66%	11%	9%	14%	35
By managing authority							
	FBO	66%	84%	9%	3%	4%	1035
	NGO	80%	81%	11%	8%	0%	326
	Private	62%	77%	13%	5%	5%	3324
	Public	47%	74%	11%	8%	7%	2800
By location							
	Rural	50%	74%	13%	7%	6%	3649
	Urban	64%	79%	11%	5%	5%	3836
All		56%	77%	12%	6%	5%	7485

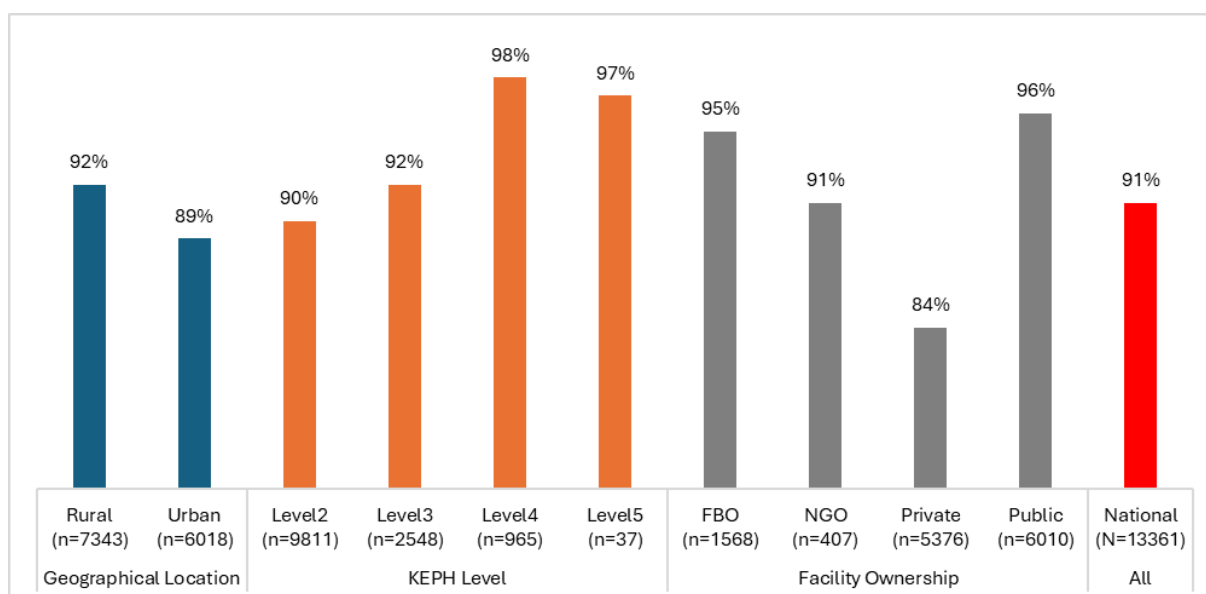
3.2.2 Supportive supervision

Supportive supervision is a transformative approach that shifts the focus from traditional oversight to mentorship and collaboration. By implementing supportive supervision, healthcare facilities can enhance staff performance, improve job satisfaction, and ultimately deliver better patient care. This approach requires commitment from leadership, ongoing training for supervisors, and a dedication to fostering a positive and supportive work environment. Supportive supervision focuses on strengthening the health system through identification and resolution of inefficiencies and promotion of health standards, teamwork and communication. In the QoC survey, facilities were assessed on whether they received supportive supervision in the last 12 months and the nature of the supervision i.e. whether integrated or program specific.

Nationally, 91% of the assessed health facilities had received external supportive supervision within the last 12 months. Nearly all level 4 and 5 health facilities received supervision in the

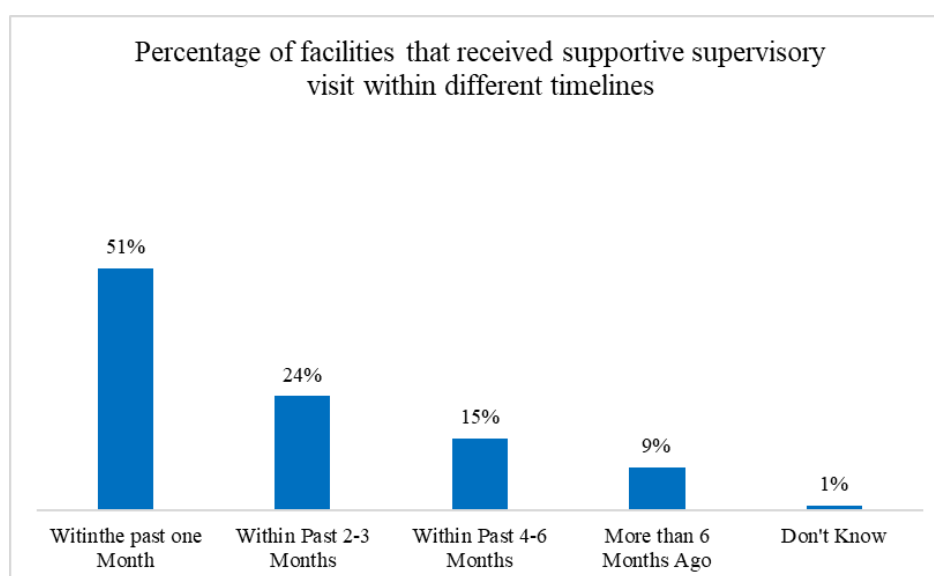
last 12 months (98% and 97% respectively). A summary on performance for external supervision is provided in the figure below.

Figure 15: Percentage of facilities that received any external supervision within the last 12 months (N=13,361)



About half of all health facilities (51%) received monthly supportive supervision while 24% of health facilities reported receiving supportive supervision within 2 to 3 months. Only 9 percent of all assessed health facilities had not received supportive supervision from the national and county departments within 6 months before the assessment. A summary on frequency of external supportive supervision is provided below.

Figure 16: Percentage of facilities that received supportive supervisory visit by (N=13361)



Analysis of supportive supervision to facilities by ownership shows that 63% of all public facilities had received monthly supportive supervision compared to 34% of private health

facilities, 55% of FBO and 58% of NGO facilities. A detailed analysis is shown in the figure below.

Figure 17: Percentage of facilities that received supportive supervisory visit by ownership (N=13361)



County Performance on the frequency of supportive supervision

In terms of County performance, 45 counties had above 50% of their facilities receiving supportive supervision within 3 months prior to the assessment. Only Lamu and Tana River counties had less than half of their health facilities receiving quarterly supportive supervision.

The table below shows the performance per county.

Table 20: Percentage of facilities that received supportive supervisory visits within the last 3 months by County and more than 4 months by county

County	Within the last three months	More than 4 months	Don't know
Trans Nzoia	93%	6%	0%
Kisii	92%	8%	0%
Baringo	91%	9%	0%
Vihiga	90%	10%	0%
Tharaka Nithi	90%	8%	2%
Kilifi	86%	10%	4%
Bomet	86%	14%	0%
Kakamega	84%	17%	0%
Kwale	83%	14%	2%



County	Within the last three months	More than 4 months	Don't know
Turkana	83%	17%	0%
Bungoma	82%	18%	0%
Kericho	82%	17%	1%
Samburu	82%	14%	3%
West Pokot	81%	17%	2%
Migori	81%	19%	0%
Siaya	80%	19%	0%
Meru	79%	21%	0%
Elgeyo Marakwet	79%	19%	2%
Laikipia	78%	19%	2%
Mandera	78%	19%	3%
Homa Bay	77%	23%	0%
Nakuru	77%	21%	2%
Isiolo	77%	23%	0%
Wajir	76%	20%	4%
Nyandarua	75%	23%	2%
Mombasa	75%	23%	2%
Narok	75%	25%	0%
Kisumu	74%	24%	2%
Makueni	74%	26%	0%
Kajiado	73%	26%	0%
Uasin Gishu	72%	28%	0%
Kitui	72%	27%	0%
Muranga	71%	29%	0%
Garissa	70%	27%	2%
Nyamira	67%	31%	2%
Taita Taveta	67%	33%	0%
Busia	67%	31%	2%
Embu	66%	27%	8%
Marsabit	66%	30%	5%
Nairobi	66%	33%	0%



County	Within the last three months	More than 4 months	Don't know
Machakos	65%	34%	1%
Kiambu	65%	30%	6%
Nandi	63%	35%	3%
Nyeri	61%	37%	2%
Kirinyaga	55%	43%	2%
Tana River	45%	50%	5%
Lamu	41%	58%	0%

3.3 Internal Assessment

Systems to Support Quality Improvement/Assurance

Quality assurance in healthcare is a comprehensive and ongoing process that involves setting standards, monitoring performance, and making continuous improvements with the intention of increasing customer satisfaction. The Quality-of-care certification manuals stipulate that all health facilities should form teams for monitoring and ensuring continuous improvement in the quality of care for the purposes of minimising errors, preventing adverse events and optimize patient outcomes, ultimately improving the Quality of Care. The QoC survey focused on the management aspects of quality assurance at the facility level particularly the availability of a quality improvement focal persons and quality improvement teams (QITs) as well as the frequency of meetings of the Quality Improvement Teams and training of health care workers on quality improvement.

Table 21: Structures and processes assessed under quality improvement

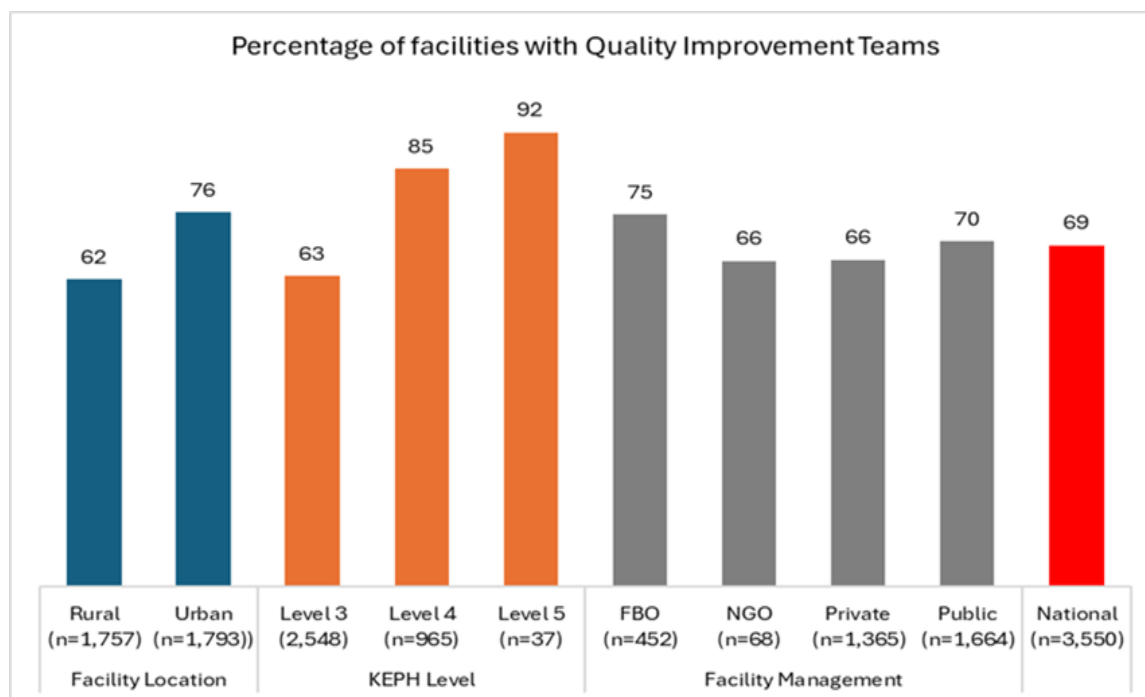
Structures	Processes
Availability of Quality Improvement Teams (QIT), Work Improvement Teams (WIT)	Frequency of meeting for the QIT Teams
Availability of focal persons in facilities for quality improvement	
Number of individuals in facilities that had been trained on Quality Improvement in the last two years.	

Availability of Quality Improvement Teams

Nationally, 69% of health facilities had Quality Improvement Teams (QITs). Majority of facilities with Quality Improvement Teams were those in levels 5 and 4 at 92% and 85% respectively, while 63% of level 3 had QITs. FBO facilities had the highest availability of QITs (75%) compared to public facilities at 70% and private & NGO facilities at 66% each.

A summary of facilities with QITs by location, KEPH level and ownership is presented in the figure below.

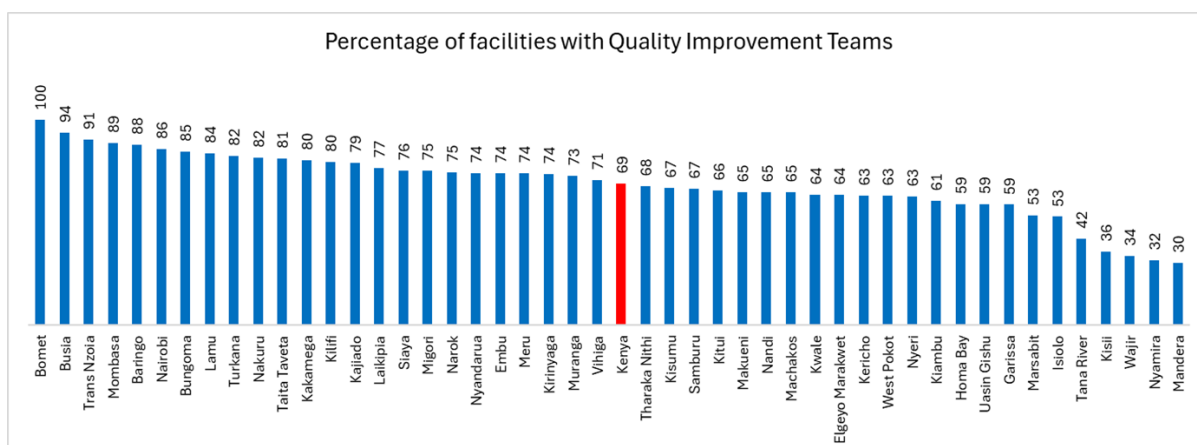
Figure 18: Percent of Health Facilities with Quality Improvement Team (QIT)



Analysis of County performance indicated that all facilities in Bomet County had QIT teams while Mandera had the lowest availability at 30%.

The figure below shows the proportion of facilities with QITs across all the counties.

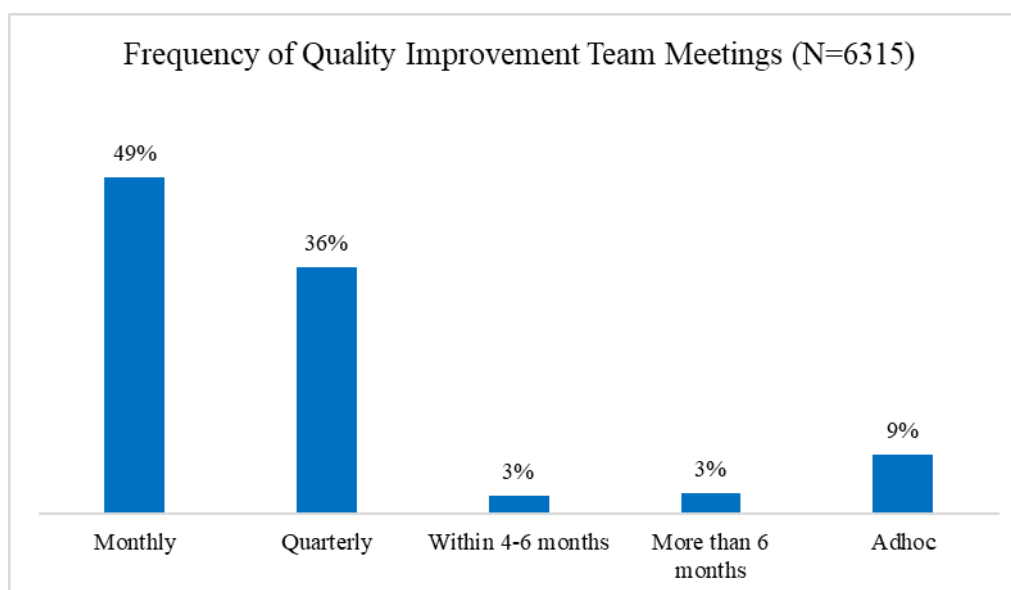
Figure 19: Percentage of Facilities with Quality Improvement Teams by county



Frequency of QIT meetings

Kenya Quality model for Health provides that Quality Improvement Teams should meet monthly. Nationally, about half of the facilities with QIT teams met monthly (49%) while the minority of them met on ad hoc basis and in 4-6 months at 9% and 3% respectively. A summary of the frequency of QIT meetings is provided in the figure below.

Figure 20: Frequency of Quality Improvement Team Meetings (n=6315)



Frequency of QIT meetings by county

Garissa County had the highest proportion of health facilities with Quality Improvement Teams that met monthly at 74% while the least was in Lamu and Marsabit at 9% and 10% respectively. This summary is provided in the table below.

Table 22: County performance on Frequency of QIT/WIT meetings

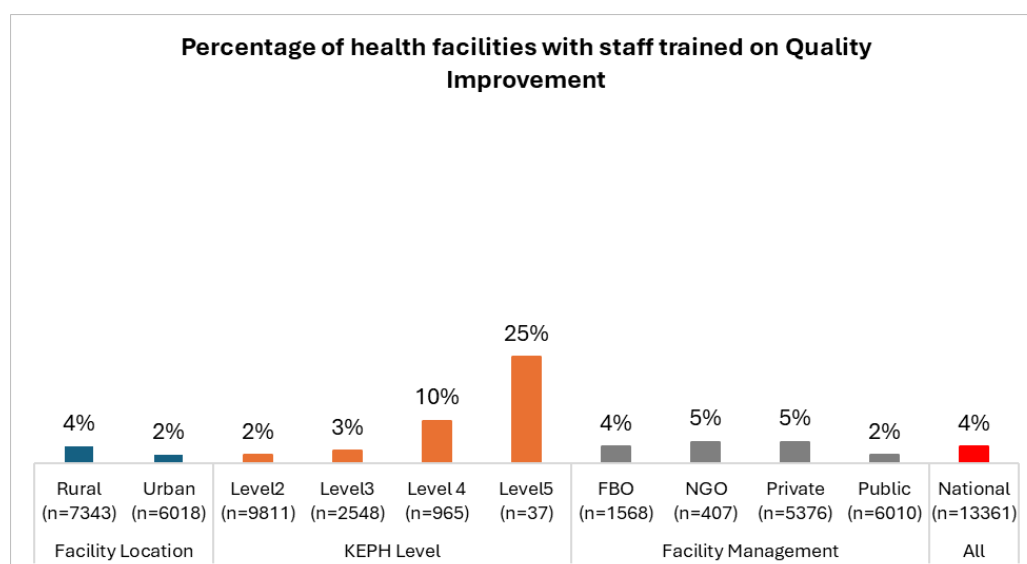
Quality assurance by County	% Quality Improvement Teams that met monthly	% of Quality Improvement Teams that mets quarterly	% of Facilities with focal person for quality improvement and patient safety/QITs or WITs
Garissa	74	24	36
Kisumu	71	18	54
Mombasa	68	25	86
Baringo	68	24	80
Kirinyaga	64	24	51
Nairobi	61	22	86
Migori	61	35	84
Isiolo	61	13	65
Elgeyo Marakwet	61	26	58
Bomet	60	40	94
Bungoma	59	29	98
Homa Bay	59	31	96
Nyandarua	59	36	62
Kwale	57	36	80
Muranga	52	35	68
Uasin Gishu	52	25	55
Tharaka Nithi	52	34	24
Kakamega	50	39	71
Kitui	50	27	65
Meru	49	35	75
Machakos	49	41	60
West Pokot	49	48	68
Laikipia	48	50	44
Trans Nzoia	46	49	88
Narok	45	46	65
Samburu	42	43	78
Wajir	41	38	44
Siaya	39	48	67
Turkana	39	40	91
Kilifi	39	31	91
Tana River	39	50	50
Kericho	36	43	63
Makueni	36	51	74
Nakuru	35	53	78
Nyeri	35	43	89
Busia	34	47	94

Quality assurance by County	% Quality Improvement Teams that met monthly	% of Quality Improvement Teams that mets quarterly	% of Facilities with focal person for quality improvement and patient safety/QITs or WITs
Kajiado	34	59	85
Vihiga	33	59	22
Nandi	33	45	94
Embu	31	35	45
Mandera	30	38	75
Taita Taveta	28	58	80
Kiambu	28	45	82
Nyamira	19	29	54
Kisii	17	65	22
Marsabit	10	57	57
Lamu	9	48	72

Training of Health Care Workers on Quality Improvement

The assessment revealed that nationally, only 4% of health facilities had healthcare workers trained on quality improvement in the past 2 years. One in every four level 5 facility and one in every 10 level 4 facility had health care workers trained on quality improvement as shown in the figure below.

Figure 21: Percentage of health facilities with staff trained on quality improvement

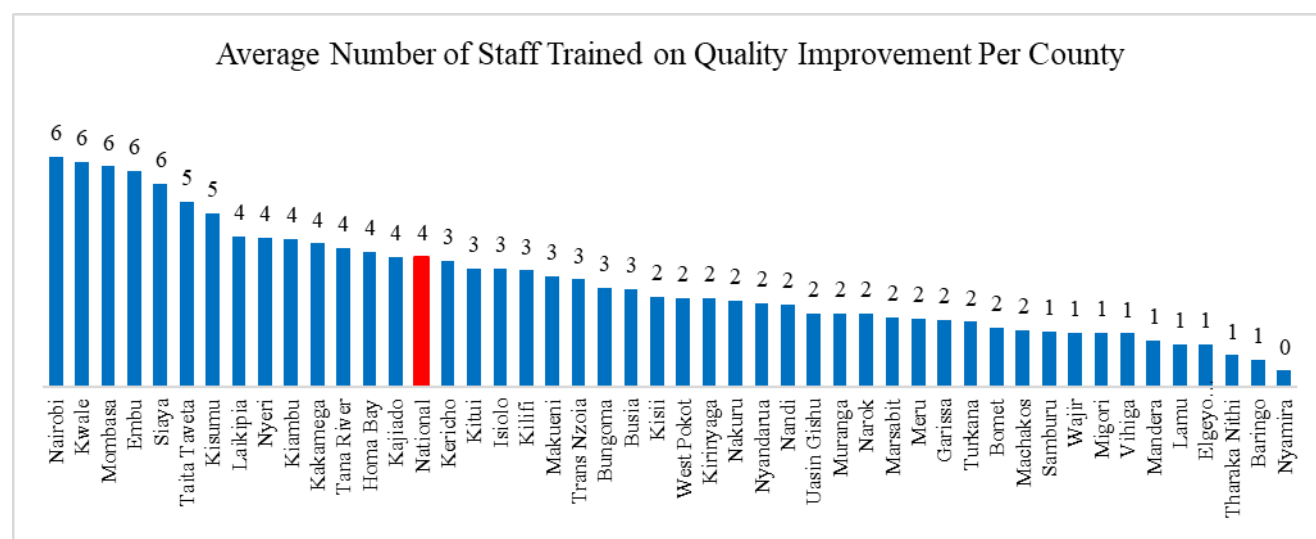


County performance on training of health care workers on Quality improvement

There were variations in the average number of health care workers trained on quality improvement by county, with Nairobi, Kwale, Mombasa, Embu and Siaya counties reporting the

highest at 6. None of the healthcare workers in Nyamira county had been trained on QI in the past 2 years. The figure below provides a summary for the 47 counties.

Figure 22: Average Number of Staff Trained on Quality Improvement Per County



A summary of the key findings and recommendations on quality assurance mechanisms is summarized in the table below

Table 23: Quality Assurance key findings

Area	Key Findings	Recommendations
External assessments	Higher-level facilities (Levels IV and V), Private and urban facilities have a higher rate of periodic external assessments (70% and above) as compared to lower-level facilities (Levels II and III), Public and rural facilities	- There is a need to increase efforts to ensure lower-level facilities (especially Level II & III) and rural facilities receive more regular external assessments to bridge the disparity observed. - The Ministry of Health and County Governments need to further investigate and address the underlying reasons for the lower rates of assessment in publicly owned facilities and develop tailored interventions to mitigate these issues.
Supportive supervision	45 counties had more than 50% of their facilities receiving supportive supervision within the 3 months prior to the assessment.	Focus on improving supportive supervision in counties with less than 50% of facilities supervised in



Area	Key Findings	Recommendations
	Privately owned facilities had the lowest rate of monthly supportive supervision at 34%.	a quarter to ensure more frequent and consistent supervision. Develop specific strategies for Counties to engage privately owned facilities to improve their rate of supportive supervision.
Internal Assessments	The proportion of facilities with Quality improvement teams and Work improvement teams have reduced from 55% to 47% when compared to the 2018 health facility assessment.	County governments should support the establishment and operationalization of Quality improvement teams /work improvement teams.

4. Patient Safety

The first goal of any health and medical intervention is to “Do no harm”. Health systems thus need to not only put in place surveillance systems to detect the harmful/ unwanted outcomes but also interventions to prevent and respond appropriately to avoid further harm. Patient safety thus includes systems to support **detection, response and prevention** of outcomes such as

- Deaths
- Surgical Related Adverse Events
- Infections and Infection Prevention
- Antimicrobial use, consumption and resistance
- Patient safety incidents and errors

In order to achieve optimal health and improve outcomes in healthcare, healthcare systems need to focus on preventing and minimizing avoidable harm and reducing medical errors during patient care. According to the World Health Organization (WHO), millions of patients suffer from injuries or fatalities due to unsafe and substandard healthcare every year. Various medical practices and risks associated with healthcare pose significant challenges to patient safety and contribute substantially to the prevalence of harm resulting from inadequate care. For instance, WHO estimates that 7% of patients in developed countries and 10% in developing countries acquire at least one healthcare-associated infection (HAI) at any given time, leading to avoidable deaths.

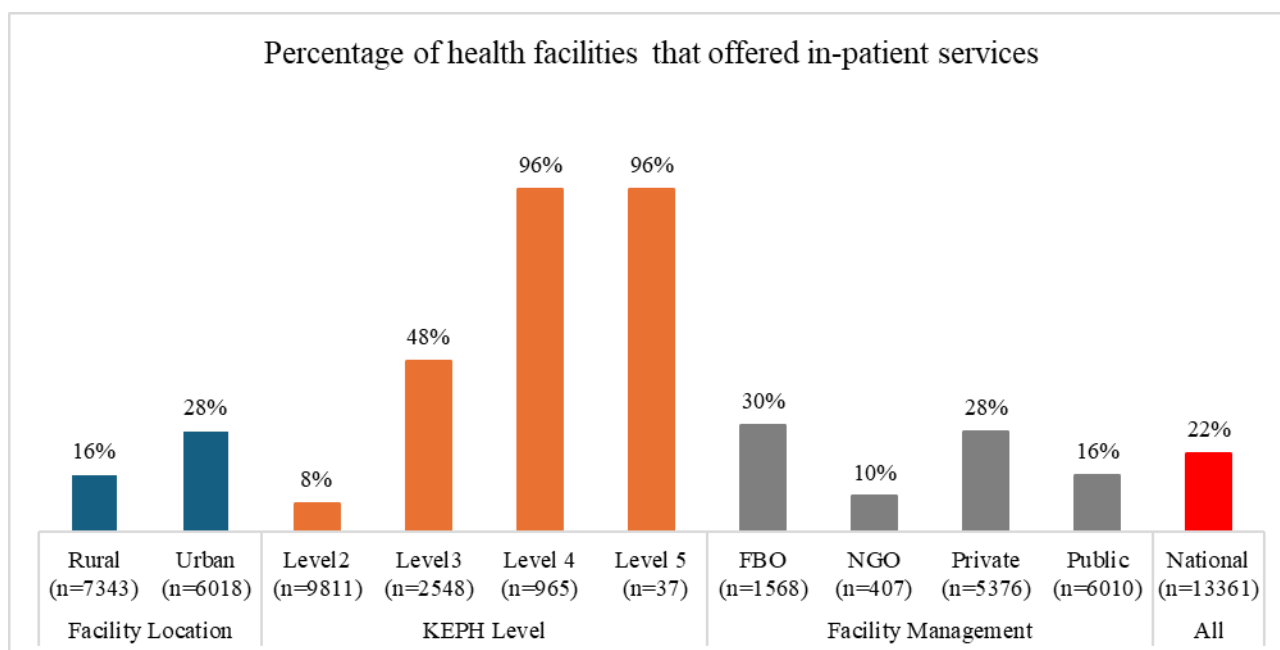


The aim of infection prevention and control (IPC) is to prevent and manage infections and their transmission within healthcare settings and the broader community. IPC is a crucial quality standard that is fundamental to the proper functioning of all healthcare facilities and the overall healthcare system. To ensure the implementation of IPC activities, healthcare facilities are mandated to have governance structures for infection prevention and control (IPC) that adhere to national IPC policy and guidelines. Additionally, healthcare facilities are required to conduct regular surveillance for healthcare-associated infections (HAIs), other patient safety incidents, healthcare worker safety incidents, antimicrobial resistance, and WHO priority pathogens in order to ensure the safety of patients and healthcare workers during the provision of medical care.

Antimicrobial resistance poses a significant threat to the effective prevention and treatment of an expanding range of infections caused by various disease-causing organisms, including bacteria, parasites, viruses, and fungi. WHO has identified antimicrobial resistance (AMR) as one of the top 10 global public health threats facing humanity. Evidence suggests that antimicrobial stewardship programs dedicated to optimizing antimicrobial use can effectively reduce the incidence of antimicrobial resistance. Implementation of antimicrobial stewardship (AMS) programs in healthcare settings can contribute to improved patient outcomes, reduced antimicrobial resistance, and enhanced quality of care. Furthermore, surveillance and monitoring of antimicrobial resistance to identify trends and patterns of drug-resistant microorganisms and assess the impact of interventions play a pivotal role in the fight against AMR.

The survey targeted inpatient facilities for analysis of most patient safety indicators. Only facilities that offered inpatient services were assessed on conducting death and case reviews. Nationally, 22% of all assessed facilities offered in-patient services, the majority of which were level 5 and 4 and had in-patient services at 96%. Of the sampled level 2 facilities, 8% had the capacity and infrastructure to offer inpatient services. Analysis against geographical location revealed that 28% of urban health facilities had inpatient services, compared to 16% of rural facilities.

Figure 23: Percentage of facilities with inpatient services.



A summary on the availability of inpatient services by County is summarized in the table below

Table 24: Percentage of facilities with Inpatient Facilities

		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

Inpatient services		Number of Facilities	
	Makueni	9%	297
	Mandera	50%	200
	Marsabit	19%	140
	Meru	14%	459
	Migori	40%	323
	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

4.1. Case and Death Reviews

Case and death reviews are critical for maintaining and improving the quality of care in healthcare settings. By systematically analyzing adverse events and patient deaths, healthcare providers can identify weaknesses in care processes, implement effective interventions, and enhance overall patient outcomes. It is a requirement that mortality data is reported and audited across all facilities to identify areas of improvement.

The survey assessed the existence of systems in health facilities for conducting various types of death reviews and the availability of the Maternal Perinatal Death Surveillance and Response (MPDSR) committee, the number of neonatal and maternal deaths and if the deaths were audited.

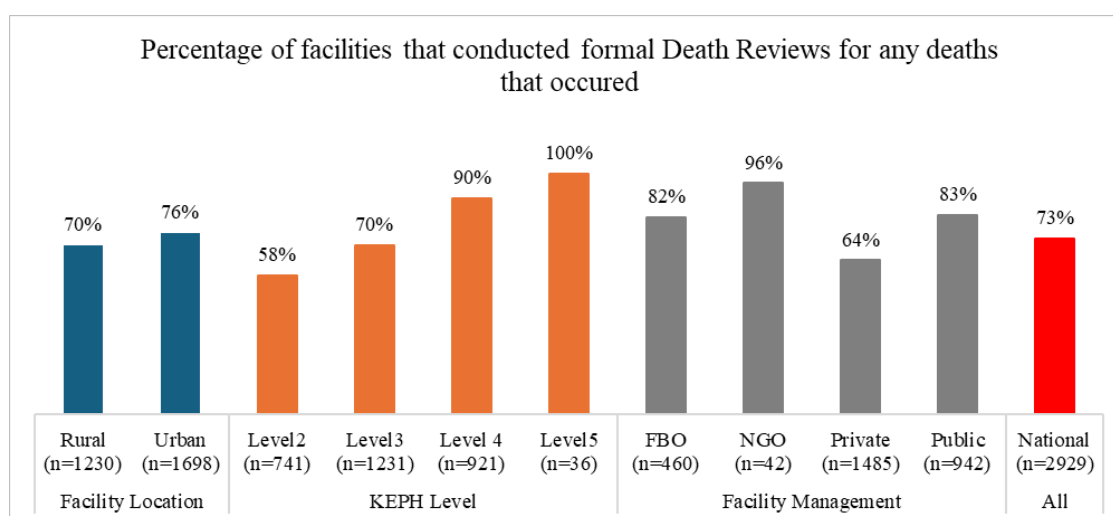
Table 25: Case review structures and processes

Structures	Processes
Formal review for any deaths	
Maternal and Perinatal death reviews	
Neonatal death reviews	
MPDSR Committees	Frequency of meeting of MPDSR committees
	- Reporting and auditing in period Oct-Dec 2023 - maternal (MOH 369 Vs MOH 371) - neonatal deaths (MOH 372)

Overall, 73% of health facilities that offered in-patient services conducted formal death reviews on all deaths occurring in the facility. Analysis by KEPH levels showed that all level 5 facilities conducted formal death reviews compared to 58% of level 2 facilities. Public facilities had majority of their facilities conducting formal death reviews (83%) compared to 64% of private facilities. A summary is provided in the figure below.

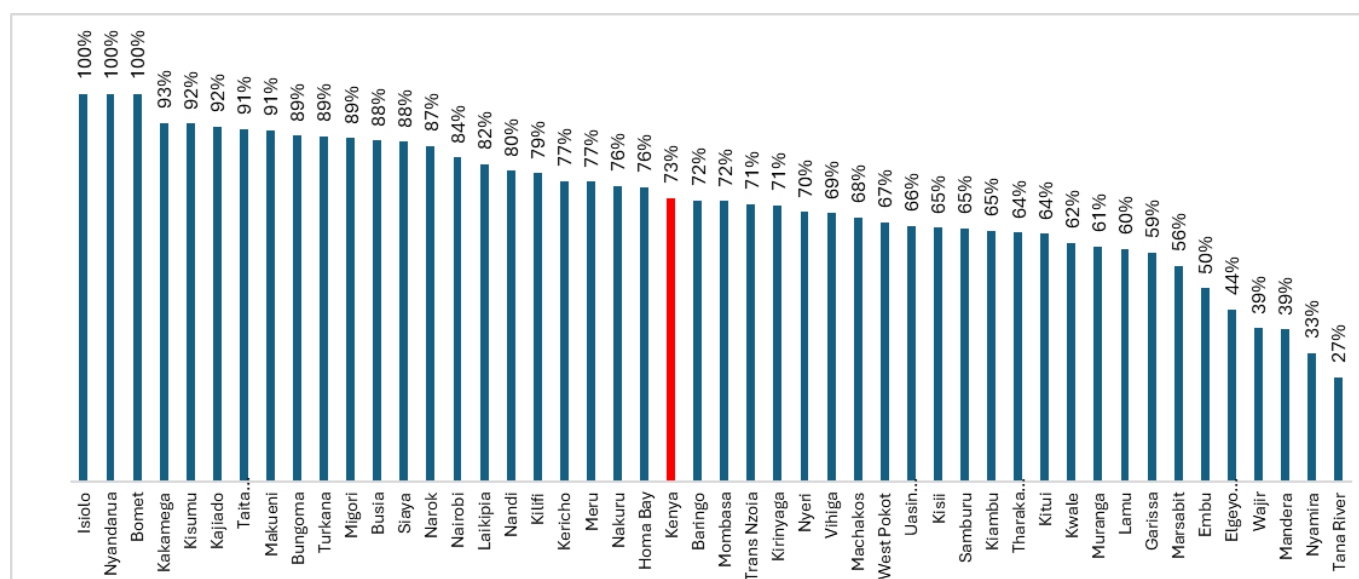


Figure 24: Percentage of Facilities that Conducted Formal Death Reviews



County analysis showed that all facilities in Bomet, Isiolo and Nyandarua Counties, conducted formal death reviews while less than 50% of the health facilities in Nyamira, Tana River, Mandera, Wajir and Elgeyo Marakwet conduct formal death reviews. The table below shows summaries per county.

Figure 25: Percentage of facilities that Conduct Formal Death Reviews for any Deaths That Occur by County (n=2929)

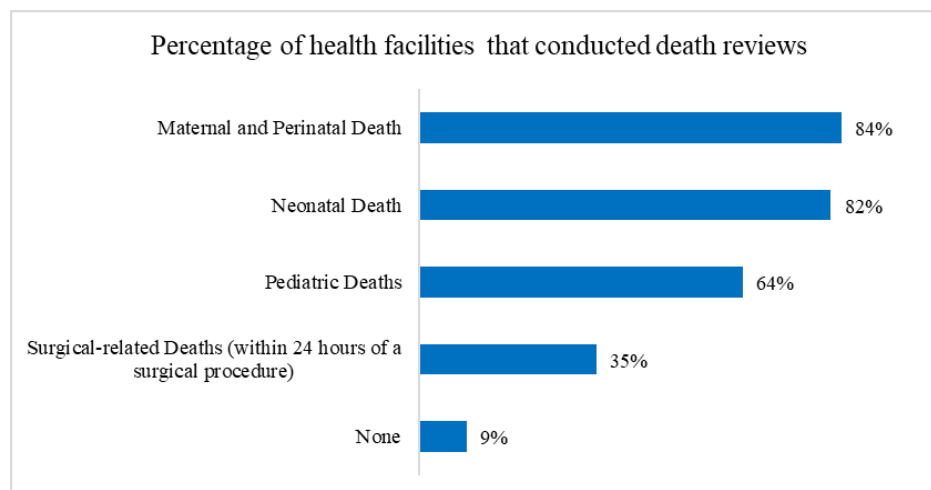


Specific Case and Death Reviews Monitored

The quality-of-care survey assessed the number of facilities with inpatient services that were conducting maternal, neonatal, paediatric and surgical death reviews. Additionally, for neonatal and maternal death reviews, the survey reported on the number of deaths reported and the number of deaths audited to establish the existing gaps in the auditing of deaths.

Of all the facilities offering inpatient services, 84% conducted maternal and perinatal death reviews while 35% conducted surgical death reviews within 24 hours of a surgical procedure as illustrated in the figure below.

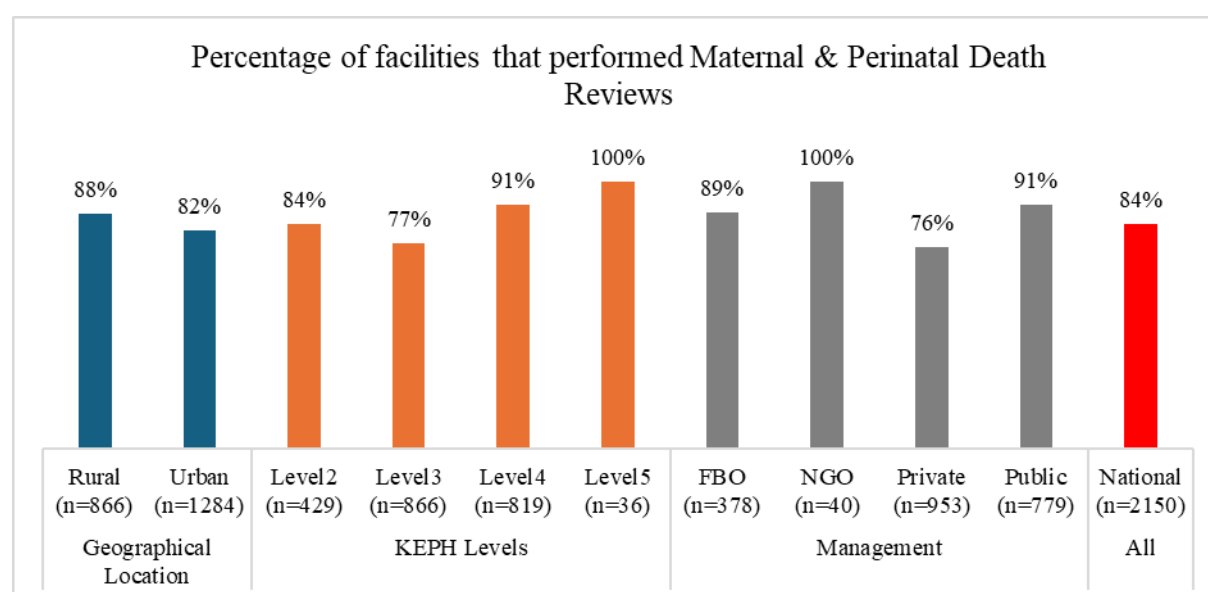
Figure 26: Percentage of facilities that conducted death review (n=2150)



4.1.1 Maternal and Perinatal Death Reviews

Majority of health facilities offering in-patient services reported that they performed maternal and perinatal deaths review (84%), ranging from 77% for level 3 to 100% of level 5 facilities. All NGO facilities conducted these reviews compared to 76% of private facilities. There was no significant variation in proportion of facilities performing maternal and perinatal death reviews in rural and urban facilities. A summary is provided in the figure below.

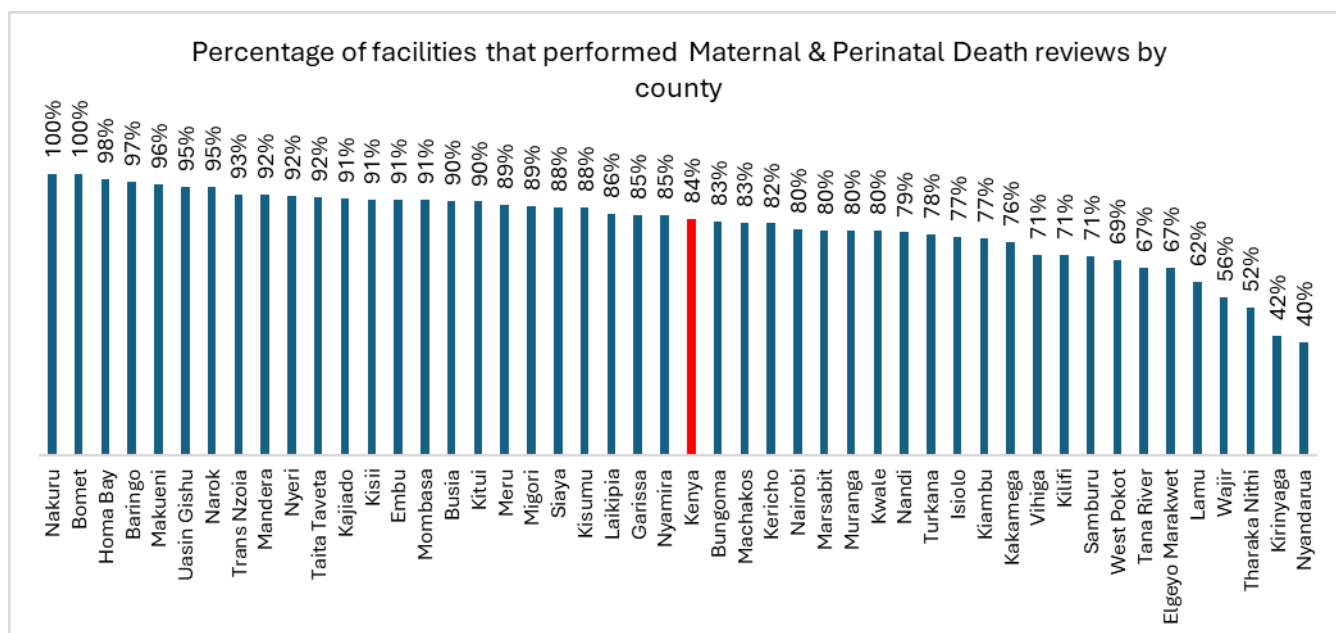
Figure 27: Percentage of facilities that performed Maternal & Perinatal Death Reviews



All health facilities in Nakuru and Bomet counties conducted maternal and perinatal death reviews. The lowest percentage of health facilities performing maternal and perinatal death

reviews was in Nyandarua and Kirinyaga counties at 40% and 42% respectively. This analysis is summarized in the figure below.

Figure 28: Percentage of facilities that performed maternal and perinatal death reviews by County

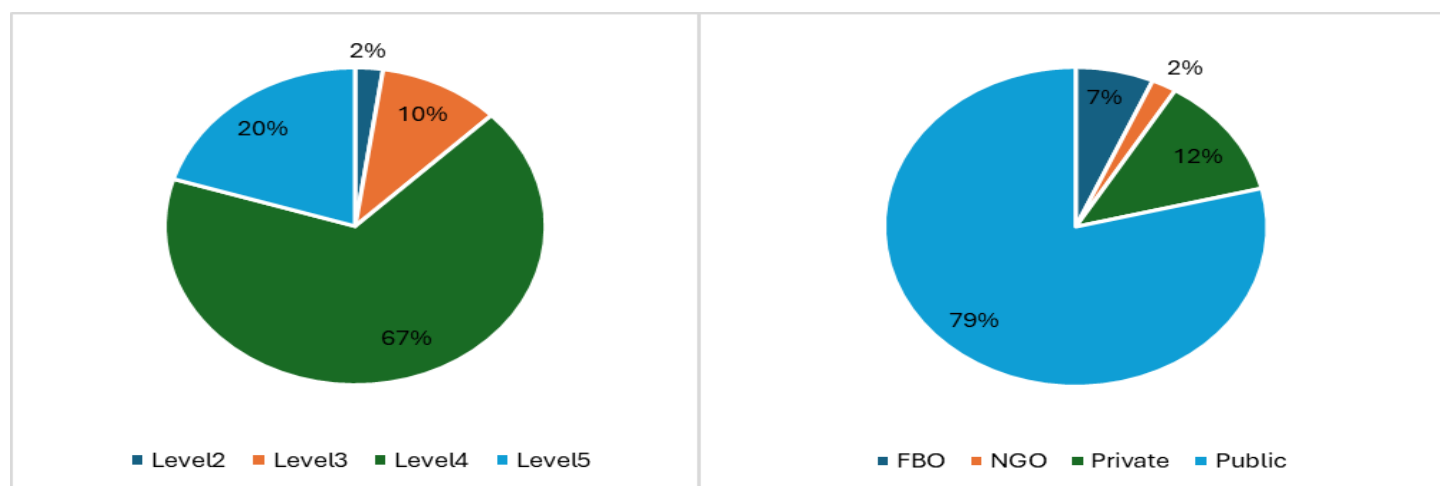


Number of maternal deaths reported between October and December, 2023

A total of 427 maternal deaths were reported between October and December 2023. When analyzed by KEPH level, most of the deaths occurred in level 4 facilities (67%) and the least number reported in level 2 facilities (2%). Majority of maternal deaths occurred in public facilities (79%); followed by private facilities at 12% with the least number occurring in NGO facilities

Number of maternal deaths reported between October and December, 2023

Figure 29: Distribution of maternal mortality (MOH 369) by KEPH level and Ownership(n=427)

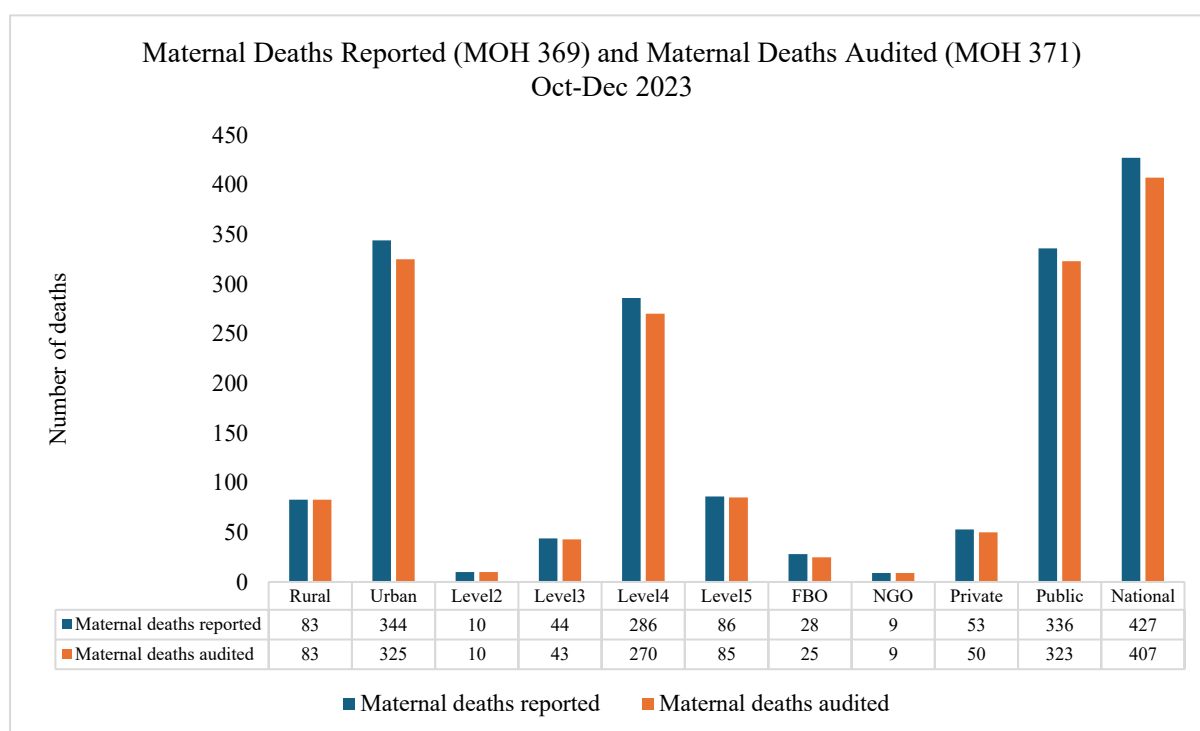


Number of maternal deaths audited between October and December, 2023

All maternal deaths reported in health facilities are required to be audited according to the MPDSR guidelines 2016. Findings of the QoC survey revealed that out of the 427 maternal deaths that were reported across all the facilities with inpatient services, 95% (407 deaths) were audited.

Higher level facilities reported more maternal deaths compared to lower-level facilities, also known as primary facilities. Majority of the maternal deaths (286) were reported in level 4 facilities and almost all (270) deaths were audited. In terms of ownership, public facilities had the highest number of maternal deaths reported at 323 deaths and findings also reveal that public facilities audited almost all the reported deaths except 13 deaths. The figure below shows the performance of health facilities in reporting and auditing maternal deaths, by location, KEPH Level, facility type, and ownership.

Figure 30: Number of maternal deaths reported against deaths audited (Oct-Dec 2023): Reported(n=413), Audited(n=394)



4.1.2 Neonatal Deaths

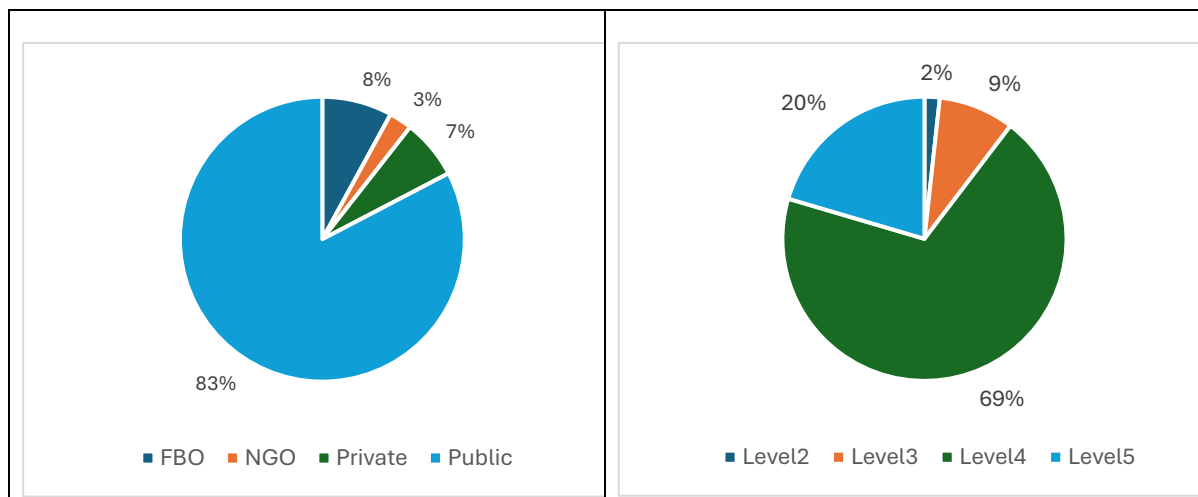
Number of reported neonatal deaths (October-December 2023)

Neonatal mortality refers to deaths occurring within the first 28 days of life.

- A total of 4,094 neonatal deaths were reported between October to December 2023.
- Analysis by ownership shows that the majority of these deaths (83%) were reported in public facilities while the least number of neonatal deaths were reported in NGO facilities (3%).

- Further analysis by KEPH level revealed that majority of the deaths were reported in higher level facilities with level 4 accounting for 69% of the deaths and the lowest deaths, 2% were in level 2 facilities.

Figure 31: Distribution neonatal deaths (MOH 372) Oct-Dec 2023 by facility ownership and KEPH Level. (n=4094)



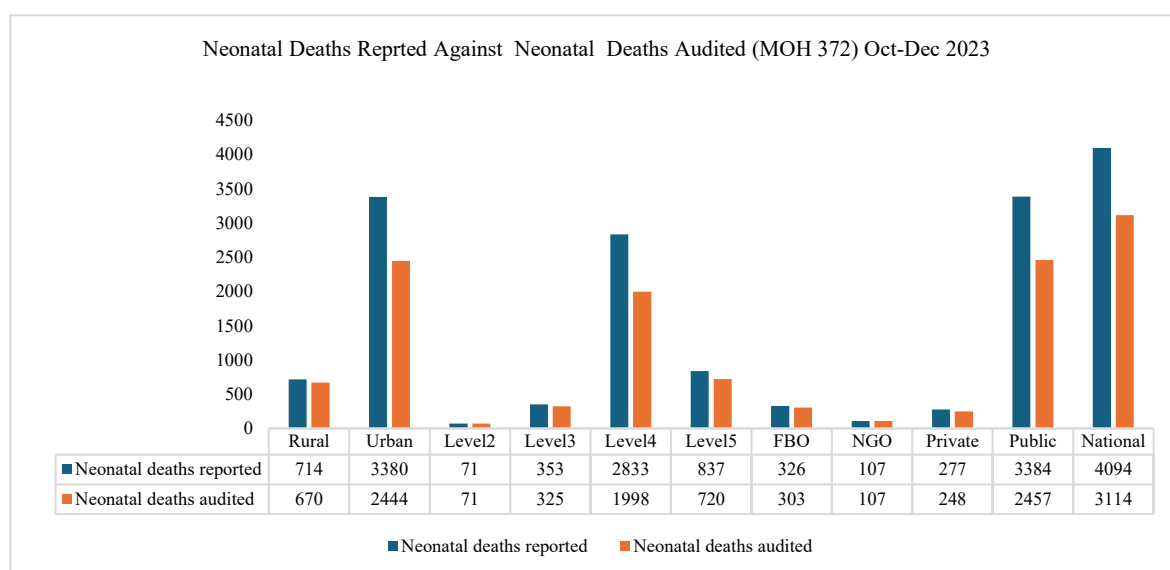
Neonatal death audit

Neonatal death reviews systematically investigate newborn deaths to identify preventable factors, improve clinical practices, and strengthen neonatal care to prevent future deaths.

Analysis of number of Neonatal deaths reported compared to number of neonatal deaths audited shows that;

- Nationally, of the 4094 neonatal deaths reported and 3114 deaths were audited.
- KEPH level analysis shows that majority of the neonatal deaths, (2833 deaths) were in level 4 facilities of which 1998 were audited. Level two facilities had the least number of neonatal deaths reported; with all the 71 deaths reported audited.
- Analysis by location shows that more deaths are reported in urban facilities compared to rural facilities. Of the 3380 deaths that were reported in urban based facilities, a total of 2444 neonatal deaths were audited.
- In terms of ownership, public facilities accounted for the highest number of reported deaths at 3384 deaths of which 3114 deaths were audited across all public facilities. A summary is illustrated in the figure below.

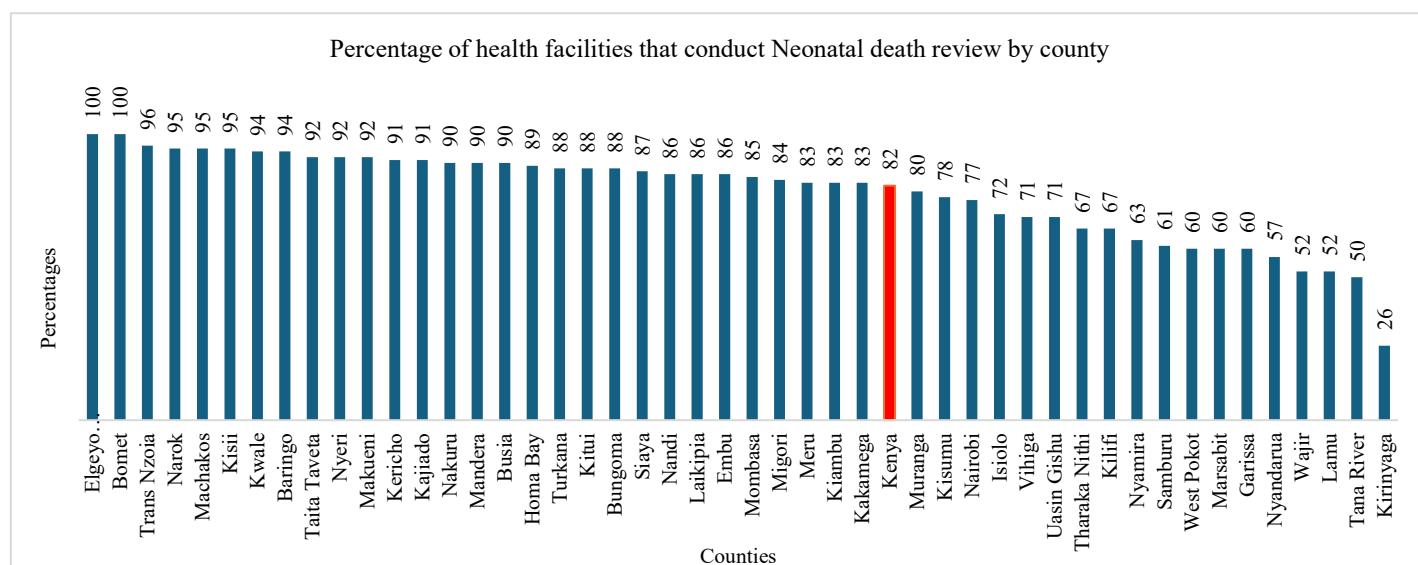
Figure 32: Number of neonatal deaths reported, MOH 372 (n=4094) against deaths audited (n=3114).



County analysis for neonatal deaths audited reveal that more than three-quarters of all county facilities conducted neonatal death audits. Of the 47 counties 41 counties had more than 60% of their facilities conducting neonatal death reviews. Kirinyaga county had the least percentage of facilities that conducted neonatal death reviews at 26%. A summary is shown in the figure below.



Figure 33 Percentage of health facilities that conduct Neonatal death review by county



4.1.3 Maternal and Perinatal Death and Surveillance Committees (MPDSR)

Availability of MPDSR committees

- Slightly more than a third (63%) of facilities had MPDSR committees in place
- Level 5 and 4 facilities had the highest availability of MPDSR committees compared to level 2 and 3 facilities.
- Most public facilities (80%) had MPDSR committees, followed by NGO owned facilities at 74%. Private facilities had the least availability at 48%

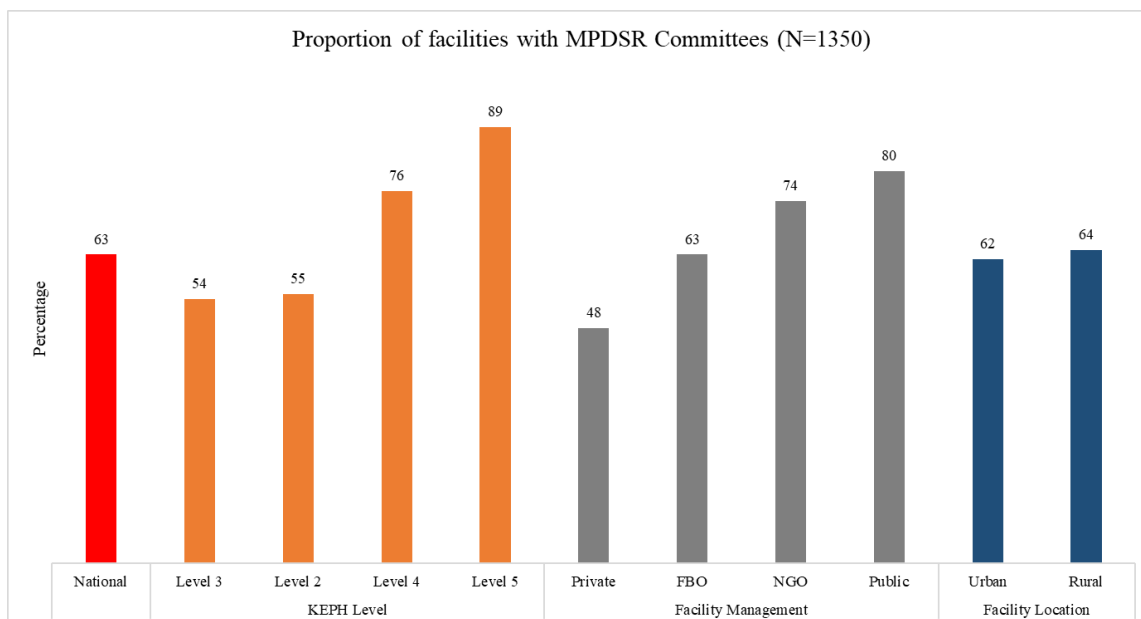
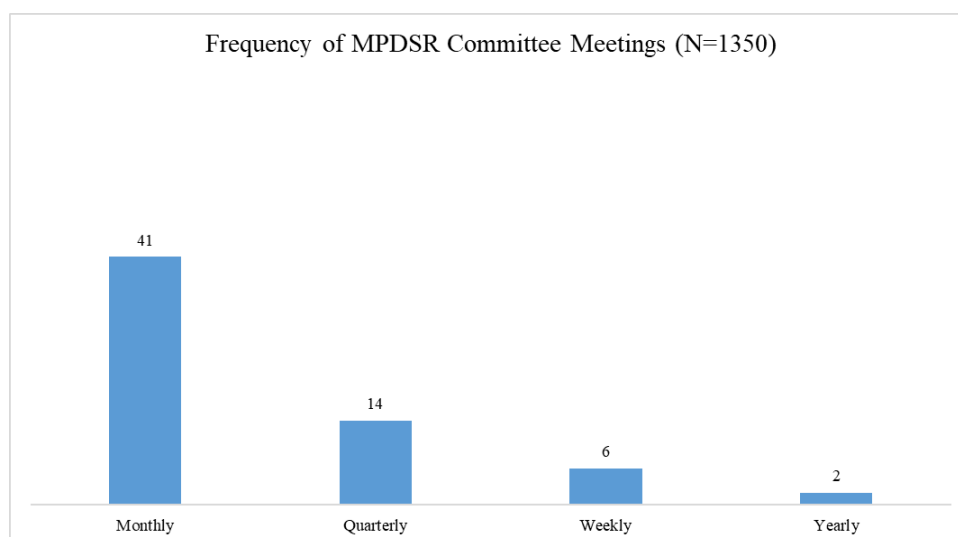


Figure 34: Proportion of facilities with MPDSR committees (N=1350)

Frequency of MPDSR Committee Meetings

- About 41% of the facilities held their MPDSR meetings monthly, while others conducted them quarterly or weekly. Only a small proportion, 2%, reported holding their meetings annually

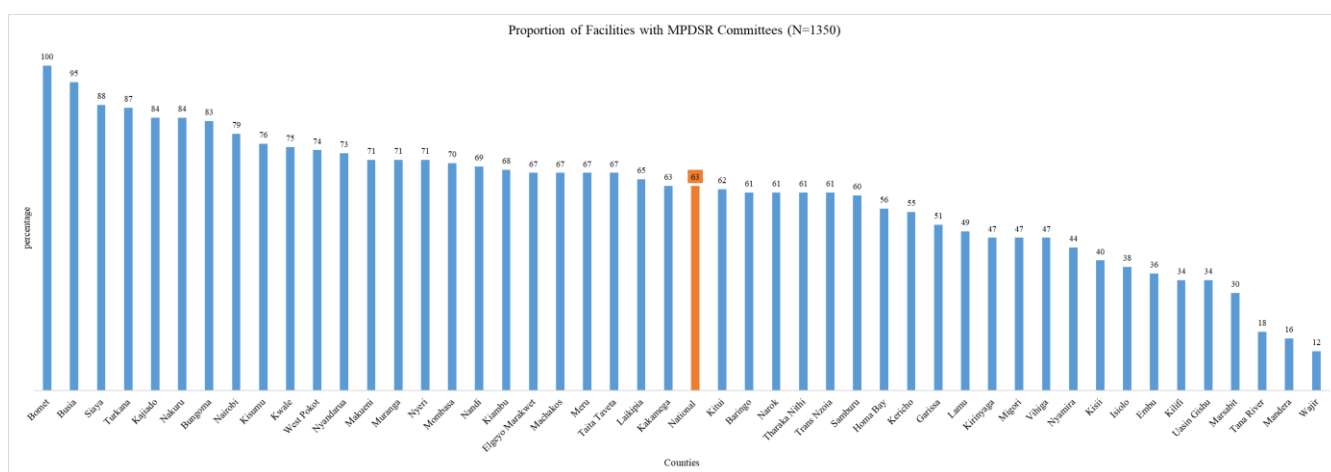
Figure 35: Percentages of facilities MPDSR committee meetings (N=1350)



Availability of MPDSR Committees by County

- Almost half (23) of the counties performed less than the national average of 63%
- All facilities in Bomet county had MPDSR committees, compared to Tana river, Wajir and Mandera counties where availability of the committees was below 20%

Figure 36: Proportion of facilities that had MPDSR committees by county (N=1350)



4.2 Surgery Related Deaths and Adverse Events

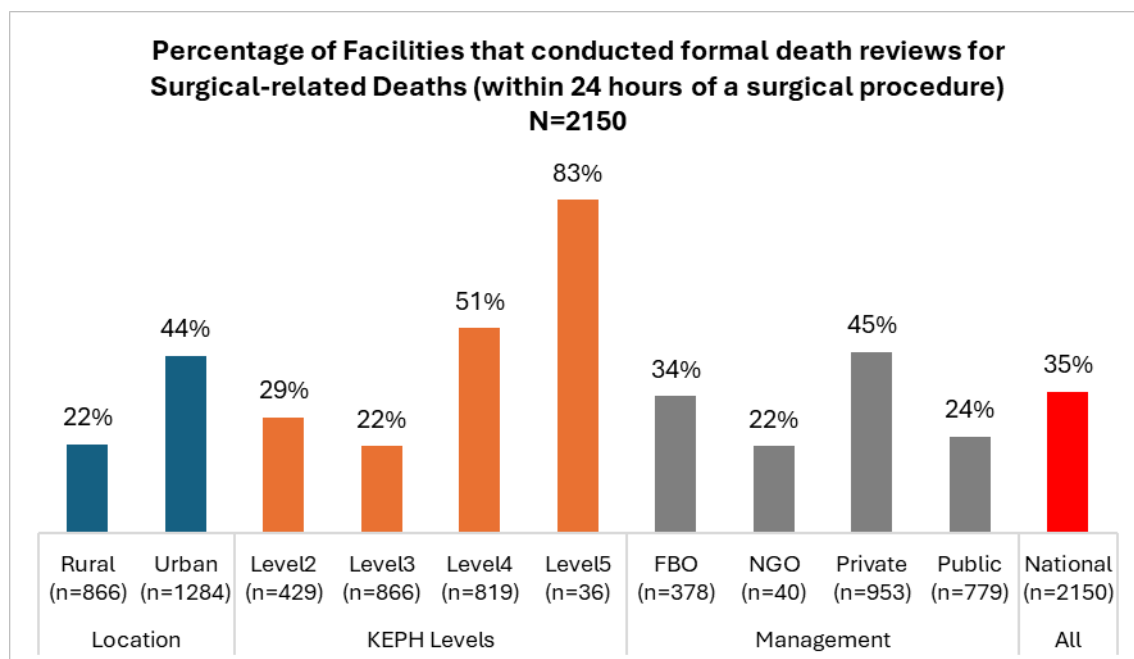
Table 26: Surgery related deaths and adverse events structures

Structures:
• Formal death reviews for Surgical-related Deaths (within 24 hours of a surgical procedure)
• System for Monitoring Adverse Events Specifically Related to Surgery (MOH 384) including deaths and infections

4.2.1 Review of Surgical-Related Deaths (occurring within 24 hours of Surgical Procedure)

About a third of health facilities (35%) conducted surgical-related death reviews (deaths occurring within 24 hours of surgical procedures) compared to other types of death reviews. Comparing results by ownership, 45% of private facilities conducted surgical death reviews compared to 24% of public facilities. Majority of level 5 facilities (83%) reviewed their surgical deaths compared to 51% and 22% of level 4 and 3 facilities respectively. A summary is provided below.

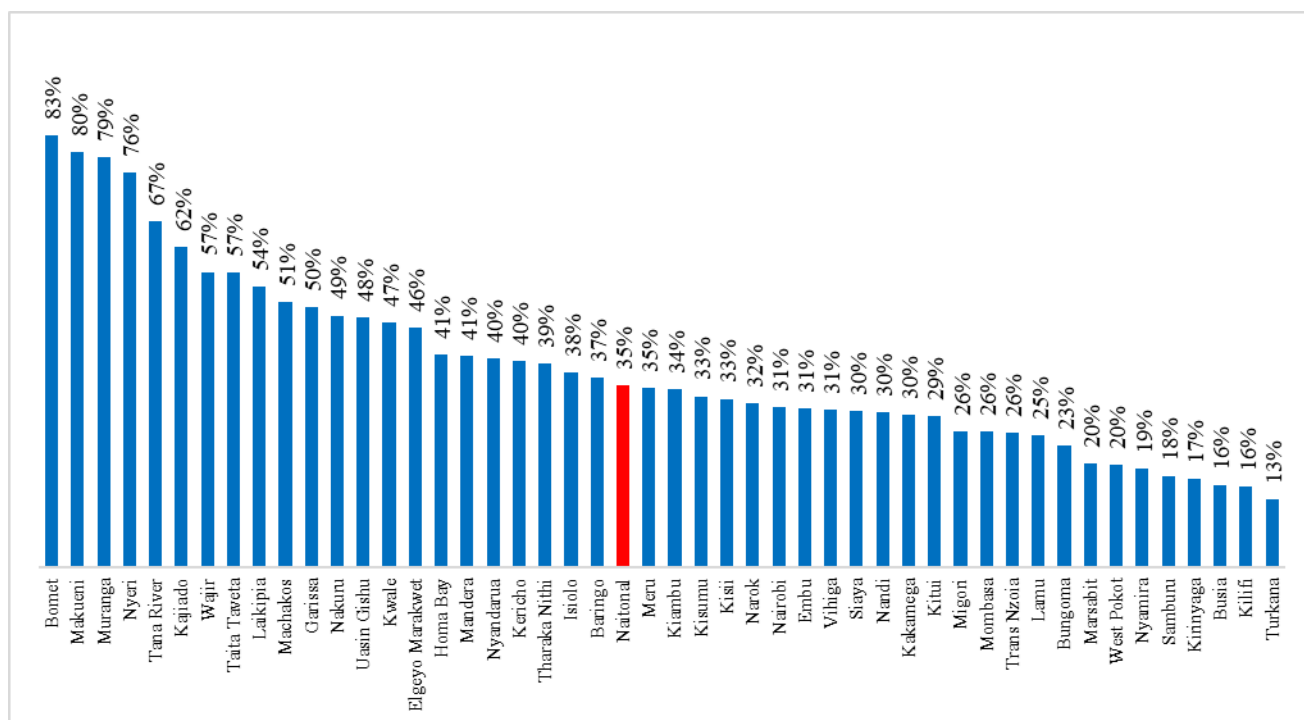
Figure 37: Percentage of Facilities that conducted formal death reviews for Surgical-related Deaths (within 24 hours of a surgical procedure) n=2150



County Performance on surgical death reviews

All counties reported conducting surgical death reviews, however, the proportion of facilities that conducted death reviews varied across counties. Bomet county had the highest proportion of facilities conducting surgical death reviews at 83%, followed by Makueni at 80%, Muranga at 79 % and Nyeri at 76%. Majority of the counties had a below average performance. Performance in fourteen counties ranged between 30% to 39%. Fourteen Counties had less than 30% of the facilities conducting surgical death reviews.

Figure 38: Percentage of Facilities that conduct formal death reviews for Surgical-related Deaths (within 24 hours of a surgical procedure), n=2150.

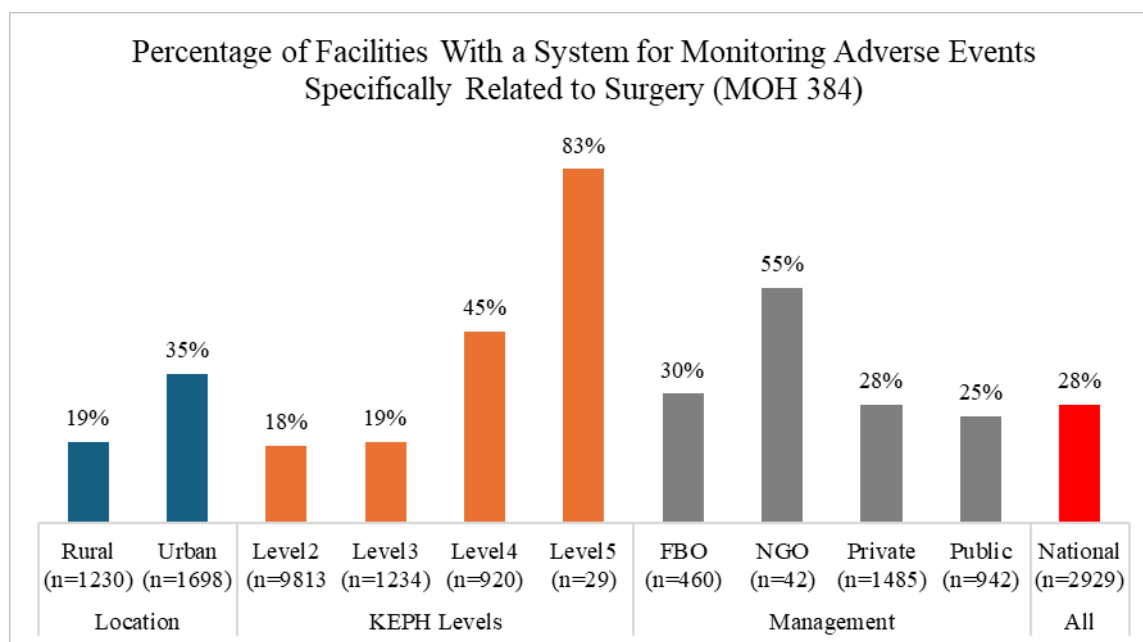


4.2.2 Systems for Monitoring Adverse Events Specifically Related to Surgery (MOH 384)

Generally, the capacity of health facilities to monitor surgery related adverse events was poor. This was assessed in health facilities **offering in-patient services**. Of all facilities offering in-patient services, 28% had systems to monitor surgery related adverse events with majority of level 5 facilities (83%) and minority of level 2 facilities (18%) having those systems. NGO facilities had the highest proportion of their facilities (55%) able to monitor these adverse events, as compared to 25% of public facilities as shown in the figure below;

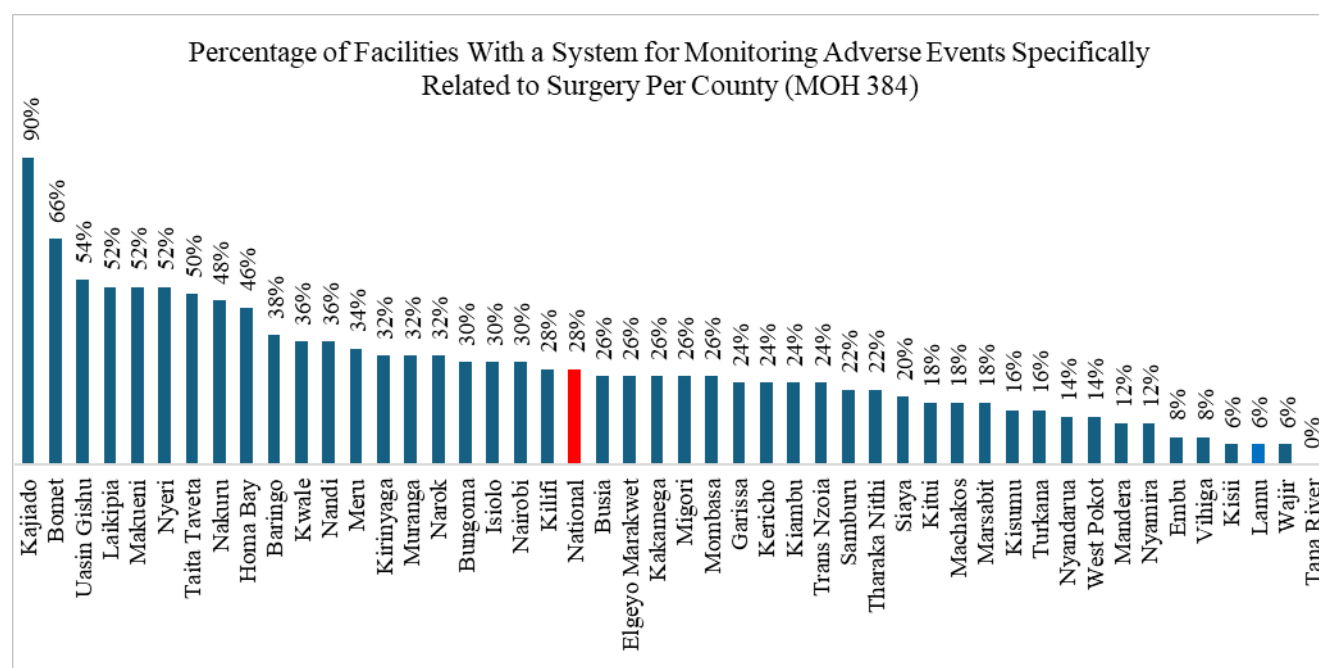


Figure 39: Percentage of Facilities With a System for Monitoring Adverse Events Specifically Related to Surgery (MOH 384)



Majority of health facilities in Kajiado county had a system to monitor surgery related adverse events (90%) followed by Bomet county (66%). None of the facilities in Tana River County had this capacity. A summary is provided below;

Figure 40: Percentage of Facilities with a System for Monitoring Adverse Events Specifically Related to Surgery Per County (MOH 384)



A summary of the key findings and recommendations on maternal and perinatal death surveillance is summarized in the table below

Table 27: MPDSR & Neonatal death reviews recommendations

Area	Key Findings	Recommendations
MPDSR	Nationally, 63% of health facilities reported having Maternal Perinatal Death Surveillance and Response (MPDSR) committees.	- There is need to institutionalize MPDSR committees in all health facilities in line with the 2016 MPDSR guidelines. - The Ministry of Health MPDSR unit and other development partners to assist in the establishment of MPDSR committees in counties with less than 20% establishment rates. - Provide training and support to facilities to standardize and maintain the monthly meeting frequency of MPDSR committees.
MPDSR Committees	Public facilities have a higher establishment rate of MPDSR committees (80%) compared to private facilities (48%).	Private facilities to be supported with mentorship on establishment and operationalization of MPDSR committees
Neonatal Death reviews	While majority of facilities had MPDSR committees, death reviews for neonatal deaths was inconsistent across all levels.	Encourage all facilities, especially those with lower review rates, to conduct comprehensive case and death reviews across maternal, neonatal, pediatric, and surgical deaths.

4.3 Infection Prevention and Control:

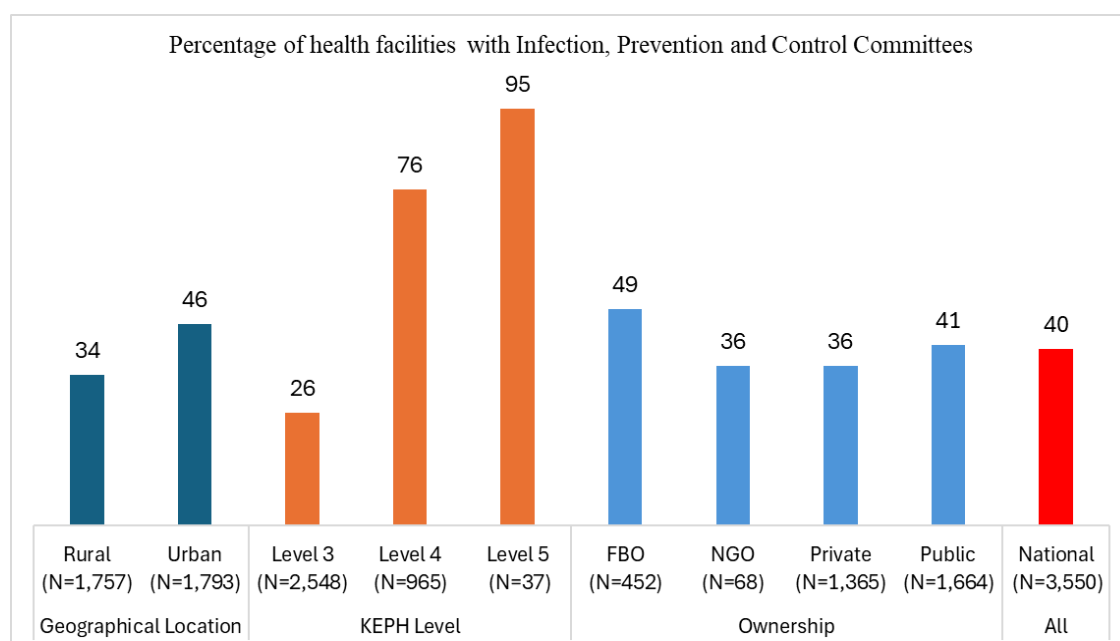
This section was assessed in facilities offering in-patient services

4.3.1 IPC Committees

The Kenya National IPC Policy provides for institutional IPC coordination structures at the national, county, sub county and facility levels. Health facilities are required to have IPC committees to coordinate implementation of IPC activities.

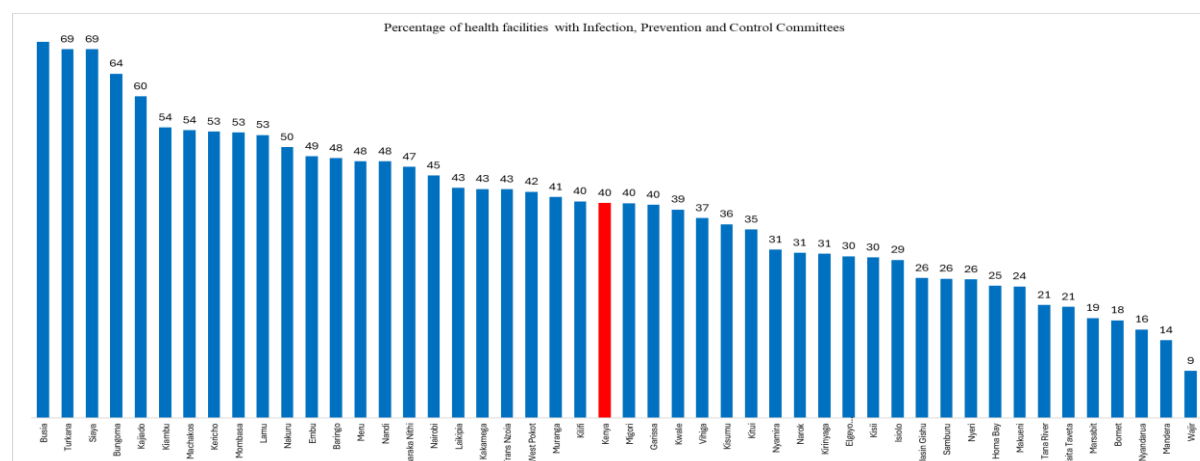
Nationally, 40% of health facilities offering inpatient services had technical IPC committees which included 95% of level 5, and 76% of level 4 facilities. These committees were most available in FBO (49%) and public (41%) facilities compared to NGO & private facilities at 36% each as shown in the figure below;

Figure 41: Percentage of health facilities offering in-patient services that had Technical Infection Prevention Committee (IPC) committees



Busia county had the highest proportion of facilities offering in patient services with IPC committees at 84% while Wajir county had the least proportion at 9% as illustrated below;

Figure 42: Percentage of health facilities offering in-patient services that had Technical Infection Prevention Committee (IPC) committees by County

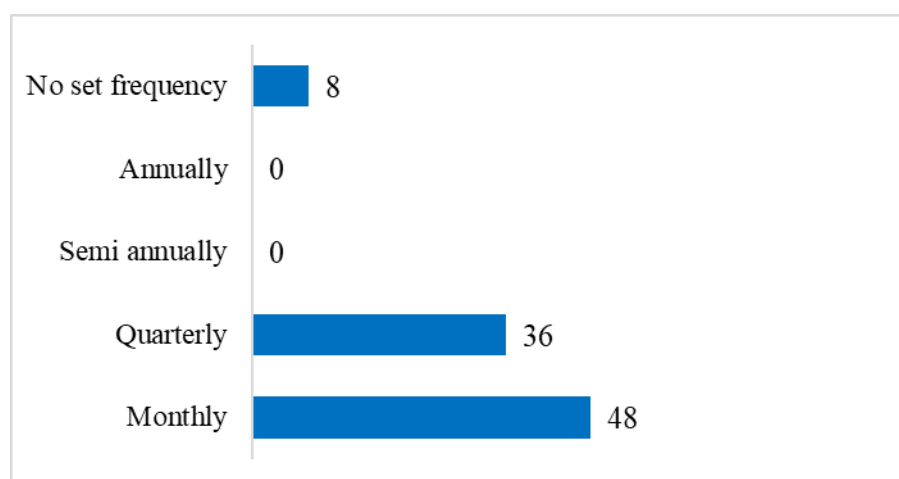


Frequency of IPC Committee meetings

The IPC Committees **are required to meet monthly**. Almost half of facilities that had IPC Committees met monthly (48%) while 35% of them met on a quarterly basis as shown in the figure below.



Figure 43: Frequency of IPC Committee meetings (n=1804)



Isiolo county had the highest proportion of facilities whose IPC committees met on a monthly basis while none of the IPC committees in Lamu county met monthly as prescribed in the IPC standards. A summary on the frequency of IPC committee meetings in counties is shown in the table below;

Table 28: Frequency of IPC committee meetings in counties

County	Monthly	Quarterly	Semi annually	Annually	No set frequency
Baringo	62	28	6	0	0
Bomet	66	34	0	0	0
Bungoma	60	16	0	0	20
Busia	42	40	4	0	14
Elgeyo Marakwet	26	36	0	0	8
Embu	18	44	0	0	40
Garissa	74	18	0	0	4
Homa Bay	38	52	0	0	2
Isiolo	80	0	0	0	0
Kajiado	26	64	0	0	6
Kakamega	48	28	0	0	8
Kericho	38	56	0	0	6
Kiambu	24	24	2	0	22
Kilifi	54	32	0	4	0
Kirinyaga	62	22	16	0	0
Kisii	42	32	0	0	4
Kisumu	72	24	2	0	0
Kitui	50	34	2	0	4
Kwale	40	16	6	0	38
Laikipia	44	40	0	0	12
Lamu	0	58	0	12	32
Machakos	50	38	0	0	8
Makueni	34	66	0	0	0
Mandera	58	42	0	0	0



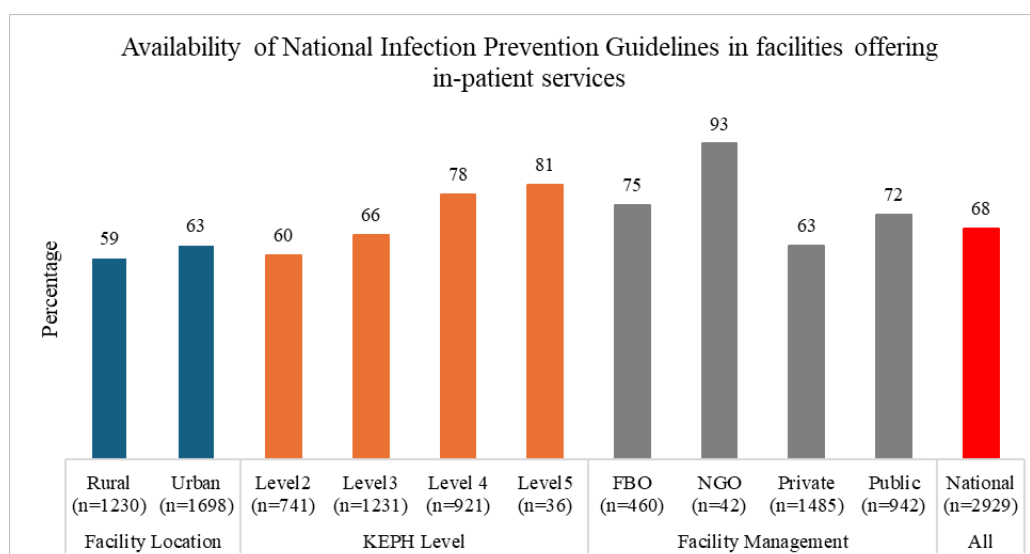
County	Monthly	Quarterly	Semi annually	Annually	No set frequency
Marsabit	12	76	0	0	12
Meru	46	50	0	0	4
Migori	44	36	2	0	8
Mombasa	52	42	0	0	6
Muranga	68	28	0	0	4
Nairobi	56	32	0	0	4
Nakuru	66	24	0	0	8
Nandi	24	46	4	0	6
Narok	48	52	0	0	0
Nyamira	42	30	0	0	28
Nyandarua	40	60	0	0	0
Nyeri	24	60	0	0	8
Samburu	72	20	0	0	10
Siaya	48	38	0	0	14
Taita Taveta	52	24	12	0	12
Tana River	50	26	0	0	26
Tharaka Nithi	60	40	0	0	0
Trans Nzoia	40	48	0	0	14
Turkana	34	56	0	4	0
Uasin Gishu	62	20	8	0	8
Vihiga	66	18	0	0	6
Wajir	44	28	0	0	28
West Pokot	36	54	0	0	10
National	48	36	0	0	8

4.3.2 Availability of IPC Policies, Guidelines

The Kenya National Infection Prevention and Control guidelines for Health Care Services provides guidance and interventions towards the reduction of health care associated infections and antimicrobial resistance.

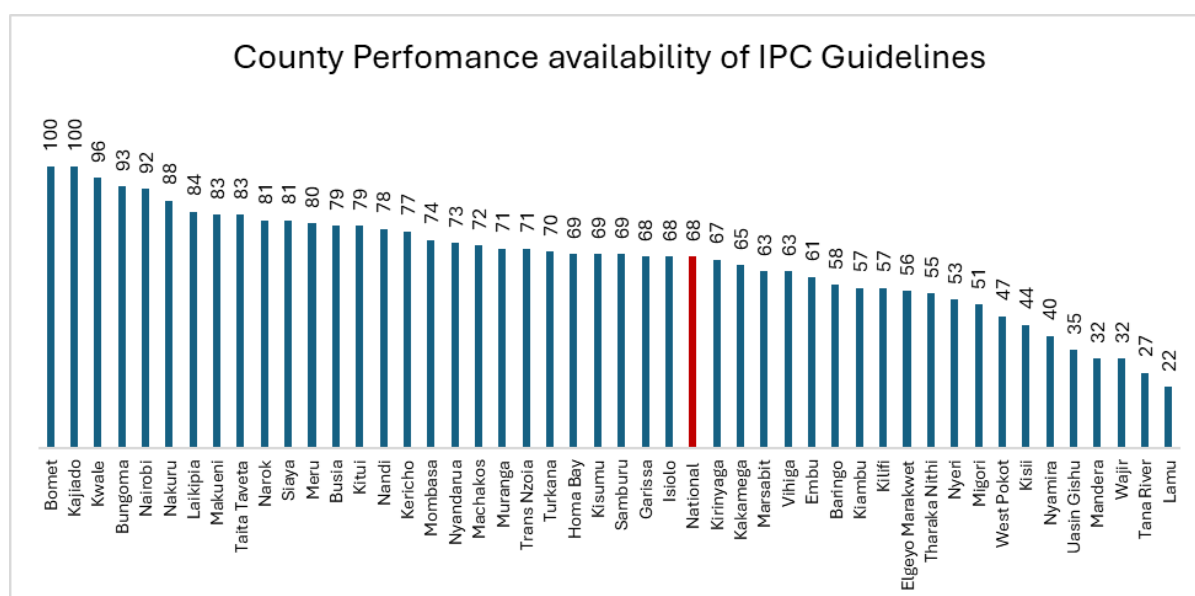
National IPC guidelines were available at 68% of health facilities offering inpatient services with eight in every ten level 5 facilities having it, compared to 60% of level 2 facilities. Availability of the guideline improved with the level of care. A summary is provided in the figure below;

Figure 44: Percentage of health facilities offering in-patient services that had the Kenya National Infection Prevention and Control Policy for Health Care Services 2021



The national availability for this Guideline was 68%. All health facilities in Bomet and Kajiado counties had the National IPC guidelines. The counties with the least proportion of facilities that had the guideline were Lamu and Tana River at 22% and 27% respectively.

Figure 45: Percentage of health facilities with the Kenya National Infection Prevention and Control Policy for Health Care Services 2021 by County



4.4 Infections

Table 29: Surveillance for HAIs in In-patient Facilities structures

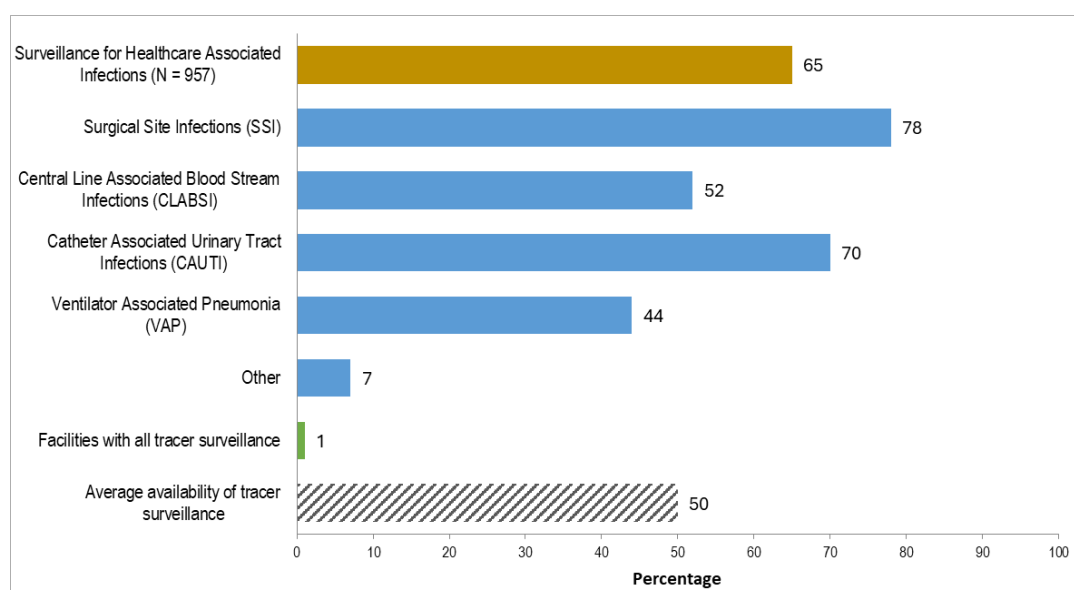
Structures	Processes
Infections	

○ Surveillance for Healthcare Associated Infections in (Level 4 and 5)	
○ Monitoring Specific Site infection (Level 4 and 5)	
● Infection Prevention (All In-patient facilities)	
○ Guidelines	
○ IPC Committees	● Frequency of committee meetings

Surveillance for Healthcare Associated Infections (HAIs) in In-patient Facilities (Level 4 and 5) only.

Surveillance for health care associated infections was assessed in level 4 and 5 health facilities offering in-patient services (N=957). 65% of level 4 and 5 facilities offering inpatient services conducted surveillance for healthcare associated infections.

Figure 46: Percentage of health facilities offering in-patient services that conducted surveillance for specific Healthcare Associated Infections (N=620)

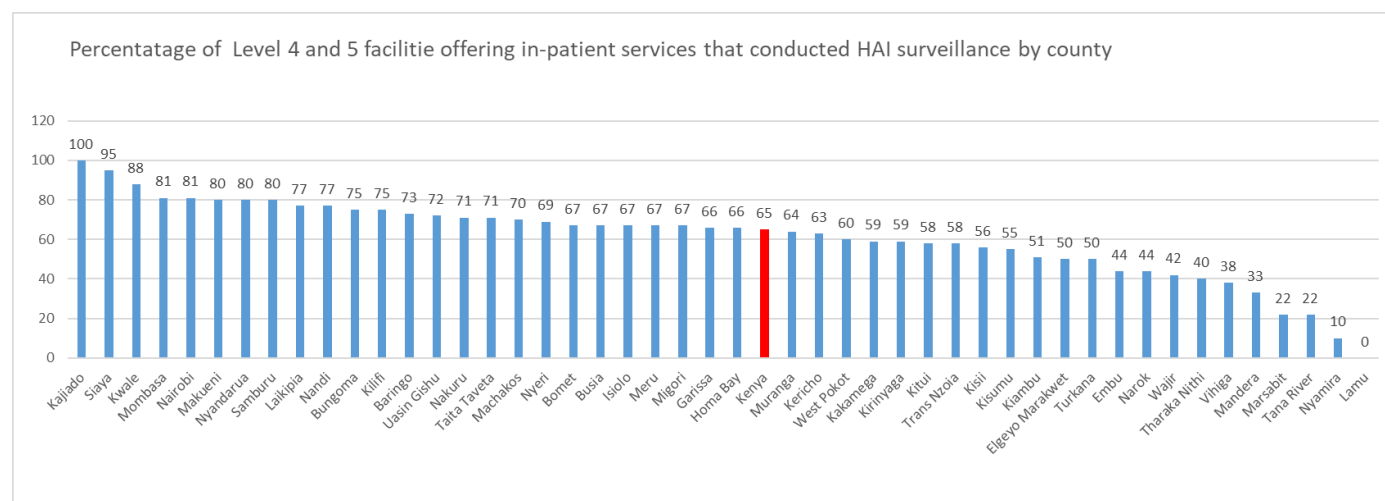


Majority of health facilities conducted surveillance for surgical site infections (78%) and catheter associated urinary tract infections (70%) while 44% conducted surveillance for ventilator associated pneumonia.

By ownership surveillance for HAI was more available at private facilities (72%) compared to 58% of public facilities. Majority of level 5 facilities conducted surveillance for HAIs (83%)

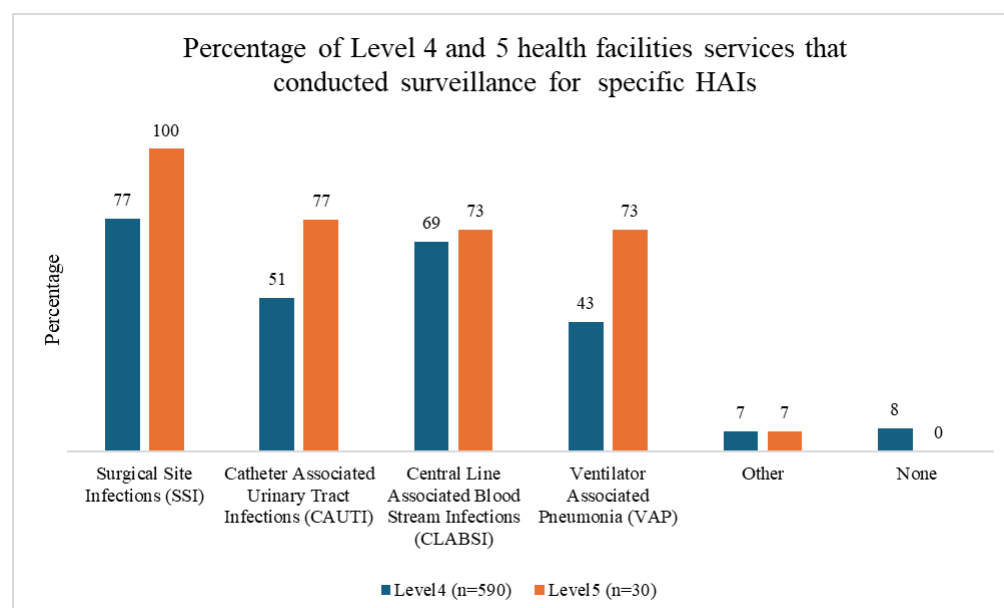
Kajiado county had all their facilities (100%) conducting surveillance for HAIs while none of facilities in Lamu county conducted HAI surveillance as shown in the figure below;

Figure 47: Percentage of health facilities offering in-patient services that conducted surveillance for Healthcare Associated Infections by County



Majority of level 5 facilities conducted surveillance for all listed HAIs compared to level 4 facilities. All level 5 facilities conducted surveillance for surgical site infections with 73% of them conducting surveillance for both Ventilator Associated Pneumonia and central line associated infections as shown in the figure below.

Figure 48: Percentage of Level 4 and 5 health facilities services that conducted surveillance for specific HAIs



All health facilities in Marsabit monitored surgical site infections and central line associated infections. None of the facilities in Tana River County conducted surveillance for catheter associated UTIs while none in Elgeyo Marakwet and Vihiga counties monitored ventilator associated pneumonia as illustrated below.

Table 30: Percentage of health facilities services that conducted surveillance for specific HAIs by county

County	Surgical Site Infections (SSI)	Central Line Associated Blood Stream Infections (CLABSI)	Catheter Associated Urinary Tract Infections (CAUTI)	Ventilator Associated Pneumonia (VAP)
Mombasa	53%	38%	48%	27%
Kwale	43%	44%	22%	45%
Kilifi	53%	81%	21%	15%
Tana River	49%	16%	0%	51%
Taita Taveta	64%	64%	53%	41%
Garissa	65%	61%	61%	32%
Wajir	64%	29%	25%	10%
Mandera	45%	84%	49%	30%
Marsabit	100%	50%	83%	50%
Isiolo	54%	54%	54%	89%
Meru	58%	82%	36%	31%
Tharaka Nithi	81%	65%	19%	15%
Embu	69%	69%	25%	40%
Kitui	83%	53%	26%	22%
Machakos	65%	52%	38%	29%
Makueni	89%	89%	46%	41%
Nyandarua	62%	62%	31%	31%
Nyeri	89%	100%	55%	66%
Kirinyaga	89%	93%	50%	50%
Muranga	87%	80%	34%	21%
Kiambu	55%	76%	49%	45%
Turkana	57%	24%	10%	15%
West Pokot	25%	25%	25%	25%
Samburu	53%	44%	44%	47%
Trans Nzoia	62%	38%	23%	31%
Uasin Gishu	95%	64%	58%	54%
Elgeyo Marakwet	64%	46%	36%	0%
Nandi	43%	45%	38%	45%
Baringo	28%	28%	20%	15%
Laikipia	72%	91%	46%	21%
Nakuru	84%	59%	62%	40%
Narok	75%	92%	67%	48%
Kajiado	59%	88%	70%	68%
Kericho	51%	51%	32%	32%
Bomet	75%	75%	25%	25%
Kakamega	75%	46%	41%	11%
Vihiga	28%	46%	64%	0%
Bungoma	41%	72%	19%	17%
Busia	24%	46%	39%	24%

County	Surgical Site Infections (SSI)	Central Line Associated Blood Stream Infections (CLABSI)	Catheter Associated Urinary Tract Infections (CAUTI)	Ventilator Associated Pneumonia (VAP)
Siaya	39%	63%	48%	24%
Kisumu	65%	58%	47%	28%
Homa Bay	50%	20%	12%	25%
Migori	81%	25%	23%	23%
Kisii	44%	90%	42%	43%
Nyamira	56%	7%	7%	7%
Nairobi	59%	54%	44%	39%
National	60%	40%	58%	33%

4.5 Antimicrobial Use, Consumption and Resistance

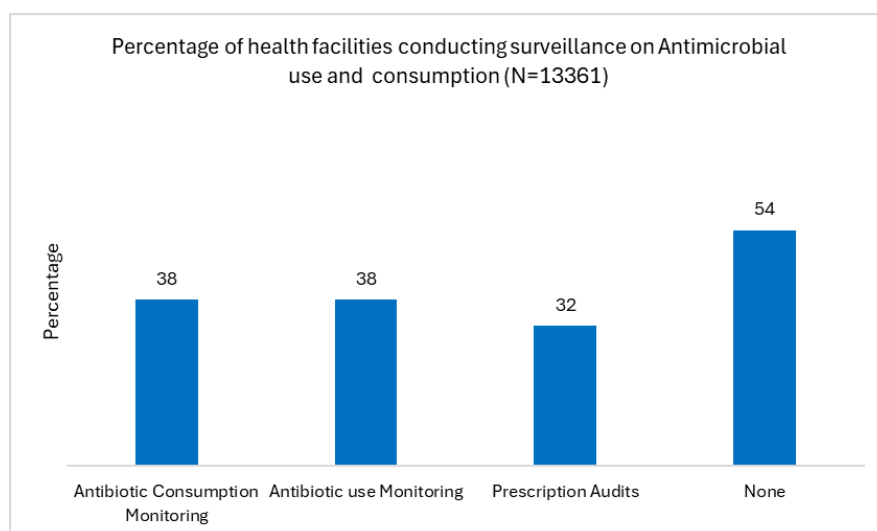
Table 31: Antimicrobial Use, Consumption and Resistance structures and processes

Structures	Processes
Antimicrobial Use and Consumption Monitoring (MOH 285)	
- Anti-Microbial Resistance (AMR) Monitoring (Level 4 &5) - WHO Priority Pathogens (MOH 289) - Reporting of Laboratory AMR Surveillance Data to the National Central Data Warehouse	
- AMR Management - AMR Committees - AMR focal persons - Policies, Guidelines and Action Plans	Frequency of AMR committee meetings

4.5.1 Antimicrobial use and consumption monitoring

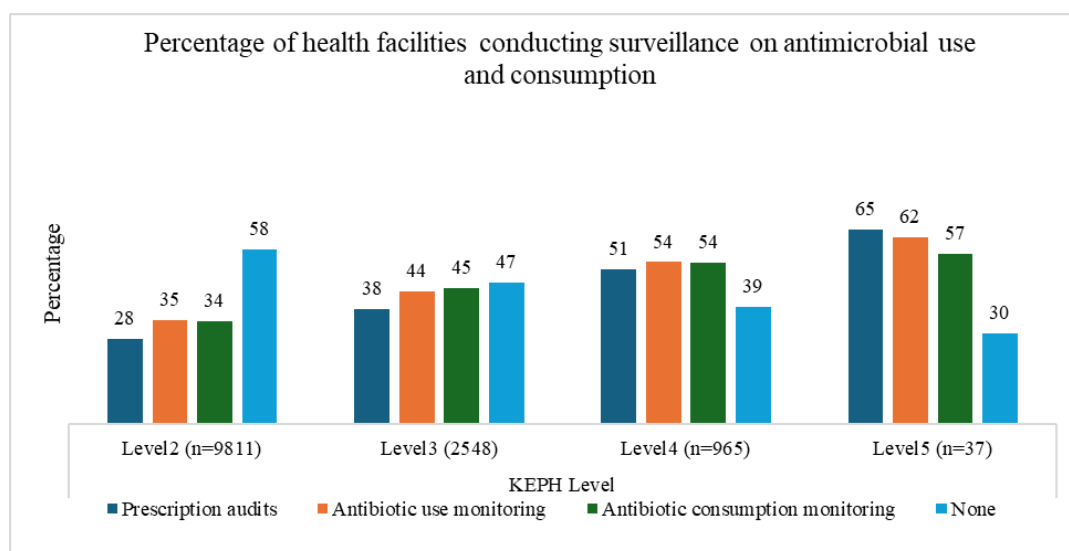
Monitoring of antimicrobial use and consumption in health facilities was below average
 Nationally, 38% of facilities monitored antibiotic use & antibiotic consumption, with about a third (32%) monitoring prescription audits as summarized below.

Figure 49: Percentage of health facilities conducting surveillance on antimicrobial use and consumption (Source: MOH 285 (N=13361))



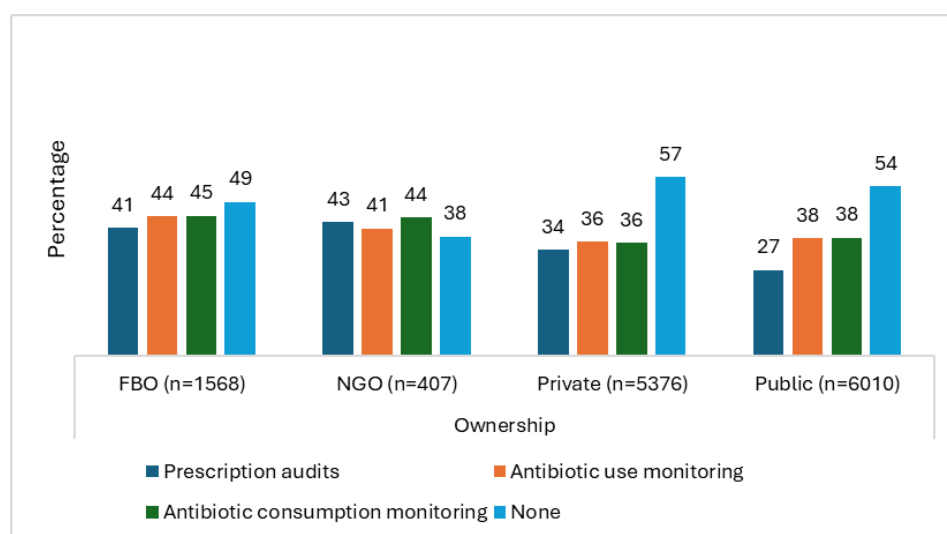
Monitoring antibiotic use and consumption improved with the levels of care. For instance, 65% of level 5 facilities conducted audits of prescriptions and 62% monitored antibiotics use compared to level 2 facilities that did prescription audits and monitored antibiotic use in 28% and 35% of facilities respectively. More than half of level 2 facilities (58%) did not conduct surveillance on antimicrobial use and consumption. A summary is shown in the figure below.

Figure 50: Percentage of health facilities conducting surveillance on antimicrobial use and consumption by KEPH Level, MOH 285



More than half (57%) of privately owned and public hospitals did not conduct any surveillance for antimicrobial use and consumption. Surveillance was most implemented in NGO and FBO owned health facilities

Figure 51: Percentage of health facilities conducting surveillance on antimicrobial use and consumption by Ownership, MOH 285



There was varied performance across counties on monitoring prescription audits, antibiotic use and consumption. Almost all facilities in Kajiado county monitored antibiotic use and consumption. A summary on monitoring of antibiotic use and consumption across counties is shown in the table below.

Table 32: Percentage of health facilities conducting surveillance on antimicrobial use and consumption by county

County	Prescription audits	Antibiotic use monitoring	Antibiotic consumption monitoring
Mombasa	38%	47%	47%
Kwale	26%	27%	32%
Kilifi	37%	45%	48%
Tana River	12%	12%	12%
Lamu	24%	5%	5%
Taita Taveta	25%	52%	41%
Garissa	47%	48%	34%
Wajir	18%	22%	14%
Mandera	22%	22%	21%
Marsabit	5%	5%	5%
Isiolo	49%	52%	47%
Meru	35%	36%	37%
Tharaka Nithi	13%	22%	21%
Embu	30%	43%	36%
Kitui	9%	10%	10%
Machakos	21%	24%	23%
Makueni	15%	39%	56%
Nyandarua	51%	57%	57%
Nyeri	18%	16%	28%
Kirinyaga	41%	47%	44%
Muranga	9%	17%	17%



County	Prescription audits	Antibiotic use monitoring	Antibiotic consumption monitoring
Kiambu	28%	29%	29%
Turkana	34%	35%	32%
West Pokot	35%	37%	43%
Samburu	36%	48%	37%
Trans Nzoia	26%	31%	35%
Uasin Gishu	47%	47%	35%
Elgeyo Marakwet	15%	20%	19%
Nandi	19%	48%	49%
Baringo	48%	49%	46%
Laikipia	46%	57%	54%
Nakuru	31%	50%	47%
Narok	36%	30%	22%
Kajiado	59%	99%	97%
Kericho	10%	15%	8%
Bomet	63%	64%	63%
Kakamega	49%	57%	63%
Vihiga	0%	2%	3%
Bungoma	38%	36%	40%
Busia	62%	67%	66%
Siaya	41%	50%	58%
Kisumu	22%	25%	20%
Homa Bay	32%	47%	44%
Migori	24%	34%	36%
Kisii	6%	8%	8%
Nyamira	72%	74%	69%
Nairobi	45%	42%	44%
National	32%	38%	38%

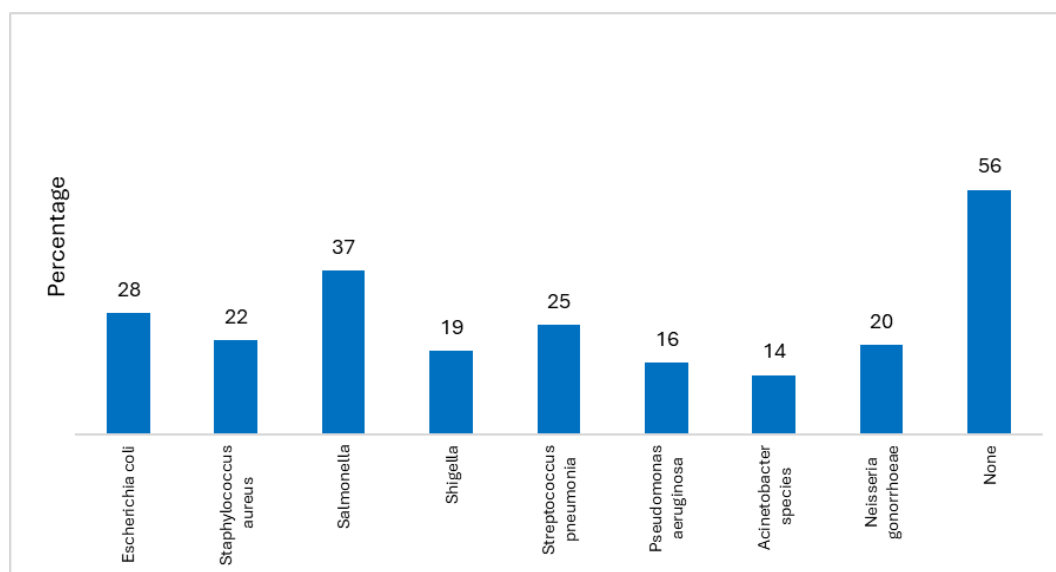
4.5.2 Antimicrobial Resistance

Monitoring systems for AMR were assessed in level 4 and 5 facilities.

Monitoring of WHO Priority Pathogens

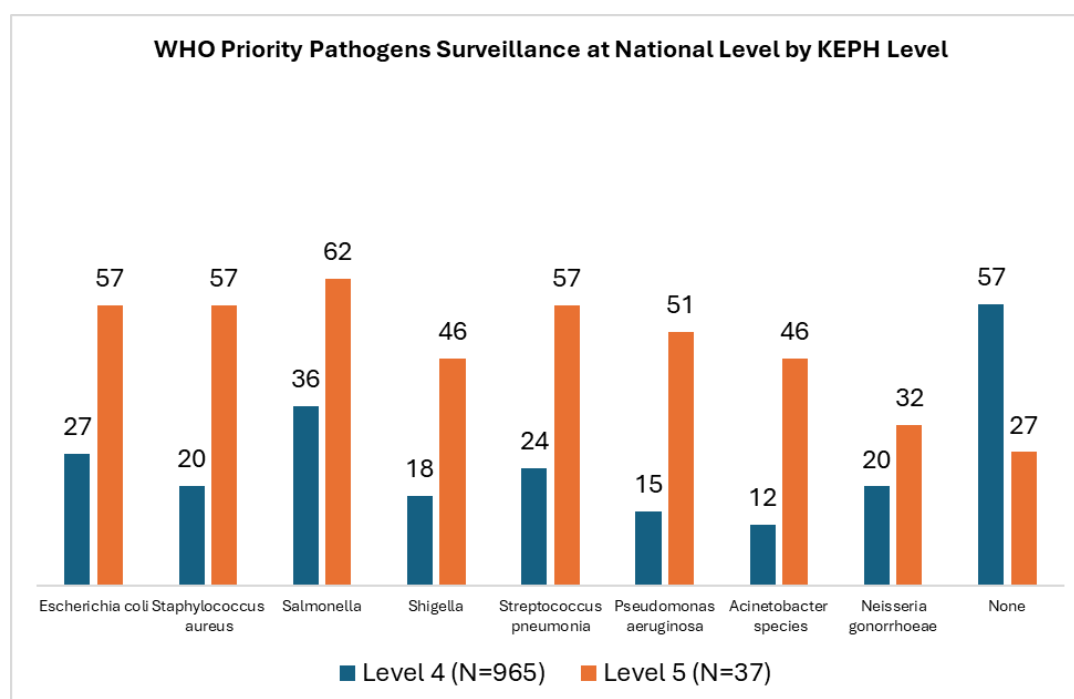
Slightly more than half of facilities (56%) did not conduct surveillance for any of the WHO priority pathogens. Among those that did, a significant proportion focused on monitoring *Salmonella* (37%) and *Escherichia coli* (28%), while the lowest surveillance was for *Acinetobacter* species at 14%.

Figure 52: Percentage of health facilities that monitored WHO priority Pathogens MOH 289 (n=1002)



Surveillance for WHO priority pathogens was predominantly done in level 5 facilities compared to level 4 facilities for all listed pathogens. More than half (57%) of level 4 facilities did not conduct surveillance for any of the priority pathogens, as shown in the figure below

Figure 53: Percentage of health facilities that monitored WHO priority Pathogens Surveillance by KEPH Level, MOH 289



Kajiado county had the highest proportion of facilities that monitored all the listed WHO priority pathogens. Several counties did not monitor some of the pathogens as shown in the table below;

Table 33: Percentage of health facilities that monitored WHO priority Pathogens MOH 289 (n=1002) by county

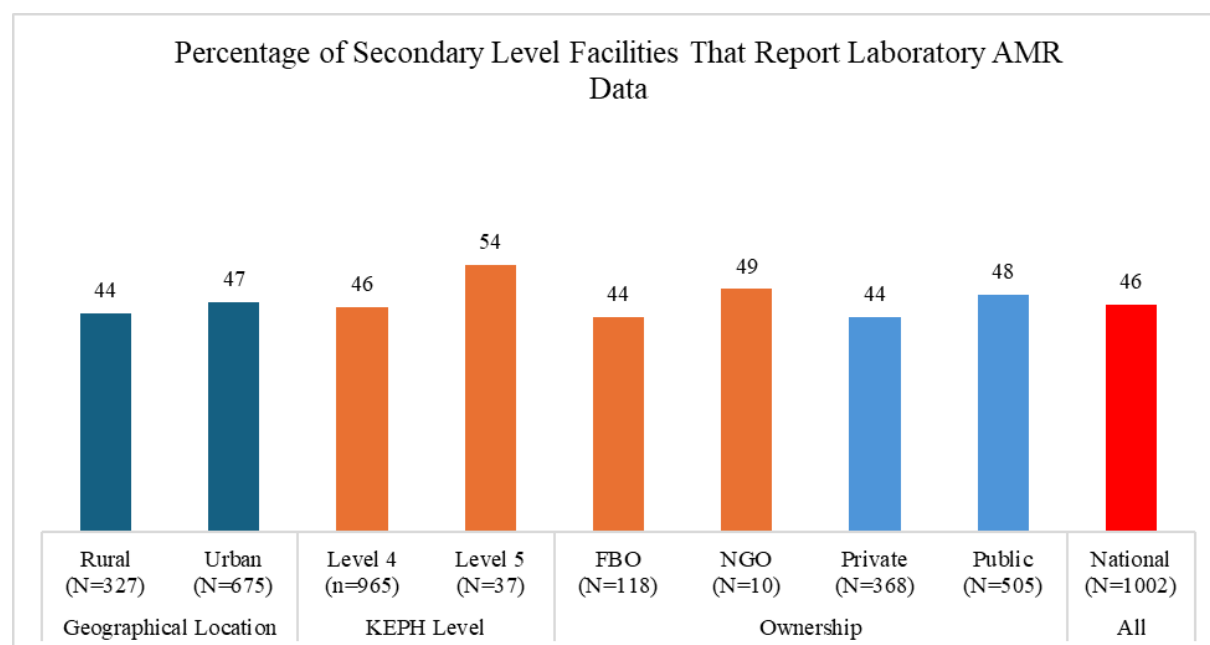
County	Escherichia coli	Staphylococcus aureus	Salmonella	Shigella	Streptococcus pneumoniae	Pseudomonas aeruginosa	Acinetobacter species	Neisseria gonorrhoeae
Mombasa	68%	68%	58%	39%	68%	39%	39%	48%
Kwale	13%	13%	13%	0%	13%	13%	0%	13%
Kilifi	25%	25%	25%	25%	38%	25%	19%	31%
Tana River	0%	0%	0%	0%	0%	0%	0%	0%
Lamu	0%	0%	0%	20%	0%	0%	0%	0%
Taita Taveta	29%	29%	29%	29%	29%	29%	14%	29%
Garissa	53%	10%	53%	10%	5%	5%	10%	10%
Wajir	27%	18%	32%	23%	14%	14%	9%	5%
Mandera	11%	0%	11%	5%	16%	0%	0%	5%
Marsabit	0%	0%	22%	11%	0%	0%	0%	0%
Isiolo	83%	67%	67%	50%	50%	33%	17%	50%
Meru	34%	26%	59%	28%	34%	23%	15%	26%
Tharaka Nithi	36%	18%	45%	0%	36%	0%	9%	9%
Embu	12%	12%	12%	12%	12%	12%	12%	12%
Kitui	10%	10%	15%	5%	10%	5%	5%	5%
Machakos	36%	30%	41%	19%	25%	14%	9%	21%
Makueni	22%	22%	48%	17%	17%	13%	9%	17%
Nyandarua	20%	20%	40%	0%	20%	20%	0%	20%
Nyeri	22%	22%	22%	14%	22%	22%	22%	14%
Kirinyaga	29%	24%	18%	6%	29%	35%	12%	12%
Muranga	7%	7%	13%	7%	7%	7%	7%	7%
Kiambu	32%	13%	21%	9%	15%	13%	7%	13%
Turkana	25%	25%	42%	25%	25%	8%	8%	17%
West Pokot	0%	0%	0%	0%	0%	0%	0%	0%
Samburu	20%	0%	0%	20%	0%	0%	0%	20%
Trans Nzoia	29%	14%	50%	14%	36%	14%	14%	29%
Uasin Gishu	34%	34%	70%	14%	34%	24%	9%	29%
Elgeyo Marakwet	0%	0%	22%	11%	0%	0%	0%	0%
Nandi	38%	38%	46%	23%	46%	38%	23%	38%
Baringo	25%	8%	25%	8%	17%	17%	0%	17%
Laikipia	40%	47%	60%	13%	27%	20%	7%	0%
Nakuru	23%	23%	48%	37%	44%	23%	27%	30%
Narok	22%	11%	22%	0%	22%	0%	0%	11%
Kajiado	90%	75%	95%	75%	65%	60%	55%	80%
Kericho	31%	25%	63%	19%	50%	6%	13%	31%
Bomet	50%	50%	63%	50%	50%	38%	25%	50%
Kakamega	33%	24%	33%	14%	29%	19%	19%	24%
Vihiga	0%	7%	7%	0%	7%	0%	0%	7%
Bungoma	35%	40%	40%	20%	30%	20%	15%	35%
Busia	31%	31%	38%	23%	31%	23%	23%	31%
Siaya	33%	24%	52%	38%	24%	10%	10%	29%

County	Escherichia coli	Staphylococcus aureus	Salmonella	Shigella	Streptococcus pneumoniae	Pseudomonas aeruginosa	Acinetobacter species	Neisseria gonorrhoeae
Kisumu	14%	11%	32%	19%	14%	11%	14%	10%
Homa Bay	24%	10%	62%	10%	28%	0%	0%	24%
Migori	8%	13%	25%	8%	13%	0%	0%	4%
Kisii	5%	0%	8%	3%	0%	2%	3%	8%
Nyamira	10%	10%	30%	20%	30%	0%	0%	30%
Nairobi	31%	24%	38%	25%	30%	28%	25%	23%
Kenya	28%	22%	37%	19%	25%	16%	14%	20%

Reporting of Laboratory AMR Surveillance Data to the National Central Data Warehouse

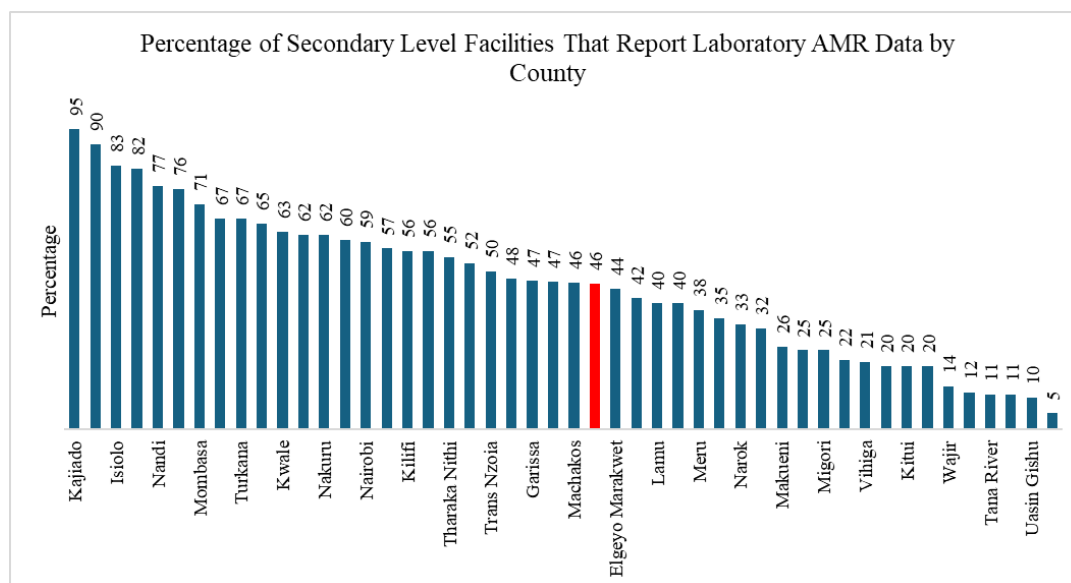
Out of all level 4 and 5 facilities in Kenya, 46% reported laboratory AMR data to the Central Data Warehouse. Urban facilities constitute a higher percentage (47%) of those reporting compared to rural facilities. Level 5 facilities had a higher percentage (54%) reporting AMR data. Regarding facility management, NGO-managed facilities had the highest proportion of facilities reporting AMR surveillance data (49%), followed closely by public facilities (48%).

Figure 54: Percentage of levels 4 and 5 health facilities that reported on Laboratory AMR data to the Central Data Warehouse at National Level



Kajiado and Nyamira counties had the highest proportion of health facilities that reported laboratory AMR data to the central data warehouse at the national level at 95% and 90% respectively. The least proportion of reporting facilities was in Mandera county at 5%. A summary is provided in the chart below.

A decorative banner featuring a collage of financial data visualizations. It includes a pie chart with a segment labeled '268', a line graph with data points like '2,000', '1,500', and '1,000', a bar chart with values such as '5,000', '4,000', '3,000', and '2,000', and a small table with columns '0', '1', and '2'. The entire banner is overlaid with a semi-transparent blue gradient.

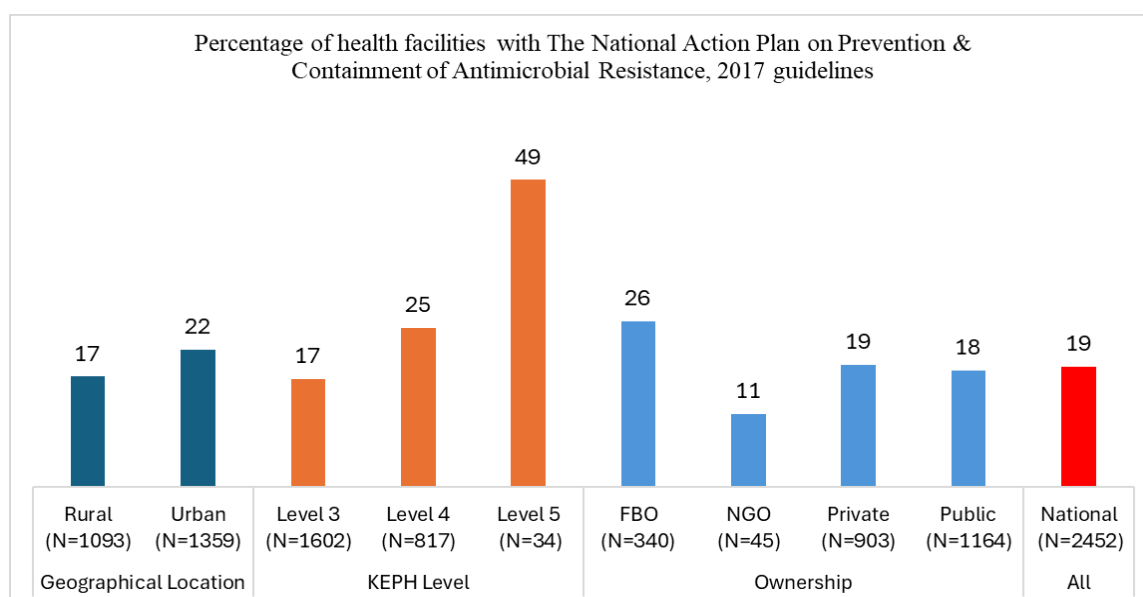


Availability of the Guidelines/Strategies on AMR

The National Policy and Action Plan for Antimicrobial Resistance provides strategic guidance on the prioritized interventions with the most impact in preventing and controlling AMR. It also provides an implementation framework for stakeholders at all levels.

Availability of the National Policy and Action Plan for Antimicrobial resistance was extremely low, with only 19% of health facilities having the National Action Plan on prevention and containment of AMR. These guidelines were most available in level 5 and 4 facilities when compared with level 3 facilities, at 49% for level 5 facilities, 25% for level 4, and 17% for level 3 facilities, as shown in the figure below.

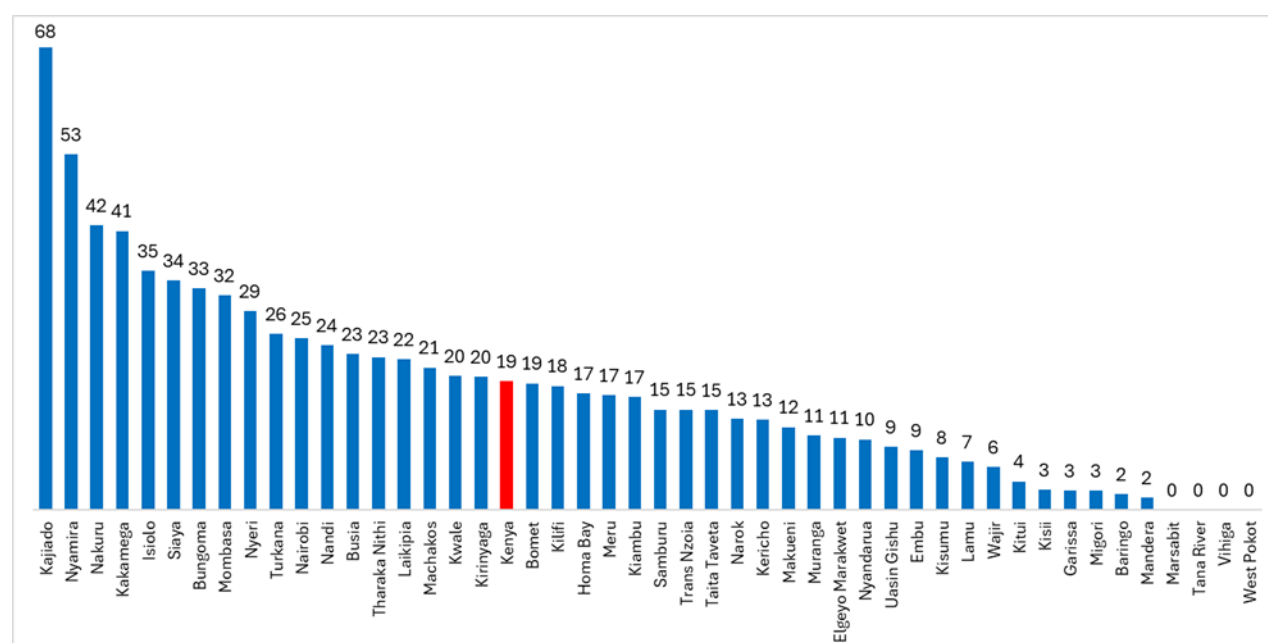
Figure 56: Percentage of health facilities that had the National Action Plan on Prevention & Containment of Antimicrobial Resistance, 2017



There was a variation in levels of availability of the national action plan on prevention and containment of AMR across counties with 68% of facilities in Kajiado county having it. The action plan was missing in all facilities in Marsabit, Tana River, Vihiga and West Pokot counties.

A summary is provided in the figure below;

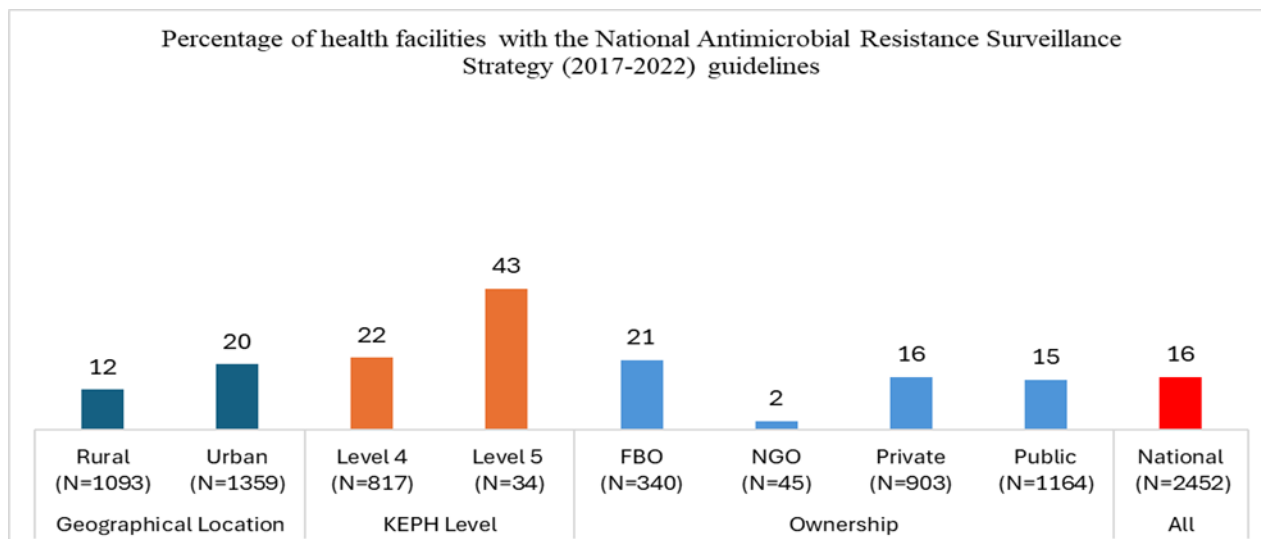
Figure 57: Percentage of health facilities that had the National Action Plan on Prevention & Containment of Antimicrobial Resistance, 2017 by county



Availability of the National Antimicrobial Resistance Surveillance Strategy (2017-2022)

Less than a fifth of facilities (16%) reported having the national AMR surveillance strategy. The availability was lowest in NGO and public facilities at 2% and 15% respectively. Availability of this strategy was highest in level 5 facilities (43%) compared to 22% of level 4 facilities as shown below.

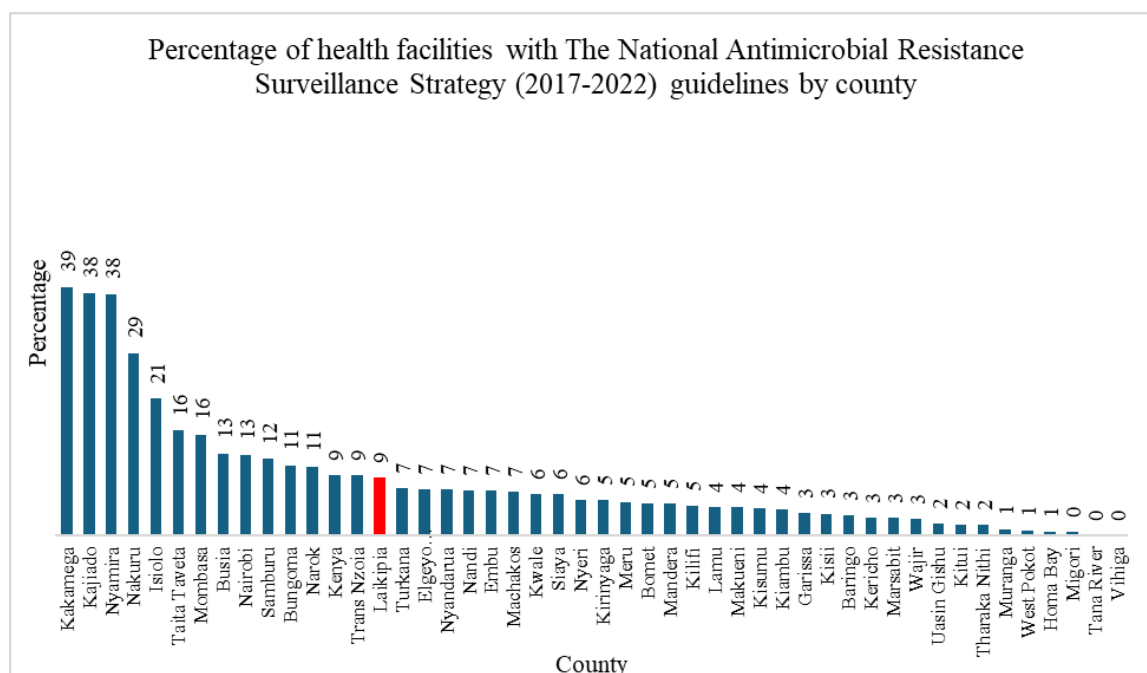
Figure 58: Percentage of health facilities that had the National Antimicrobial Resistance Surveillance Strategy (2017-2022)



Health facilities in Kajiado, Nakuru, Nyamira and Kakamega counties had the highest availability of the national AMR surveillance strategy (63%,54%,41% and 40% respectively). None of health facilities in Kitui,Marsabit,,Tana River and Vihiga counties had the strategy as seen in the figure below

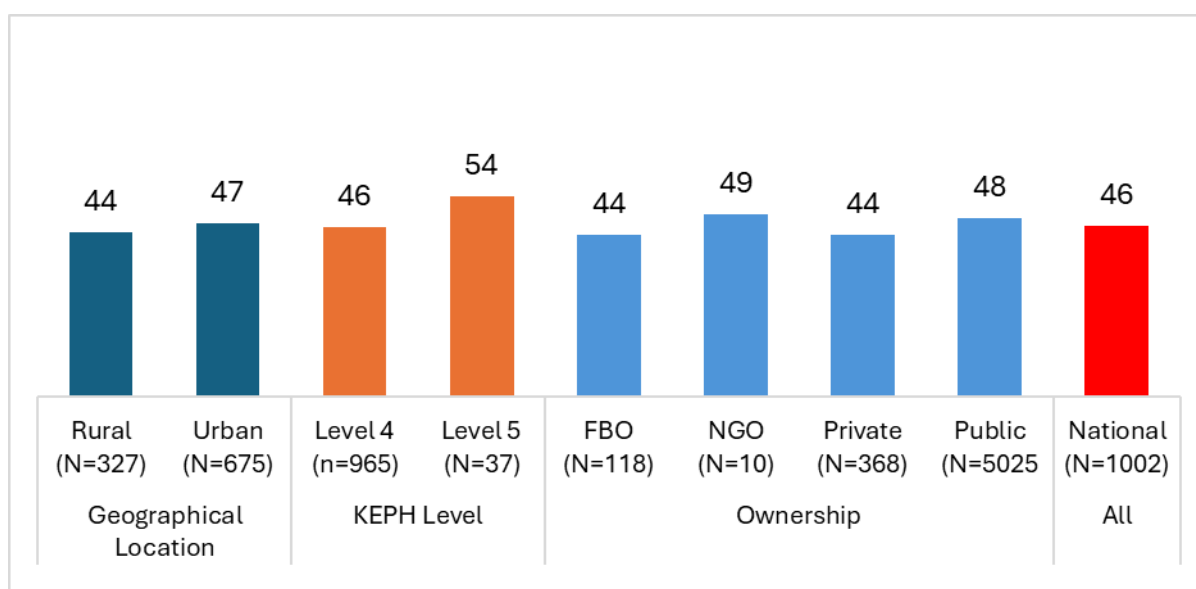


Figure 59: Percentage of health facilities that had the National Antimicrobial Resistance Surveillance Strategy (2017-2022) by county



About half (46%) of all Level 4's and 5's had a functional multidisciplinary antimicrobial stewardship committee/ team in place. This was available in more than half of Level 5 facilities (54%) compared to 46% of level 4 facilities. Private and FBO's facilities had the lowest performance (44% of their facilities) compared to 49% and 48% of NGO and public facilities respectively as shown in the chart below;

Figure 60: Percentage of health facilities that had a functional Multidisciplinary Antimicrobial Stewardship committee/team



Frequency of AMR Committee meetings

The AMR committee met monthly in 47% of the facilities, quarterly in 37%, weekly in 10% and at no set frequency in 6% of health facilities.

Figure 61: Percentage of health facilities that have a functional Multidisciplinary Antimicrobial Stewardship committee meeting at National Level (N=317)

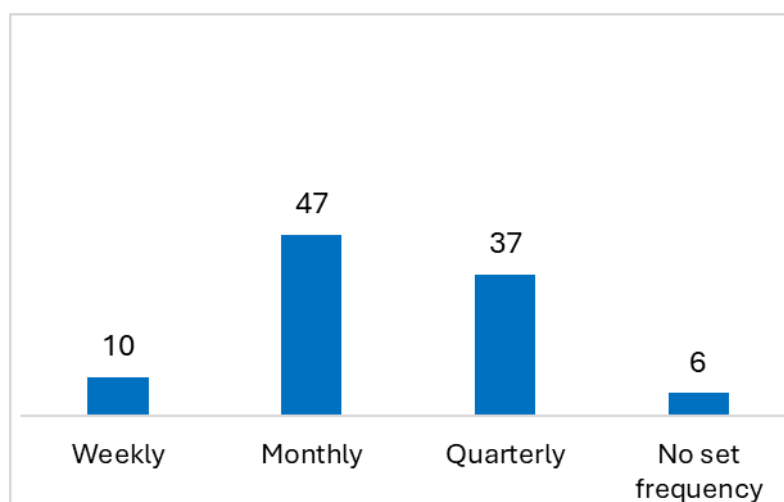


Table 34: Infections and AMR key findings and recommendations

Area	Key Findings	Recommendations
Policy environment	- Availability of patient and health care worker safety, AMR and IPC policies, strategies and guidelines in health facilities was extremely low, thus affecting provision of quality services and overall health outcomes. - Governance structures to oversee the implementation of IPC and AMR interventions were missing in most health facilities thus slowing implementation of AMR and IPC interventions and ultimately compromising on quality and safety of health services	- Dissemination and distribution of the National policies, strategy and action plan for IPC, AMR, patient safety and quality of care - Provide the necessary technical assistance for surveillance on incidents and adverse events - Strengthen governance structures for AMR, IPC, Patient safety and quality of care

Area	Key Findings	Recommendations
Training	The capacity of health facilities to report on AMR surveillance data was low in level 4 and 5 health facilities in most counties. This compromised on efforts to prevent and contain AMR which is now a public health threat.	- Provide training to the counties on AMR, IPC, patient safety and quality of care - Encourage cross learning practices across counties that demonstrate best practices for AMR, IPC, Patient safety and quality of care

An analysis of the percentage of facilities that had a functional multidisciplinary antimicrobial stewardship committee with the frequency of meetings by county is summarized in the table below

Figure 62: Percentage and frequency of facilities that have a functional Multidisciplinary Antimicrobial Stewardship Committee

	Facilities that have a functional Multidisciplinary Antimicrobial Stewardship committee	Number of Facilities	Weekly	Monthly	Quarterly	No set frequency
By County						
Baringo	42%	13	40%	40%	20%	0%
Bomet	38%	8	0%	33%	67%	0%
Bungoma	50%	20	20%	40%	40%	0%
Busia	38%	15	20%	40%	20%	20%
Elgeyo Marakwet	33%	9	0%	33%	67%	0%
Embu	32%	11	0%	36%	28%	36%
Garissa	29%	29	33%	50%	0%	17%
Homa Bay	38%	29	27%	45%	27%	0%
Isiolo	33%	6	0%	100%	0%	0%
Kajiado	90%	26	11%	44%	44%	0%
Kakamega	45%	22	10%	40%	50%	0%
Kericho	13%	16	0%	50%	50%	0%
Kiambu	21%	55	0%	36%	64%	0%
Kilifi	44%	16	14%	29%	43%	14%
Kirinyaga	65%	17	0%	55%	27%	18%
Kisii	2%	47	0%	100%	0%	0%

	Facilities that have a functional Multidisciplinary Antimicrobial Stewardship committee	Number of Facilities	Weekly	Monthly	Quarterly	No set frequency
Kisumu	40%	53	0%	66%	34%	0%
Kitui	5%	20	0%	0%	100%	0%
Kwale	50%	8	25%	0%	50%	25%
Laikipia	27%	15	0%	25%	75%	0%
Lamu	20%	5	0%	0%	0%	100%
Machakos	36%	30	0%	40%	30%	30%
Makueni	22%	23	0%	40%	40%	20%
Mandera	0%	19	0%	0%	0%	0%
Marsabit	11%	9	0%	0%	0%	100%
Meru	25%	35	15%	46%	39%	0%
Migori	21%	33	20%	20%	60%	0%
Mombasa	32%	29	0%	45%	55%	0%
Muranga	27%	17	0%	25%	25%	50%
Nairobi	36%	114	0%	73%	27%	0%
Nakuru	51%	48	31%	55%	14%	0%
Nandi	23%	13	0%	33%	67%	0%
Narok	22%	9	0%	50%	50%	0%
Nyamira	70%	11	14%	57%	29%	0%
Nyandarua	20%	5	0%	100%	0%	0%
Nyeri	61%	16	0%	13%	87%	0%
Samburu	0%	5	0%	0%	0%	0%
Siaya	19%	23	0%	75%	25%	0%
Taita Taveta	29%	7	0%	0%	100%	0%
Tana River	0%	9	0%	0%	0%	0%
Tharaka Nithi	18%	11	50%	50%	0%	0%
Trans Nzoia	57%	14	13%	50%	38%	0%
Turkana	33%	12	0%	25%	75%	0%
Uasin Gishu	20%	29	25%	50%	0%	25%
Vihiga	29%	14	0%	50%	25%	25%
Wajir	5%	22	0%	0%	100%	0%
West Pokot	20%	5	0%	0%	100%	0%
By type						
Level2	0%	0	0%	0%	0%	0%
Level3	0%	0	0%	0%	0%	0%
Level4	30%	965	10%	48%	36%	6%
Level5	68%	37	8%	44%	48%	0%
By managing authority						
FBO	40%	118	2%	71%	24%	2%
NGO	43%	10	33%	67%	0%	0%



	Facilities that have a functional Multidisciplinary Antimicrobial Stewardship committee	Number of Facilities	Weekly	Monthly	Quarterly	No set frequency
Private	27%	368	13%	55%	29%	3%
Public	33%	505	10%	35%	46%	9%
By location						
Rural	25%	327	15%	47%	35%	3%
Urban	35%	675	8%	47%	37%	7%
All	32%	1002	10%	47%	37%	6%

4.6 Patient Incidents and Errors

Health care systems are required to have mechanisms in place to prevent and reduce risk, errors, and avoidable harm that can occur to patients during the provision of health care, as well as protection of health care workers from occupational risks, hazards, and accidents at the workplace.

Table 35: Patient incidents and errors structures

Structures	Processes
Surveillance for patient safety incidents (MOH 288)	
Surveillance for specific Errors • Medical • Surgical • Blood Transfusion	
Policies, Action plans, guidelines	

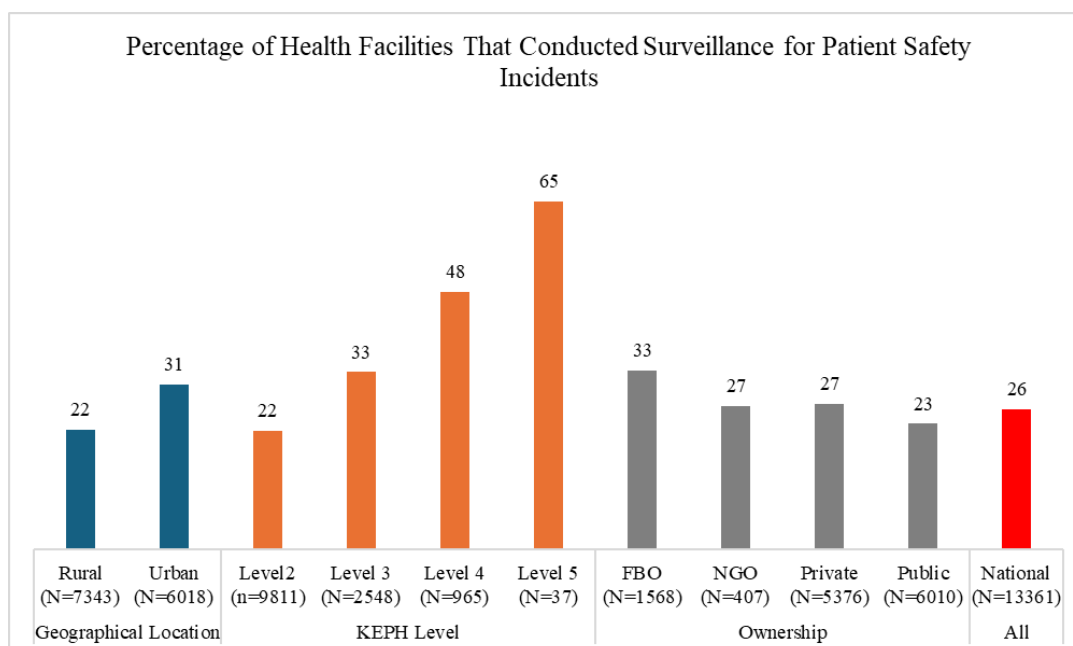
4.6.1 Surveillance for patient safety incidents

Surveillance for patient safety incidents in health facilities was generally low, with only level 5 facilities performing above average.

Findings from the survey reveal that a significant number of facilities did not engage in surveillance for patient safety incidents. Only 26% health facilities conducted surveillance for patient safety incidents. Many facilities conducting surveillance for patient safety incidents were Level 5 (65%). There was little variation in the proportion of facilities conducting this surveillance across all ownership categories. A summary is provided in the figure below;

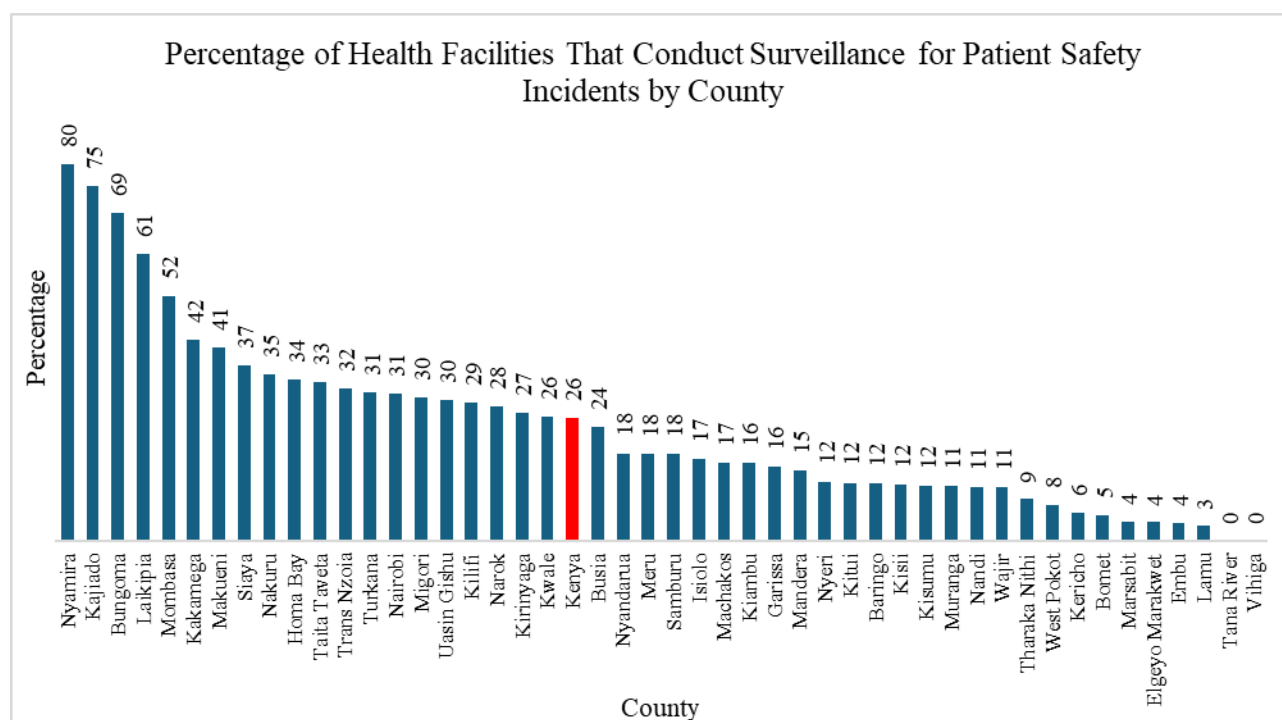


Figure 63: Percentage of health facilities that conducted surveillance for patient safety incidents ((MOH 288)



Nyamira and Kajiado counties had the highest proportion of facilities that carried out surveillance on patient safety incidents (80% and 74% respectively). None of the facilities in Vihiga and Tana River counties monitored patient safety incidents as shown in the figure below;

Figure 64: Percentage of Health Facilities That Conduct Surveillance for Patient Safety Incidents by County (MOH 288) (N=13361)



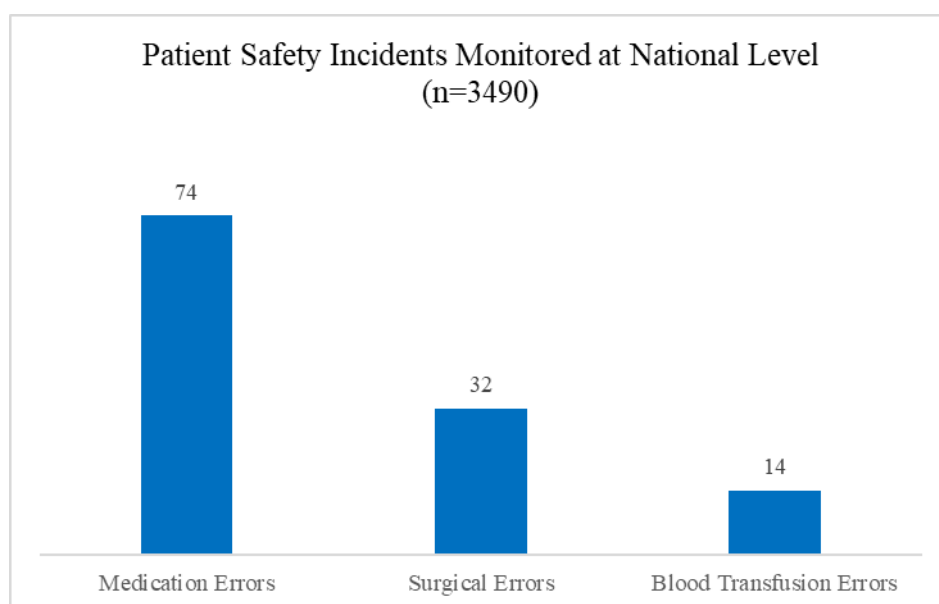
4.6.2 Surveillance for Medication Errors

Surveillance for medication errors in health facilities was more enhanced compared to other patient safety incidents with surveillance for all patient safety incidents improving with the level of care.

The survey assessed health facilities' surveillance for specific patient safety incidents including medication errors, surgical errors, and blood transfusion errors. This information was captured from the patient safety surveillance register, MOH 288.

Medication errors were the most monitored patient safety incident (74% of facilities), while blood transfusion errors were the least monitored (14% of facilities), as illustrated in the figure below;

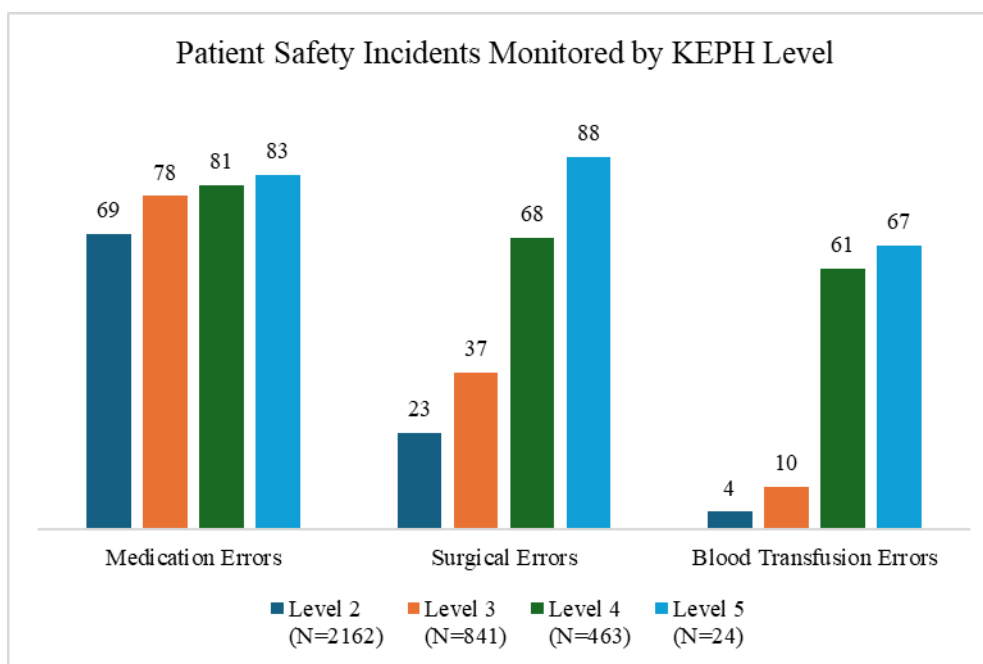
Figure 65: Percent of health facilities that monitored specific patient safety incidents (n=3490)



Medication errors were fairly monitored across all levels of care (over 80% of level 5 & 4, 78% of Level 3 and 69% of level 2 facilities). However, surgical errors and blood transfusion errors were least monitored in level 2 and 3 facilities with only 4% of level 2 and 10% of level 3 facilities monitoring blood transfusion errors. A summary is shown in the figure below.

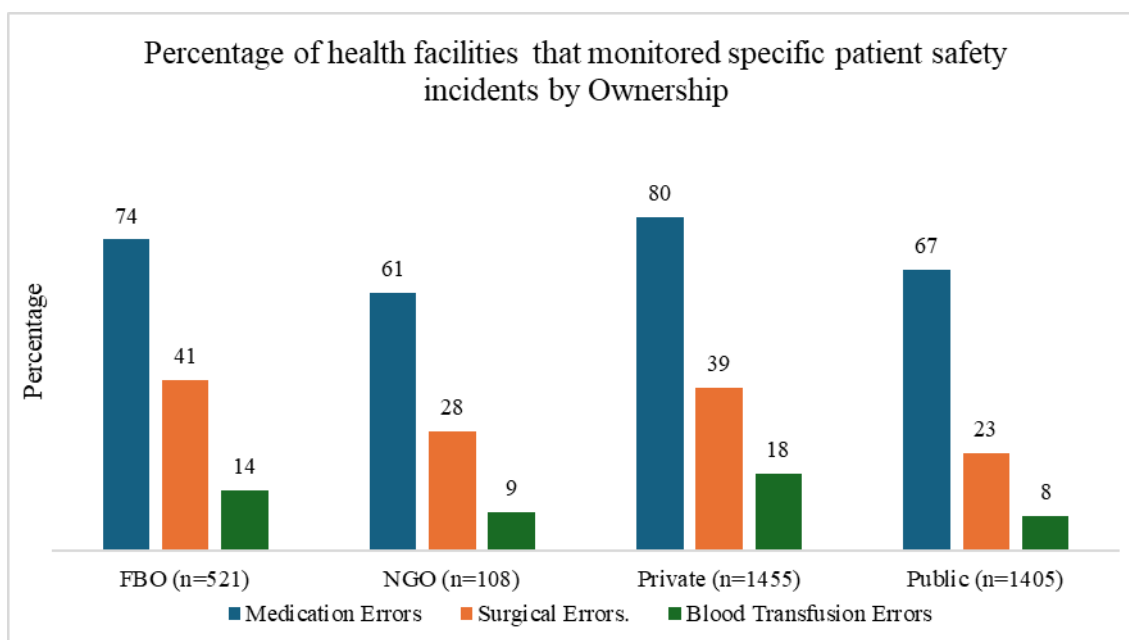


Figure 66: Percentage of health facilities that monitored specific patient safety incidents by KEPH level (MOH 288) n=3490



Medication errors and blood transfusion errors were best monitored in private facilities at 80% and 18% of facilities respectively compared to other facility ownership categories. Surgical errors were mostly monitored by faith-based facilities (41% of the facilities) compared to 23% of public facilities as illustrated in the chart below;

Figure 67: Percentage of health facilities that monitored specific patient safety incidents by ownership category (MOH 288) n=3490



All health facilities in Busia and Kisumu counties monitored medication errors while none of the facilities in Vihiga, Lamu and Embu monitored medication errors. Surgical errors were best

monitored in Kakamega and Kirinyaga counties 72% and 68% of their facilities respectively. The highest proportion of facilities that monitored blood transfusion errors were in Isiolo county (40%) as shown in the table below;

Table 36: Facilities monitoring errors by county

County	% Facilities monitoring Medication Errors	% of Facilities monitoring Surgical Errors (%)	% of Facilities monitoring Blood Transfusion Errors
Mombasa	80%	29%	14%
Kwale	52%	13%	10%
Kilifi	70%	12%	11%
Lamu	0%	0%	0%
Taita Taveta	50%	37%	16%
Garissa	90%	46%	17%
Wajir	47%	5%	5%
Mandera	89%	48%	7%
Marsabit	65%	0%	17%
Isiolo	84%	47%	39%
Meru	93%	44%	14%
Tharaka Nithi	88%	24%	6%
Embu	0%	0%	0%
Kitui	49%	4%	7%
Machakos	91%	53%	36%
Makueni	87%	16%	10%
Nyandarua	69%	27%	3%
Nyeri	64%	29%	22%
Kirinyaga	80%	69%	20%
Muranga	84%	63%	27%
Kiambu	64%	67%	21%
Turkana	92%	44%	3%
West Pokot	41%	33%	33%
Samburu	96%	65%	4%
Trans Nzoia	57%	18%	15%
Uasin Gishu	61%	42%	19%
Elgeyo Marakwet	83%	55%	28%
Nandi	83%	37%	28%
Baringo	16%	13%	13%
Laikipia	85%	13%	9%
Nakuru	51%	25%	14%
Narok	31%	25%	12%
Kajiado	93%	36%	13%
Kericho	93%	54%	21%
Bomet	21%	21%	0%
Kakamega	89%	72%	18%
Bungoma	75%	13%	13%



County	% Facilities monitoring Medication Errors	% of Facilities monitoring Surgical Errors (%)	% of Facilities monitoring Blood Transfusion Errors
Busia	100%	34%	8%
Siaya	55%	21%	15%
Kisumu	100%	25%	9%
Homa Bay	63%	26%	6%
Migori	76%	42%	4%
Kisii	78%	23%	23%
Nyamira	91%	39%	11%
Nairobi	60%	30%	12%
National	73%	33%	13%

4.6.3 Policies and Guidelines for Patient Safety

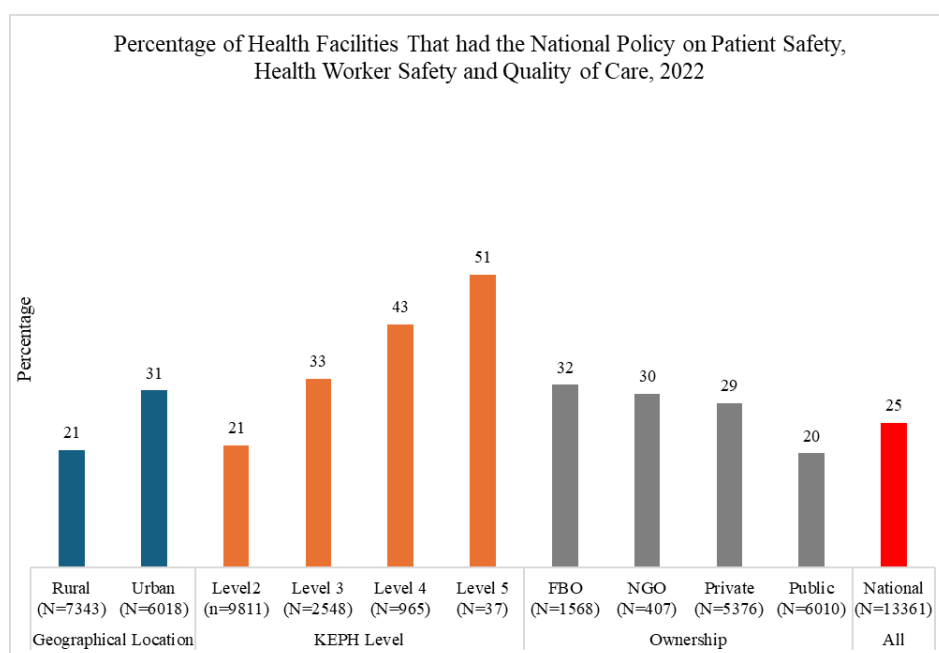
The patient safety, health worker safety and quality of care guides enhancing a safe environment for patients and healthcare workers to ensure safety and quality of health care services are provided. It provides a comprehensive framework through which the health system will be transformed to deliver quality & patient-centered services.

Nationwide, about one in every four facilities (25%) had the National Policy on Patient Safety, Health worker safety and Quality of care 2022. Higher level facilities had a higher probability of having the policy (51% for level 5 and 43% for level 4 compared to 21% and 33% for level 2 and 3 respectively).

Public facilities had the least proportion of their facilities having the policy at 20% compared to 32% of faith-based facilities. These findings are summarized in the figure below.

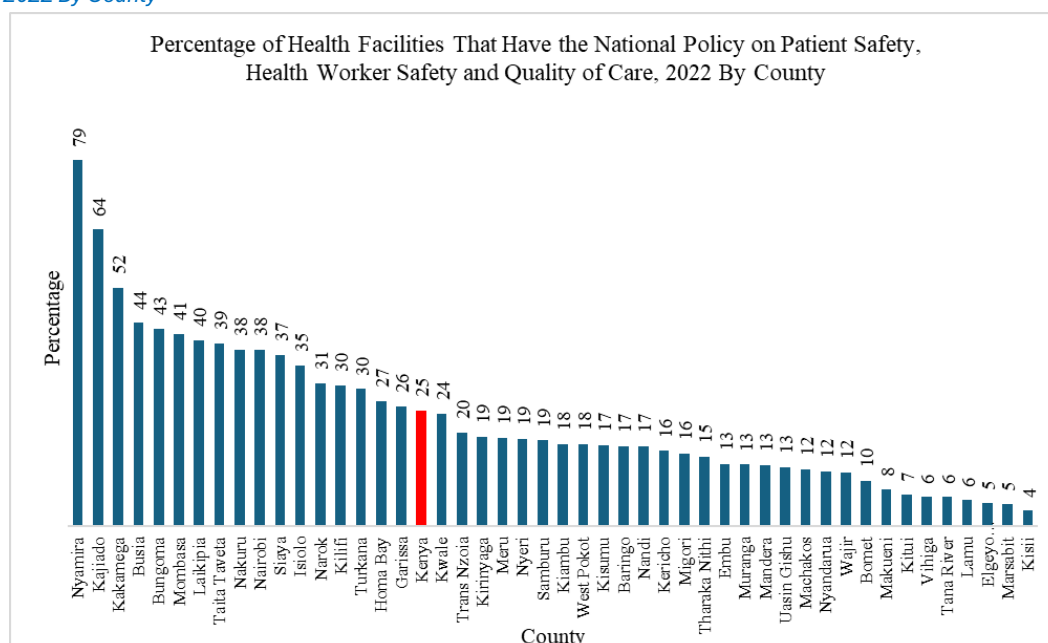


Figure 68: Percentage of health facilities that had the National Policy on Patient Safety, Health Worker Safety and Quality of Care, 2022



The findings revealed a wide variation on availability of the policy across the counties, with Nyamira and Kajiado counties having the highest proportion of facilities that had the policy (79% and 64% respectively). The policy was least available in Kisii and Marsabit counties as shown in the figure below;

Figure 69: Percentage of Health Facilities That Have the National Policy on Patient Safety, Health Worker Safety and Quality of Care, 2022 By County



5. Human Resource Availability

5.1 Total Health Workforce

Human Resource for Health (HRH) is a critical component of assessing and monitoring the performance and quality of health services worldwide and a crucial determinant of the quality of health that a country/organization avails to its population. The overall objective of the MTP III (the third generation of the medium-term plans of the Kenya Vision 2030) in 2018 included 5 areas targeted to accelerate the attainment of Universal Health Coverage; one of the areas was enhancing the human resource capacity for health service provision.

The 2024 QOC assessment demonstrates the commitment of the Kenyan government in unearthing the challenges facing the health system with the intention of making remedial measures. In terms of HRH, the assessment focused on the following areas:

Table 37: HRH assessment focus

Active Health Worker Stock	Medical Worker Density
Medical: Non-Medical Ratio	
- Distribution - Gender - Cadre - Age - Terms of Engagement	- Distribution - Cadre - KEPH Level - Ownership
Norms and Standards:	Density

5.1.1 Active Health Worker Stock

The distribution of the health workforce is essential for ensuring equitable access to healthcare. An effective workforce distribution reduces health disparities, improves health outcomes, enhances health system efficiency, and addresses population health needs. Policymakers, healthcare providers, and stakeholders must work together to develop policies and strategies for effective workforce distribution which ensures that healthcare is accessible to those who need it and not only those who can afford it.

Table 38: Healthcare workers methodological note

Methodological Note:

The human resource roster, the data collection tool used to collect the active health workforce stock, reflected the number at two different levels

- Data that were collected as **aggregate per facility** and not disaggregated to individual level. This applies where the N=221,108 as in the medical/non-medical ratio
- Data that was collected at **individual level** (health worker), verified and aggregated to give the totals used in all the distributions and densities. (N=120,47)

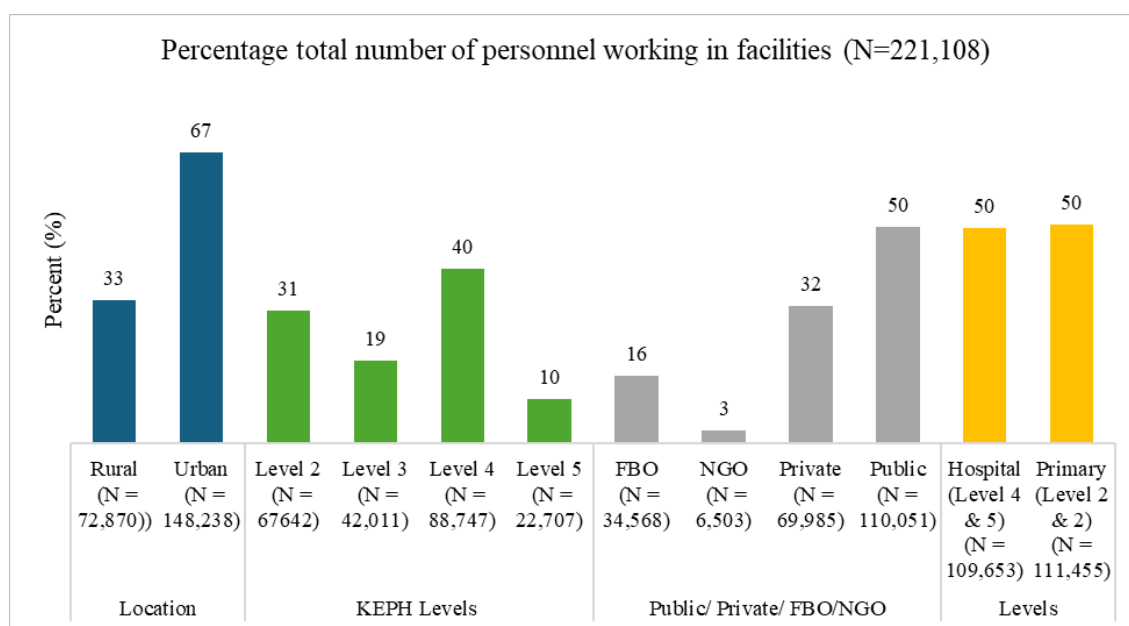


- Deduplication of health workers was done using personal identifiers and workstation details, for data collected at individual level.

Distribution

A total of 221,108 personnel working across 13,320 health facilities were assessed. **The bulk of the personnel were in Level 4 (40%) and Level 2 (31%) while in terms of ownership the Public and Private carried the highest proportions at 50% and 32% respectively.** Figure 55 below shows the distribution of the health Workers in the different categories. In general, the country has more health workers in the urban areas (67%), which shows an inequitable distribution of health workers that ultimately affects the equitable health care provision in the country.

Figure 70: Distribution of personnel in the health facilities

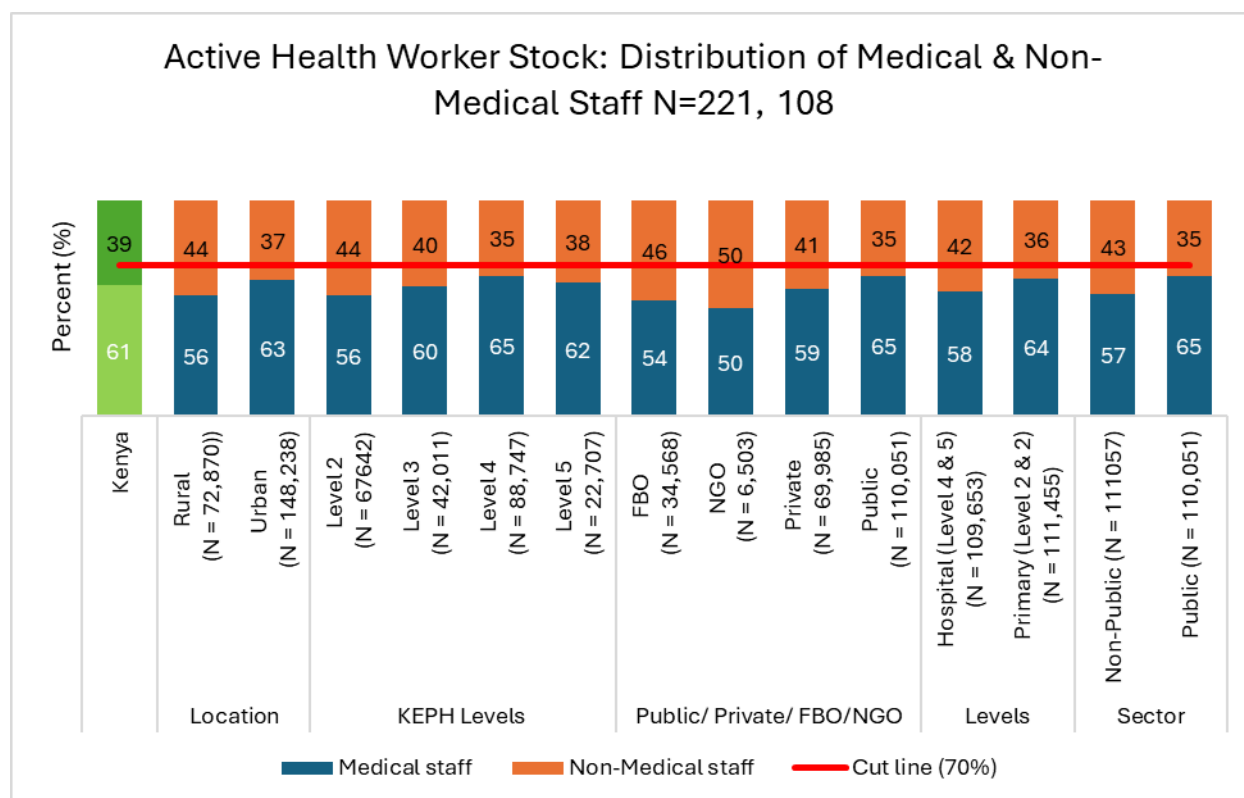


Medical: Non-Medical Ratio of Active Health Worker Stock

The Norms and Standards for Management of Human Resources in the Public Service, June, 2017⁴, the **best practice staff ratio for health facilities is 70% technical and 30% support**. (In this assessment, technical refers to Medical and support refers to non-medical). **Out of all the personnel in the country, 61% were medical staff and 39% were non-medical staff**. The figure below shows the distribution of the medical and non-medical personnel in Kenya. Based on this recommendation, Kenya has exceeded the target for non-medical by 9%. This trend in proportion of medical and non-medical has been replicated across the KEPH levels where the non-medical forms 44% in Level 2, 40% in Level 3, 35% in Level 4 and 38% in level 5. In terms of ownership of facilities, the proportion of the non-medical personnel was 50% in NGO, 46% in FBO, 41% in Private and 35%, in Public which had the least proportion. This not only shows inadequacy in terms of health workers availability but also shows inefficient distribution. In order to improve health services equity, efficient distribution of health workers must first be achieved.

⁴ Norms and Standards for Management of Human Resources in the Public Service, June 2017

Figure 71: Distribution of the medical and non-medical personnels in Kenya.



Medical and Non-medical Health Workers Ratio in Counties

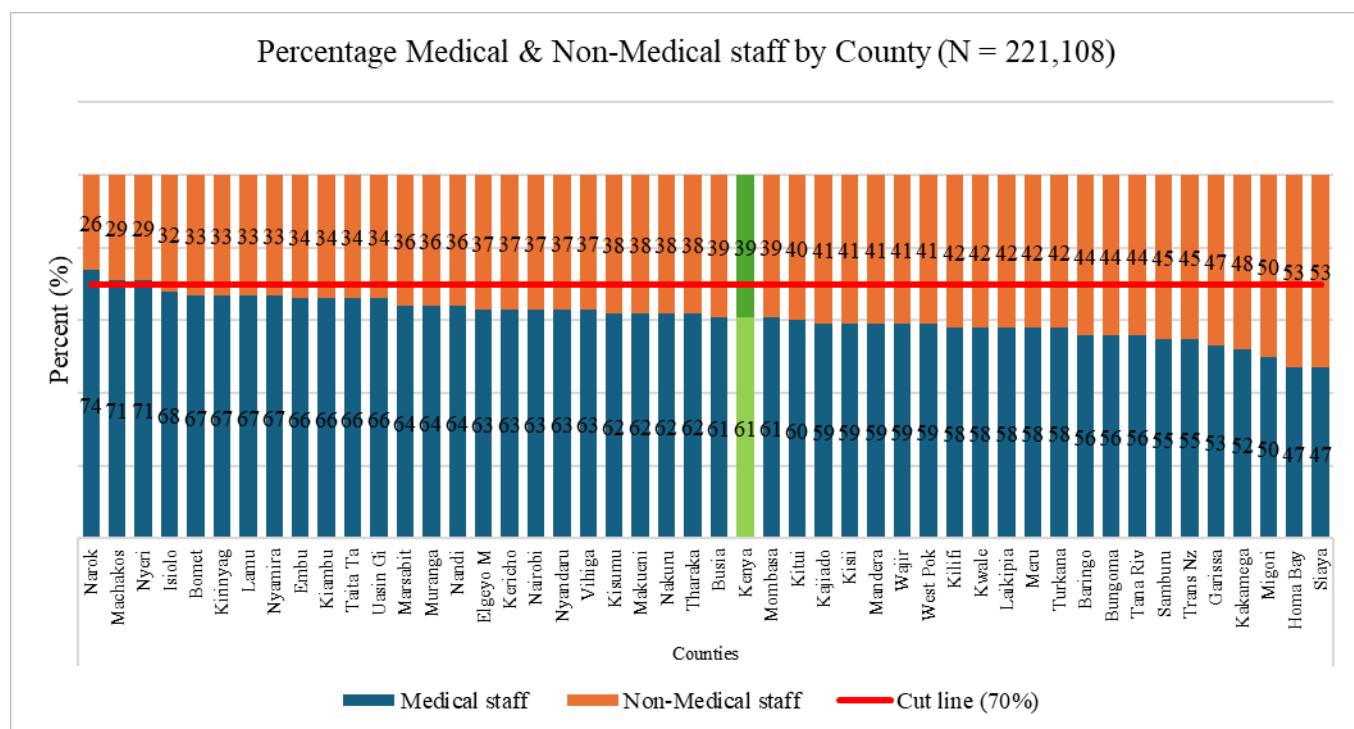
Only three counties met the threshold of the 30% non-medical staff in their personnel ratio; Narok 26%, Nyeri 29% and Machakos at 29%. Other counties with the lowest number of non-medical personnel included Kirinyaga, Lamu, Nyamira and Bomet at 33%.

The counties with the highest percentage of non-medical workers were Siaya and Homa Bay both at 53% and Migori at 50%. The counties have made considerable progress in the composition of their health workers to align to with policy, however, some counties still have a long way to go to reach the standard.

The Devolved HRM Policy Guidelines on Human Resources for Health, February 2015, indicated that Kenya was among the African Countries that were suffering from a shortage of Health Care Workers. A shortage of between 50% and 80% of health care workers was indicated in the rural health facilities. The policy also indicated that most personnel in the health facilities constituted 50%-70% medical workers. The 2024 QOC Assessment indicates the distribution of most facilities falling between 58% and 68% which points to a slight improvement from what was reported in 2015.

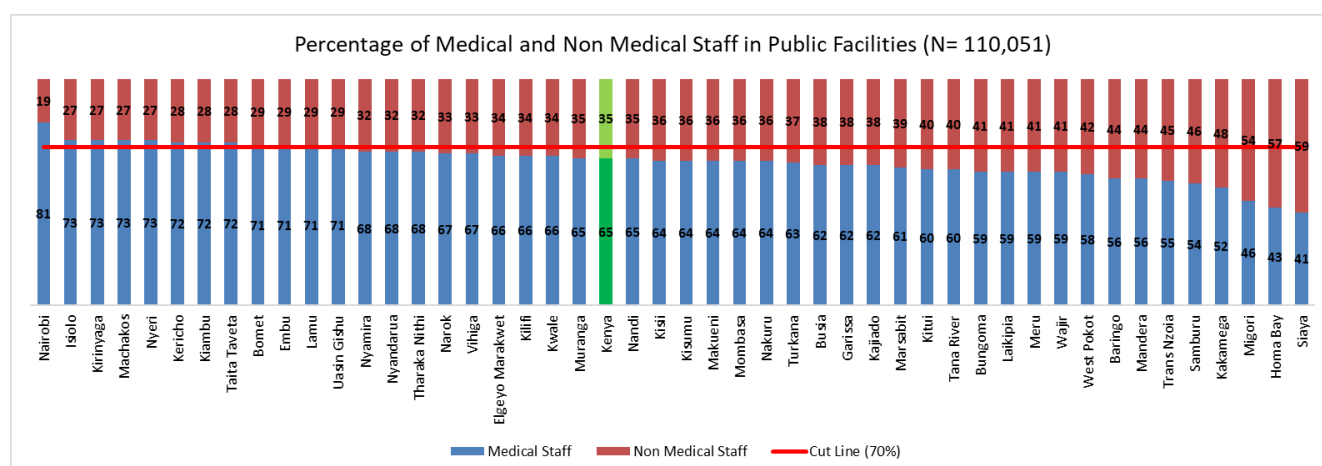


Figure 72: Distribution of the medical and non-medical personnels in the Counties



In public facilities, Nationally 65% of staff in public facilities were medical while 35% were non-medical. Among Counties, Nairobi, Isiolo, Kirinyaga, Machakos, Nyeri, Kericho, Kiambu, Taita Taveta, Bomet, Embu, Lamu and Uasin Gishu Counties met the required 70:30 ratio of medical to non-medical workers. On the other hand, Migori, Homa Bay and Siaya had more than 50% of their staff being non-medical.

Figure 73: Distribution of the medical and non-medical personnel in the Counties among public facilities



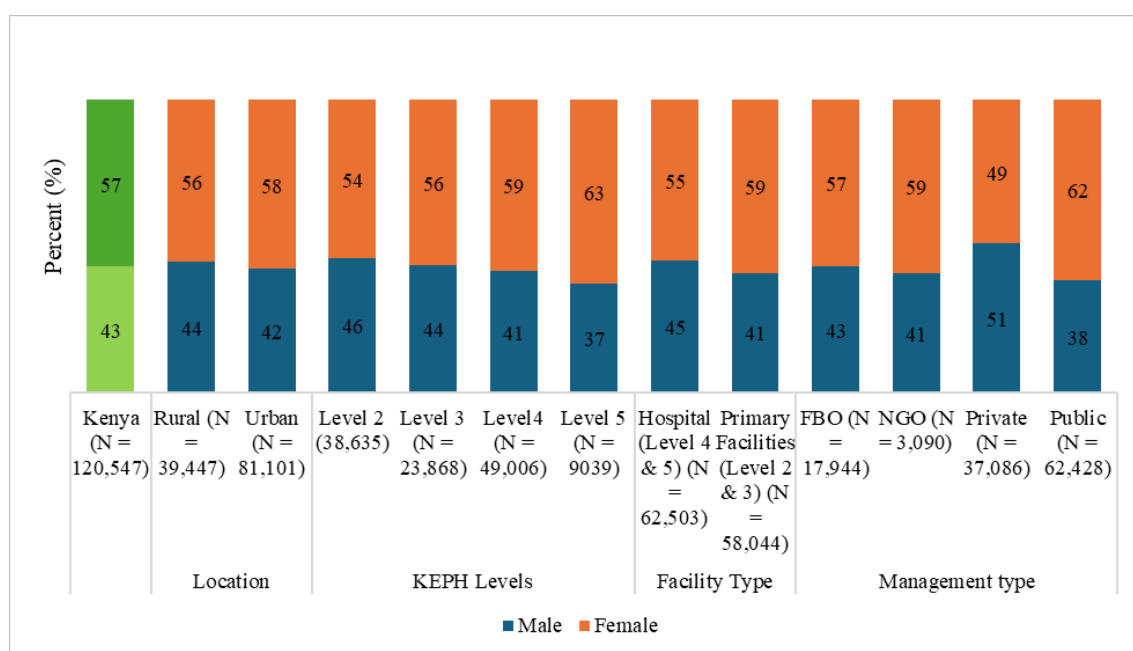
Discussion:

The analysis highlights a critical shortage of health workers across all facility levels. This gap affects public facilities more than other ownership categories. Furthermore, there a disproportionately high number of non-medical workers in most Counties, further compromising provision of quality services by limiting available budgets to employ medical workers.

Distribution of Health Workers by Gender

Female medical health workers comprised the majority (57%) nationally, which is replicated across the KEPH Levels. Level 5 had 63% female health workers while Level 4 had 59%. Level 2 had the least proportion of female health workers at 54%. The Public Health Facilities had their bulk of medical health workers as females (62%) while the Private facilities had 49% females.

Figure 74: Distribution of Health Workers by Gender (N=120,547)

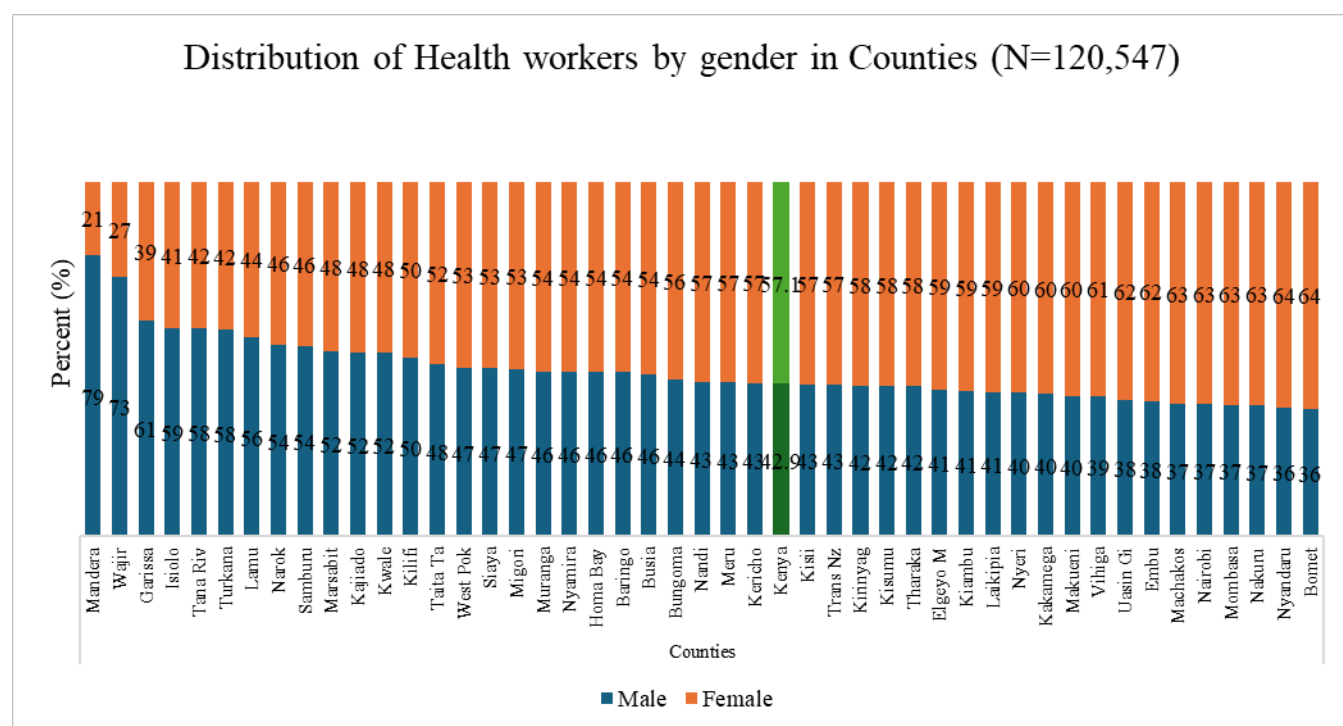


Distribution of Health Workers by Gender across the Counties.

Most counties had female medical workers led by Nyandarua County at 64% and Nairobi at 63%. Mandera and Wajir counties had the least proportion of female workers at 21% and 27% respectively.



Figure 75: Distribution of Health Workers by Gender in the Counties (N=120,547)



Distribution of Health Workers by Cadres

This survey collected 22 specified cadres. Medical doctors, clinical officers and nurses' cadres had multiple categories based on the role and qualification. Other health workers that were sampled were classified in the Other Categories as per the table below

Table 39: Other Cadre Categories

	Survey Categories		Cadre Groups
1	Clinical Officer	1	Clinical Officers
2	Clinical Officer (Specialist)		
3	Clinical Officer Interns		
4	Graduate Clinical Officer		
5	Medical Doctor Specialist	2	Medical Doctor Specialist
6	Medical Officer	3	Medical Doctors generalists
7	Medical Officer Interns		
8	Enrolled Nurses	4	Nurses
9	Nurse (Specialist)		
10	Nursing Officer		
11	Registered Nurse		



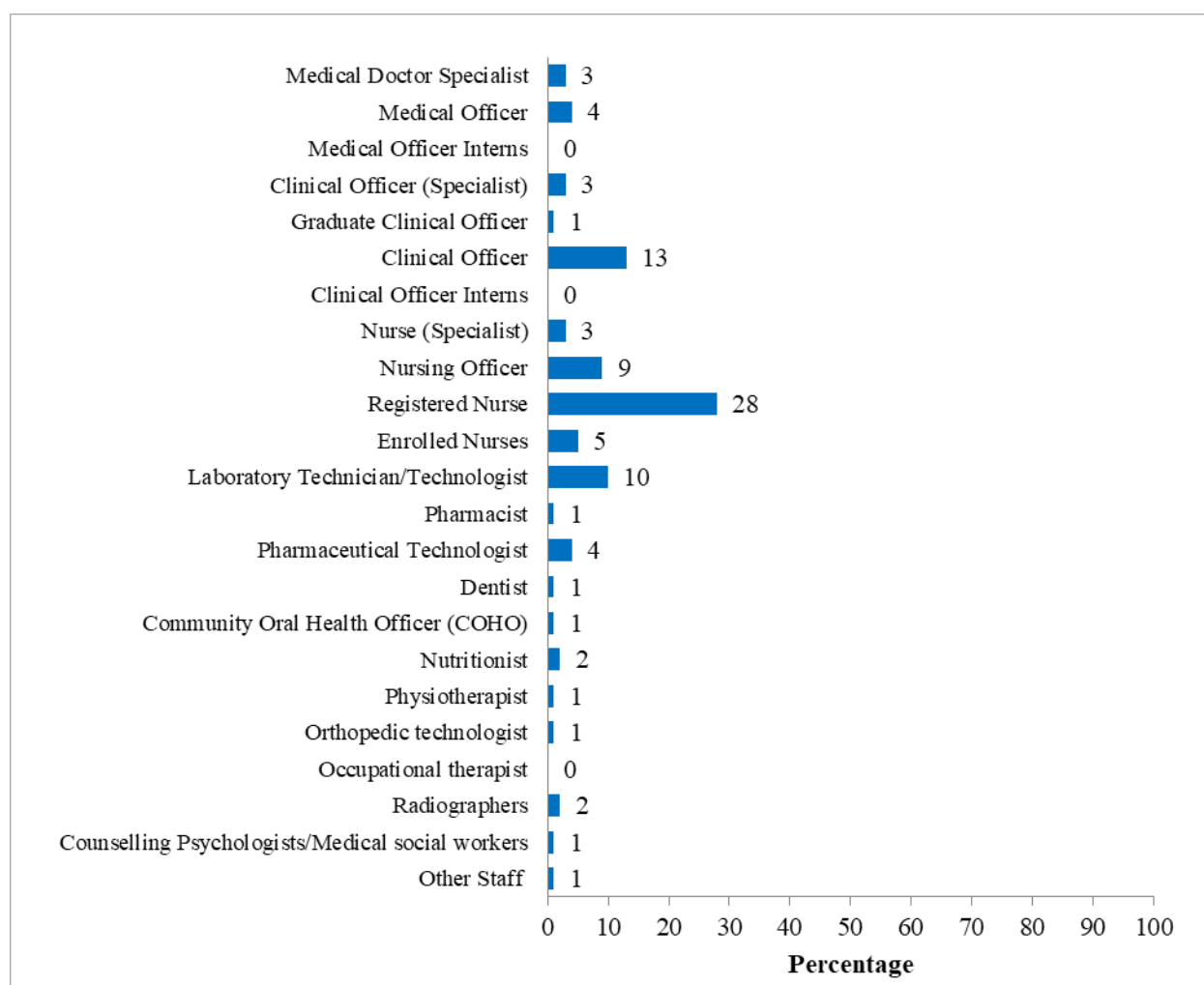
	Survey Categories		Cadre Groups
12	Pharmaceutical Technologist	5	Pharmaceutical Technologist
13	Pharmacist	6	Pharmacist
14	Laboratory Technician/Technologist	7	Laboratory Technician/Technologist
15	Dentist	8	Dentist
16	Community Oral Health Officer (COHO)	9	Community Oral Health Officer (COHO)
17	Counselling Psychologists/Medical social workers	10	Counselling Psychologists/Medical social workers
18	Nutritionist	11	Nutritionist
19	Occupational therapist	12	Occupational therapist
20	Orthopaedic technologist	13	Orthopaedic technologist
21	Physiotherapist	14	Physiotherapist
22	Radiographers	15	Radiographers
23	Other Medical	16	Other Medical
24	Other non-medical	17	Other non-medical
25	Other Staff (Specify)	18	Other Staff (Specify)

A total of 120,547 health workers were assessed according to their cadres in the Kenya 2024 QOC Assessment.

The cadres that had the highest proportion of health workers were Registered nurses at 28%, Clinical Officers at 13%, and lab technicians/technologists at 10%. The Occupational therapists comprised 0.4% of all the health workers while medical officer Interns comprised 0.1%



Figure 76: Distribution of Health Workers by Cadre (N=120,547)

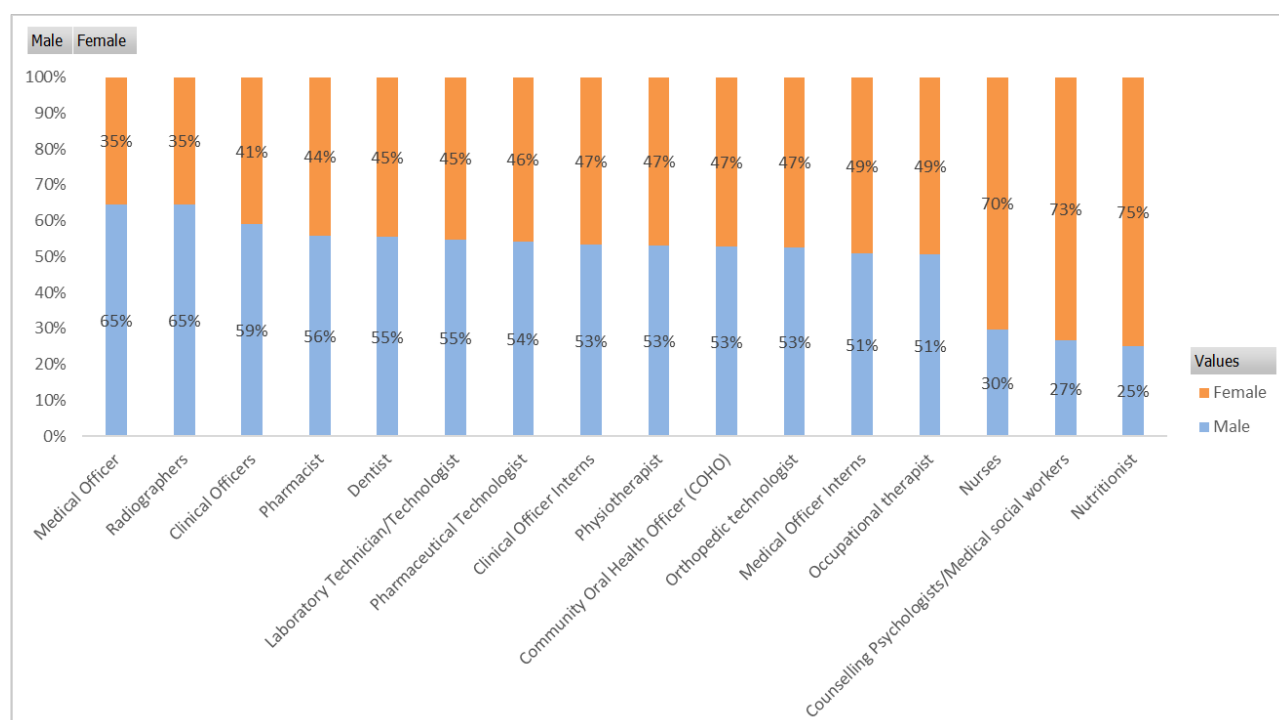


Medical Cadre distribution by Gender

Across the medical cadres, the highest composition of the personnel were male (above 50%). The Radiographers and Medical Officers at 65% were leading in their composition of male health workers. The nurses, counselling psychologists/ medical social workers and nutritionists are among the cadres with the least number of male health workers at 30%, 27% and 25% respectively.



Figure 77: Medical Cadre Distribution by Gender



Health Workforce Distribution by Age

Overall, the highest proportion of health workers was below 40 years of age. The 2024 Kenya Quality of Care Focused Health Facility Assessment (KQOC) investigated the professional experience among the health workforce by looking at the age distribution and the median number of years of service in the current position among staff working at the facility.

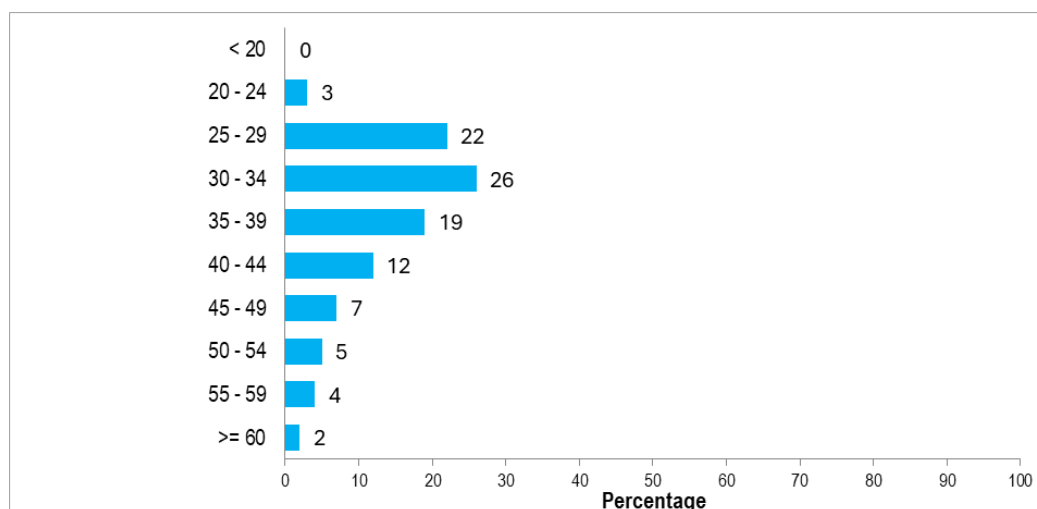
The distribution between the ages was as follows, 20-24 years (3%), 25-29 years (22%), 30 and 34 (26%), and 35-39 years (19%). The distribution for those above 40 years was 40-44 years at 12%, 45-49 years at 7%, 50-54 years at 5%, 55-60 years at 4% and those above 60 years at 2%; Figure 78. This shows that most of the current workforce in Kenyan facilities comprises young healthcare providers. It remains up to the government therefore to train and retain this work force and manage attrition.

According to the WHO guidelines on monitoring and evaluating human resources for health, the key to maintaining a sufficient workforce for achieving health systems goals is to educate, recruit, and retain young health practitioners while reinvesting in the experienced workforce. Age distribution is an indicator that can be used to measure and monitor health workforce transitions and exits through retirement for policy and planning purposes.

Health Workforce distribution by Age N=120,547



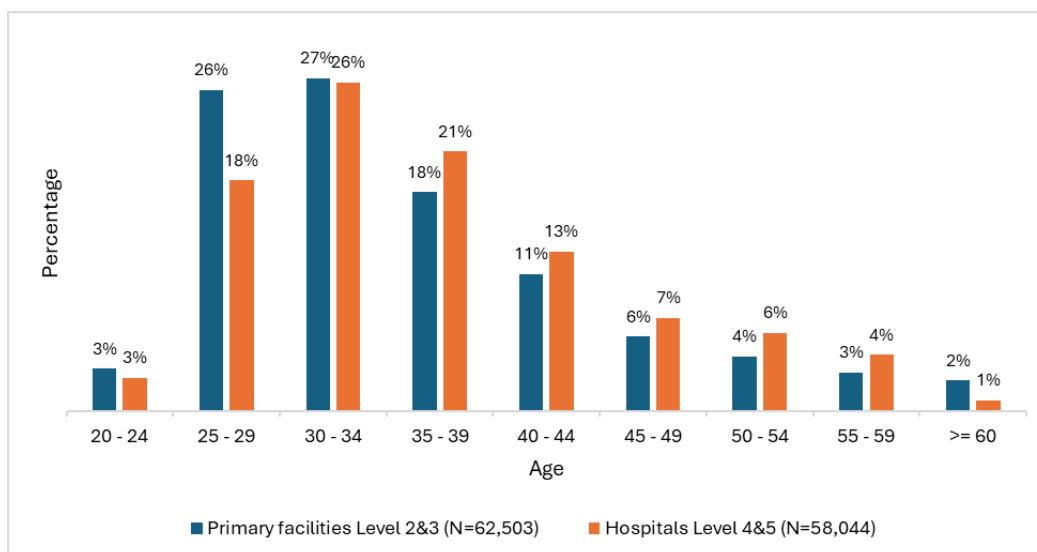
Figure 78: Health workers by age N=120=120,547



Distribution of health workers by age in Primary Facilities and Level 4 and 5.

The health facilities have a higher proportion of young health workforce with most personnel falling in the age bracket of 30-34 years. The proportion of health workers likely to retire in the next five years was higher in Hospitals (4%) than in primary facilities (3%).

Figure 79: Health Workforce Distribution by Age across the Facilities

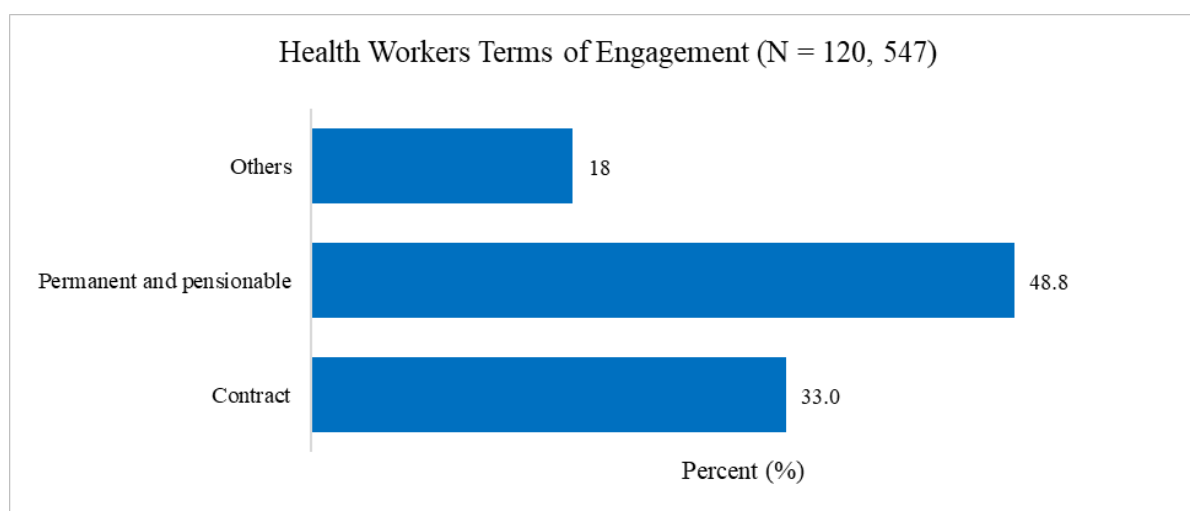


Distribution by terms of engagement

The term of engagement for the majority of health care workers was on a permanent and pensionable basis at 48.8%. The health workers on contract comprised 33%.

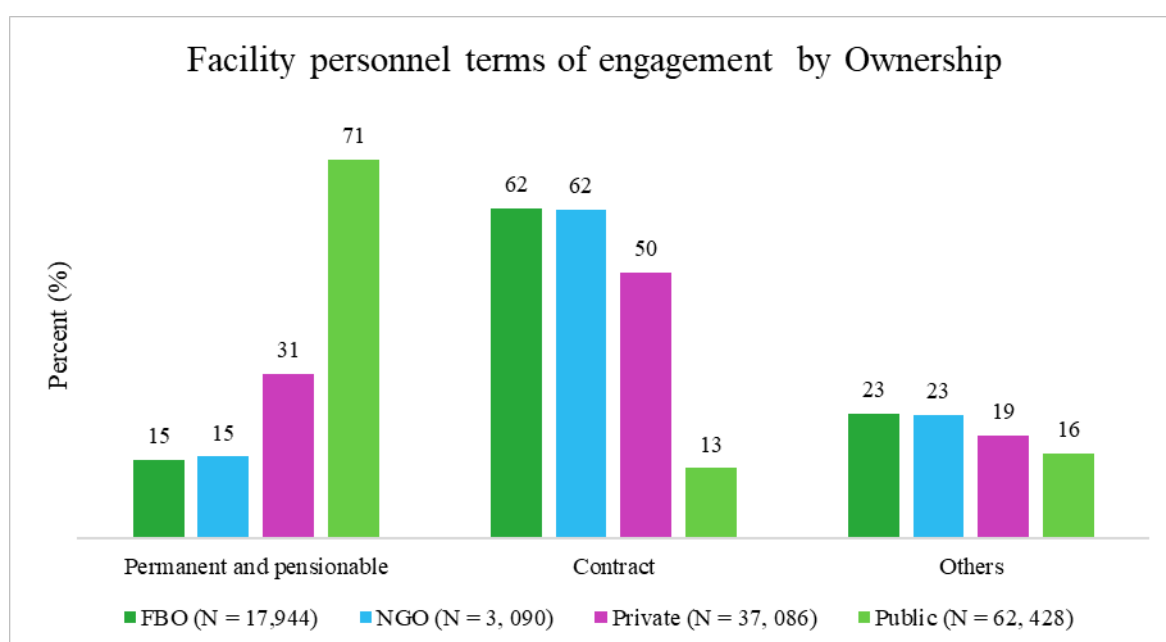


Figure 80: Distribution of Health Workers by their terms of engagement in Kenya



Most Public health workers were on permanent and pensionable terms, 71%. Most medical personnels were on contract in FBO and NGO facilities at (62%) while Private had 50%.

Figure 81: Distribution of Health Workers by their terms of engagement across Facilities by ownership (N=120,547)



The distribution of health workers by age, cadres; facility ownership, location and KEPH level in the different categories is as in the table below

Table 40: Percent of staff terms of engagement

Permanent and	NGO/Faith -based	Contract	County	UHC Contract	Locum	Owner	Number of facilities



pensionable								
By location								
Rural	45%	5%	32%	3%	6%	2%	0%	39447
Urban	51%	3%	33%	1%	2%	4%	0%	81101
By type								
Level2	36%	5%	37%	1%	3%	6%	1%	38635
Level3	42%	2%	40%	2%	3%	4%	0%	23868
Level4	60%	3%	28%	2%	3%	2%	0%	49006
Level5	62%	6%	24%	2%	2%	1%	0%	9039
By managing authority								
FBO	14%	14%	61%	1%	0%	3%	0%	17944
NGO	15%	6%	62%	0%	0%	6%	0%	3090
Private	31%	3%	50%	0%	0%	9%	1%	37086
Public	71%	1%	13%	3%	5%	1%	0%	62428
All	49%	4%	33%	2%	3%	4%	0%	120547

Table 41: Number of Healthcare Workers Interviewed

	By location		By type				By managing authority				All
	Rural	Urban	Level2	Level3	Level4	Level5	FBO	NGO	Private	Public	
Number absent	15,980	33,814	13,453	10,573	22,747	3,021	6,106	943	16,462	26,284	49,794
Male	17,539	34,210	17,711	10,390	20,305	3,342	7,733	1,256	18,880	23,880	51,749
Female	21,908	46,887	20,924	13,477	28,697	5,696	10,211	1,834	18,203	38,548	68,795
Medical officers	1,003	7,065	1,325	952	4,711	1,079	859	69	3,387	3,752	8,067
Clinical officers	6,360	13,266	7,166	4,385	7,158	917	2,702	597	7,656	8,671	19,626
Nurses	19,188	33,965	16,774	10,458	21,577	4,344	7,722	1,159	13,824	30,448	53,153
Pharmacists	1,668	5,023	1,938	1,411	2,975	368	1,115	180	2,475	2,922	6,692
Core cadres	28,219	59,319	27,203	17,206	36,421	6,708	12,397	2,004	27,343	45,794	87,538
Age Group											
< 20	58	39	42	30	24	-	7	-	38	52	97
20 - 24	913	2,641	1,264	772	1,368	150	621	131	1,748	1,055	3,554
25 - 29	8,556	18,242	9,840	6,235	9,181	1,542	5,441	860	12,949	7,549	26,798
30 - 34	10,725	21,211	10,219	6,445	13,177	2,095	4,937	935	10,265	15,800	31,936
35 - 39	7,803	15,220	6,539	4,420	10,282	1,783	2,853	559	5,144	14,468	23,023
40 - 44	4,702	9,527	4,262	2,575	6,292	1,100	1,661	292	2,784	9,492	14,229
45 - 49	2,685	5,350	2,235	1,479	3,480	840	904	119	1,376	5,635	8,034
50 - 54	1,982	4,364	1,755	966	2,882	744	740	127	946	4,533	6,346
55 - 59	1,385	3,127	1,225	683	1,926	678	432	33	507	3,539	4,511
>= 60	638	1,363	1,254	262	391	94	348	34	1,327	292	2,001
Total	39,447	81,101	38,635	23,868	49,006	9,039	17,944	3,090	37,086	62,428	120,547

5.1.2 Health Workforce Norms and Standards

Health workforce norms and standards are crucial components of any healthcare system. These norms and standards serve as guidelines for the allocation, training, deployment, and management of healthcare professionals to ensure that the population's health needs are adequately met. The KMPDC checklists for categorization of health facilities⁵ were used to define standard distribution of staffing norms by level of Care. These are outlined below for the core cadres (Medical officers, Nurses and clinical officers);

HR core cadres Norms

Table 42: HR core cadres Norms

Staff Category	Level 4	Level 3	Level 2
Medical Officers	12	2	0
Nurses and midwives	60	12	2
Clinical Officers	10	4	1
Clinical Officers specialized	10	1	0

Staffing norms: Level 2-4

Figure 79 below shows that, overall, only 24% of facilities nationally met the human resource norms with 32% of level 2 and 2% of level 3 meeting these norms. No level 4 met the norms for required core staff. NGO facilities had the highest proportion of facilities meeting staffing norms (58%) while only 13% of public facilities fulfilled the staffing norms.

⁵ [Kenya Medical Practitioners and Dentists Council's Downloads page](#).

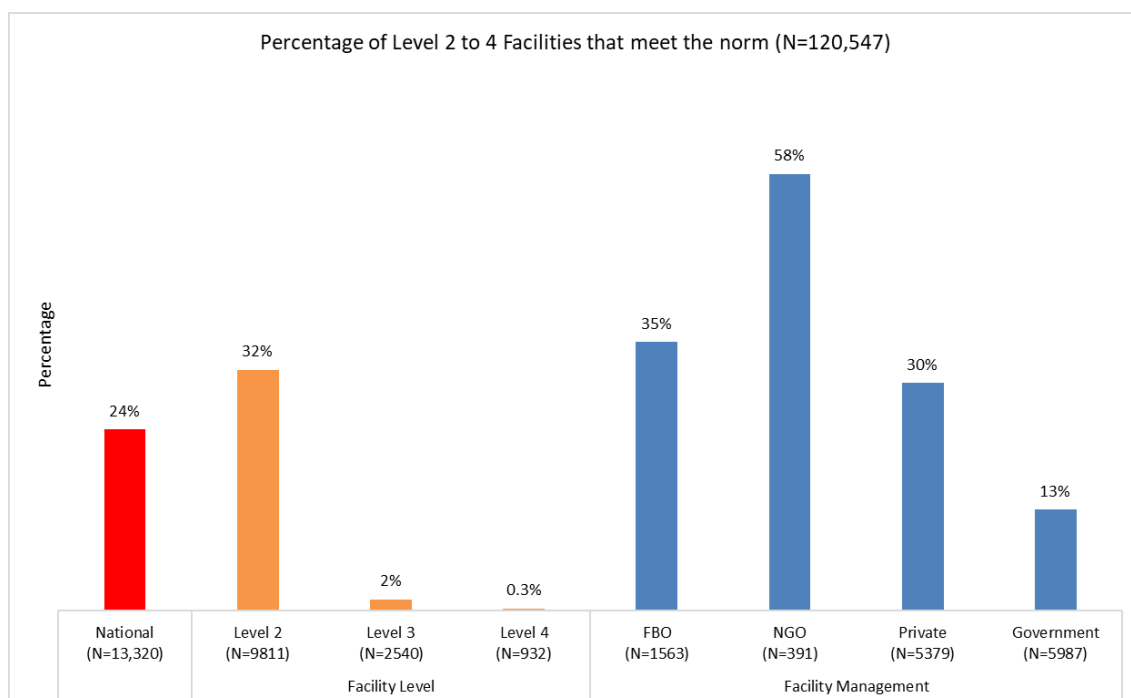
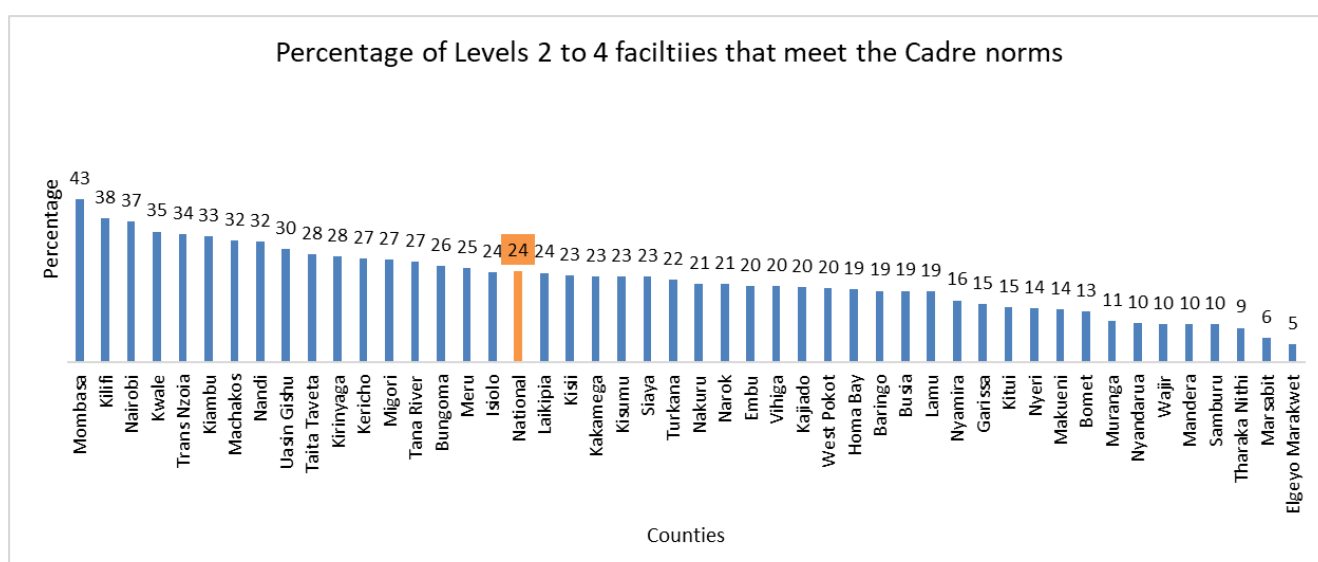


Figure 82: Percent of level 2 to 4 facilities that meet cadre norms

Counties with the highest proportion of facilities meeting staffing norms in levels 2 to 4 facilities were Mombasa (43%), Kilifi (38%), Nairobi (37%), Mombasa (37%) and Kwale (35%). On the other hand, only 5% of levels 2,3 or 4 facility facilities in Elgeyo Marakwet, and 6% in Marsabit met the staffing norms; while 9% of facilities in Tharaka Nithi met these norms

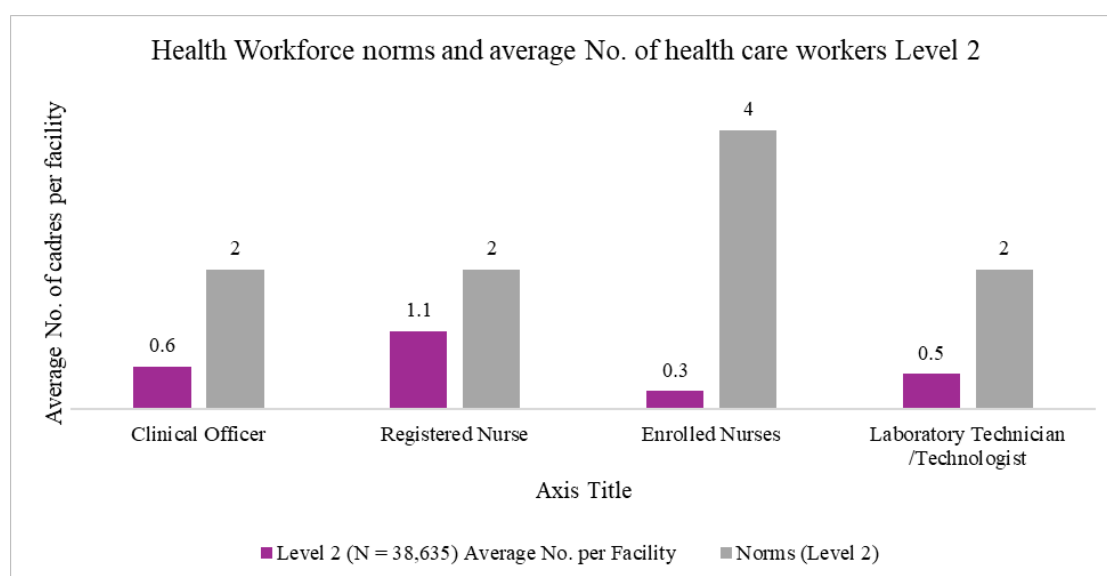


Status compared with the 2017 Human Resources Norms and Guidelines for Health Sector ⁶

Staffing norms: Level 2

In level 2 facilities, the average number of clinical officers was 0.6 compared to set norm of 2 while for registered nurses was 1 compared to set norm of 2; Enrolled Nurses were less than 1 (0.3) compared to standard norm of 4 and average number of laboratory personnel were also less than 1(0.5) compared with set norm and standards of 2. These findings reveal the existence of gaps across all cadres, an indication of inadequate staffing in level 2 health facilities.

Figure 83: Staffing norms and Average Health Workers-Level 2 (N=38,635)



Staffing norms: Level 3

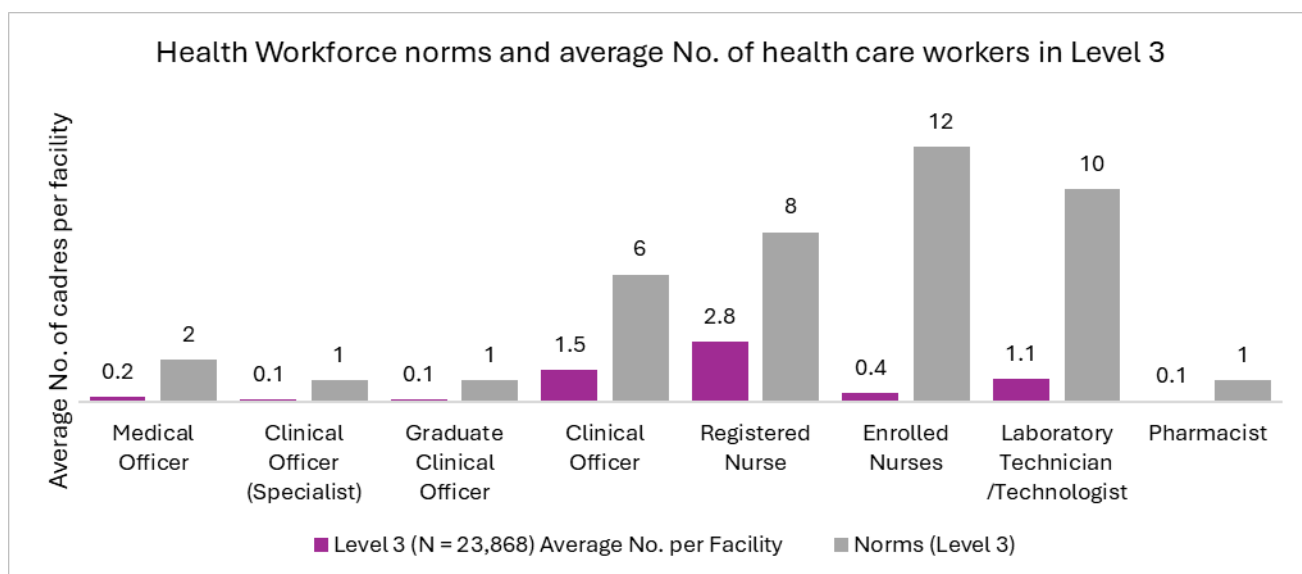
In level 3, the findings revealed understaffing across all cadres compared with the set standard norms. Comparison with 2018 KHFA showed a similar picture with slight changes in some cadres. On average, the number of Medical Officers, Clinical Officer specialists, Enrolled nurses and Pharmacists were less than 1 in all level 3 health facilities. A large discrepancy was observed among Enrolled Nurses, with an average of 0.4 compared to the set norm of 12 Enrolled Nurses at each level 3 facility. The inadequacy of Medical Officers is a finding that was also recorded in the 2018 KHFA report, where the average number of Medical Officers in level 3 was found to be 0.23.

A minimal improvement in the average number of health workers in facilities at level 3 has been made and in some cases like the Clinical officers, a deterioration of the availability of health workers has been observed.

⁶ Norms and Standards for Management of Human Resources in the Public Service, June 2017



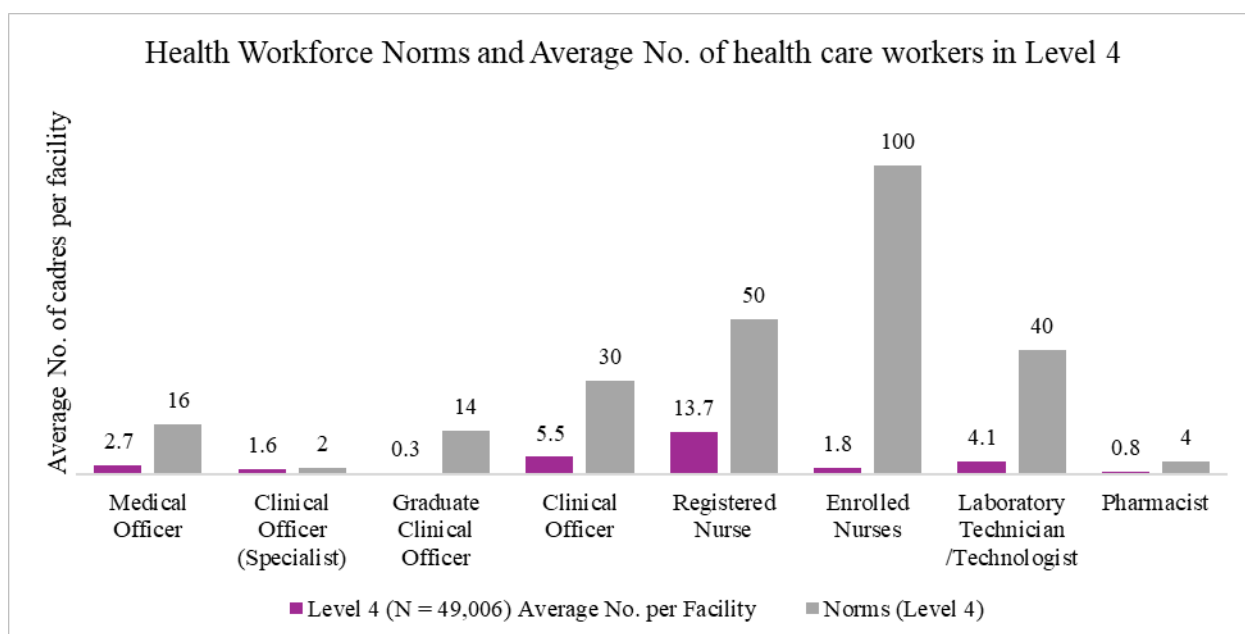
Figure 84: Staffing norms and Average Health Workers-Level 3 (n=23,868)



Staffing norms: Level 4

In general, all the following cadres at level 4 were below the set standard norms. The Clinical Officer Specialists almost met the target with the facilities at 1.6 against the set standard of 2. High levels of understaffing were observed among Clinical Officers (5.5 against 30); Enrolled Nurses (1.8 against 100); Registered Nurses (13.7 against 50) Laboratory Personnel (4.1 against 40). There are inadequate health workers across the cadres.

Figure 85: Staffing norms and Average Health Workers-Level 4 (N=49,006)



5.1.3 Health Workforce Density

Density of health workers by cadre was computed for medical officers, Clinical officers, Nurses, Laboratory personnel using the KNBS 2024 population projections. The results were

compared with Kenya Harmonized Health Facility Assessment 2018, and the WHO recommendation to achieve at least 70% of the UHC service index.

Core Cadres Density

All cadres are below the threshold needed to achieve 70% UHC service coverage index. Overall, the density of core cadres is 14.3 against a WHO target of 23.

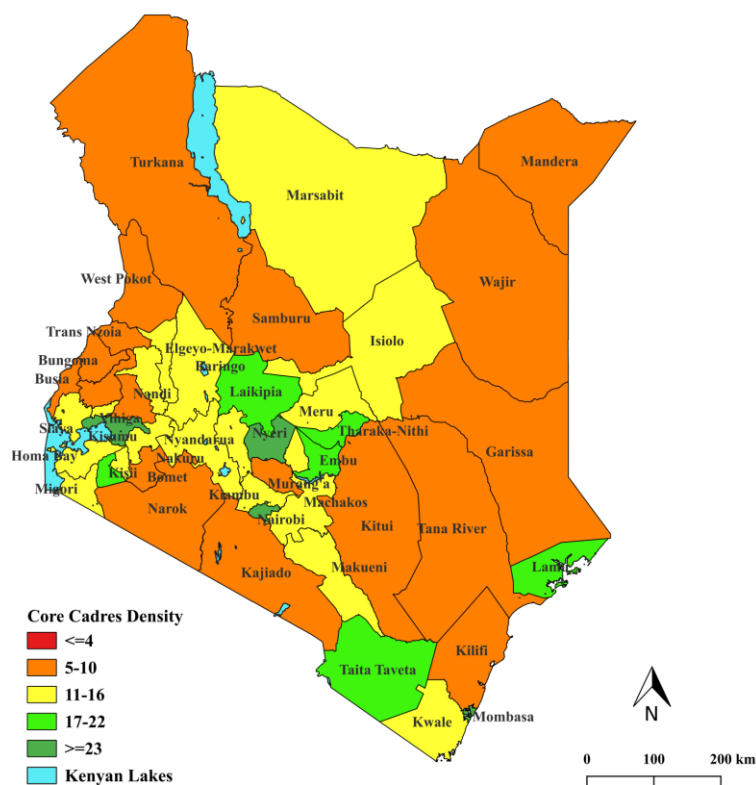
Table 43: Health workforce Densities

HRH Densities	Kenya QOC 2024	Current average regional (AFRO) density per 10,000 population	Requirement for population for at least 70% of UHC service index
Medical Doctors, all generalists and specialists	0.89	3.29	7.7
Clinical Officers	3.2	0.28	0.9
Nurses	10.1	14	58.6
Lab Technologists	2.3	1.25	14
Pharmacists	1.3	1.28	14.7
Dentists	0.14	0.74	5.3
Core Cadres	14.3		23

Across Counties, only Kisumu, Mombasa, Nairobi and Nyeri met the staffing norms of at least 23 core health workers per 10,000 population. Most Counties had densities below 10. The lowest densities were in Narok (5.2), Trans Nzoia (7.5), Wajir (7.6). Mandera, Murang'a, Garissa, Turkana, Tana river and Garissa all had densities below 9 (Figure 83, Table 44).



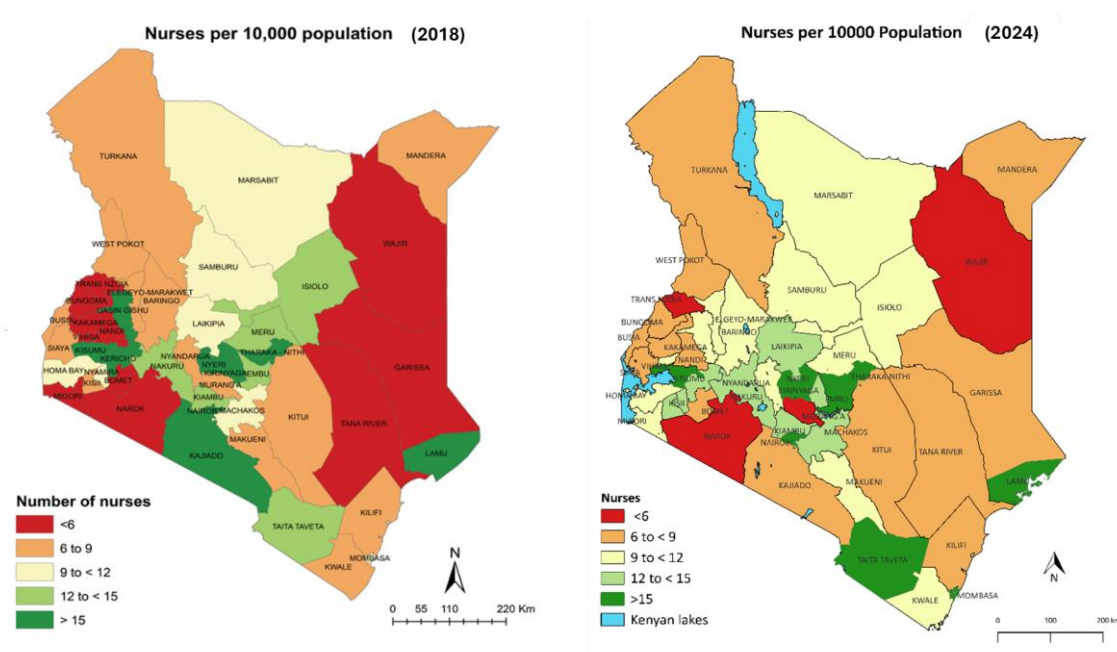
Figure 86: Core Cadres density per 10,000 population across the Counties



Nurses

There were several counties that had their density of nurses above 15 per 10,000 population in the 2024 QOC assessment. These included Embu, Nyeri, Tharaka Nithi, Kirinyaga, Machakos and Kisumu. The figure below compares the 2024 density with that of KHHFA 2018. The density of 15 per 10,000 population is still way below the recommended target density of 58.64 which is required to meet 70% of UHC Services within the population. There were however counties that had very low density of nurses, below 6 that included Kajiado, Narok, Garissa, Trans Nzoia, Kilifi, Wajir and Murang'a. Densities for counties like Wajir, Garissa and Narok remained below 15.

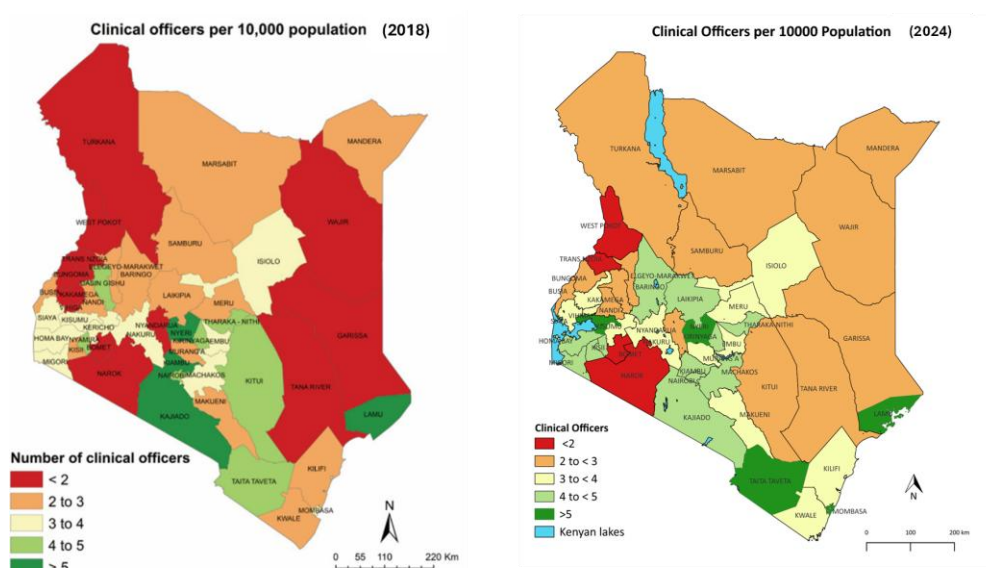
Figure 87: Nurses Workforce Density across the Counties in 2018(left) against 2024(right)



Clinical officers

Counties that had Clinical Officers density above 5 per 10,000 population were Nyeri, Mombasa and Kisumu. These are among the cadres that achieved the target of 0.9 that is recommended for achievement of 70% UHC services index. Several counties had a density of below 2 including Bomet, Wajir, Trans Nzoia, Marsabit, West Pokot, Turkana and Narok. Compared with the 2018 KHHFA survey, Nyeri is the only county that has maintained a high density of clinical officers while some counties have improved like Kisumu with others dropping their densities like Kajiado

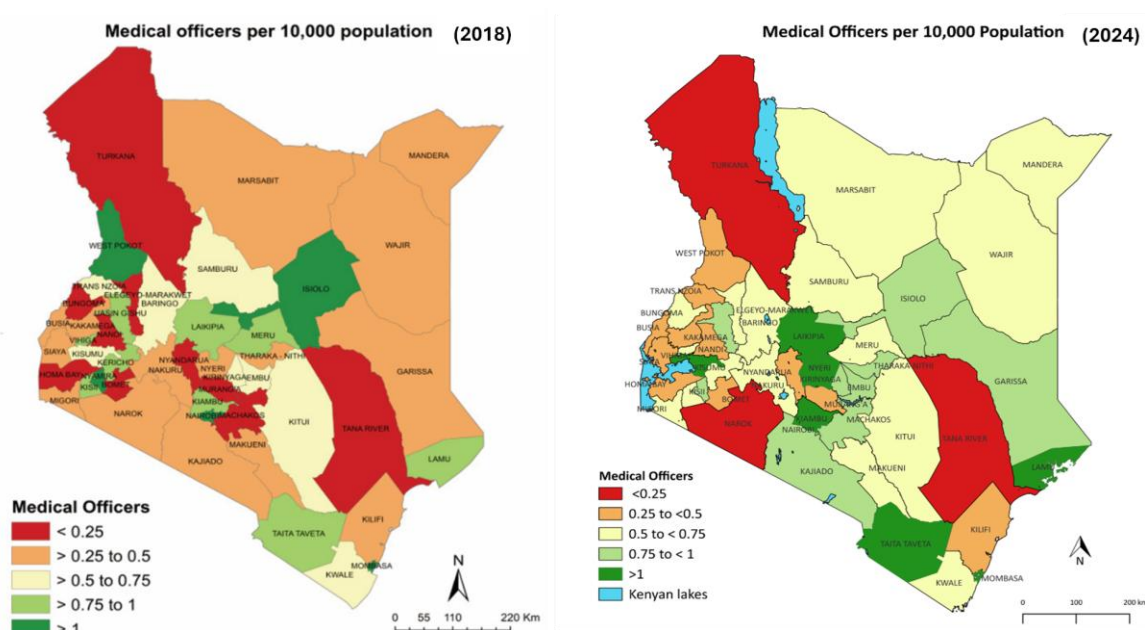
Figure 88: Clinical Officers Workforce Density across the Counties in 2018(left) against 2024(right)



Medical officers

There were huge differences between counties in terms of density of Medical Officers (MOs). The counties with MOs densities above 1 were Taita Taveta, Mombasa, Lamu, Laikipia, Nyeri, Kisumu and Kirinyaga. On the other hand, Turkana, Narok and Tana River had the lowest density which was below 0.25. Compared to 2018, Turkana, Narok and Tana River have made no progress in their densities which remain below 0.25. Counties like Mombasa, Nandi and Elgeyo Marakwet made substantial improvement in their densities.

Figure 89: Medical Officers Workforce Density across the Counties in 2018(left) against 2024(right)



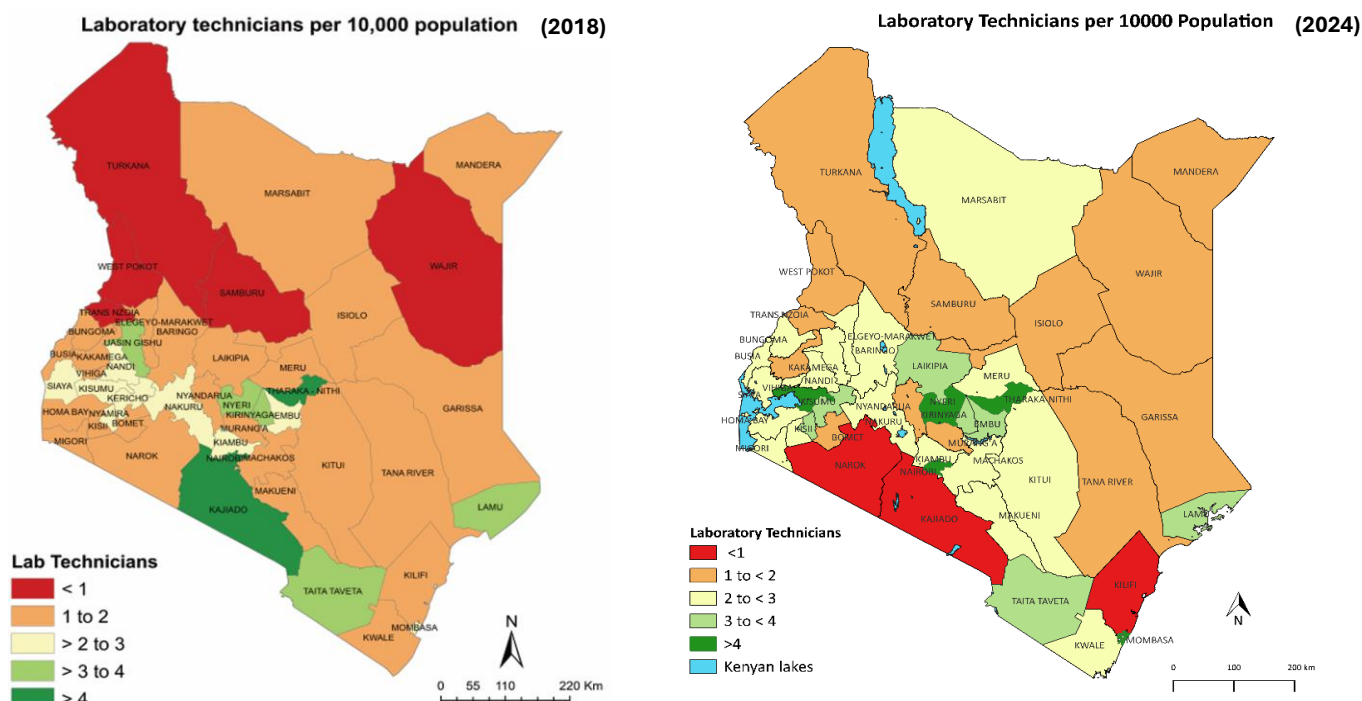
Laboratory Technicians and Technologists

The counties that had laboratory technicians and technologists densities above 4 were Mombasa, Nyeri and Kisumu while Narok, Kilifi, Bomet and Kajiado had their density below 1.

This is way below the recommended density for a county to achieve 70% UHC Services which is recommended as 14. In 2018, Wajir, West Pokot, Turkana, Samburu and Trans Nzoia had densities below 1 but in 2024 these counties densities improved to between 1 and 2. Kajiado county density decreased from above 4 to below 1.



Figure 90: Laboratory Technicians Workforce Density across the Counties in 2018(left) against 2024(right)



A distribution of the core cadres by County is shown in the table below;

Table 44: Health workforce Densities across the counties

Counties	Medical Doctor Density	Clinical Officers Density	Laboratory Technician /Technologist Density	Nurses Density	Core Cadres (Nurses, Medical Doctors, Clinical Officers) Density	Percentage of facilities that meet the cadre norms
Baringo	0.7	3.8	1.8	10.1	14.5	19%
Bomet	0.5	1.8	1.0	7.3	9.6	13%
Bungoma	0.6	2.4	2.2	7.0	10.0	26%
Busia	0.4	2.3	2.3	8.1	10.9	19%
Elgeyo Marakwet	0.6	1.8	2.0	9.7	12.1	5%
Embu	0.9	3.3	3.3	15.7	19.9	20%
Garissa	0.9	2.1	1.4	5.9	8.9	15%
Homa Bay	0.3	3.7	2.2	9.4	13.4	19%
Isiolo	0.9	2.6	1.6	9.7	13.2	24%
Kajiado	0.8	3.8	0.0	5.3	9.9	20%
Kakamega	0.4	2.9	1.3	6.7	10.1	23%
Kericho	0.7	2.9	2.8	11.4	15.0	27%



Counties	Medical Doctor Density	Clinical Officers Density	Laboratory Technician /Technologist Density	Nurses Density	Core Cadres (Nurses, Medical Doctors, Clinical Officers) Density	Percentage of facilities that meet the cadre norms
Kiambu	1.1	4.0	2.1	11.6	16.7	33%
Kilifi	0.4	3.1	0.8	5.5	9.0	38%
Kirinyaga	0.8	4.1	3.4	11.8	16.7	28%
Kisii	0.7	3.7	2.7	13.7	18.1	23%
Kisumu	2.6	5.9	4.5	18.8	27.3	23%
Kitui	0.7	2.3	1.8	7.2	10.2	15%
Kwale	0.7	2.8	2.5	8.7	12.2	35%
Laikipia	1.4	4.0	3.1	12.7	18.1	24%
Lamu	1.9	4.8	2.9	15.4	22.1	19%
Machakos	0.9	3.9	2.1	12.0	16.8	32%
Makueni	0.6	2.9	2.2	8.9	12.4	14%
Mandera	0.5	1.9	1.5	6.1	8.5	10%
Marsabit	0.5	1.9	1.8	8.7	11.1	6%
Meru	0.5	2.9	2.2	8.6	12.1	25%
Migori	0.5	3.9	2.0	10.6	15.0	27%
Mombasa	2.3	5.1	4.0	16.3	23.6	43%
Muranga	0.4	3.0	1.2	5.3	8.7	11%
Nairobi	2.3	4.2	4.5	17.0	23.5	37%
Nakuru	0.6	3.5	2.3	11.7	15.8	21%
Nandi	0.5	2.7	2.1	6.9	10.1	32%
Narok	0.1	1.7	0.6	3.4	5.2	21%
Nyamira	0.9	4.0	2.9	11.7	16.7	16%
Nyandarua	0.4	2.3	1.4	8.4	11.1	10%
Nyeri	1.5	5.1	4.1	18.8	25.3	14%
Samburu	0.5	2.1	1.3	7.8	10.4	10%
Siaya	0.5	2.9	2.0	7.9	11.2	23%
Taita Taveta	1.2	4.7	3.4	14.0	19.9	28%
Tana River	0.2	2.2	1.7	6.4	8.8	27%
Tharaka	1.0	4.0	4.0	16.7	21.8	9%
Trans Nzoia	0.4	1.8	1.3	5.3	7.5	34%
Turkana	0.2	1.8	1.2	6.4	8.4	22%
Uasin Gishu	1.0	2.6	2.5	9.9	13.5	30%



Counties	Medical Doctor Density	Clinical Officers Density	Laboratory Technician /Technologist Density	Nurses Density	Core Cadres (Nurses, Medical Doctors, Clinical Officers) Density	Percentage of facilities that meet the cadre norms
Vihiga	0.6	3.6	2.6	9.8	14.0	20%
Wajir	0.5	1.9	1.7	5.2	7.6	10%
West Pokot	0.4	1.8	1.5	7.7	9.9	20%
National	0.89	3.23	2.31	10.14	14.25	24%

5.2 Health Worker Absenteeism

Health worker availability refers to the number of health professionals in a specific area and the services they are able to provide. It encompasses their physical presence, available health infrastructure, and the extent to which services are utilized.

Absenteeism rate refers to how many times a health worker is absent due to planned or unplanned reasons. The rate can be achieved by randomly assessing up to ten health workers during an unannounced visit. The absence rate usually doesn't include approved absences such as annual leave, although there may be some instances where including this data could be beneficial. Health workers on call, off duty /not his/her shift and on outreach were all considered to be working during the exercise.

While it's normal for workers to have occasional time off for legitimate reasons such as physical or mental illness or a family emergency, frequent or habitual days off are a sign of chronic absenteeism, which can harm productivity and morale. It's therefore important to track absence and take proactive measures to reduce them to minimize their impact. High absenteeism rates can disrupt patient care, lead to delayed treatment, and negatively affect the quality of healthcare services.

The QOC 2024 assessment the absenteeism of twenty-two (22) different cadres of health workers and some non- health workers was assessed using indicators in table 46 below. Absence was classified as planned and unplanned as per the following definitions.

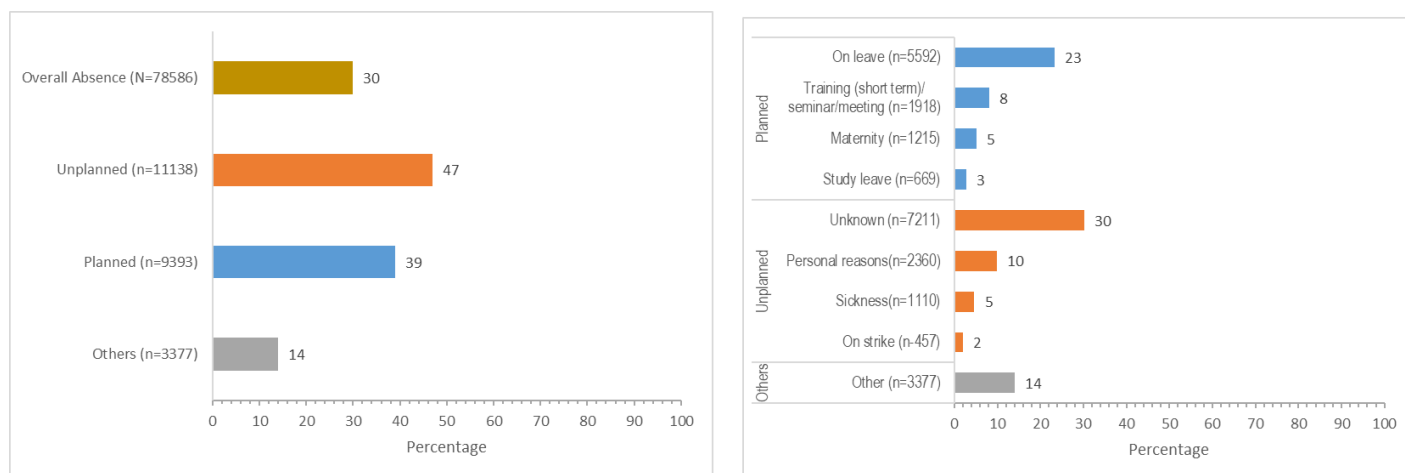
Planned absence refers to a scheduled time off work, usually for Maternity/Paternity leave, Training (short-term)/seminar/meeting, on leave, Study leave. Planned absence is dependent on management practices. Unplanned absence refers to circumstances like illness, other reasons, unknown reasons, on strike or unexpected personal issues. Unplanned absenteeism is largely health worker dependent.

Proportion of Health Worker Absence

Nationally, health worker absence in Kenya is 30% during the unannounced visit. Health worker absence can be categorized as either planned or unplanned.

Unplanned reasons were the reason for absenteeism for majority of the health workers at 47%, while planned absenteeism was at 39%. Annual leave was the highest reason for planned absenteeism at 23%. For the unplanned absence, unknown reasons were highest at 30% while other reasons were at 14%. Any additional reasons were categorized as others.

Figure 91: Reasons for absenteeism by category (n= 78586)



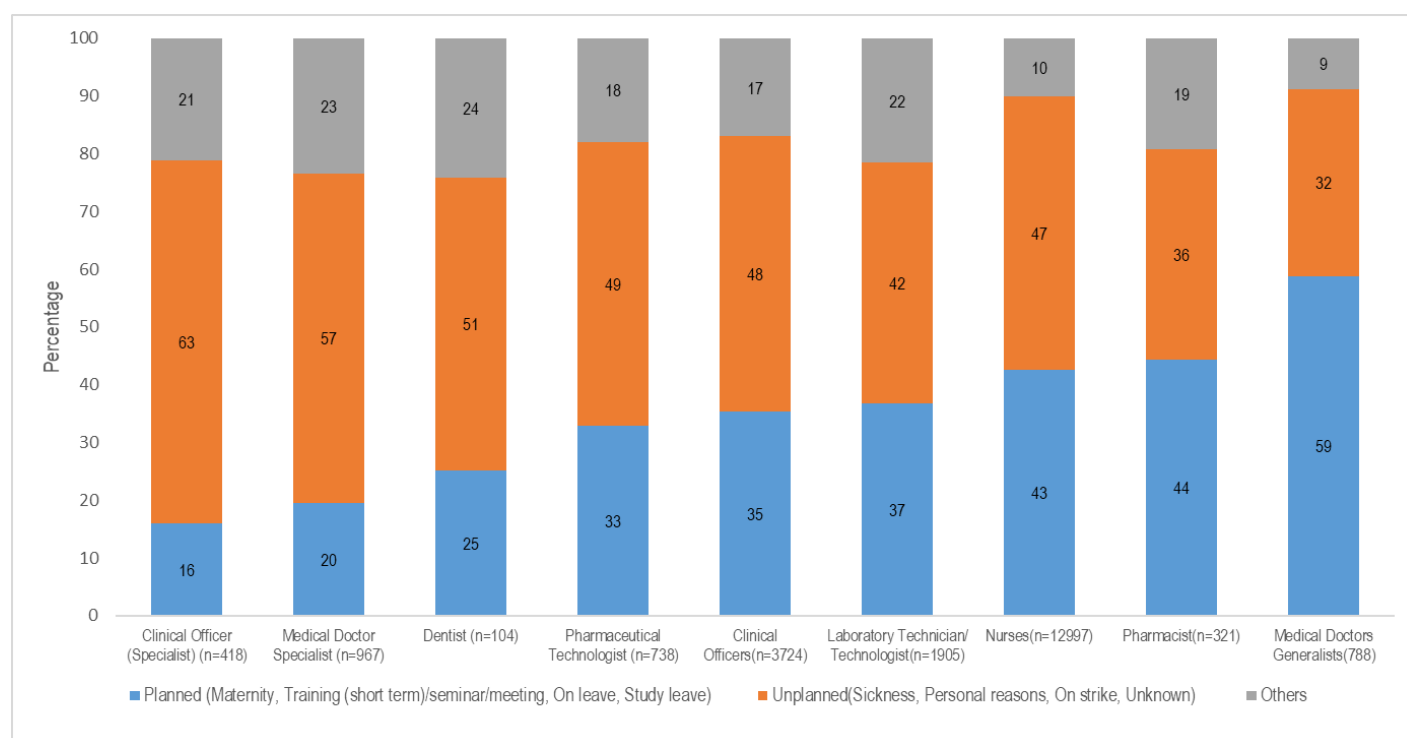
Disaggregation of Absence by Healthcare Worker Cadre

Planned absence accounted for the highest reasons for absenteeism among medical doctor generalists at 59%. Clinical officer specialists had the highest unplanned absence at 63%, while dentists had the highest other absenteeism at 24%.

It is worthwhile to note that in Kisii, Marsabit and Wajir counties some health workers were on strike during the assessment and therefore this increased overall absenteeism



Figure 92: Percentage of health worker availability by cadre



Reasons for absence in different cadres were also further analyzed as shown in the table below. It is worth noting that unknown reasons contributed significantly to absenteeism and especially in the nursing cadre at 35% and clinical officers at 33%.

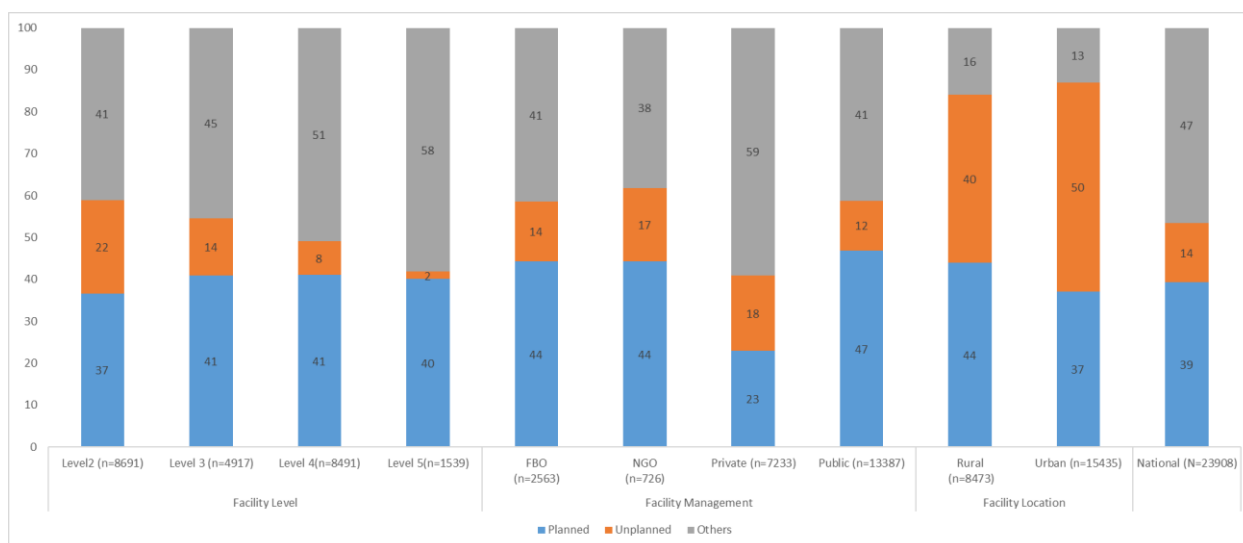
Disaggregation of healthcare worker absenteeism by location and ownership

Tables 46 & 47 and Figure 93, 94 & 95 show the disaggregation of healthcare worker absenteeism by location, managing authority, ownership and by county

- By location, planned absenteeism accounted for the highest absenteeism in rural areas at 44%; while unplanned reasons accounted for the highest reasons for health worker absence in urban areas at 50%.
- By KEPH Level, uncategorized reasons (others) contributed to the highest absenteeism across all levels of care.
- By ownership, health workers in the public sector were more likely to be absent from work due to planned reasons (47%) compared to their counterparts in FBO and NGO (44%), and private facilities (23%). In contrast, uncategorized reasons (others) contributed to the highest absenteeism in private facilities (59%).



Figure 93: Disaggregation of healthcare worker absenteeism by location, KEPH level and facility ownership



County Distribution

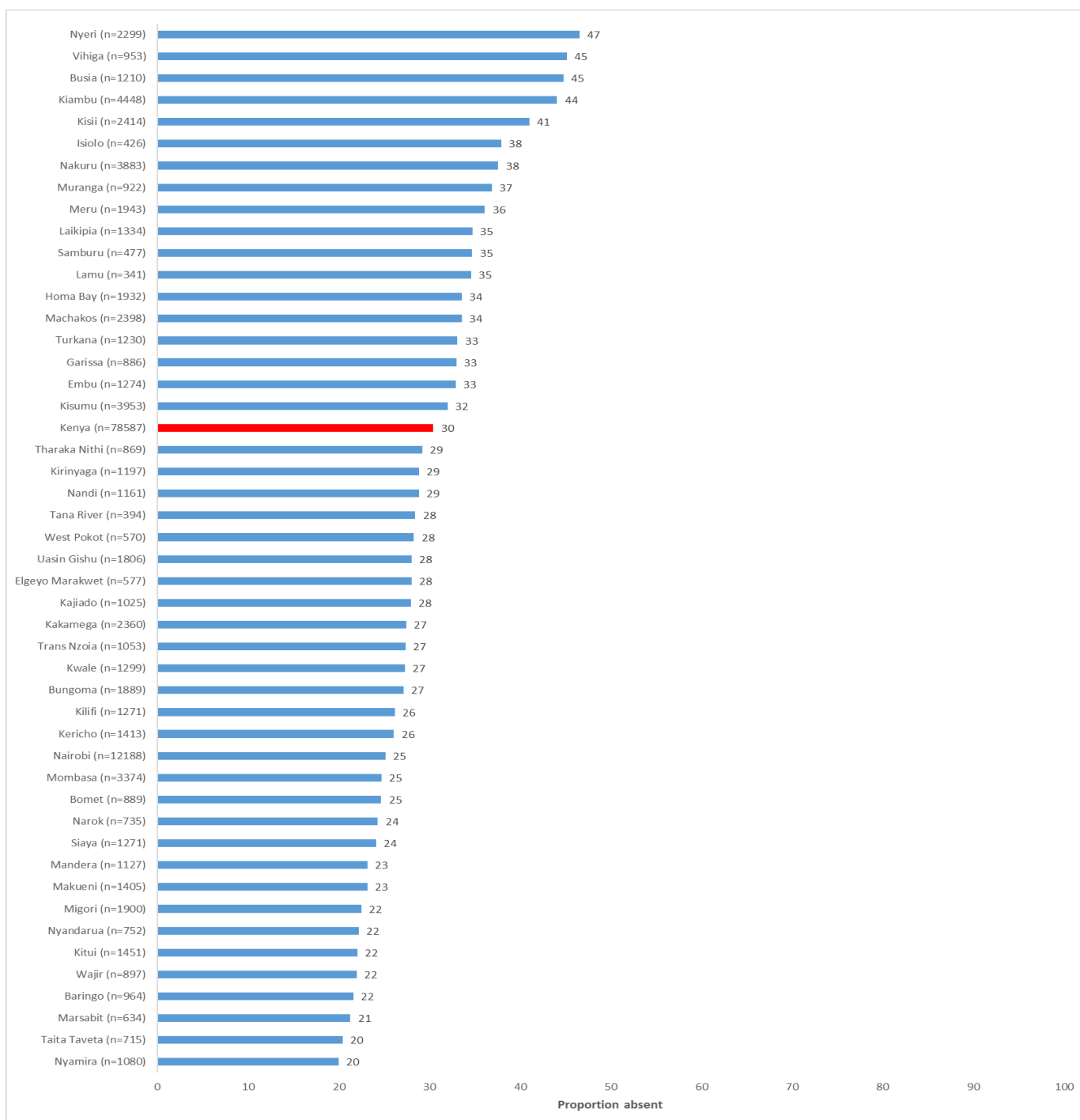
Disaggregation of healthcare worker absenteeism by county

Overall Absenteeism (planned, unplanned and others) by county

The highest absenteeism rate was in Nyeri County at 47% and lowest in Nyamira at 20% against the national average of 30% as indicated in figure 91

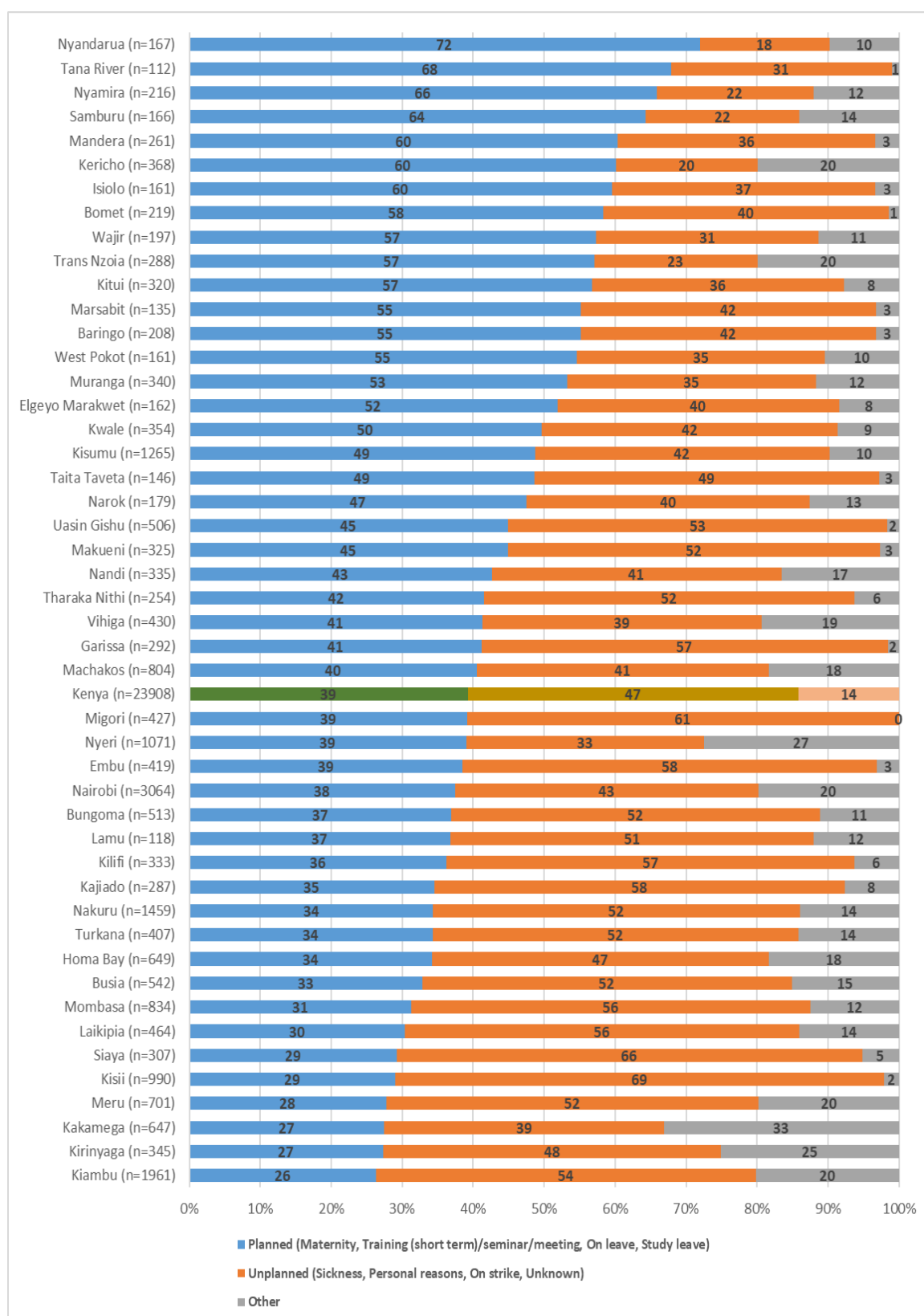


Figure 94: County distribution of overall absenteeism



Planned absenteeism was the highest reason for absenteeism among health workers in Nyandarua county at 72% compared to Kiambu County that had the least at 26%. Unplanned absenteeism contributed to the highest absenteeism in Kisii County at 69% while Nyandarua County had the least at 18%.

Figure 95: health worker absenteeism by county by type.



Discussion:

Results indicate that absenteeism among healthcare workers is generally higher in rural areas compared to urban areas, this may be primarily due to factors like limited career opportunities,

lower wages, poor infrastructure, longer travel distances, and a lack of readily available support systems in rural communities. Our results also indicate that absenteeism rates tend to be higher in the public sector compared to the private sector, which is a significant factor to consider when analyzing workforce performance across different industries; this can be attributed to various factors like perceived job security, less stringent accountability measures, and differences in workplace culture within public organizations.

Table 45: Healthcare worker absenteeism recommendations

Key Findings	Recommendations
Unplanned reasons contributed to the highest proportion of absenteeism at 47%	Establish mechanisms to ensure accountability of health workers.
Planned reasons also contributed to fairly high rates of absenteeism	Enhanced human resource management practices to ensure a balance between service delivery and HR development.

Table 46: Healthcare worker absenteeism

	Maternity	Sickness	Training (short term)/ seminar/ meeting	On leave	Study leave	Personal reasons	On strike	Unknown	Other	Number of Health Care Workers
Baringo	7	2	21	88	0	46	0	39	7	208
Bomet	0	39	18	93	18	38	0	12	3	219
Bungoma	45	22	59	83	3	28	0	217	57	513
Busia	14	22	86	76	2	23	0	237	82	542
Elgeyo Marakwet	6	11	23	53	1	8	20	26	14	162
Embu	17	32	22	119	3	9	28	176	13	419
Garissa	26	7	5	81	9	30	0	130	5	292
Homa Bay	19	7	109	80	14	108	13	178	119	649
Isiolo	21	1	30	46	0	24	29	6	5	161
Kajiado	12	17	34	45	8	35	6	107	22	287
Kakamega	35	37	40	94	9	40	0	178	214	647
Kericho	48	8	23	151	0	57	3	5	73	368
Kiambu	62	56	21	411	21	96	8	892	394	1961
Kilifi	4	20	14	93	11	46	0	125	21	333
Kirinyaga	3	9	29	63	0	28	0	127	87	345
Kisii	44	49	16	220	6	80	78	476	21	990
Kisumu	20	95	154	289	153	85	1	344	124	1265
Kitui	29	17	59	78	16	87	0	10	25	320
Kwale	13	23	18	95	50	42	0	83	30	354
Laikipia	13	21	8	96	25	30	0	206	65	464
Lamu	7	0	6	31	0	14	0	46	14	118
Machakos	65	20	17	179	65	61	27	223	148	804
Makueni	13	27	12	111	11	46	0	97	9	325



	Maternity	Sickness	Training (short term)/ seminar/ meeting	On leave	Study leave	Personal reasons	On strike	Unknown	Other	Number of Health Care Workers
Mandera	12	6	7	133	5	30	0	59	9	261
Marsabit	10	35	9	49	6	12	0	10	4	135
Meru	1	25	44	133	17	102	41	200	138	701
Migori	23	11	38	94	13	22	0	227	0	427
Mombasa	16	24	61	179	6	58	3	384	104	834
Muranga	9	10	82	88	2	64	0	46	40	340
Nairobi	259	112	244	571	75	312	109	774	608	3064
Nakuru	42	91	52	399	8	71	3	589	203	1459
Nandi	21	18	9	99	13	81	0	37	55	335
Narok	18	8	29	30	8	33	0	31	22	179
Nyamira	27	16	15	77	22	32	0	0	26	216
Nyandarua	19	9	42	57	1	13	1	8	16	167
Nyeri	45	37	157	198	18	60	0	262	294	1071
Samburu	7	3	5	90	5	32	0	1	23	166
Siaya	9	46	35	35	11	20	0	135	16	307
Taita Taveta	9	1	12	43	7	29	0	40	4	146
Tana River	0	4	20	53	3	2	0	29	1	112
Tharaka Nithi	0	11	20	78	7	67	0	55	16	254
Trans Nzoia	44	7	41	78	2	41	12	6	57	288
Turkana	34	5	33	65	7	132	14	60	58	407
Uasin Gishu	25	54	26	177	0	26	0	190	9	506
Vihiga	24	7	66	83	4	33	31	98	83	430
Wajir	22	12	34	54	3	23	0	27	22	197
West Pokot	17	18	13	55	3	6	29	3	17	161
By Type										
Level2	524	565	1,062	1,578	120	1,527	4	1,588	1,993	8961
Level3	208	251	457	1,227	119	438	21	1,526	670	4917
Level4	474	229	369	2,314	325	393	280	3,421	687	8491
Level5	9	65	30	473	105	3	153	675	27	1539
By Management Authority										
FBO	307	113	216	603	7	153	0	798	366	2563
NGO	59	48	181	81	0	104	0	125	127	726
Private	272	202	451	848	90	1,106	16	2,948	1,299	7233
Public	576	748	1,071	4,059	571	997	440	3,340	1,585	13387
By Location										
Rural	477	474	966	2,079	219	1,082	38	1,761	1,375	8473
Urban	737	636	952	3,513	449	1,278	418	5,450	2,001	13434
National	1215	1110	1918	5592	669	2360	457	7211	3377	23908

Table 47: Healthcare worker absenteeism (Continued)

	Planned	Unplanned	Other	Total	Planned (%)	Unplanned (%)	Other(%)	Number of Health care workers
Baringo	115	87	7	208	55%	42%	3%	208
Bomet	128	88	3	219	58%	40%	1%	219
Bungoma	189	267	57	513	37%	52%	11%	513
Busia	178	282	82	542	33%	52%	15%	542
Elgeyo Marakwet	84	64	14	162	52%	40%	8%	162
Embu	162	245	13	419	39%	58%	3%	419
Garissa	120	167	5	292	41%	57%	2%	292
Homa Bay	222	307	119	649	34%	47%	18%	649
Isiolo	96	60	5	161	60%	37%	3%	161
Kajiado	99	166	22	287	35%	58%	8%	287
Kakamega	178	255	214	647	27%	39%	33%	647
Kericho	221	73	73	368	60%	20%	20%	368
Kiambu	515	1,052	394	1,961	26%	54%	20%	1961
Kilifi	121	191	21	333	36%	57%	6%	333
Kirinyaga	94	164	87	345	27%	48%	25%	345
Kisii	287	682	21	990	29%	69%	2%	990
Kisumu	616	525	124	1,265	49%	42%	10%	1265
Kitui	182	114	25	320	57%	36%	8%	320
Kwale	176	148	30	354	50%	42%	9%	354
Laikipia	141	257	65	464	30%	56%	14%	464
Lamu	43	60	14	118	37%	51%	12%	118
Machakos	326	331	148	804	40%	41%	18%	804
Makueni	146	171	9	325	45%	52%	3%	325
Mandera	158	95	9	261	60%	36%	3%	261
Marsabit	74	56	4	135	55%	42%	3%	135
Meru	195	368	138	701	28%	52%	20%	701
Migori	167	260	0	427	39%	61%	0%	427
Mombasa	261	469	104	834	31%	56%	12%	834
Muranga	181	119	40	340	53%	35%	12%	340
Nairobi	1,149	1,306	608	3,064	38%	43%	20%	3064
Nakuru	501	754	203	1,459	34%	52%	14%	1459
Nandi	143	137	55	335	43%	41%	17%	335
Narok	85	71	22	179	47%	40%	13%	179
Nyamira	142	48	26	216	66%	22%	12%	216
Nyandarua	120	30	16	167	72%	18%	10%	167
Nyeri	418	359	294	1,071	39%	33%	27%	1071
Samburu	107	36	23	166	64%	22%	14%	166
Siaya	90	201	16	307	29%	66%	5%	307
Taita Taveta	71	71	4	146	49%	49%	3%	146



	Planned	Unplanned	Other	Total	Planned (%)	Unplanned (%)	Other(%)	Number of Health care workers
Tana River	76	35	1	112	68%	31%	1%	112
Tharaka Nithi	105	133	16	254	42%	52%	6%	254
Trans Nzoia	164	66	57	288	57%	23%	20%	288
Turkana	140	210	58	407	34%	52%	14%	407
Uasin Gishu	228	270	9	506	45%	53%	2%	506
Vihiga	177	169	83	430	41%	39%	19%	430
Wajir	113	62	22	197	57%	31%	11%	197
West Pokot	88	56	17	161	55%	35%	10%	161
By Type								
Level2	3285	3684	1993	8961	37%	22%	41%	8961
Level3	2010	2236	670	4917	41%	14%	45%	4917
Level4	3482	4323	687	8491	41%	8%	51%	8491
Level5	617	896	27	1539	40%	2%	58%	1539
By Management Authority								
FBO	1134	1063	366	2563	44%	14%	41%	2563
NGO	321	277	127	726	44%	17%	38%	726
Private	1661	4273	1299	7233	23%	18%	59%	7233
Public	6277	5525	1585	13387	47%	12%	41%	13387
By Location								
Rural	3742	3356	1375	8473	44%	40%	16%	8473
Urban	5652	7782	2001	13434	37%	50%	13%	13434
National	9393	11138	3377	23,908	39%	47%	14%	23908

Table 48: Percent composition of reasons for absence

	Maternity/Paternity	Sickness	Training (short term)/seminar/meeting	Off duty/Not his/her shift	On leave	Study leave	On call (confirmation with roster)	Personal reasons	On strike	Outreach	Unknown	Other	Number absent
By location													
Rural	4%	4%	7%	52%	13%	2%	2%	5%	0%	5%	3%	2%	15980
Urban	2%	2%	4%	66%	11%	3%	2%	3%	1%	2%	1%	2%	33814
By type													
Level2	4%	5%	7%	49%	10%	1%	3%	8%	0%	5%	4%	4%	13453
Level3	3%	3%	6%	61%	12%	1%	2%	4%	0%	4%	2%	2%	10573
Level4	2%	2%	3%	68%	12%	3%	2%	1%	1%	2%	1%	1%	22747
Level5	2%	1%	2%	64%	16%	6%	2%	0%	3%	1%	1%	1%	3021
By managing authority													
FBO	3%	3%	4%	66%	10%	1%	2%	5%	0%	3%	2%	1%	6106
NGO	4%	4%	8%	52%	13%	2%	2%	3%	0%	8%	1%	5%	943
Private	2%	2%	3%	73%	5%	1%	4%	5%	0%	2%	1%	2%	16462
Public	3%	4%	6%	53%	17%	4%	1%	3%	2%	4%	2%	2%	26284
All	3%	3%	5%	61%	12%	2%	2%	4%	1%	3%	2%	2%	49794



6. Work Environment and Satisfaction

6.1 Occupational Health and Safety

Health workers are the backbone of any functioning health system. While contributing to the enjoyment of the right to health for all, health workers should also enjoy the right to healthy and safe working conditions to maintain their health. Health workers face a range of occupational risks associated with infections, unsafe patient handling, hazardous chemicals, radiation, heat and noise, psychosocial hazards, violence and harassment, injuries, inadequate provision of safe water, sanitation and hygiene. Safeguarding the health, safety and well-being of health workers can prevent diseases and injuries caused by work, while improving the quality and safety of care and environmental sustainability in the health sector.

The protection of health and safety of health workers contributes to improving productivity, job satisfaction and retention of health workers. It also facilitates the regulatory compliance of health facilities with national laws and regulations on occupational health and safety, bearing in mind their working conditions that present an increased risk of exposure to occupational hazards. Unsafe working conditions resulting in occupational illness, injuries and absenteeism represent a significant financial cost for the health sector (WHO).

Survey coverage

Table 49: Health worker safety structures

Adherence to Processes/ Health Workers Experience
● Exposure to hazardous materials ● Satisfaction with safety measures ● Coverage with immunization

Results:

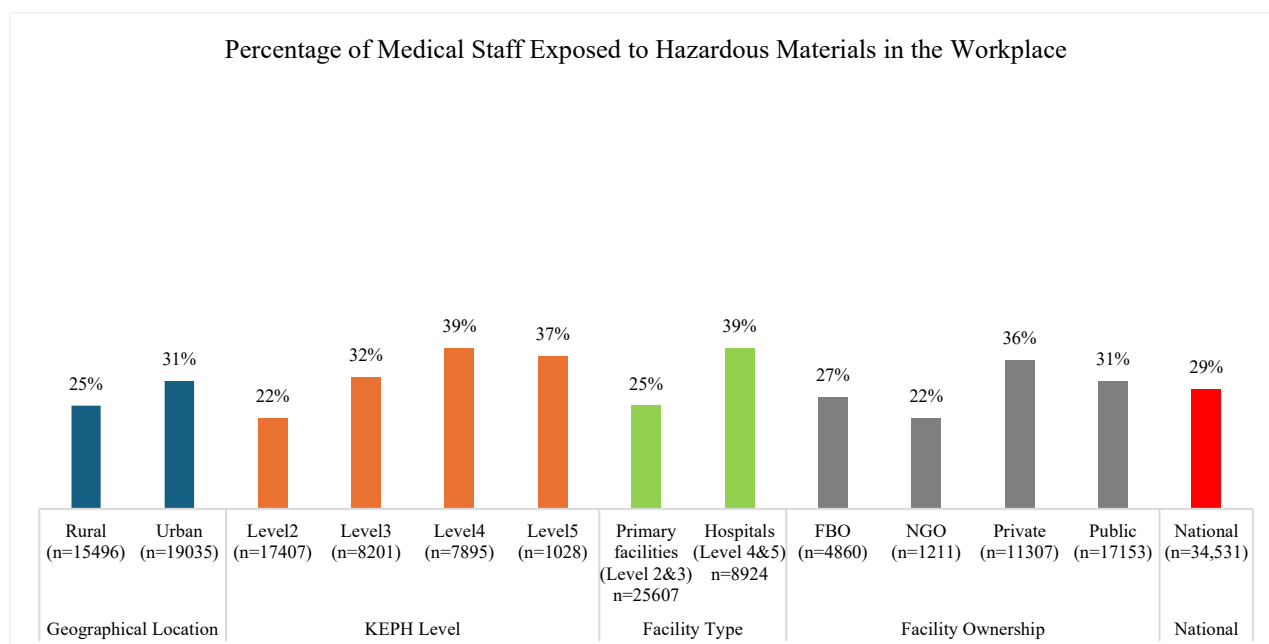
It is important to note that the questionnaire on Occupational Health and Safety was administered to medical staff working in the outpatient department of sampled health facilities.

6.1.1 Exposure to Hazardous Materials in the Workplace

Nationally, slightly more than a quarter (29%) of the medical staff reported having been exposed to hazardous materials in the workplace. A higher number of exposures was reported among medical staff working in level 4 and 5 facilities at 39% and 37%, respectively, compared to those working in level 2 facilities (22%). Three and four out of ten medical staff working in public and private health facilities, respectively, had been exposed to hazardous materials compared two out of ten working in NGO facilities as seen in figure 96 below.

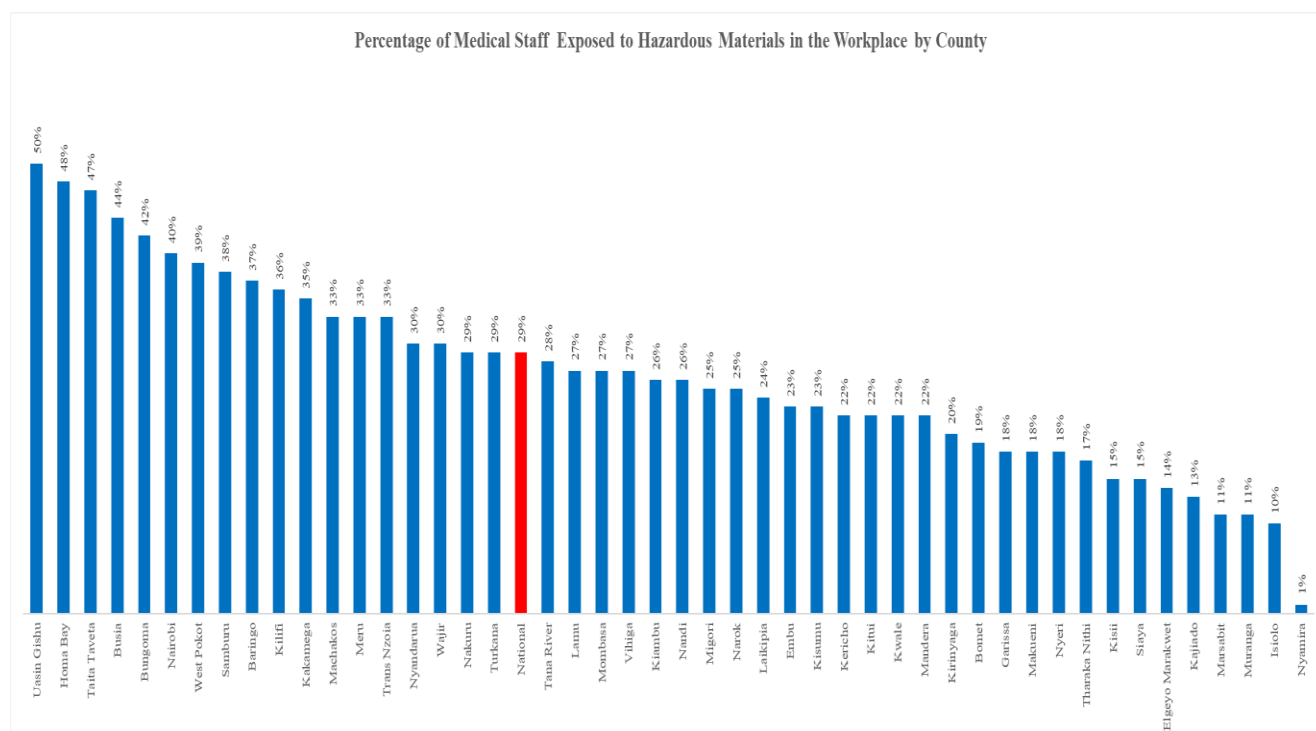


Figure 96: Percentage of Workers Exposed to Hazardous Materials in the Workplace (n=34,531)



Over half the counties (26) had more than a quarter of their staff exposed to hazardous materials in the workplace. Half of the medical staff in Uasin Gishu County had been exposed to hazardous materials in the workplace. Nyamira County had the least proportion of staff exposed to hazardous materials at 1%.

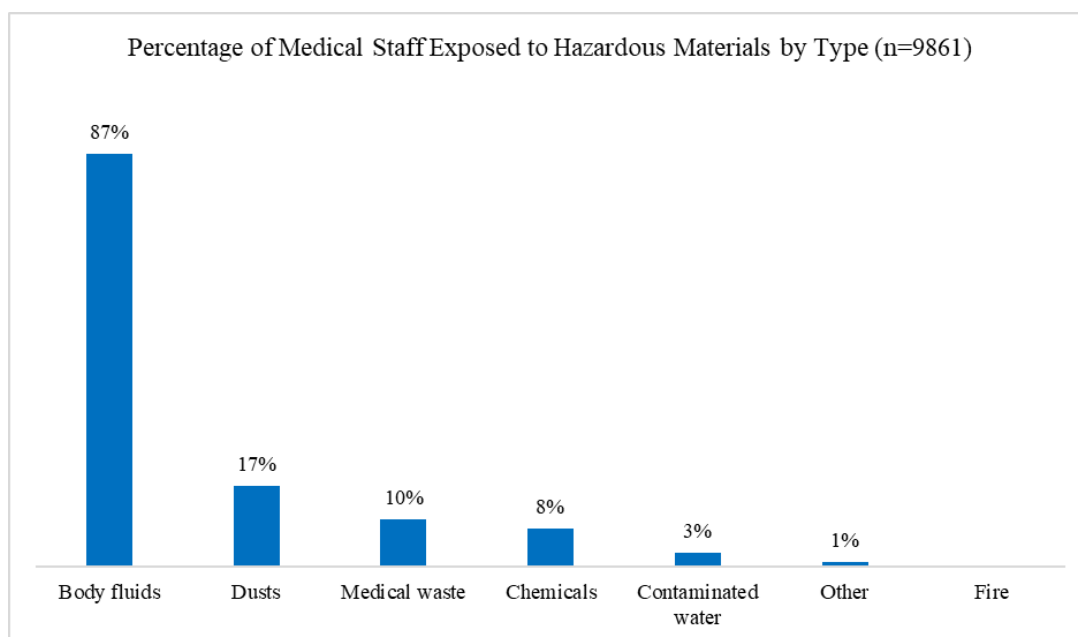
Figure 97: Percentage of Medical Staff Exposed to Hazardous Materials in the Workplace by County (n=34,531)



Majority (87%) of the medical staff had been exposed to body fluids while none had been exposed to fire as shown in figure 98 below.



Figure 98: Percentage of Medical Staff Exposed to Hazardous Materials by Type (n=9861)



Across all the facilities by management, body fluids were the most reported hazardous exposure followed by dust and medical waste as shown in Figure 99 below. Only 1% of the medical staff in private facilities reported being exposed to fire.

Figure 99: Percentage of Workers Exposed to Hazardous Materials by Material Type by Facility Management (n=9861)

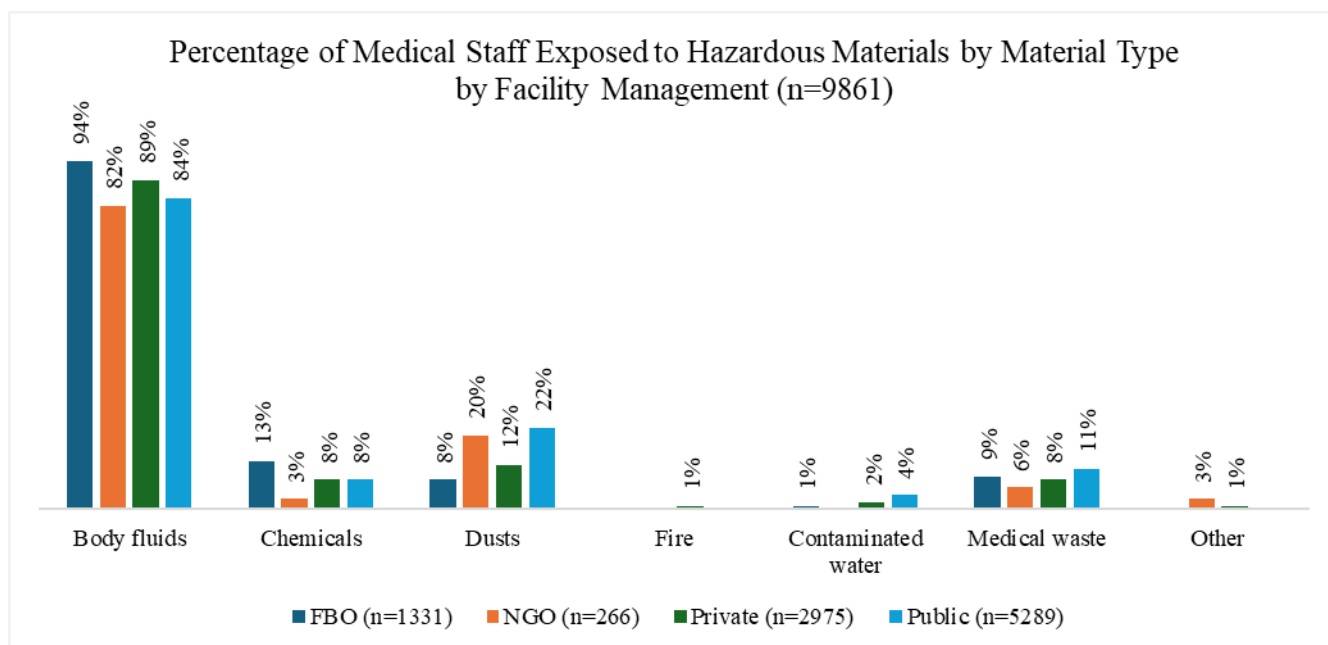


Table 50: Percent of hazardous exposures

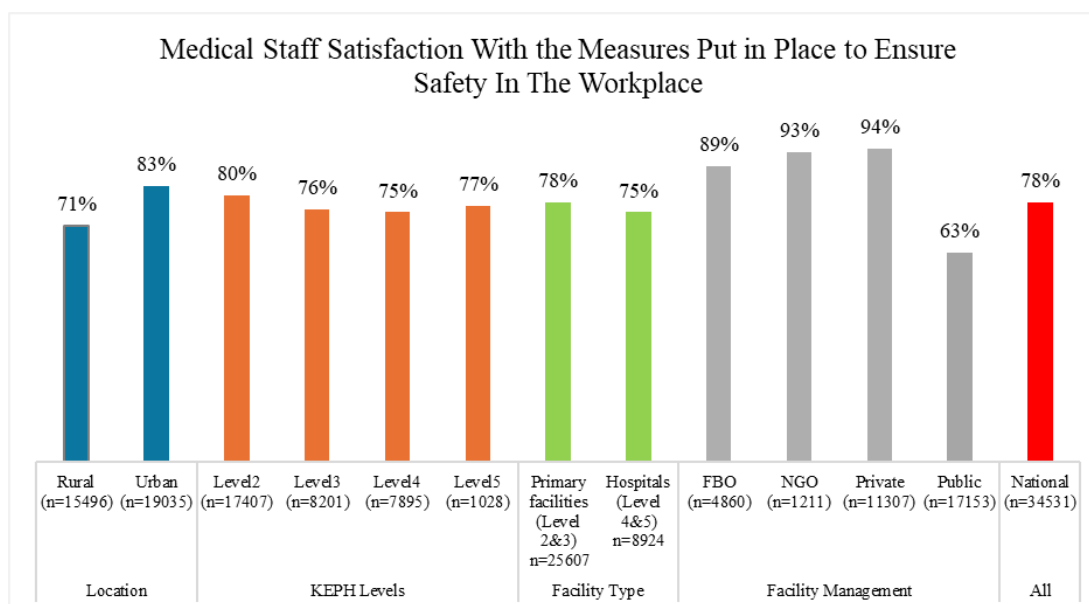
	Body fluids	Chemicals	Dusts	Fire	Contaminated water	Medical waste	Other	Total
By location								
Rural	84%	7%	21%	0%	3%	11%	0%	3949

Urban	89%	9%	14%	0%	3%	9%	1%	5912
By Type								
Level2	80%	6%	22%	0%	3%	9%	1%	3821
Level3	90%	8%	18%	1%	2%	10%	0%	2602
Level4	92%	13%	11%	0%	3%	10%	1%	3053
Level5	97%	1%	9%	2%	2%	10%	0%	384
By managing authority								
FBO	94%	13%	8%	0%	1%	9%	0%	1331
NGO	82%	3%	20%	0%	0%	6%	3%	266
Private	89%	8%	12%	1%	2%	8%	1%	2975
Public	84%	8%	22%	0%	4%	11%	0%	5289
All	87%	8%	17%	0%	3%	10%	1%	9861

6.1.2. Medical Staff Satisfaction with Safety Measures in the Workplace

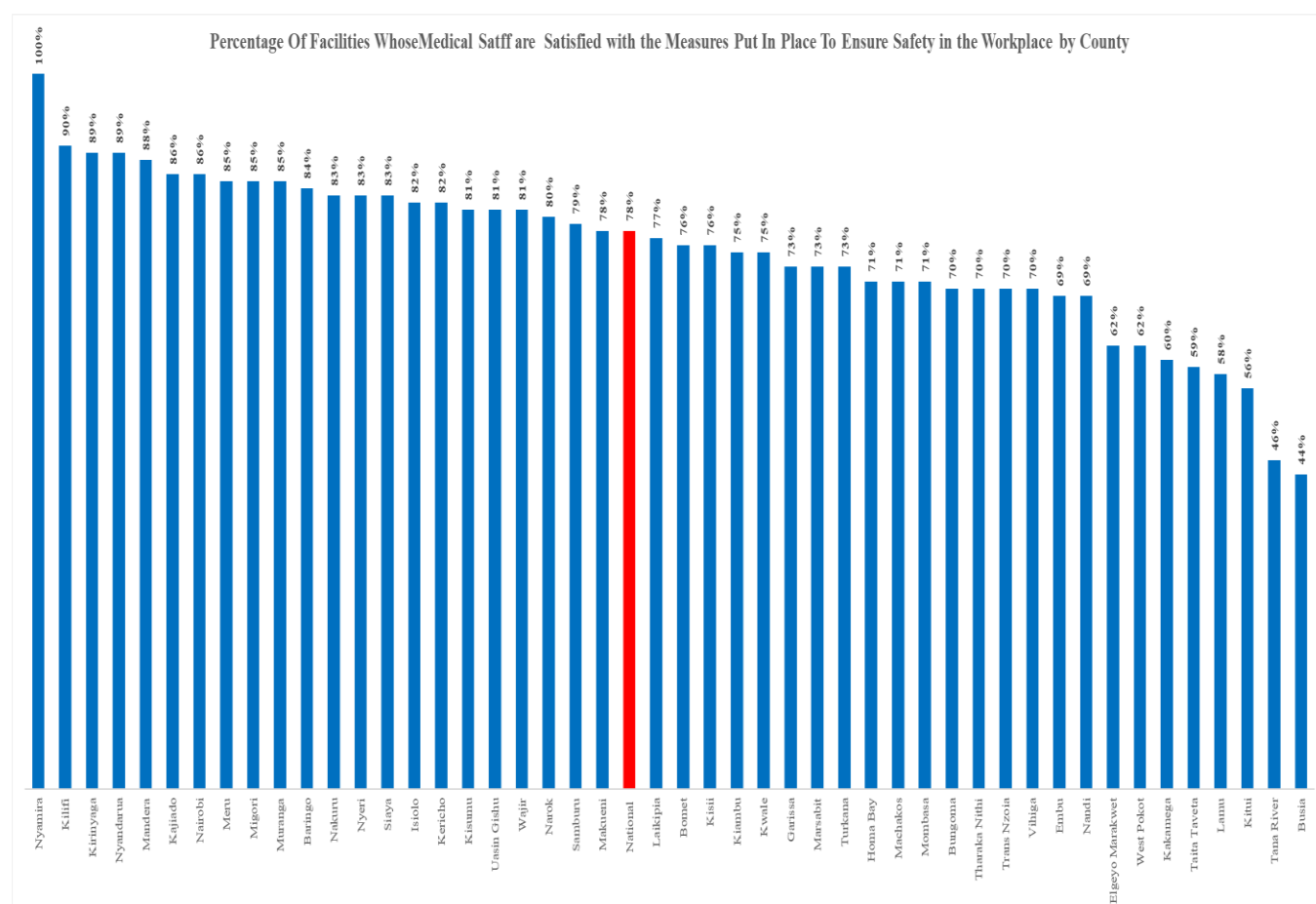
Overall, slightly more than three quarters (78%) of the medical staff were satisfied with the measures put in place to ensure safety in the workplace. Medical staff in the private health facilities were the most satisfied at 94% compared to their counterparts in public facilities at 63%. Eight out of ten (83%) of medical staff in the urban health facilities were satisfied with the safety measures put in place compared to seven out of ten (71%) in the rural facilities as shown in figure 100 below.

Figure 100: Medical Staff Satisfaction with Measures Put in Place to Ensure Safety in the Workplace(n=34,531)



Over half the counties (26) had more than three quarters of their medical staff satisfied with the safety measures put in place. All the medical staff in Nyamira County were satisfied with the measures put in place to ensure safety in their workplace. Busia county had the least percentage (44%) of medical staff satisfied with the safety measures put in place with Tana River following at 46%.

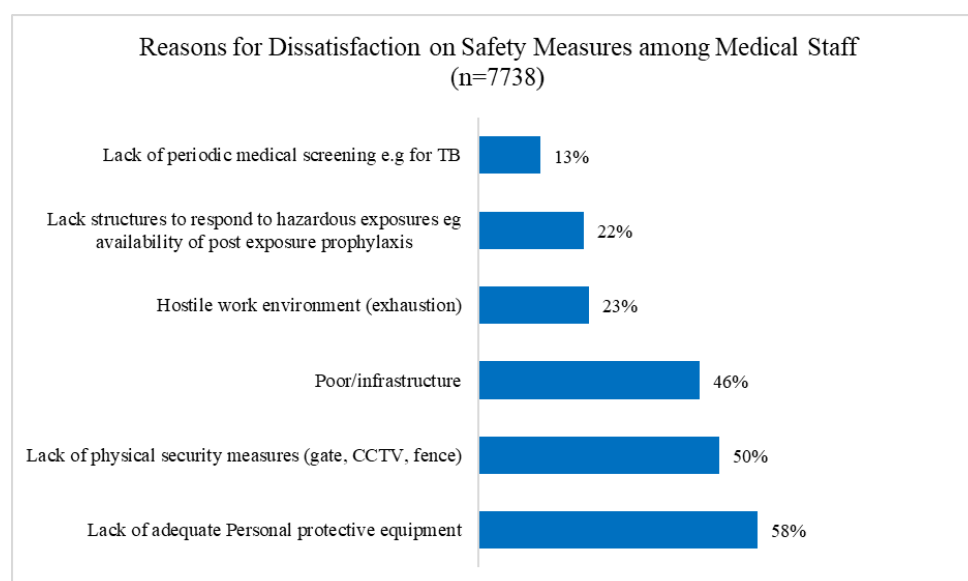
Figure 101: Percentage Medical Staff Satisfied measures put in place to ensure their safety in the workplace by County (n=34,531)



6.1.3 Reasons for Dissatisfaction with the Safety Measures Put in Place Among Medical Place

Lack of adequate personal protective equipment (58%) was the most cited reason for dissatisfaction on the safety measures put in place while lack of periodic medical screening e.g. for TB was the least at 13% as shown in figure 99 below.

Figure 102: Reasons for Dissatisfaction on Safety Measures among Medical Staff (n=7738)



By facility management, more medical staff in public and private health facilities (60%) cited lack of adequate personal protective equipment as the reason for dissatisfaction compared to staff working in the NGO facilities (21%). Slightly more than a quarter of the medical staff in NGO health facilities (27%) mentioned lack of periodic medical screening e.g., for TB and only 10% cited lack of structures to respond to hazardous exposures e.g., availability of post exposure prophylaxis as reasons for dissatisfaction. Slightly more than a half (54%) of the medical staff in public health facilities cited lack of physical security measures (gate, CCTV, fence) as reasons for dissatisfaction as shown in figure 103 below.

Figure 103: Reasons for Non-satisfaction on Safety Measures among Medical Staff (n=7738)

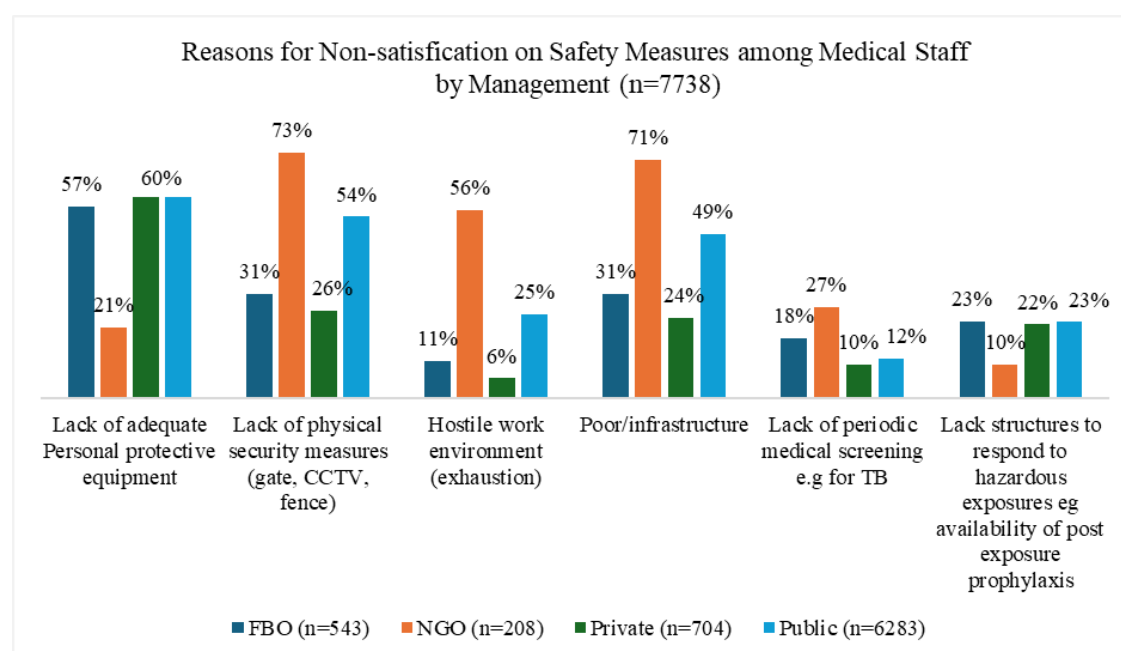


Table 51: Percent of reasons behind dissatisfaction with safety

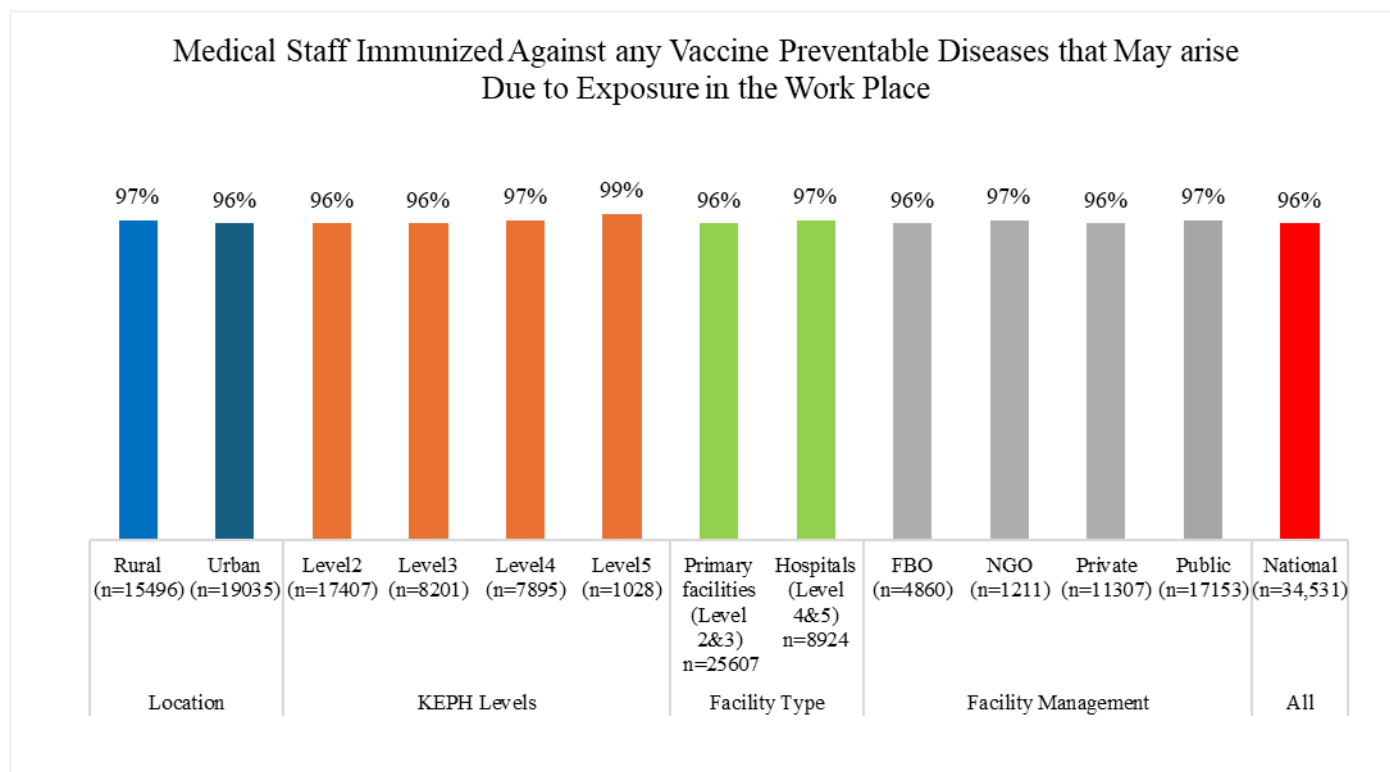
	Lack of adequate Personal protective equipment	Lack of physical security measures (gate, CCTV, fence)	Hostile work environment (exhaustion)	Poor/infrastructure	Lack of periodic medical screening e.g for TB	Lack structures to respond to hazardous exposures eg availability of post exposure prophylaxis	Total
By location							
Rural	59%	53%	22%	48%	12%	24%	4510
Urban	58%	46%	24%	42%	14%	20%	3228
By type							
Level2	53%	58%	22%	54%	13%	24%	3545
Level3	64%	47%	19%	41%	10%	27%	1966
Level4	62%	42%	26%	36%	14%	16%	1995
Level5	65%	30%	26%	37%	21%	15%	233
By managing authority							
FBO	57%	31%	11%	31%	18%	23%	543
NGO	21%	73%	56%	71%	27%	10%	208
Private	60%	26%	6%	24%	10%	22%	705
Public	60%	54%	25%	49%	12%	23%	6283
All	58%	50%	23%	46%	13%	22%	7738

6.1.4 Medical Staff Immunization against Vaccine Preventable Diseases

Nationally, 96% of the medical staff had been vaccinated against any vaccine preventable diseases that may arise due to exposure in the work place as seen in figure 104 below.

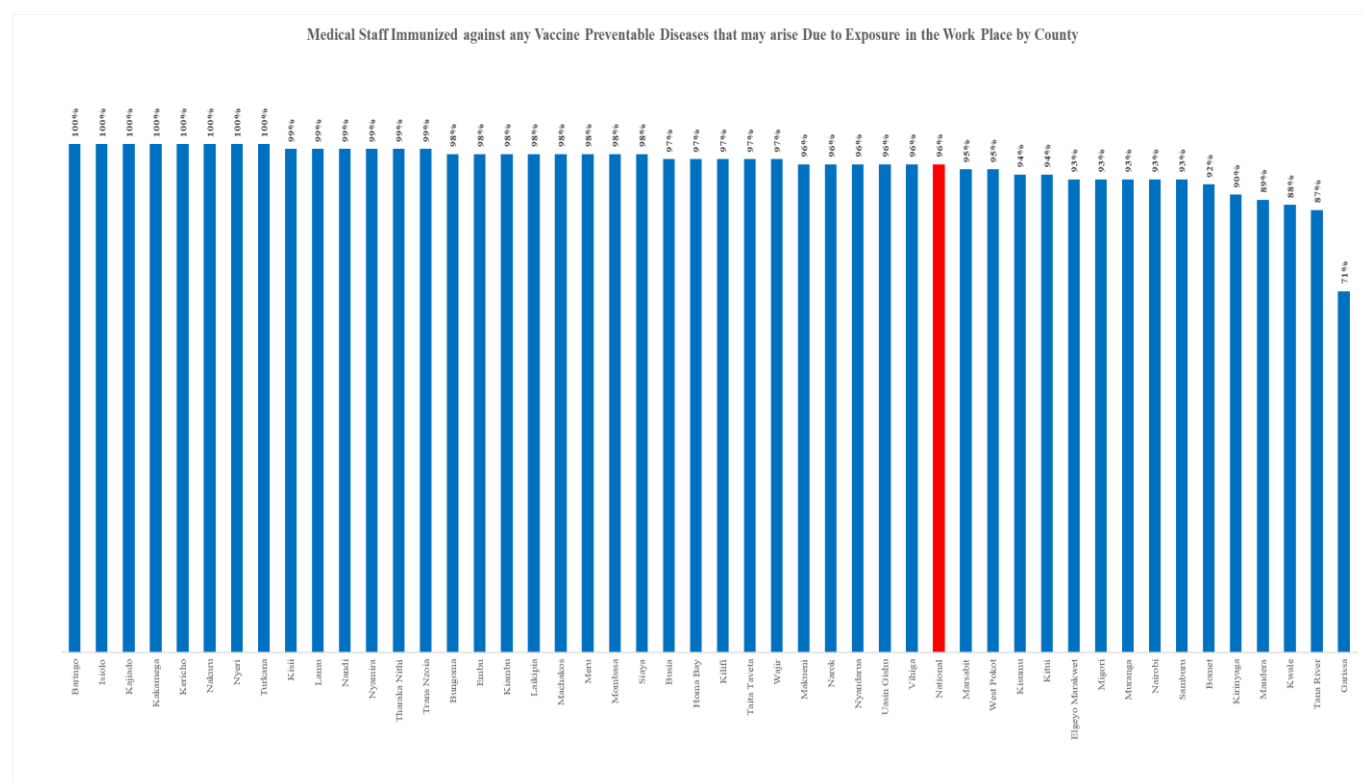


Figure 104: Medical Staff Immunized against any Vaccine Preventable Diseases that May Arise Due to Exposure in the Work Place(n=34,531)



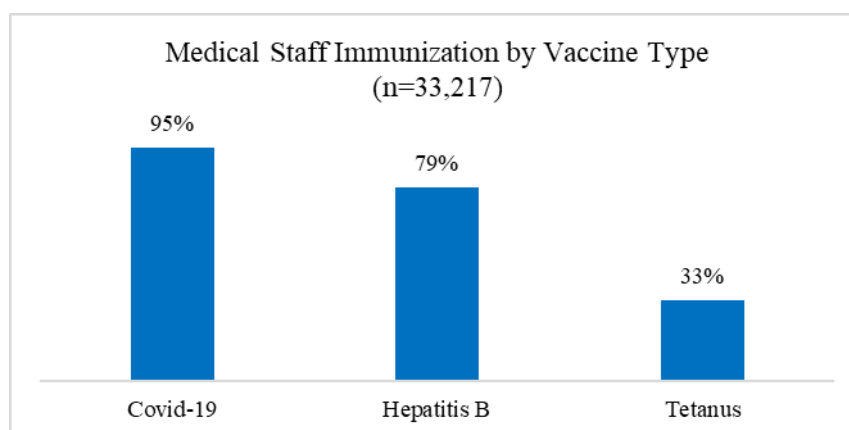
Nine counties, Baringo, Isiolo, Kajiado, Kakamega, Kericho, Nakuru, Nyeri and Turkana, had all their staff vaccinated against any vaccine preventable diseases that may arise due to exposure in the work place while Garissa County had the least proportion of medical staff vaccinated at 71% as shown in figure 105 below.

Figure 105: Medical Staff Immunized against any Vaccine Preventable Diseases that may arise Due to Exposure in the Work Place by County (n=34,531)



Overall, 95% of the medical staff had been vaccinated against the Covid-19 while only 33% had received the Hepatitis B vaccine.

Figure 106: Medical Workers Immunization by Vaccine Type (n=33,217)



Ninety three percent (93%) of the medical staff in level 5 health facilities had been vaccinated against Hepatitis B. Over 90% of the medical staff had been immunized against Covid-19 regardless of the facility management. Almost three quarters (74%) of the medical staff in public health facilities had been vaccinated against Hepatitis B compared to 93% in NGO and 84% in both Private and FBO as shown in Figure 104 below.

Figure 107: Medical Staff Immunization by Vaccine Type and Facility Management (n=33,217)

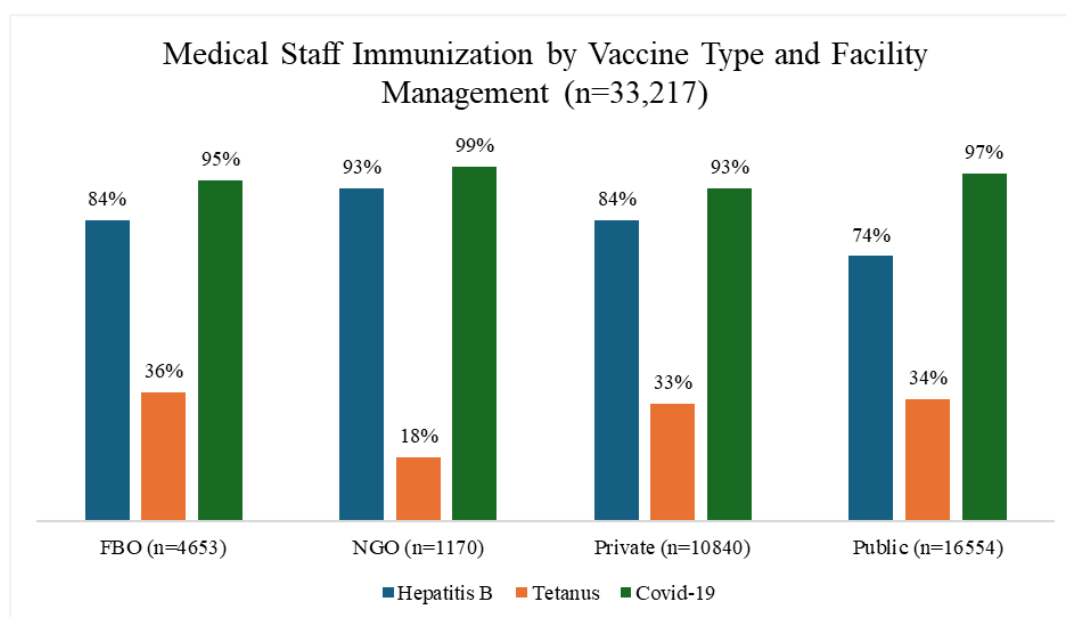


Table 52: Percent immunized against any vaccine preventable diseases that may arise due to exposure in the work place

		Hepatitis B	Tetanus	Covid-19	Number of Staff
By County					
	Baringo	92%	62%	95%	580
	Bomet	67%	11%	94%	446
	Bungoma	84%	35%	97%	810
	Busia	74%	7%	96%	517
	Elgeyo Marakwet	83%	0%	88%	305
	Embu	73%	32%	93%	500
	Garissa	91%	18%	84%	228
	Homa Bay	63%	47%	100%	783
	Isiolo	87%	43%	96%	211
	Kajiado	74%	28%	98%	786
	Kakamega	72%	59%	99%	900
	Kericho	92%	3%	96%	564
	Kiambu	81%	32%	99%	1915
	Kilifi	84%	68%	90%	809
	Kirinyaga	72%	20%	90%	472
	Kisii	84%	4%	92%	952
	Kisumu	73%	22%	98%	1202
	Kitui	70%	12%	94%	646
	Kwale	88%	49%	88%	535
	Laikipia	75%	46%	96%	521
	Lamu	49%	0%	90%	186
	Machakos	79%	58%	98%	1209
	Makueni	85%	48%	97%	629
	Mandera	83%	31%	85%	390

		Hepatitis B	Tetanus	Covid-19	Number of Staff
	Marsabit	61%	31%	96%	289
	Meru	79%	45%	92%	992
	Migori	68%	11%	97%	797
	Mombasa	88%	43%	91%	1020
	Muranga	63%	51%	91%	667
	Nairobi	91%	25%	96%	4178
	Nakuru	61%	26%	95%	1610
	Nandi	86%	38%	98%	560
	Narok	76%	11%	95%	364
	Nyamira	90%	0%	100%	474
	Nyandarua	95%	63%	98%	442
	Nyeri	86%	49%	95%	990
	Samburu	80%	52%	94%	227
	Siaya	78%	50%	99%	527
	Taita Taveta	84%	73%	94%	330
	Tana River	72%	38%	92%	138
	Tharaka Nithi	79%	66%	96%	486
	Trans Nzoia	85%	1%	99%	528
	Turkana	87%	28%	94%	644
	Uasin Gishu	70%	37%	98%	737
	Vihiga	59%	11%	95%	433
	Wajir	71%	16%	94%	398
	West Pokot	90%	67%	99%	293
By type					
	Level2	76%	35%	96%	16708
	Level3	78%	33%	96%	7856
	Level4	85%	30%	95%	7633
	Level5	93%	28%	89%	1021
By managing authority					
	FBO	84%	36%	95%	4653
	NGO	93%	18%	99%	1170
	Private	84%	33%	93%	10840
	Public	74%	34%	97%	16554
By location					
	Rural	73%	35%	97%	14967
	Urban	85%	31%	94%	18251
All		79%	33%	95%	33217

6.2 Health Worker Environment and Satisfaction

Introduction

Health workers are continually exposed to a variety of health and safety challenges as part of their job. The main types of workplace injury and harm in healthcare include exposure to pathogens/infections, long working hours/fatigue, occupational burnout, stigma, physical violence as well as psychological/mental ill-health.

Working conditions and health worker safety affect the capacity and capability of health workers to deliver high quality healthcare. Improving the working environment of health professionals not only ensures high productivity but also reduces the expenses associated with occupational damage and helps to minimize harm to patients.

In September 2020, the World Health Organization (WHO) called on governments to take key actions to protect health workers from violence; to be cognizant of their mental well-being; to protect healthcare workers from both physical and biological hazards; to further national programs for health worker safety, and to connect health worker safety policies to existent patient safety policies.

According to WHO, globally, there are 136 million workers in the health and social work sector, approximately 70% of whom are women. All these workers have the right to decent work, including protection of health and safety risk at work. Health workers face a range of occupational risks associated with biological, chemical, physical, ergonomic and psychosocial hazards affecting the safety of both health workers and patients.

Providing occupational health and safety measures for protecting health workers and is also fundamental for well-functioning and resilient health systems, quality of care and maintaining a productive health workforce.

WHO has been supporting countries to develop norms and standards for prevention of occupational risks in the health sector, implement occupational health programmes for health workers at the national level and in all healthcare facilities, advocate and network for strengthening the protection of health and safety of health workers.

The QOC-HFFA assessment through this section sought to establish the conditions under which the medical staff in the health facilities were providing services by assessing the following areas;

Table 53: Work environment structures

Processes- Health Worker Environment and Satisfaction
This was elicited through the interview of medical staff who conduct general consultation in OPD ● Promotions in the last three years. ● Timeliness in the payment of salaries. ● Experience of assault (Physical, verbal or any other); ● Distribution of workload

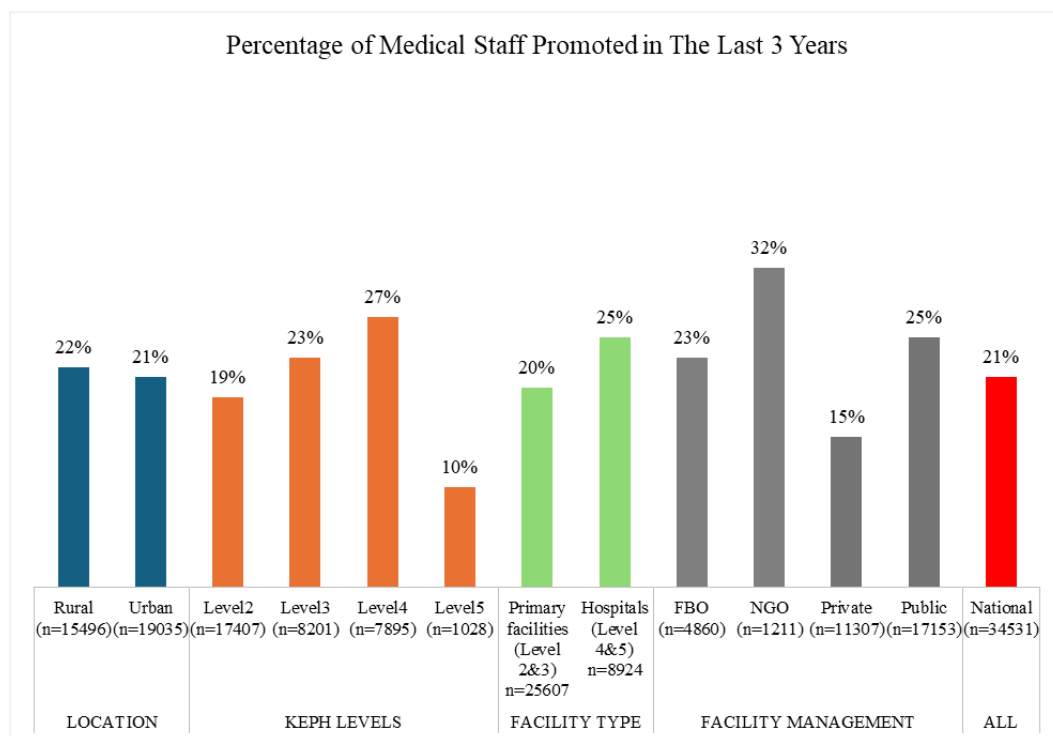
- Perceived levels of satisfaction including measures that they felt would improve their working conditions

Key Findings

6.2.1 Promotions in the last 3 years

Nationally, about a fifth (21%) of the medical staff in the health facilities reported having been promoted in the last 3 years. The percentage of medical staff promoted in the rural and urban areas was almost the same at 22% and 21% respectively. Twenty seven percent (27%) of medical staff in level 4 facilities had been promoted compared to 23%; 19% and 10% in levels 3; 2 and 5 respectively. Based on ownership, more medical staff (32%) in NGO facilities had been promoted compared to Public and Private facilities at 25% and 15% respectively.

Figure 108: Percentage of medical staff promoted in the last 3 years



There were variations in the promotion of medical staff over the last three years in the counties with 58% of medical staff in Taita Taveta having been promoted in the last three years. Less than a fifth of medical staff in 26 counties had been promoted in the last three years with Kirinyaga having the least number of promotions at 2%.

Figure 109: Percentage of medical staff promoted in the last 3 years by county (n=34,531)

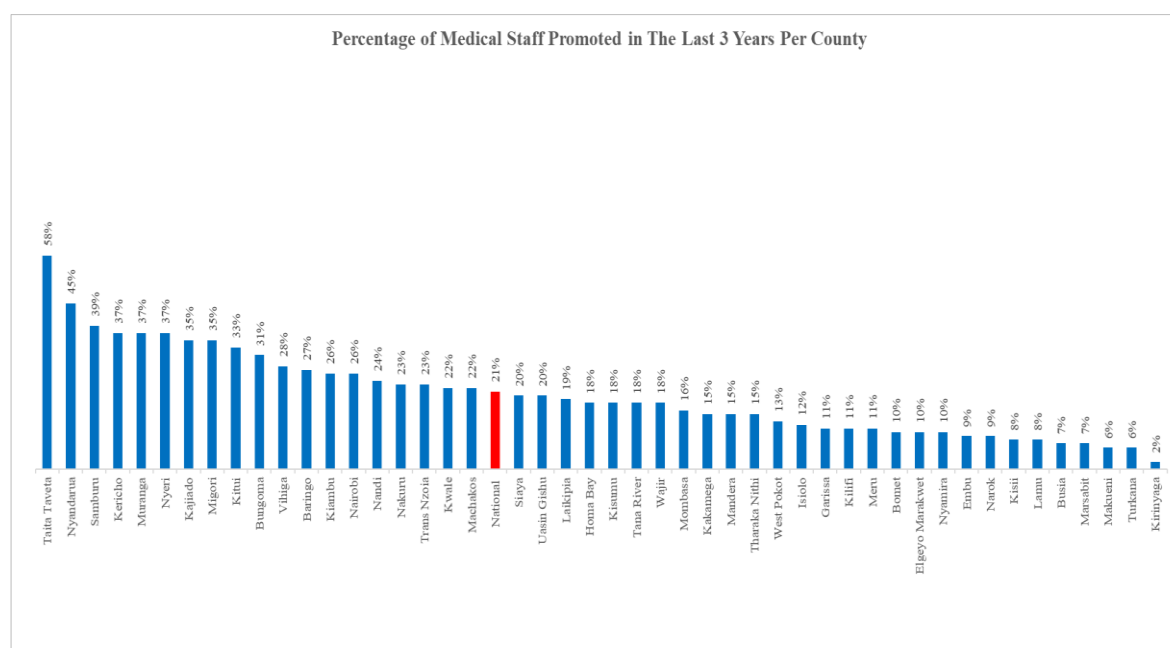


Table 54: Percentage of health worker safety measures put in facilities

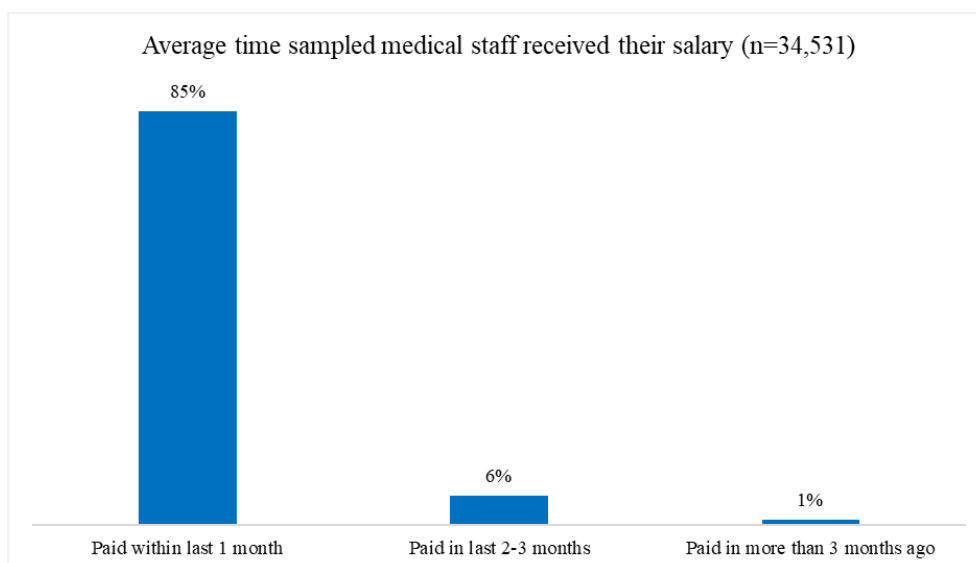
	Promoted in the last 3 years	Assault at work environment in the last 1 year	Workload is fairly distributed among health workers	Exposed to any hazardous materials in the last 1 year	Satisfied with the measures put in place to ensure your safety	Immunized against any vaccine-preventable diseases that may arise due to exposure	Total
By location							
Rural	22%	16%	60%	25%	71%	97%	15496
Urban	21%	18%	74%	31%	83%	96%	19035
By type							
Level2	19%	14%	72%	22%	80%	96%	17407
Level3	23%	15%	64%	32%	76%	96%	8201
Level4	27%	25%	65%	39%	75%	97%	7896
Level5	10%	29%	58%	37%	77%	99%	1028
By managing authority							
FBO	23%	9%	81%	27%	89%	96%	4860
NGO	32%	9%	89%	22%	83%	97%	1211
Private	15%	13%	89%	26%	94%	96%	11308
Public	25%	22%	49%	31%	63%	97%	17153
All	21%	17%	68%	29%	78%	96%	34531

6.2.2 Payment of Salaries

Overall, salaries for medical staff were paid in a timely way with 85% of medical staff reporting having received their salaries within the previous month. That said, only 1% of medical staff reported having been paid more than 3 months before the day of the survey.

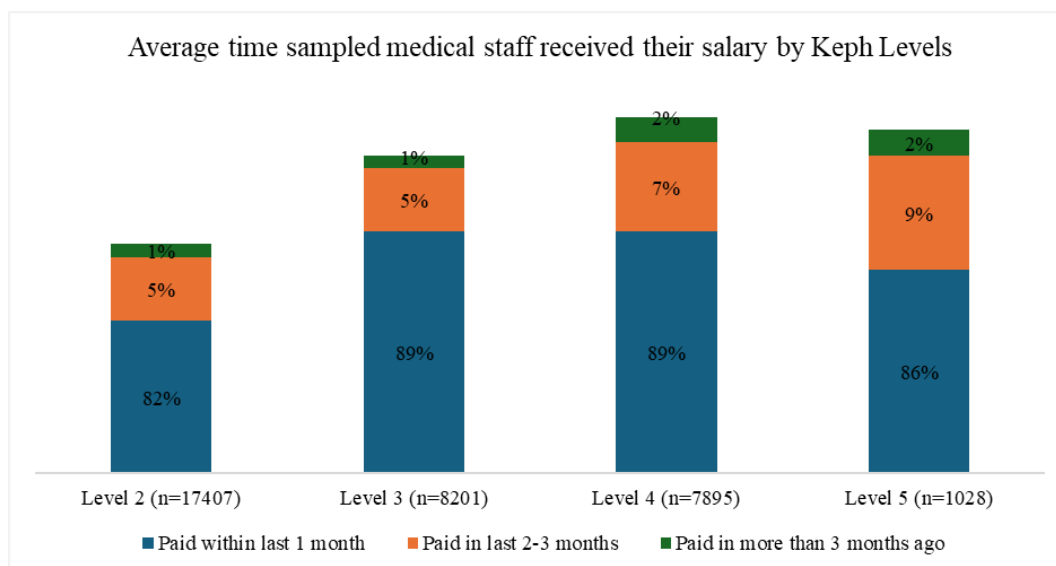


Figure 110: Average time sampled medical staff received their salary (n=34,531)



There was slight difference in the proportion of medical staff who had had their salaries paid within the previous one month in rural and urban health facilities at 85% and 86% respectively. On average, more than 80% of the medical staff had their salaries paid within the previous month irrespective of the KEPH Level as shown in figure 111 below. However, 2% of the medical staff in Level 4 and 5 facilities had not been paid 3 months prior to the day of the survey.

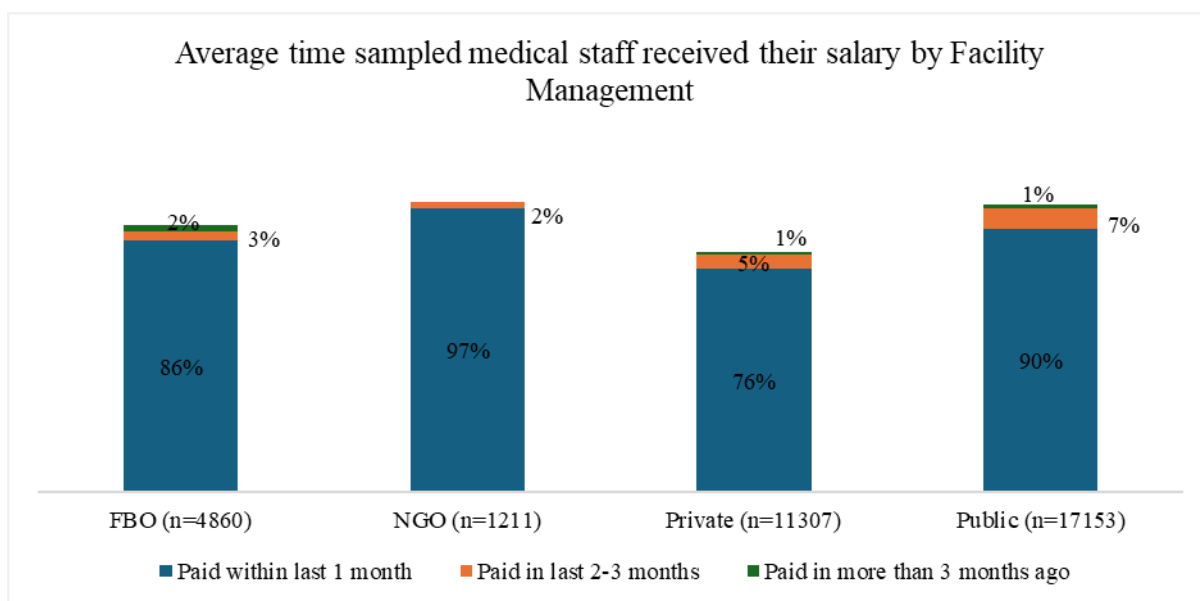
Figure 111: Average time sampled medical staff received their salary by KEPH Level(n=34,531)



Nine in ten of the medical staff in NGO (97%) and Public health facilities (90%) had their salaries paid within the previous month compared to 86% of staff working in FBO facilities and 76% in private facilities. Notably, 7% and 5% of medical staff in public and private facilities had been paid 2-3 months prior to the day of the survey. Only a small proportion of medical staff NGO (2%), Public & Private (1%) had not been paid in more than 3 months from the day of the assessment as seen in Figure 112 below.



Figure 112: Average time sampled medical staff received their salary by facility management (n=34,531)



More than three quarters of medical staff in 40 counties had received their salaries within the previous month with Lamu and Trans Nzoia leading at 99%. Marsabit and Kirinyaga Counties had the least number of staff who received salaries within the last month at 58%. Further, 36% and 31% of medical staff in Marsabit and Kirinyaga Counties reported to having received their salaries 2-3 months prior to the day of the survey; Kisii, Nyamira and Bomet counties followed at 27%, 22% and 21% respectively. About one out of ten medical staff in Turkana, Narok and Taita Taveta counties reported having received their salaries more than 3 months prior to the day of the survey as seen in Figure 113 below.

Figure 113: Average time sampled medical staff received their salary by County (n=34,531)

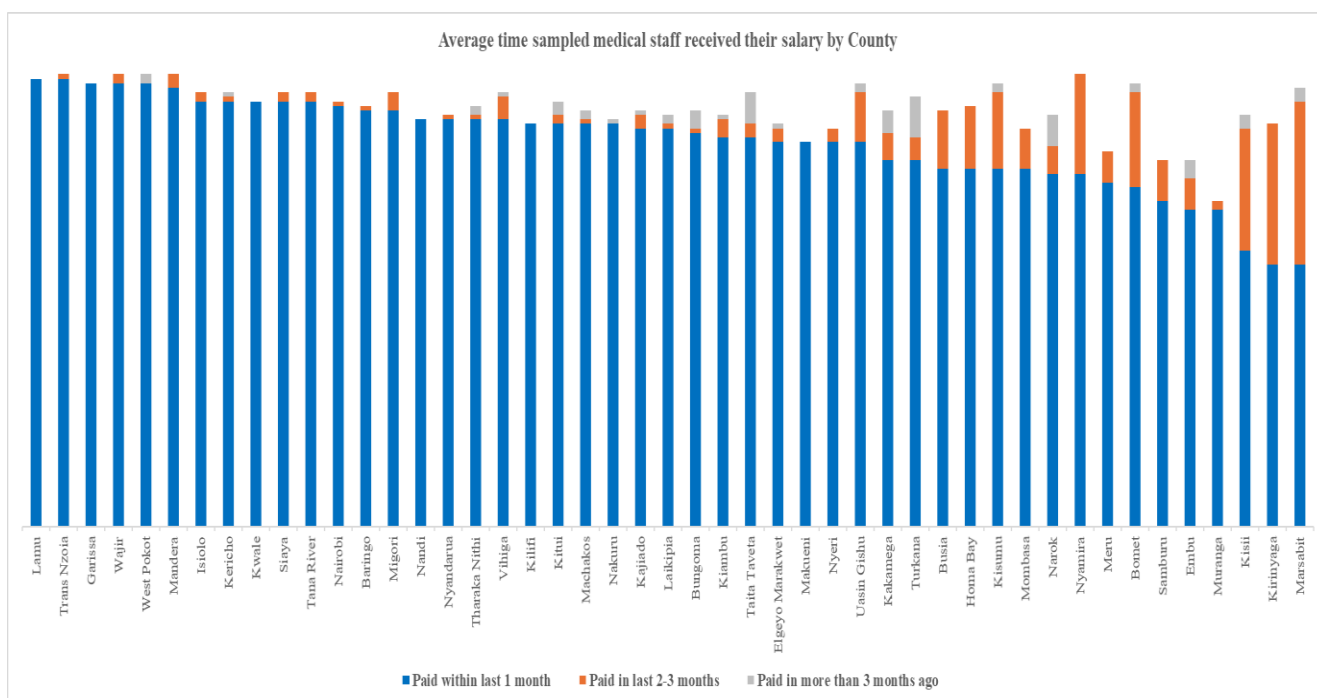




Figure 114: Percent of last pay dates

	Paid within last 1 month	Paid in last 2-3 months	Paid in more than 3 months ago	Not applicable	Total
By location					
Rural	85%	7%	1%	7%	15496
Urban	86%	5%	1%	8%	19035
By type					
Level2	82%	5%	1%	12%	17407
Level3	89%	5%	1%	5%	8201
Level4	89%	7%	2%	2%	7896
Level5	86%	9%	2%	3%	1028
By managing authority					
FBO	86%	3%	2%	9%	4860
NGO	97%	2%	0%	1%	1211
Private	76%	5%	1%	18%	11308
Public	90%	7%	1%	1%	17153
All	85%	6%	1%	8%	34531

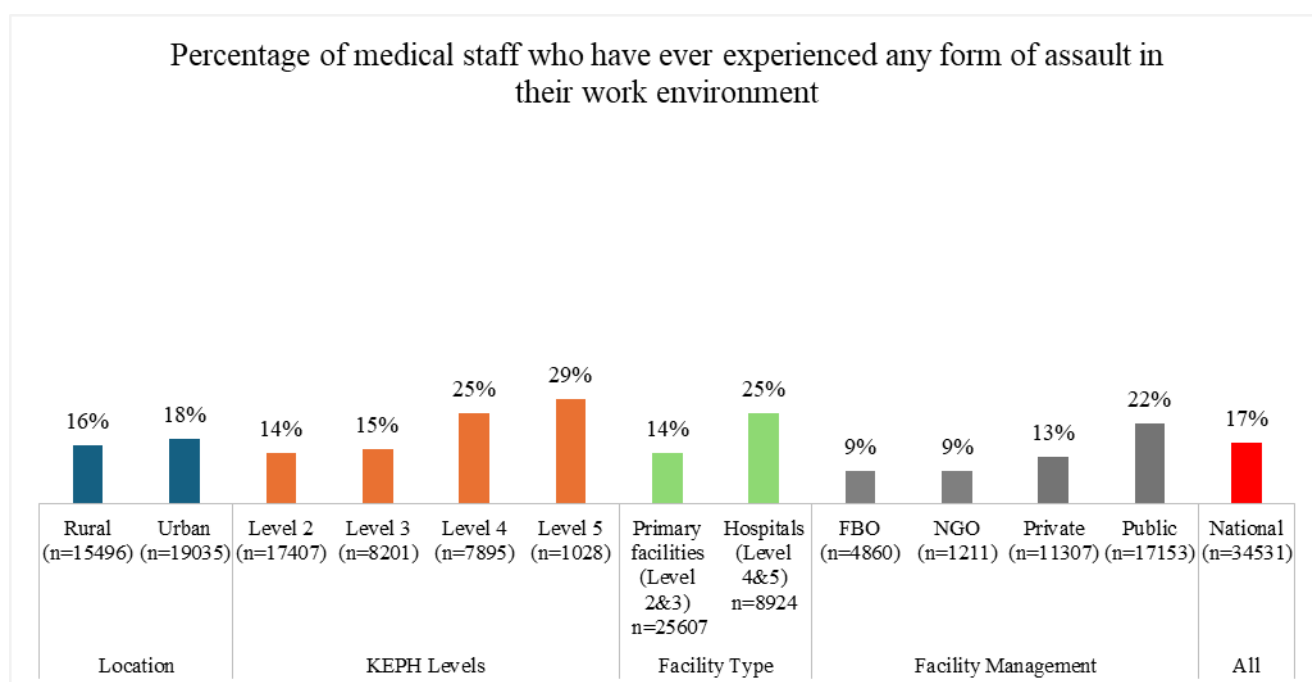
6.2.3 Experience of Assault (Physical, Verbal or any other)

The assessment sought to establish the occurrence of work-related abuse among health workers be it physical, verbal, threats, harassment or any other form of violence. It is important to note that the questionnaire on assault was administered to medical staff working in the outpatient department of sampled health facilities.

Nationally, 17% of the medical staff reported having experienced any form of assault in their work place in the last one year. This finding was comparable to the World Health Organization (WHO) that estimates between 8-38 per cent of health workers suffer at least one form of violence. Slightly more than a fifth (22%) of the medical staff in public health facilities had experienced assault compared to 9% of staff in FBO and NGO and 13% in private facilities. A quarter of medical staff in hospitals are more likely to experience assault than those in the primary care facilities (14%). More medical staff in higher level facilities reported having experienced assault compared to staff working in lower level facilities; specifically, about three out of ten (29%) and a quarter (25%) medical staff in Level 5 and 4 facilities respectively had experienced any form of assault compared to 14% and 15% in Level 2 and 3 facilities as shown in Figure 115. The proportion of medical staff that had experienced assault based on location (rural or urban) was almost similar at 16% and 18% respectively.

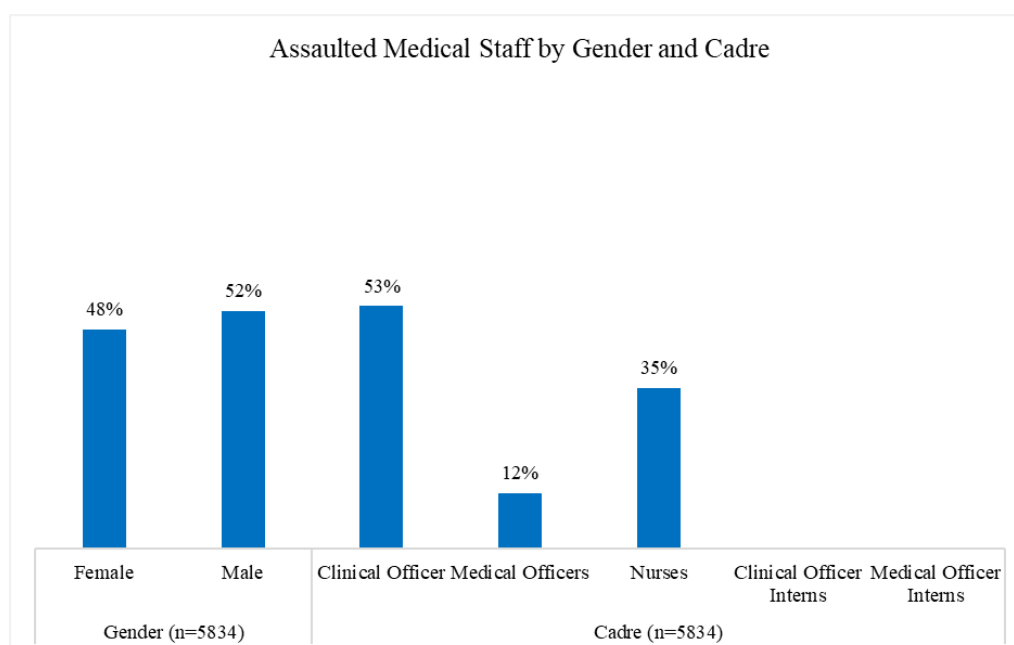


Figure 115: Percentage of medical staff who have ever experienced any form of assault in their work environment(n=34,531)



About half of the medical staff had experienced assault regardless of the gender. Slightly more than half of the of clinical officers reported experiencing assault compared to medical officers at 12%. There were no medical staff interns who reported having ever been assaulted as seen in Figure 116 below.

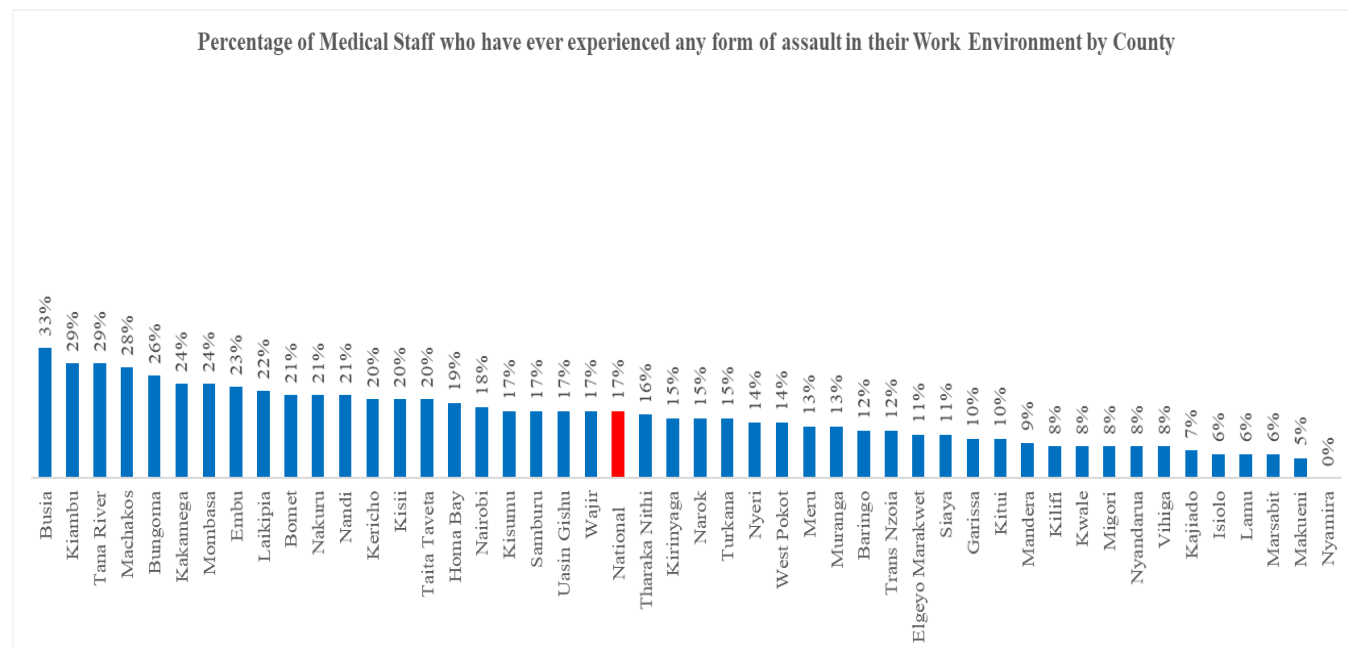
Figure 116: Proportion of assaulted medical staff by gender and cadre among all assaulted staff (n=5,834)



There were variations across the counties; about a fifth of medical staff in 15 counties had experienced assault. Three out of ten medical staff in Busia, Kiambu and Tana River reported

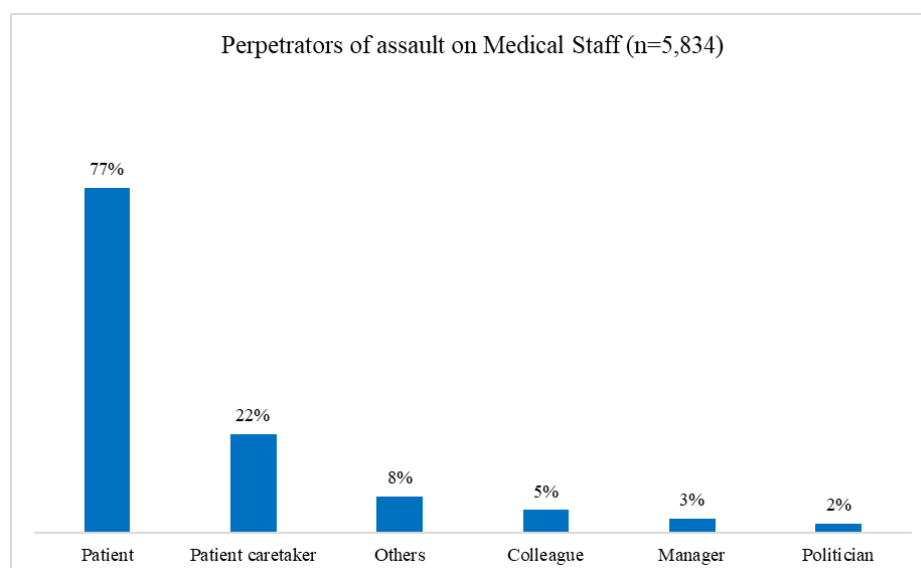
having experienced assault compared to 6% of staff in Isiolo, Lamu and Marsabit Counties, and 5% in Makueni. Notably, no staff in Nyamira reported any experience of assault.

Figure 117: Percentage of medical staff who have ever experienced any form of assault in their work environment by county (n=34,531)



Majority of the medical staff (77%) reported patients as the main perpetrators of assault while health facility managers and politicians were the least at 3% and 2% respectively.

Figure 118: Perpetrators of Assault on Medical Staff (n= 5,834)



Eight out of ten patients in the rural areas are more likely to assault a medical staff compared to seven in the urban areas. Health facility managers and politicians are least likely to assault medical staff irrespective of the facility location. Across the facility KEPH levels, patients were still the main perpetrators of assault followed by their caretakers while managers and

politicians were the least likely perpetrators. Patient caretakers in FBO and colleagues in NGO facilities respectively, are most likely to assault medical staff compared to public and private facilities as shown in Figure 119 below.

Figure 119: Perpetrators of Assault on Medical Staff by facility location (n=5,834)

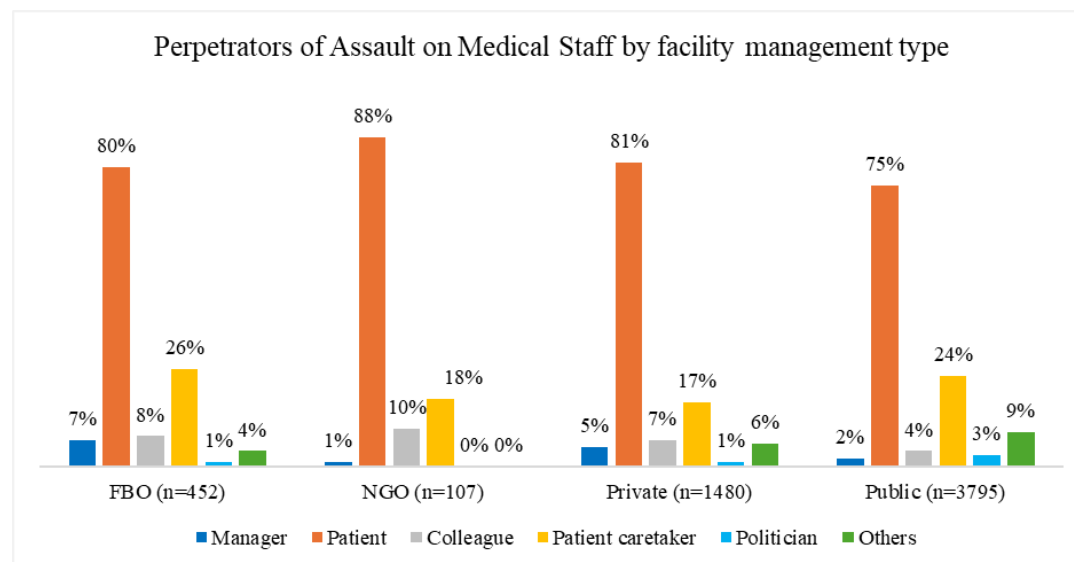
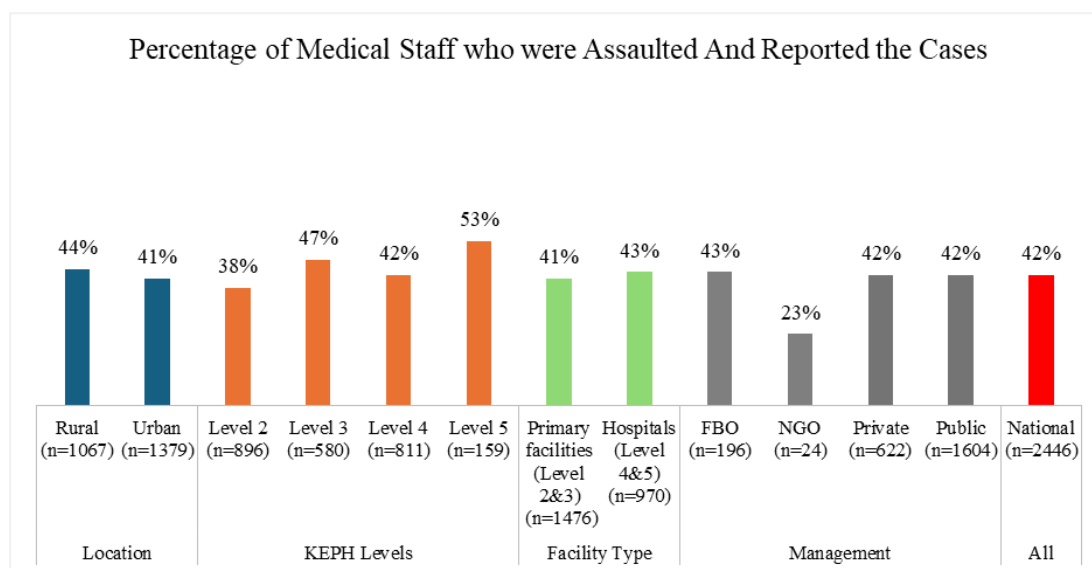


Table 55: Percent of Assault Perpetuator

	Manager	Patient	Colleague	Patient caretaker	Politician	Others	Number assaulted
By location							
Rural	3%	70%	6%	20%	3%	11%	2451
Urban	3%	82%	5%	23%	1%	5%	3383
By type							
Level2	2%	78%	3%	14%	1%	11%	2354
Level3	5%	80%	9%	21%	2%	5%	1232
Level4	4%	73%	5%	30%	3%	3%	1950
Level5	0%	81%	2%	44%	0%	22%	298
By managing authority							
FBO	7%	80%	8%	26%	1%	4%	452
NGO	1%	88%	10%	18%	0%	0%	107
Private	5%	81%	7%	17%	1%	6%	1480
Public	2%	75%	4%	24%	3%	9%	3795
All	3%	77%	5%	22%	2%	8%	5834

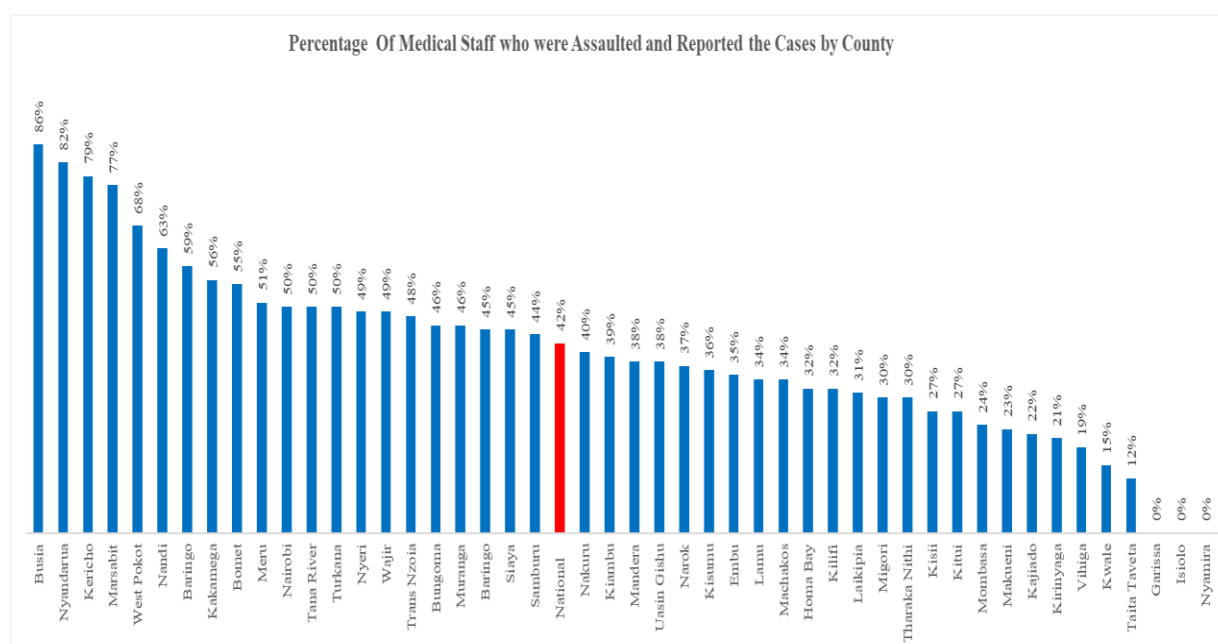
Nationally, 42% of medical staff who were assaulted over the last one year reported the case. Four in ten (40%) of medical staff in public, private and FBO facilities reported the assault case compared to about a quarter (23%) of assaulted staff in NGO facilities as shown below.

Figure 120: Percentage of medical staff who were assaulted and reported the case(n=2446)



Busia and Nyandarua counties had more than 80 % of the medical staff reporting the assault cases. Nyandarua and Marsabit counties had more than three quarters (75%) of the medical staff reporting the assault cases despite having less than 10% of the total assault cases. None of the assaulted staff in Garissa and Isiolo counties reported the assault as shown below.

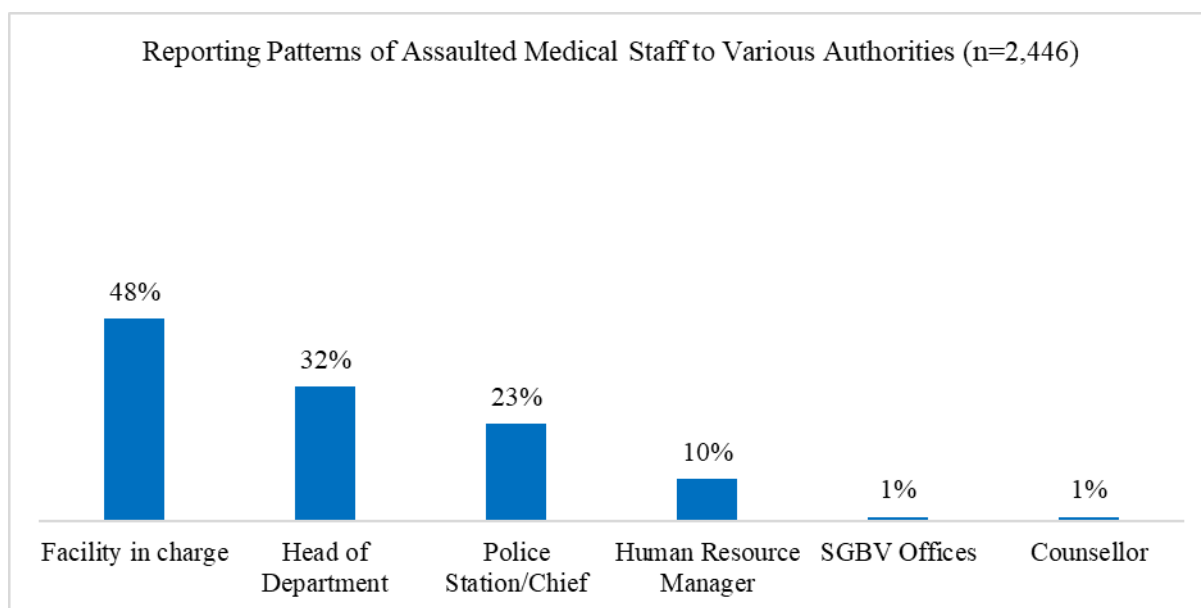
Figure 121: Percentage of medical staff who were assaulted and reported the cases by county (n=2,446)



Overall, about half (48%) of the assaulted medical staff reported the cases to facility in charges with about a third (32%) reporting to heads of departments and 23% to police stations. Only 1% of the medical staff who had been assaulted reported to counsellors or SGBV offices. By the KEPH level, medical staff in level 5 facilities (72%) are more likely to report the assault cases to Facility in charges compared to their colleagues in level 2 (39%).

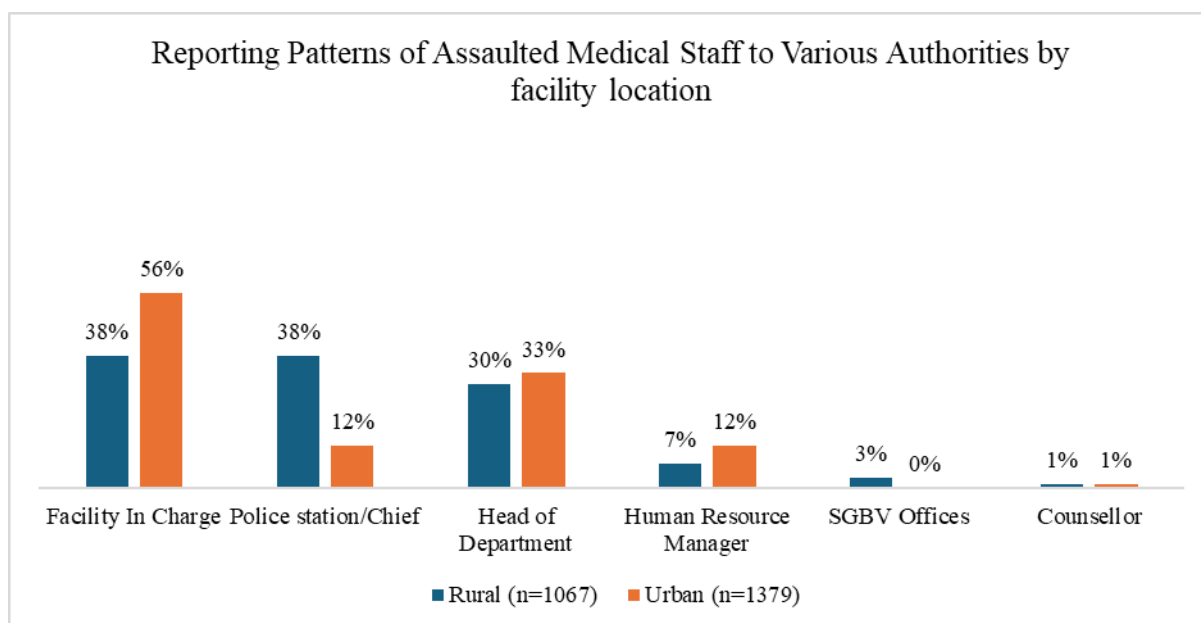


Figure 122: Reporting Patterns of Assaulted Medical Staff to Various Authorities(n=2,446)



Based on location, more medical staff in urban facilities (56%) reported the cases to facility in charges compared to their counterparts in the rural areas (38%). Medical staff in the rural areas are more likely to report the assault cases to police stations/chiefs (38%) compared to their counterparts in the urban areas (12%). Only 3% of the assaulted medical staff in rural areas reported the cases to the Sexual and Gender Based Violence (SGBV) offices.

Figure 123: Reporting Patterns of Assaulted Medical Staff to Various Authorities by facility location(n=2,446)



Medical staff who had experienced assault are most likely to report the case to a facility in charge regardless of the managing authority. All the assaulted medical staff in the NGO facilities reported the cases to the facility in charges compared to assaulted medical staff in public facilities who mostly reported to a facility in charge or a head of department as shown in figure 124 below.

Figure 124: Reporting Patterns of Assaulted Medical Staff to Various Authorities by Facility Management (n=2,446)

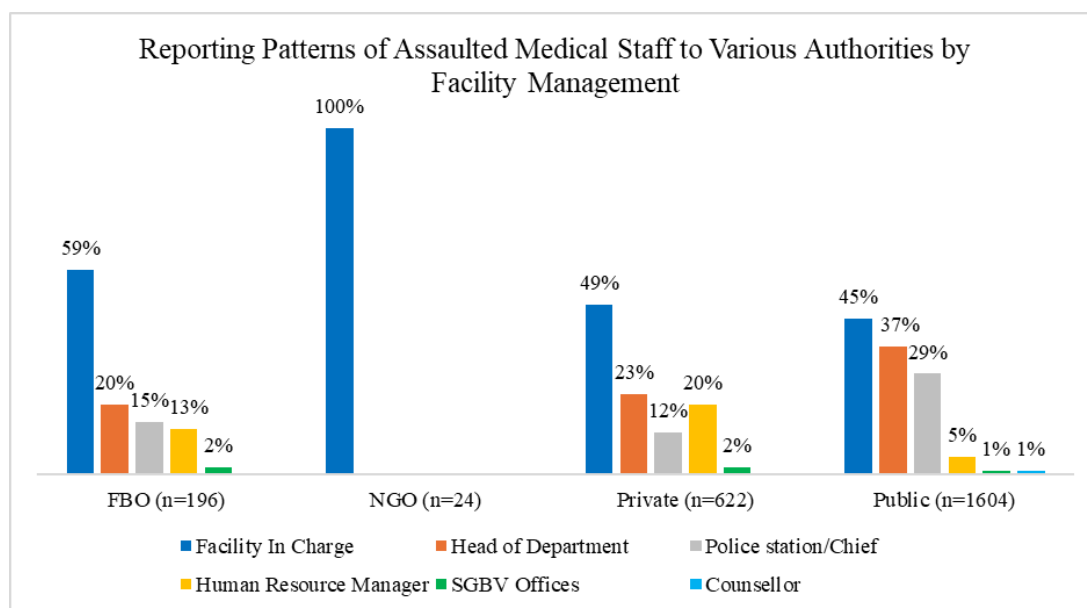


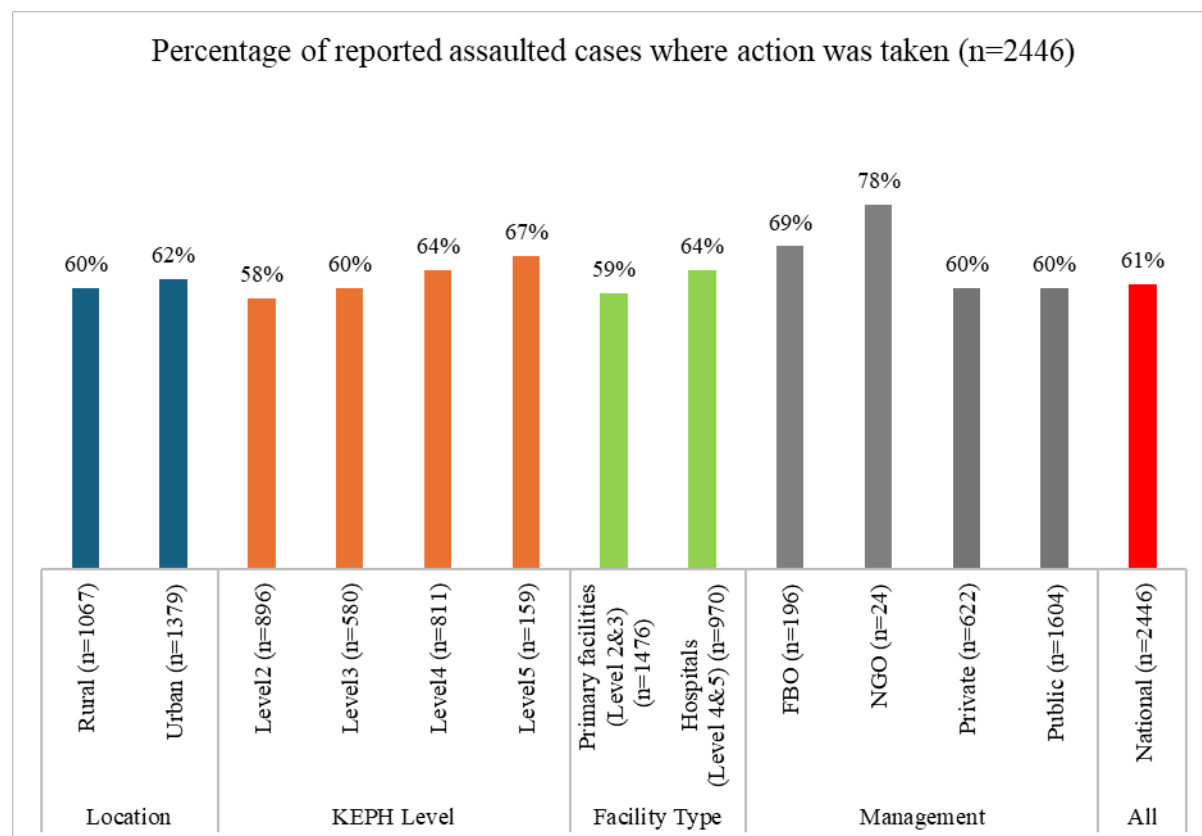
Table 56: Percent of staff reporting patterns of assaulted staff

		Reported the assault	Counsellor	Facility in charge	Head of Department	SGBV Offices	Human Resource Manager	Police Station/C chief	Action taken	Number of Assaulted Staff
By County										
	Baringo	59%	0%	13%	88%	0%	0%	38%	50%	42
	Bomet	45%	0%	60%	39%	6%	0%	19%	70%	46
	Bungoma	55%	0%	27%	10%	0%	13%	53%	41%	118
	Busia	46%	0%	63%	15%	0%	9%	24%	22%	79
	Elgeyo Marakwet	86%	36%	17%	29%	0%	0%	17%	46%	31
	Embu	35%	3%	55%	32%	0%	0%	10%	54%	40
	Garissa	0%	0%	0%	0%	0%	0%	0%	0%	0
	Homa Bay	32%	0%	60%	73%	0%	26%	10%	90%	49
	Isiolo	0%	0%	0%	0%	0%	0%	0%	0%	0
	Kajiado	22%	0%	13%	0%	0%	0%	87%	100%	12
	Kakamega	56%	0%	29%	14%	0%	17%	34%	67%	123
	Kericho	79%	0%	45%	61%	16%	16%	18%	85%	88
	Kiambu	39%	0%	61%	16%	0%	10%	27%	41%	218
	Kilifi	32%	0%	70%	30%	0%	0%	0%	80%	20
	Kirinyaga	21%	0%	89%	0%	0%	11%	0%	68%	16
	Kisii	27%	0%	44%	46%	12%	12%	22%	78%	52
	Kisumu	36%	0%	67%	7%	0%	36%	22%	72%	75
	Kitui	27%	0%	63%	29%	8%	0%	71%	71%	19
	Kwale	15%	0%	100%	0%	0%	0%	0%	57%	8
	Laikipia	31%	0%	44%	31%	0%	13%	13%	46%	37
	Lamu	34%	0%	0%	27%	0%	0%	73%	73%	4

		Reported the assault	Counsellor	Facility in charge	Head of Department	SGBV Offices	Human Resource Manager	Police Station/Chief	Action taken	Number of Assaulted Staff
	Machakos	34%	0%	72%	27%	0%	0%	51%	79%	118
	Makueni	23%	0%	100%	0%	0%	0%	0%	23%	7
	Mandera	38%	0%	26%	57%	0%	0%	76%	100%	14
	Marsabit	77%	0%	72%	28%	0%	0%	16%	56%	15
	Meru	51%	0%	14%	68%	0%	6%	25%	44%	68
	Migori	30%	0%	67%	66%	0%	0%	14%	0%	20
	Mombasa	24%	14%	86%	28%	0%	19%	14%	61%	59
	Muranga	46%	0%	62%	41%	0%	0%	36%	61%	44
	Nairobi	50%	0%	36%	49%	0%	5%	0%	55%	398
	Nakuru	40%	0%	25%	40%	0%	15%	20%	80%	135
	Nandi	63%	0%	41%	6%	0%	28%	25%	77%	75
	Narok	37%	0%	0%	51%	0%	8%	42%	28%	21
	Nyamira	0%	0%	0%	0%	0%	0%	0%	0%	0
	Nyandarua	82%	0%	100%	19%	0%	0%	0%	100%	31
	Nyeri	49%	0%	72%	0%	0%	0%	22%	69%	67
	Samburu	44%	0%	63%	57%	19%	45%	6%	81%	19
	Siaya	45%	0%	63%	0%	0%	25%	12%	25%	27
	Taita Taveta	12%	0%	30%	70%	0%	20%	0%	50%	8
	Tana River	50%	0%	27%	0%	0%	0%	73%	96%	23
	Tharaka Nithi	30%	0%	31%	46%	0%	0%	23%	15%	23
	Trans Nzoia	48%	0%	78%	6%	0%	0%	16%	68%	31
	Turkana	50%	0%	71%	52%	0%	0%	55%	74%	49
	Uasin Gishu	38%	0%	82%	0%	0%	0%	18%	78%	50
	Vihiga	19%	0%	0%	100%	0%	0%	0%	57%	7
	Wajir	49%	0%	49%	15%	0%	25%	11%	67%	34
	West Pokot	68%	13%	13%	13%	4%	0%	57%	83%	28
By type										
	Level2	38%	3%	39%	27%	3%	8%	36%	58%	895
	Level3	47%	0%	50%	25%	0%	15%	16%	60%	580
	Level4	42%	0%	52%	41%	0%	8%	11%	64%	811
	Level5	53%	0%	72%	33%	0%	5%	36%	67%	159
By managing authority										
	FBO	43%	0%	59%	20%	2%	13%	15%	69%	196
	NGO	23%	0%	100%	0%	0%	0%	0%	78%	24
	Private	42%	0%	49%	23%	2%	20%	12%	60%	622
	Public	42%	1%	45%	37%	1%	5%	29%	60%	1604
By location										
	Rural	44%	1%	38%	30%	3%	7%	38%	60%	1067
	Urban	41%	1%	56%	33%	0%	12%	12%	62%	1379
All		42%	1%	48%	32%	1%	10%	23%	61%	2446

Nationally, action was taken in six out the 10 reported assault cases on medical staff. This was replicated across regardless of the facility type and location. Notably, action was taken in almost 8 out of 10 (78%) reported assault cases in NGO facilities as shown in figure 125 below.

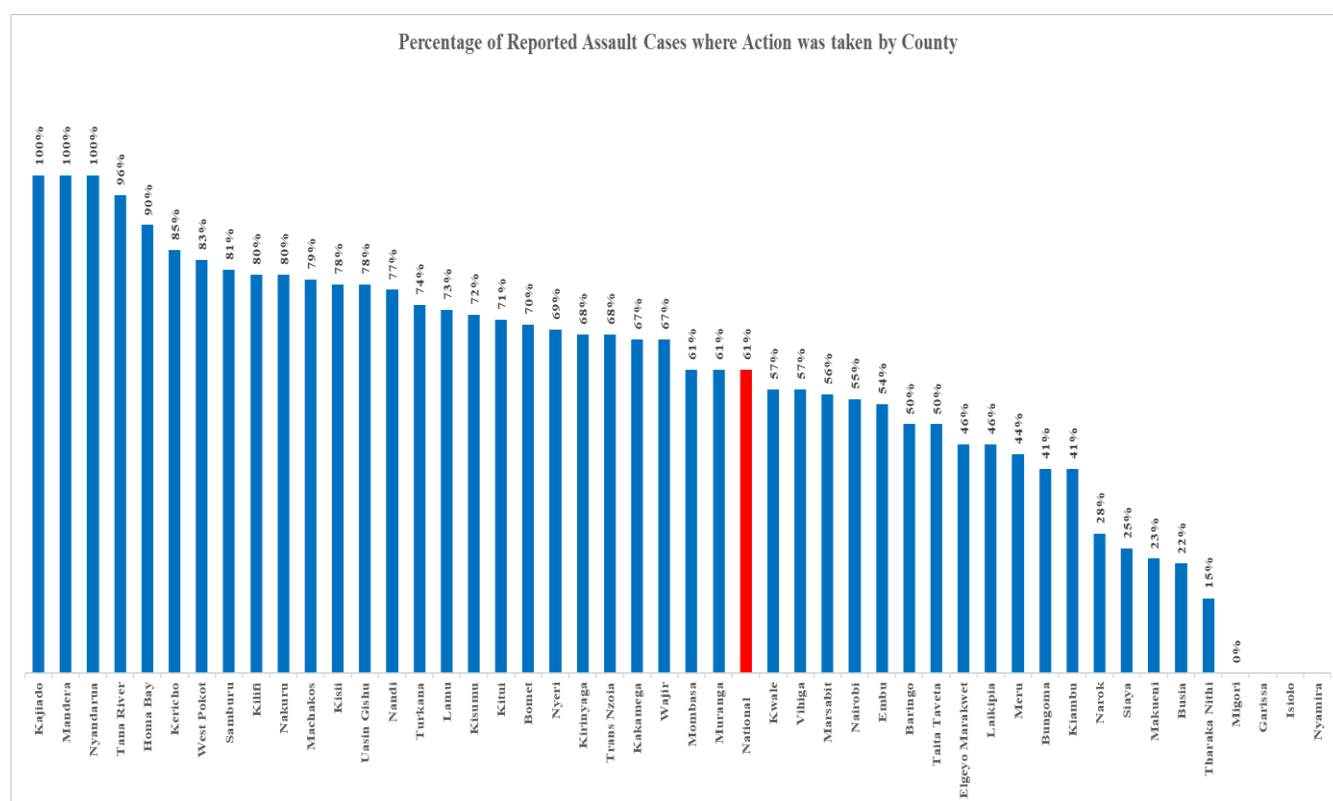
Figure 125: Percentage of reported assaulted cases where action was taken



Action was taken against all the assault cases reported in Kajiado, Mandera and Nyandarua counties whereas no action was taken in Migori county despite 30% of assaulted medical staff reporting the cases.

NB: The assaulted medical staff in Garissa and Isiolo counties did not report while Nyamira had no assault cases.

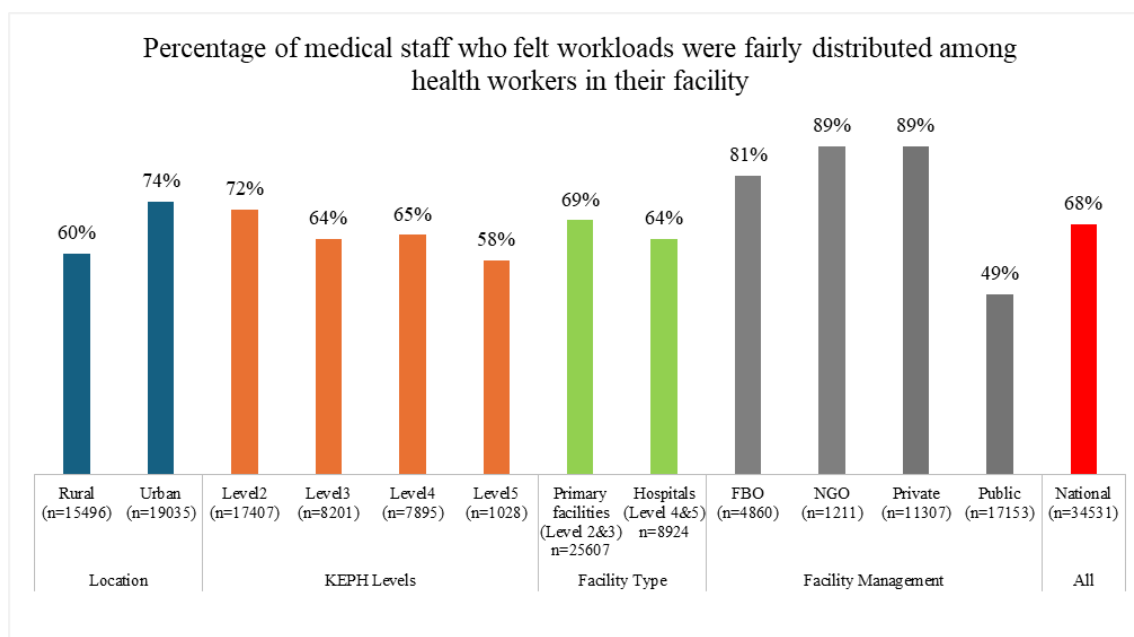
Figure 126: Percentage of reported assaulted cases where action was taken by county (n=2446)



6.2.4 Workload Distribution

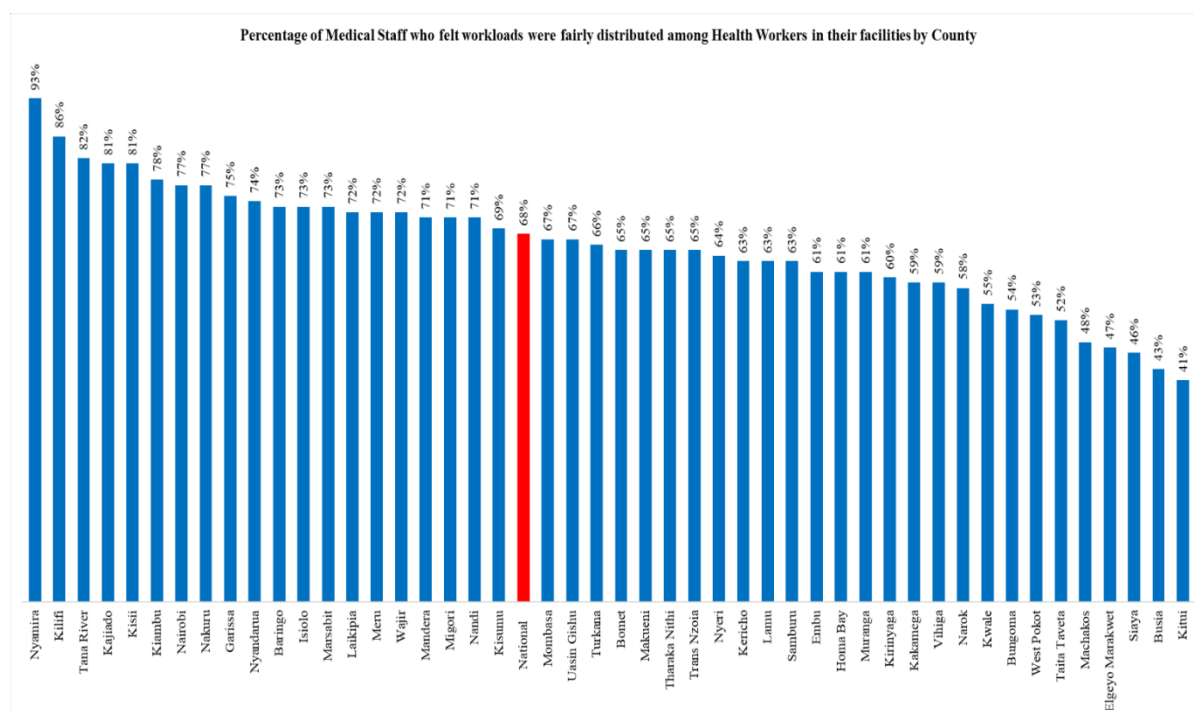
In Kenya, almost seven out of ten (68%) of medical staff felt that the workloads were fairly distributed among the health workers in their facilities. In regards to facility location, about three quarters (74%) of medical staff in the urban facilities felt the workloads were fairly distributed compared to 60% of staff in the rural facilities. More medical staff in Level 2 (72%) felt that the workloads were fairly distributed compared to staff Level 5 (58%) facilities. Based on facility management, about half (49%) of the medical staff in public facilities felt the workloads were fairly distributed compared to more than 80% of staff in NGO, Private and FBO facilities.

Figure 127: Percentage of medical staff who felt workloads were fairly distributed among health workers in their facility (n=34,531)



More than 90% of medical staff in Nyamira county felt the workloads were fairly distributed in the facilities while Machakos, Elgeyo Marakwet, Siaya, Busia and Kitui Counties had less than half of the staff reporting fair distribution of workload as shown in Figure 128 below.

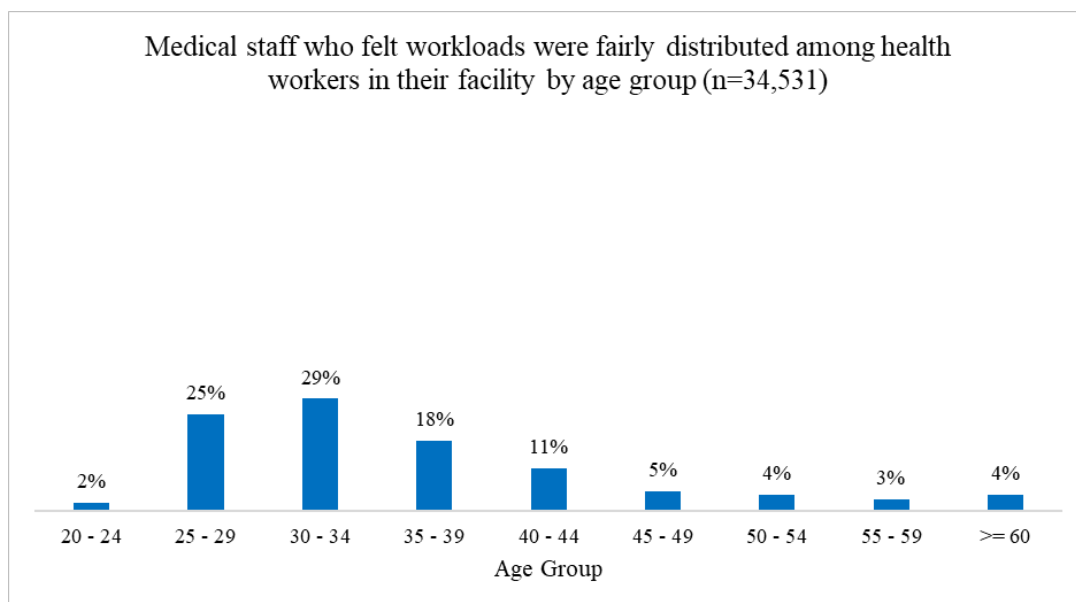
Figure 128: Percentage of medical staff who felt workloads were fairly distributed among health workers in their facility by county (n=34,531)



Four percent (4%) of the elderly medical staff (those aged over 60 years) felt that the workloads in the health facilities were fairly distributed. A quarter (25%) of those aged 25-29 and 29% of

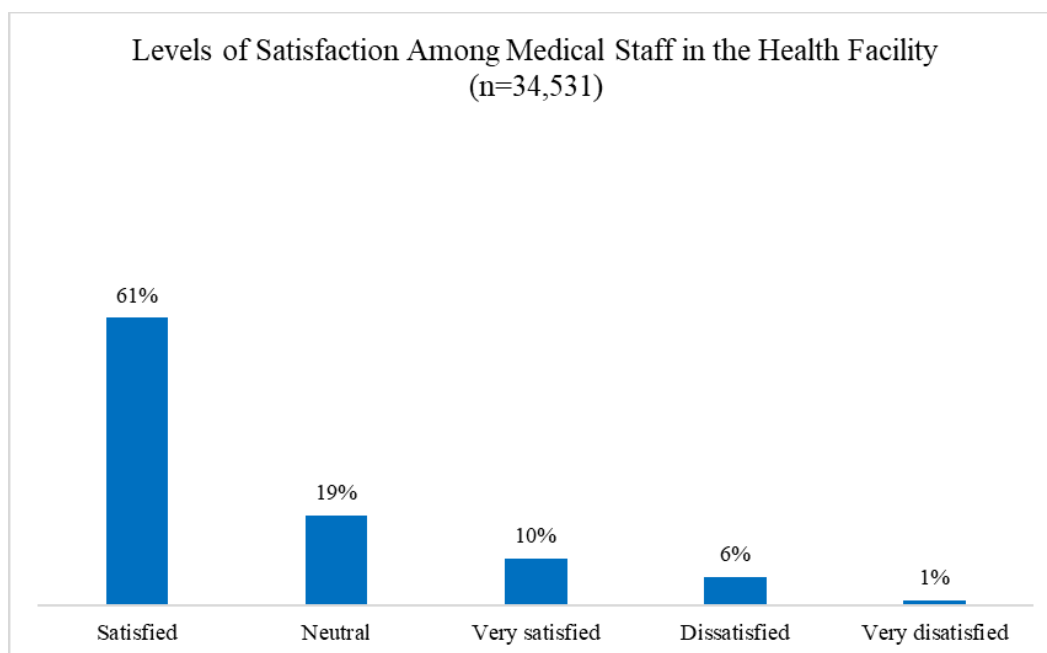
those aged 30-34 felt that the workloads in the health facilities were fairly distributed. Only 2% of medical staff aged between 20 to 24 years felt that the workloads were fairly distributed, as shown in Figure 129 below.

Figure 129: Medical staff who felt workloads were fairly distributed among health workers in their facility by age group (n=34,531)



Nationally, six out of ten (61%) of medical staff are satisfied working in the health facility; 19% were neutral while 6% were dissatisfied working in their respective health facilities.

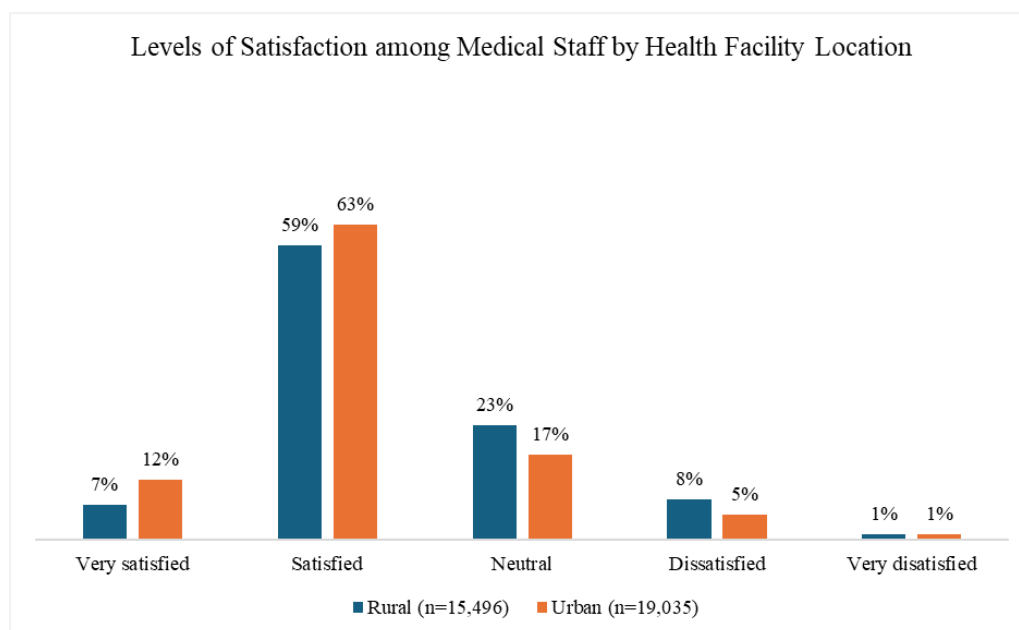
Figure 130: Levels of Satisfaction Among Medical Staff in the Health Facility (n=34,531)



The levels of satisfaction among staff across all levels of care was similar. However, by facility location, medical staff in urban areas are more likely to be satisfied compared to their counterparts in the rural areas as shown below.

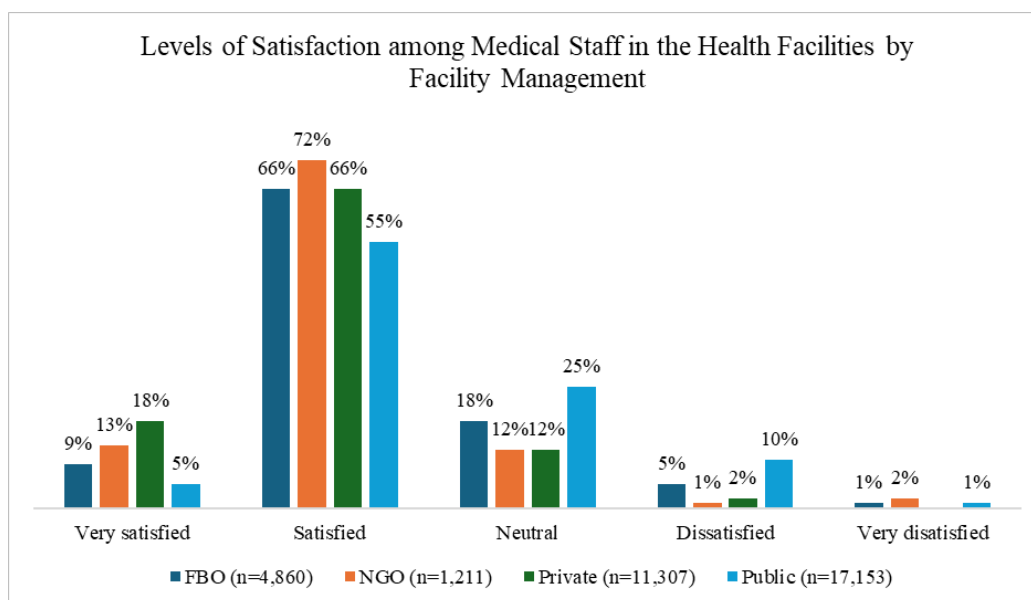


Figure 131: Levels of Satisfaction among Medical Staff by Health Facility location (n=34,531)



Generally, majority of the medical staff felt satisfied working in the facilities regardless of the type of facility management. That said, medical staff in FBO, NGO and private facilities had generally higher levels of satisfaction compared to staff in public facilities as shown in Figure 132 below.

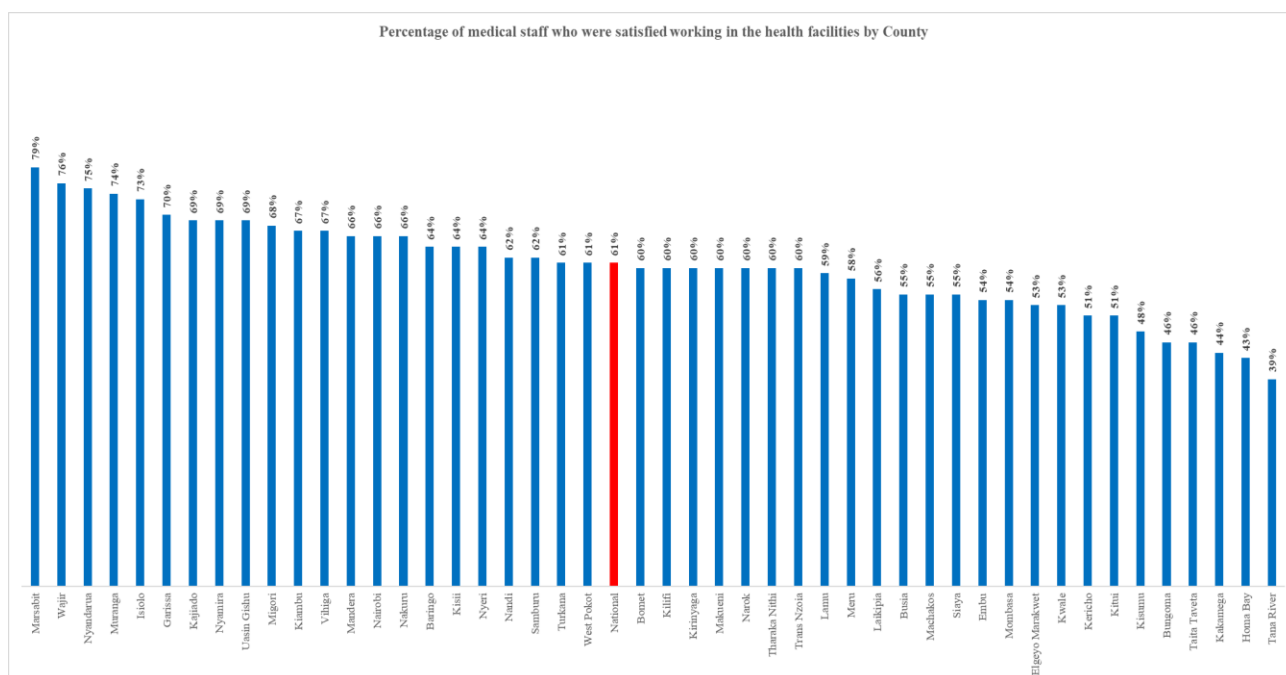
Figure 132: Levels of Satisfaction Among Medical Staff in the Health Facility by Facility management (n=34,531)



At least 8 in every 10 of medical staff in Marsabit County were satisfied working in the respective health facilities while Kisumu, Bungoma, Taita Taveta, Kakamega, Homa Bay and Tana River counties had less than half of their staff satisfied working in the facilities.

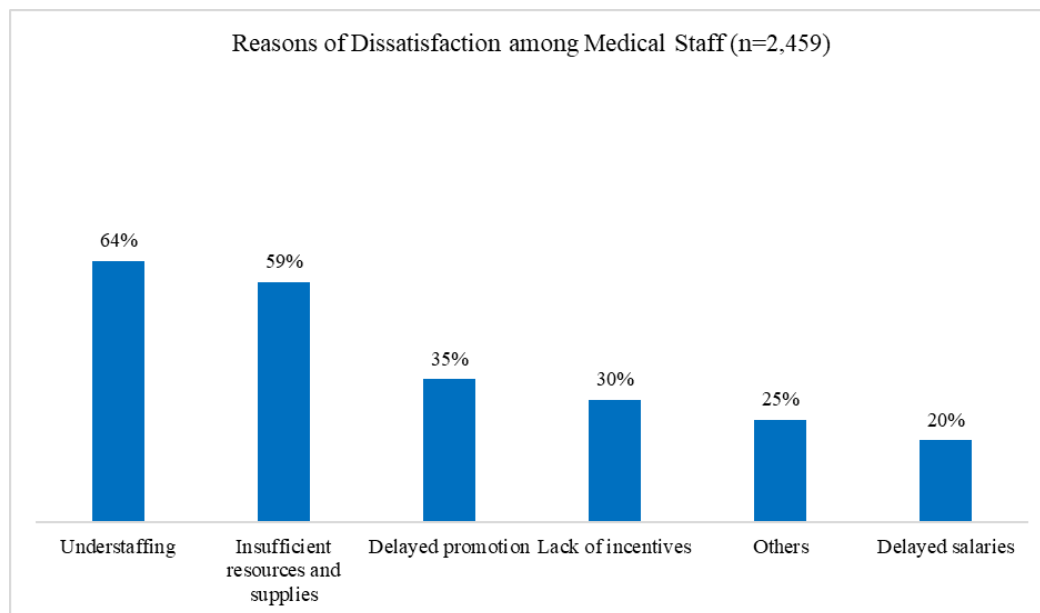


Figure 133: Proportion of Medical Staff who were satisfied working in the health facilities by county (n=34,531)



Overall, six out of ten medical staff cited understaffing and insufficient resources and supplies as the reasons for dissatisfaction, whereas delayed salaries were the reasons felt to be the lowest cause of dissatisfaction at 20%.

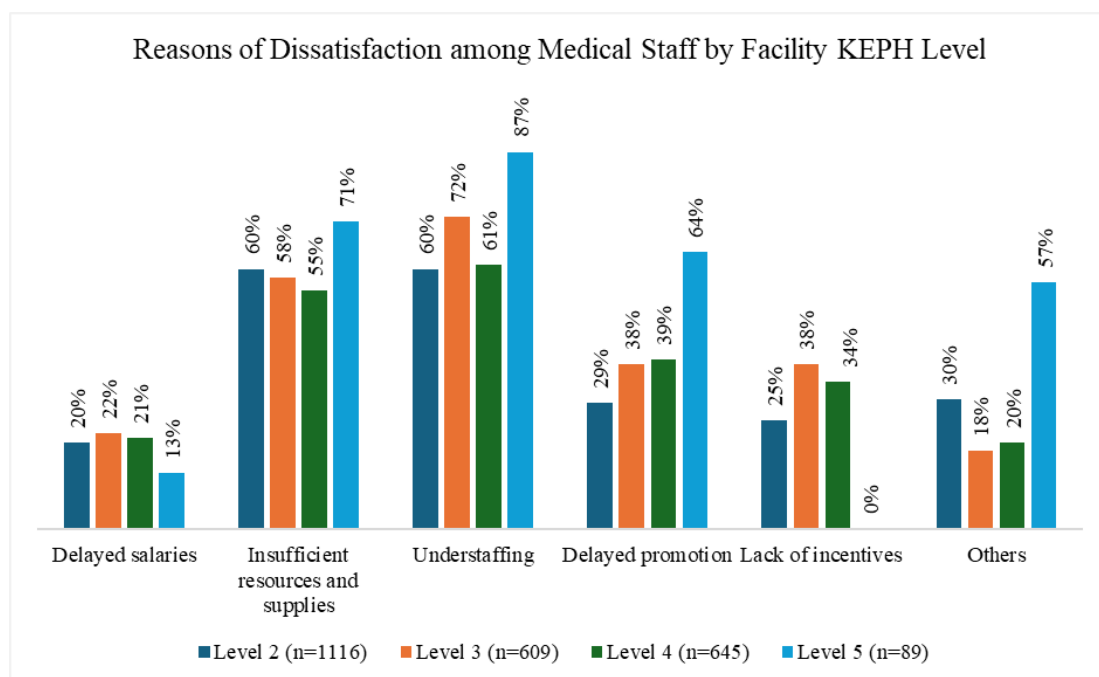
Figure 134: Reasons of Dissatisfaction Among Medical Staff (n=2,459)



The reasons of dissatisfaction among medical staff by facility location were similar. By the health facility KEPH Level, understaffing was the main reason for dissatisfaction followed by insufficient resources and supplies regardless of the level of care as shown below.



Figure 135: Reasons of Dissatisfaction among Medical Staff by Facility KEPH Level(n=2,459)



All the medical staff in NGO facilities cited delayed promotions as the reasons for dissatisfaction. Insufficient resources & supplies, understaffing and delayed salaries were the leading reasons for dissatisfaction among staff working in FBO, public & private facilities respectively as shown in figure 136 below.

Figure 136: Reasons of Dissatisfaction among Medical Staff by facility management (n=2,459)

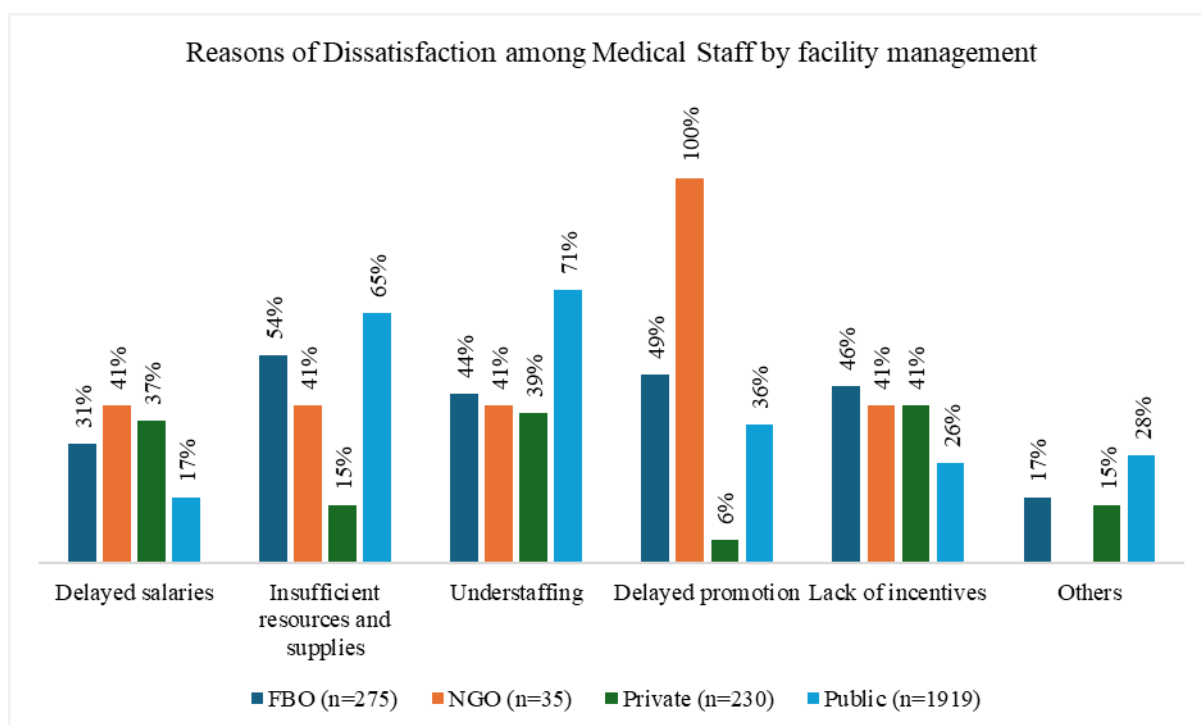


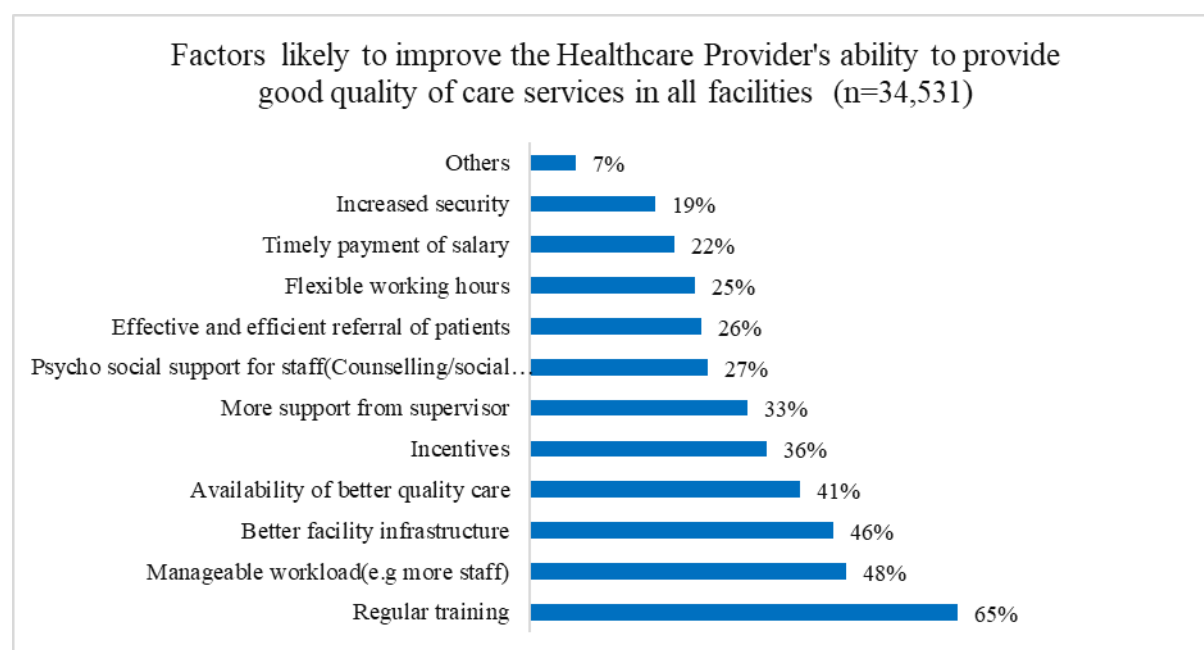
Table 57: Percent of reasons for dissatisfaction in the workplace among medical staff

		Delayed salaries	Insufficient resources and supplies	Understaffing	Delayed promotion	Lack of incentives	Others	Number of Medical Staff
By County								
	Baringo	12%	33%	50%	24%	21%	47%	79
	Bomet	61%	10%	38%	38%	31%	31%	29
	Bungoma	19%	62%	58%	24%	34%	19%	60
	Busia	31%	95%	81%	63%	24%	7%	68
	Elgeyo Marakwet	0%	36%	26%	12%	13%	61%	51
	Embu	42%	65%	61%	34%	22%	15%	81
	Garissa	54%	77%	88%	88%	65%	23%	12
	Homa Bay	22%	70%	63%	17%	9%	53%	103
	Isiolo	0%	0%	0%	0%	100%	100%	1
	Kajiado	0%	0%	100%	0%	14%	14%	50
	Kakamega	20%	95%	71%	41%	51%	31%	79
	Kericho	12%	83%	98%	74%	9%	18%	76
	Kiambu	60%	48%	64%	40%	84%	0%	26
	Kilifi	0%	45%	49%	63%	23%	19%	38
	Kirinyaga	83%	57%	47%	40%	32%	0%	24
	Kisii	34%	72%	61%	33%	29%	23%	148
	Kisumu	35%	65%	65%	35%	35%	28%	134
	Kitui	8%	56%	73%	29%	37%	42%	89
	Kwale	0%	34%	81%	0%	0%	26%	79
	Laikipia	0%	85%	71%	57%	22%	0%	32
	Lamu	0%	71%	45%	61%	29%	23%	17
	Machakos	9%	70%	91%	71%	29%	50%	102
	Makueni	33%	42%	74%	67%	91%	0%	63
	Mandera	0%	100%	100%	68%	61%	32%	14
	Marsabit	69%	100%	69%	69%	69%	0%	21
	Meru	59%	100%	59%	80%	80%	0%	14
	Migori	0%	17%	21%	44%	35%	0%	34
	Mombasa	42%	45%	76%	28%	54%	5%	54
	Muranga	25%	25%	25%	0%	25%	75%	18
	Nairobi	18%	46%	47%	33%	35%	26%	330
	Nakuru	2%	28%	50%	21%	16%	14%	77
	Nandi	0%	93%	64%	5%	17%	26%	59
	Narok	0%	100%	100%	73%	13%	0%	12
	Nyamira	0%	0%	100%	0%	0%	0%	4
	Nyandarua	0%	60%	60%	40%	40%	0%	3
	Nyeri	9%	55%	55%	27%	36%	45%	30
	Samburu	0%	48%	80%	5%	5%	58%	22
	Siaya	31%	75%	85%	25%	25%	15%	53
	Taita Taveta	100%	42%	23%	9%	9%	9%	26

		Delayed salaries	Insufficient resources and supplies	Understaffing	Delayed promotion	Lack of incentives	Others	Number of Medical Staff
	Tana River	0%	100%	63%	16%	0%	53%	9
	Tharaka Nithi	0%	59%	82%	59%	0%	36%	20
	Trans Nzoia	0%	53%	21%	16%	0%	31%	27
	Turkana	0%	74%	58%	16%	0%	58%	39
	Uasin Gishu	10%	63%	92%	38%	63%	8%	57
	Vihiga	33%	66%	83%	50%	42%	0%	46
	Wajir	0%	84%	65%	35%	32%	16%	31
	West Pokot	23%	53%	100%	77%	23%	0%	16
By type								
	Level2	20%	60%	60%	29%	25%	30%	1116
	Level3	22%	58%	72%	38%	38%	18%	609
	Level4	21%	55%	61%	39%	34%	20%	645
	Level5	13%	71%	87%	64%	0%	57%	89
By managing authority								
	FBO	31%	54%	44%	49%	46%	17%	275
	NGO	41%	41%	41%	100%	41%	0%	35
	Private	37%	15%	39%	6%	41%	15%	230
	Public	17%	65%	71%	36%	26%	28%	1920
By location								
	Rural	18%	61%	67%	35%	29%	27%	1369
	Urban	23%	55%	61%	35%	31%	23%	1090
All		20%	59%	64%	35%	30%	25%	2459

Almost two thirds of medical staff (65%) mentioned regular trainings as a factor likely to improve the ability of medical staff to provide good quality of care services in the health facilities as shown in figure 137 below.

Figure 137: Percentage of factors likely to improve the medical staff's ability to provide good quality of care services in all facilities (n=34,531)



Regular trainings were the most cited factor that are likely to improve the ability of medical staff to provide good quality of care services across all levels of care. In addition, medical staff in the public facilities cited manageable workload (64%) and better facility infrastructure (59%) as factors likely to improve their ability to provide good quality of care services in the health facilities as shown in figure 138 below.

Figure 138: Factors likely to improve the Healthcare Provider's ability to provide good quality of care services in facilities by Facility Ownership (n=34,531)

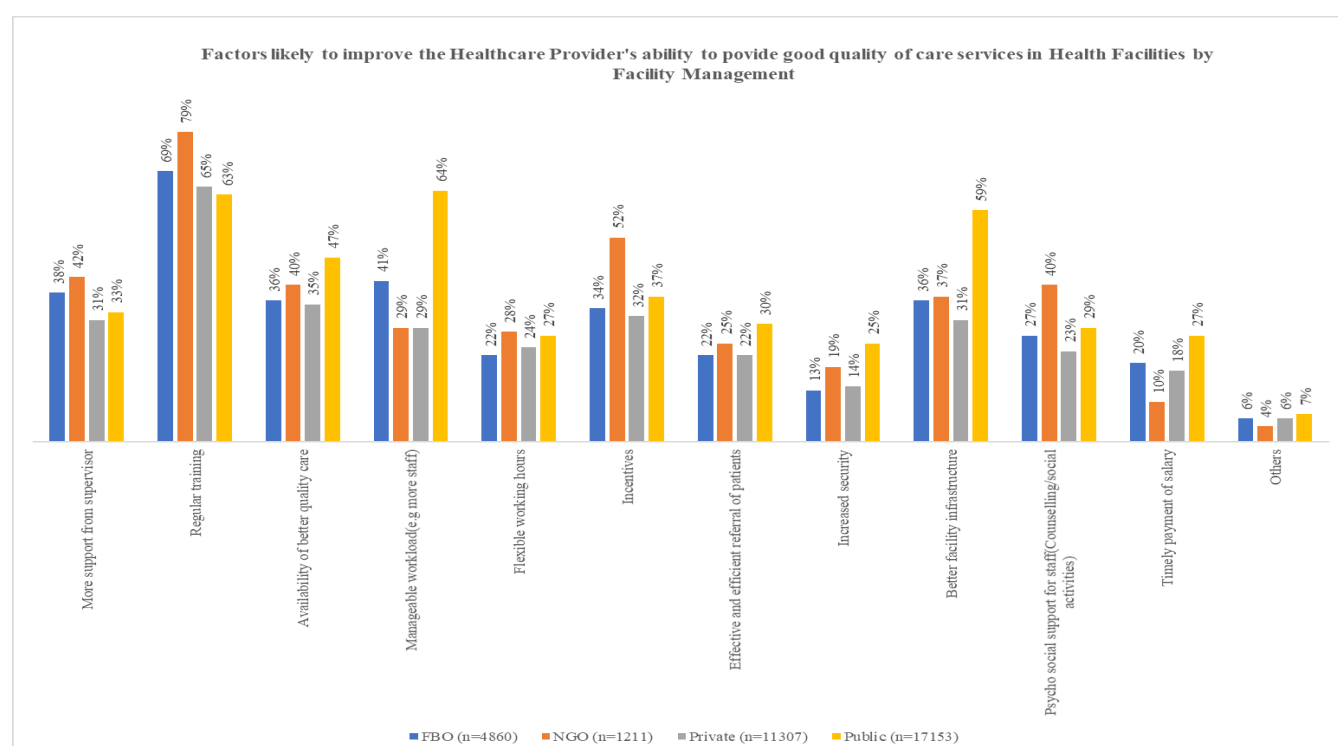


Table 58 disaggregates the factors likely to improve the Healthcare Provider's ability to provide good quality of care services by ownership, managing authority location and by county

Over 90% of medical staff in West Pokot (94%), Kilifi (93%) and Makueni (91%) counties cited regular trainings as the major factor likely to improve their ability to provide good quality of care services in the health facilities. However, Trans Nzoia and Tharaka Nithi counties had 28% of their medical staff, respectively, citing regular trainings being a major factor. Slightly more than three quarters (76%) of the medical staff in West Pokot counties also cited manageable workload (e.g., more staff) as a major factor.

Table 58: Percentage of factors likely to improve the medical staff's ability to provide good quality of care services in all facilities (n=34,531)

	More support from supervisor	Regular training	Availability of better quality care	Manageable workload (e.g. more staff)	Flexible working hours	Incentives	Effective and efficient referral of patients	Increased security	Better facility infrastructure	Psychosocial support for staff (Counselling/social activities)	Timely payment of salary	Others	Number of Staff
By County													
Baringo	46%	67%	58%	55%	31%	37%	38%	22%	44%	16%	20%	7%	582
Bomet	17%	62%	35%	40%	12%	29%	7%	4%	36%	15%	27%	1%	482
Bungoma	42%	58%	35%	61%	21%	34%	27%	25%	58%	15%	32%	10%	822
Busia	33%	50%	37%	46%	18%	27%	24%	21%	41%	1%	24%	17%	533
Elgeyo Marakwet	11%	35%	47%	34%	2%	20%	6%	4%	40%	4%	7%	9%	326
Embu	24%	71%	23%	41%	22%	29%	18%	11%	40%	17%	26%	7%	508
Garissa	77%	59%	23%	22%	21%	32%	13%	23%	22%	33%	9%	2%	323
Homa Bay	23%	51%	50%	48%	20%	31%	10%	6%	43%	12%	23%	6%	809
Isiolo	27%	52%	14%	38%	7%	25%	9%	11%	45%	22%	13%	7%	211
Kajiado	12%	56%	34%	26%	18%	15%	7%	9%	15%	2%	1%	16%	786
Kakamega	52%	63%	58%	54%	29%	46%	31%	24%	63%	48%	36%	6%	900
Kericho	15%	52%	46%	47%	2%	11%	0%	1%	33%	8%	1%	5%	564
Kiambu	34%	65%	30%	41%	22%	41%	35%	19%	41%	26%	13%	3%	1957
Kilifi	31%	93%	44%	30%	25%	38%	34%	17%	45%	17%	16%	1%	836
Kirinyaga	24%	46%	46%	52%	14%	24%	16%	7%	36%	26%	41%	3%	524
Kisii	12%	65%	62%	52%	45%	49%	40%	39%	73%	35%	37%	6%	964
Kisumu	33%	68%	51%	53%	26%	45%	30%	22%	58%	42%	41%	9%	1277
Kitui	9%	51%	34%	70%	14%	32%	11%	10%	42%	16%	8%	10%	684
Kwale	9%	39%	21%	47%	15%	24%	5%	6%	61%	10%	5%	12%	609
Laikipia	12%	49%	17%	63%	16%	33%	26%	19%	61%	16%	11%	7%	530
Lamu	17%	65%	45%	56%	12%	33%	3%	22%	28%	36%	11%	26%	189
Machakos	49%	79%	62%	73%	47%	70%	67%	42%	67%	55%	39%	5%	1231
Makueni	60%	91%	55%	61%	69%	80%	47%	30%	43%	54%	21%	0%	655
Mandera	47%	66%	63%	50%	53%	32%	21%	17%	27%	27%	46%	0%	438
Marsabit	27%	58%	56%	24%	11%	10%	4%	12%	48%	3%	33%	7%	304
Meru	39%	70%	35%	56%	33%	29%	27%	22%	51%	23%	44%	3%	1010

	More support from supervisor	Regular training	Availability of better quality care	Manageable workload (e.g. more staff)	Flexible working hours	Incentives	Effective and efficient referral of patients	Increased security	Better facility infrastructure	Psychosocial support for staff (Counselling/social activities)	Timely payment of salary	Others	Number of Staff
Migori	41%	83%	33%	26%	22%	18%	7%	3%	16%	19%	10%	0%	857
Mombasa	36%	77%	42%	47%	27%	41%	34%	24%	42%	39%	26%	2%	1036
Muranga	27%	34%	25%	45%	13%	14%	17%	13%	39%	16%	18%	5%	714
Nairobi	53%	82%	47%	44%	29%	48%	27%	30%	38%	47%	15%	1%	4492
Nakuru	26%	70%	50%	49%	30%	29%	31%	26%	48%	29%	17%	2%	1614
Nandi	20%	39%	25%	33%	2%	25%	1%	1%	51%	3%	6%	54%	563
Narok	48%	85%	46%	29%	14%	6%	40%	6%	61%	22%	15%	0%	379
Nyamira	53%	85%	51%	60%	72%	52%	50%	50%	64%	29%	97%	6%	477
Nyandarua	6%	58%	23%	35%	26%	34%	16%	9%	29%	4%	17%	2%	461
Nyeri	26%	59%	34%	40%	9%	24%	36%	10%	54%	33%	19%	7%	990
Samburu	15%	31%	22%	52%	4%	10%	5%	21%	55%	0%	1%	15%	245
Siaya	8%	37%	19%	59%	7%	17%	6%	5%	58%	3%	19%	23%	539
Taita Taveta	62%	78%	62%	72%	43%	45%	62%	36%	62%	60%	56%	3%	339
Tana River	3%	39%	8%	50%	17%	16%	6%	13%	53%	7%	2%	19%	159
Tharaka Nithi	2%	28%	14%	40%	4%	24%	4%	3%	62%	2%	3%	10%	493
Trans Nzoia	12%	28%	9%	33%	2%	6%	1%	0%	25%	1%	1%	48%	534
Turkana	34%	68%	29%	52%	29%	27%	20%	17%	38%	21%	19%	14%	646
Uasin Gishu	43%	67%	74%	65%	39%	52%	38%	29%	31%	47%	35%	1%	770
Vihiga	28%	67%	31%	54%	18%	12%	20%	15%	49%	12%	26%	8%	453
Wajir	20%	77%	32%	39%	20%	55%	13%	11%	65%	6%	8%	8%	409
West Pokot	78%	94%	64%	76%	57%	44%	72%	21%	75%	43%	51%	3%	306
By Type													
Level2	33%	65%	40%	43%	23%	34%	27%	19%	48%	26%	19%	7%	17407
Level3	32%	66%	44%	51%	27%	33%	25%	19%	44%	27%	26%	7%	8201
Level4	36%	65%	43%	53%	30%	39%	25%	22%	43%	28%	25%	7%	7896
Level5	32%	63%	34%	66%	27%	48%	17%	17%	47%	41%	27%	2%	1028
By Management Authority													
FBO	38%	69%	36%	41%	22%	34%	22%	13%	36%	27%	20%	6%	4860
NGO	42%	79%	40%	29%	28%	52%	25%	19%	37%	40%	10%	4%	1211
Private	31%	65%	35%	29%	24%	32%	22%	14%	31%	23%	18%	6%	11308
Public	33%	63%	47%	64%	27%	37%	30%	25%	59%	29%	27%	7%	17153
By Location													
Rural	31%	61%	41%	53%	24%	31%	26%	19%	53%	23%	24%	9%	15496
Urban	36%	69%	41%	44%	26%	39%	26%	20%	39%	30%	21%	5%	19035
All	33%	65%	41%	48%	25%	36%	26%	19%	46%	27%	22%	7%	34531

Recommendations

- Counties should strive to promote the health workers more often as guided by the Public Service Commission as a way of motivating them
- Private managed health facilities should adhere to the contract terms of engagement of their health workers and pay them salaries on time
- The Ministry of Health should develop policies and measures against perpetrators of assault against healthcare workers
- Primary Health facilities should implement employee or work environment satisfaction surveys at least once annually to measure the levels of satisfaction among their staff
- The Ministry of Health in collaboration with the County Governments should ensure that all health facilities comply with the national laws and regulations on occupational health and safety

7. Human Resource Knowledge

Clinical Vignettes/ Case Assessment.

Accurate, safe, and timely diagnosis is essential for quality healthcare, as diagnostic errors can lead to significant harm and poor health outcomes. Ensuring correct diagnosis is the first step in effective care, guiding proper case management and improving patient health and quality of life. Healthcare providers must prioritize safe clinical processes, including diagnosis and treatment, to protect patients from preventable harm.

Diagnosis accuracy tests are used to assess the clinician's knowledge, diagnostic abilities and decision-making process. In the QoC survey, vignettes were used to assess health care worker knowledge and skills in the management of six health conditions namely diarrhea and pneumonia in children: malaria and hypertension in adults and two complications- post-partum hemorrhage and birth asphyxia. The six health conditions were picked based on their prevalence and their contribution to morbidity and mortality in the country.

The process involved the use of simulated cases with patient demographic information, risk factors, symptoms, signs and diagnostic test results to mimic real cases.

7.1 Tracer conditions

Table 59: Tracer conditions assessed

Childhood conditions	1. Diarrhoea with severe dehydration 2. Pneumonia
Adult conditions	3. Malaria 4. Hypertension
Delivery and Newborn	5. Post-partum haemorrhage



6. Asphyxia of the newborn

The target respondents were clinicians who regularly conducted consultations in the out-patient department. In primary care facilities (level 2 & 3), the assessment was administered to nurses and clinical officers, while for level 4 and 5 facilities, the target respondents were doctors and clinical officers.

7.2 Respondents

Table 60 provides a distribution of the respondents by cadre and by level of care.

Table 60: Number of healthcare providers by Level of care and Cadre (Weighted)

Facility Level	Cadres						Total N
	Doctors N	%	Clinical Officers N	%	Nurses N	%	
Level 2	703	4	5,713	33	11,077	63	17,493
Level 3	374	5	3,574	43	4,295	52	8,243
Level 4	1,958	25	5,988	75	-	-	7,946
Level 5	241	23	789	77	-	-	1,030
Total	3,276	10	16,064	46	15,372	44	34,712

7.3 Area of Analysis

The findings were analyzed against the following indicators.

1. Correct diagnosis
2. Diagnostic accuracy
3. Adherence to clinical guidelines in diagnosis
4. Correct treatment based on clinical guidelines
5. Treatment accuracy
6. Health education

Each of the 5 indicators above was disaggregated by

1. Cadre
2. KEPH Level
3. Facility ownership
4. Location (rural/urban)
5. Years of experience
6. County

7.4 Results

7.4.1 Correct Diagnosis

This is defined as the ability of the health worker or interviewee to correctly mention the condition e.g. mentioning of diarrhea (SDI 2018). Correct diagnosis was computed as correct diagnosis divided by n for each of the **six cases** (Table 61 for illustration).

Table 61: Diagnosis cases assessed

Sampled Health Workers	Cases						Total
	Diarrhoea with Severe Dehydration	Non-severe Pneumonia	Hypertension	Malaria	Post-Partum Hemorrhage (PPH)	Birth Asphyxia	
Health Worker 1							
Health Worker 2							
Health Worker 3							
Health Worker 4							
Health Worker 5							
.....							
.....							
Total							

Correct diagnosis for hypertension

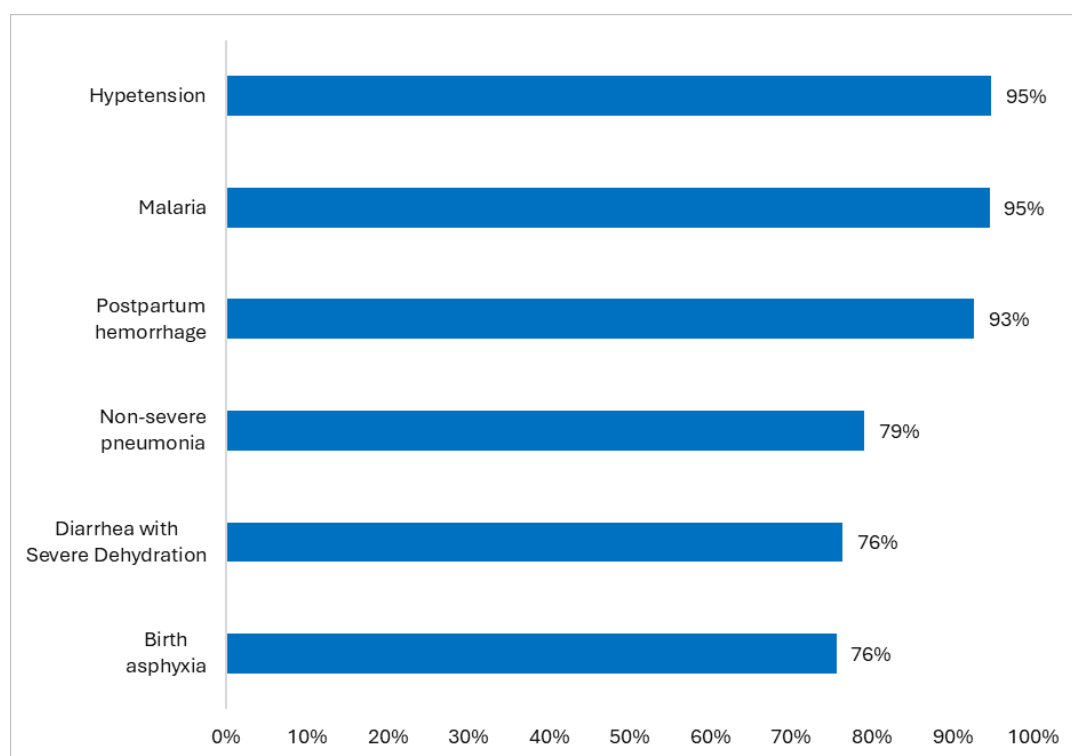
Key findings

7.4.1.1 Overall

- The findings (Figure 133) from the QoC survey revealed that majority of healthcare workers correctly diagnosed hypertension and malaria (95%) while the least correctly diagnosed conditions were asphyxia and diarrhoea at 76%.
- Post partum haemorrhage was correctly diagnosed by 93% of the healthcare workers; an improvement in performance from the 90% that correctly diagnosed it in 2018 Service Delivery Indicator survey.
- A comparison of the performance in SDI 2018 and QoC 2024, showed a decrease in proportion of healthcare workers that correctly diagnosed birth asphyxia and pneumonia, from 88% to 76% and 82% to 79% respectively.



Figure 139: Correct diagnosis for each of the cases (N=34,712)

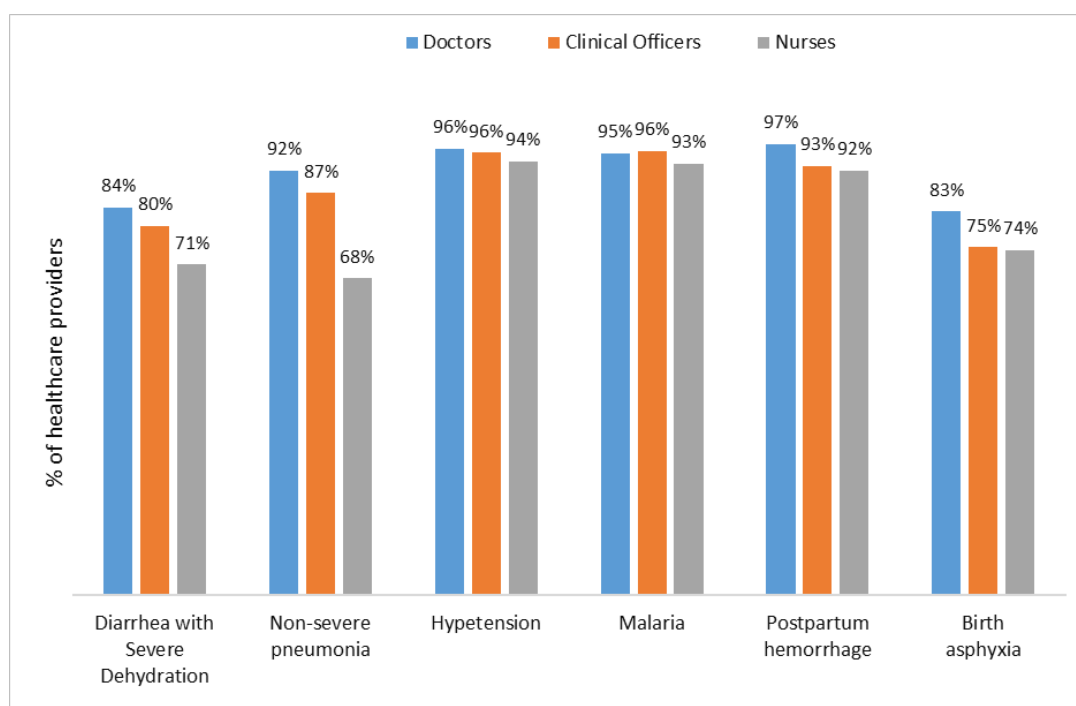


7.4.1.2 Correct diagnosis by cadre

- The findings showed variations in the capacity of different cadres to correctly diagnose the conditions.
- Doctors had the highest probability of correctly diagnosing the cases; five out of the six conditions as compared to the other cadres.
- Ninety-six percent (96%) of clinical officers correctly diagnosed malaria as compared to 95% and 93% of doctors and nurses respectively
- The widest variation was in the diagnosis of pneumonia where 92% of doctors correctly diagnosed it compared to 68% of nurses.
- There was an insignificant variation in the capacity to diagnose hypertension, malaria and postpartum haemorrhage (PPH) across the three cadres, ranging from 94%-96% for hypertension, 93%-97% for malaria and 92%-97% for PPH.
- About eight in every ten doctors and clinical officers (84% and 80% respectively) correctly diagnosed diarrhoea compared to seven in every ten nurses (70%). These findings are summarized in Figure 140



Figure 140: Proportion of healthcare providers who correctly diagnosed the cases by cadre (N=34,712)



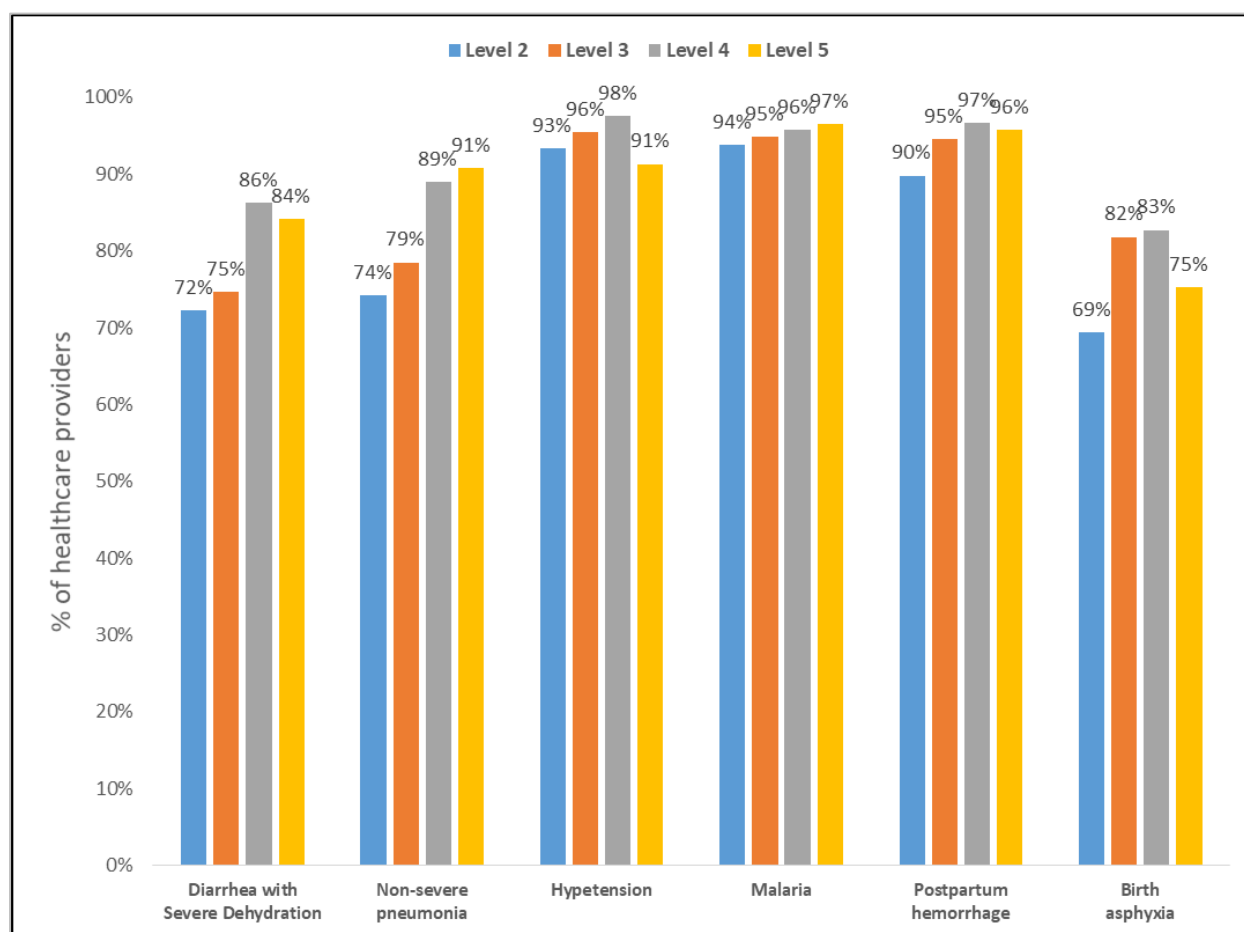
* Doctors=3276; Clinical Officers=16,064; Nurses =15,372*

7.4.1.3 Correct diagnosis by level of care

- Health care workers in the higher-level facilities were more likely to correctly diagnose all conditions except for hypertension which was correctly diagnosed by 93% of level 2 healthcare workers compared to 91% of those in level 5 facilities.
- Four out of the six conditions were more likely to be correctly diagnosed in level four facilities compared to level five and other levels (diarrhoea, hypertension, PPH and asphyxia).
- The highest percentage of healthcare workers in level 4 facilities (86%) were able to correctly diagnose diarrhoea compared to 84% and 72% of those in level 5 and level 2 facilities respectively.
- For hypertension, the percentages of healthcare workers that correctly diagnosed it varied from 98% in level 4, 96% in level 3, 93% in level 2 and 91% in level 5 facilities.



Figure 141: Proportion of healthcare providers who correctly diagnosed the cases by level of care (N=34,712)

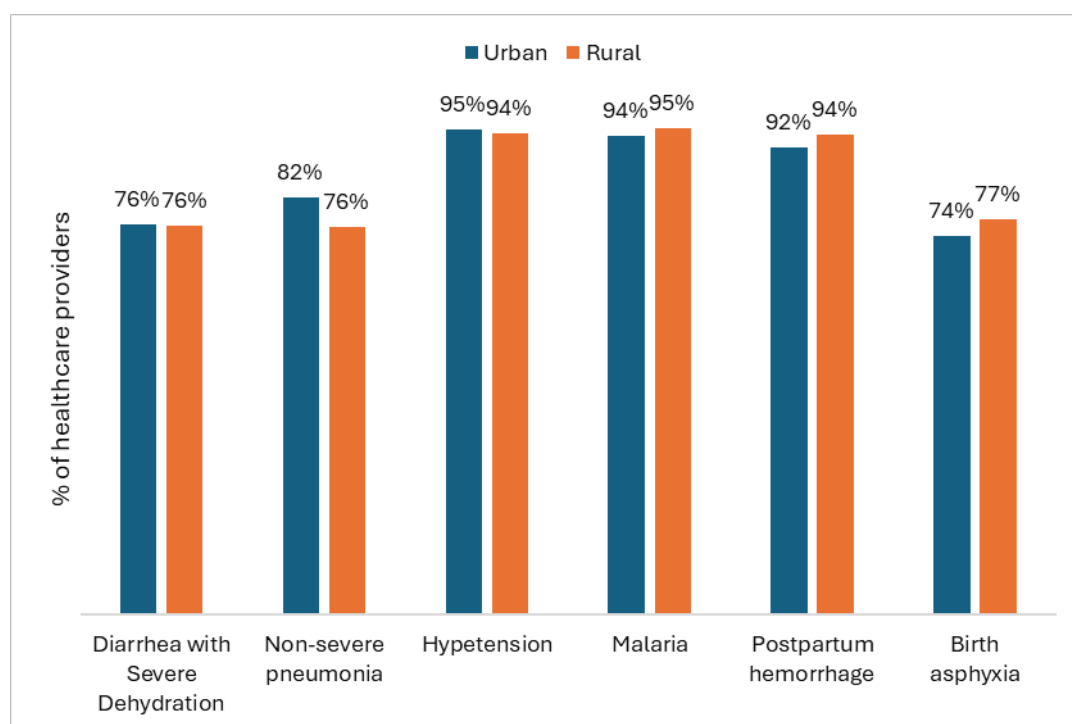


7.4.1.4 Correct diagnosis by facility location

- The findings in Figure 142 indicate that there was no notable variation in capacity of healthcare workers from rural and urban facilities to correctly diagnose the six conditions.
- Three quarters (76%) of health care workers in both urban and rural facilities correctly diagnosed diarrhoea while 95% and 94% of health care workers in urban and rural facilities respectively correctly diagnosed hypertension.
- Pneumonia was correctly diagnosed by 82% of health workers in urban facilities compared to 76% of those in rural facilities



Figure 142: Proportion of healthcare providers who correctly diagnosed the cases by facility location (N=34,712)

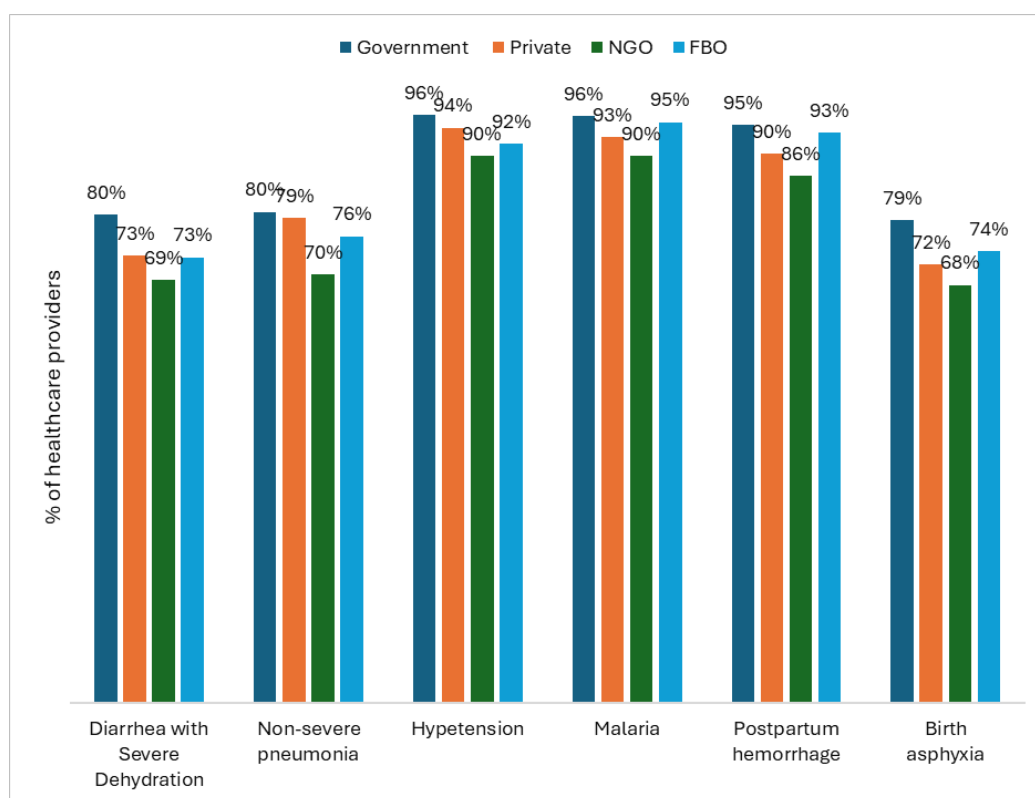


7.4.1.5 Correct diagnosis by facility ownership

- Overall, the capacity to correctly diagnose the six conditions was highest among health care workers in public health facilities and lowest among those working in NGO facilities.
- For instance, 80% of health care workers in public facilities correctly diagnosed diarrhoea and pneumonia compared to 69% and 70% respectively of those in NGO affiliated facilities. Almost all health workers (96%) in public facilities correctly diagnosed hypertension and malaria compared to 90% of those in NGO facilities
- There was almost similar performance in capacity to correctly diagnose the different cases among health workers in FBO and private facilities.



Figure 143: Proportion of healthcare providers who correctly diagnosed the cases by facility ownership (N=31,712)

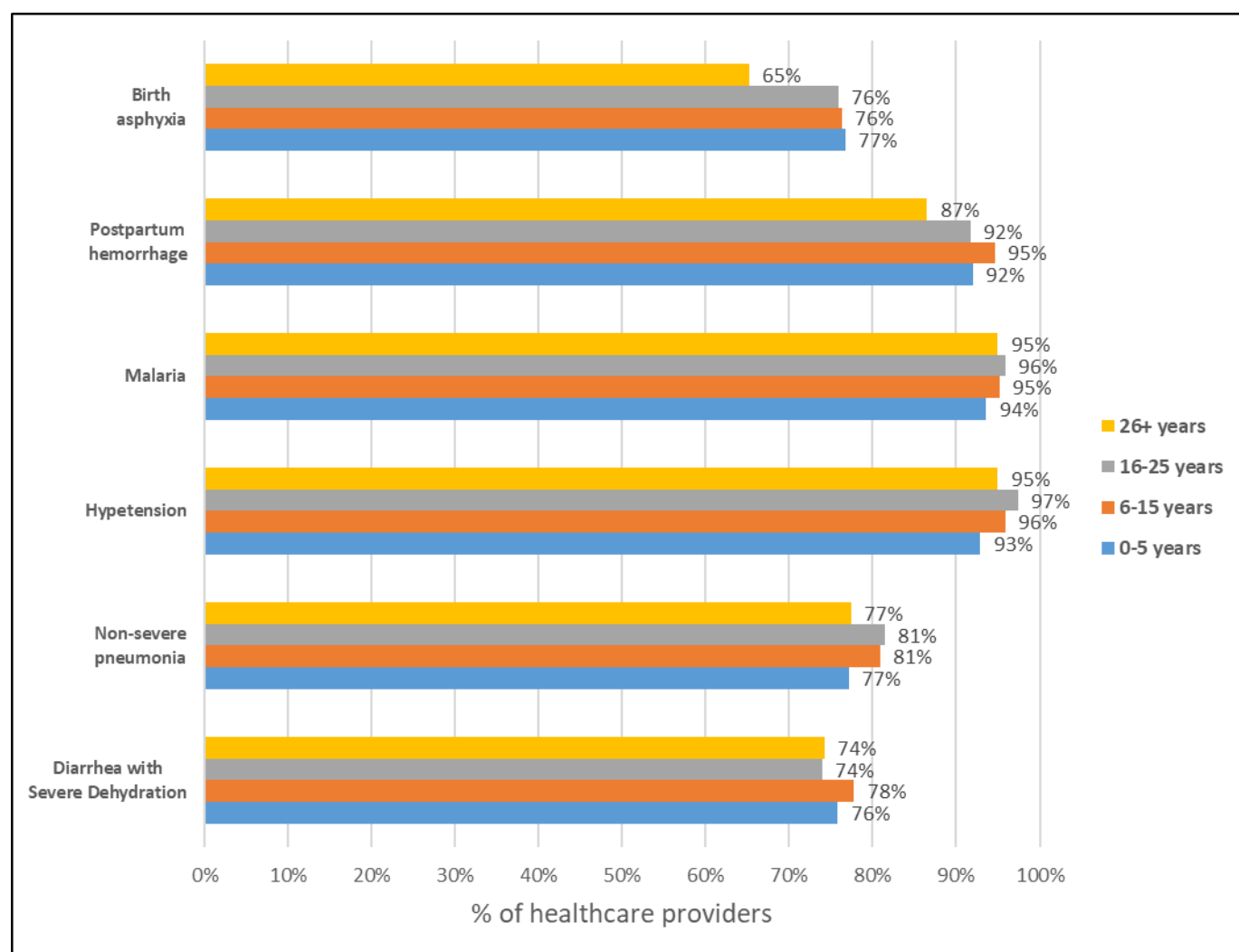


7.4.1.6 Correct diagnosis by the years of experience of the provider

- The provider years of experience were categorized into four; 0-5 years, 6-15 years, 16-25 years and above 26 years.
- The survey findings revealed minimal differences in capacities of providers to correctly diagnose malaria, hypertension and diarrhoea based on the years of experience. .
- However, those with up to 6-15 years experience were more likely to correctly diagnose the different cases



Figure 144: Proportion of healthcare providers who correctly diagnosed the cases by years of experience of the providers (N=34,688)



7.4.1.7 Correct diagnosis by county

- The findings showed variations in the capacity of health care workers from different counties to correctly diagnose the six cases.
- Some of the counties had all their healthcare workers correctly diagnosing some conditions; for instance, all health care workers in Wajir county (100%) correctly diagnosed hypertension, malaria, PPH and asphyxia.
- Similarly, all health care workers in West Pokot County (100%) correctly diagnosed diarrhoea, pneumonia and PPH.

Table 62 disaggregates proportion of healthcare providers who correctly diagnosed the six cases, by county (N=34712)

Table 62: Proportion of healthcare providers who correctly diagnosed different cases, and all cases by different variables, (N=34,712)

	Diarrhea with Severe Dehydration	Non-severe pneumonia	Hypertension	Malaria	Postpartum hemorrhage	birth asphyxia
By County						
Baringo	73%	69%	83%	97%	93%	57%
Bomet	52%	56%	70%	90%	92%	94%
Bungoma	90%	85%	96%	97%	91%	80%
Busia	79%	74%	90%	94%	94%	80%
Elgeyo-Marakwet	65%	73%	97%	100%	97%	85%
Embu	62%	75%	90%	93%	86%	60%
Garissa	89%	87%	98%	97%	99%	98%
Homa Bay	59%	66%	96%	95%	92%	76%
Isiolo	77%	82%	87%	89%	96%	71%
Kajiado	58%	69%	86%	89%	80%	46%
Kakamega	79%	75%	96%	93%	92%	75%
Kericho	57%	76%	95%	96%	89%	59%
Kiambu	56%	68%	90%	80%	80%	55%
Kilifi	90%	87%	95%	99%	96%	68%
Kirinyaga	53%	52%	95%	83%	91%	63%
Kisii	88%	88%	98%	95%	94%	94%
Kisumu	87%	76%	96%	97%	98%	75%
Kitui	80%	77%	94%	96%	96%	83%
Kwale	68%	76%	98%	97%	99%	80%
Laikipia	77%	76%	95%	95%	98%	74%
Lamu	86%	77%	98%	98%	99%	77%
Machakos	92%	87%	99%	98%	94%	84%
Makueni	100%	97%	100%	100%	100%	95%
Mandera	98%	97%	97%	100%	100%	98%
Marsabit	93%	95%	100%	97%	95%	85%
Meru	59%	75%	96%	94%	95%	78%
Migori	99%	91%	97%	100%	96%	87%
Mombasa	83%	86%	96%	87%	92%	74%
Murang'a	85%	88%	97%	97%	95%	65%
Nairobi	66%	80%	95%	93%	91%	73%
Nakuru	71%	74%	93%	96%	90%	69%
Nandi	83%	73%	98%	94%	97%	71%
Narok	96%	94%	97%	100%	96%	91%
Nyamira	95%	97%	99%	100%	100%	99%
Nyandarua	83%	84%	97%	98%	96%	95%
Nyeri	59%	78%	99%	95%	89%	58%
Samburu	78%	76%	97%	90%	93%	84%
Siaya	93%	81%	93%	100%	98%	88%
Taita-Taveta	93%	85%	99%	99%	99%	91%
Tana River	75%	59%	92%	90%	94%	70%
Tharaka-Nithi	82%	80%	97%	96%	85%	56%
Trans-Nzoia	81%	91%	99%	97%	98%	83%
Turkana	78%	60%	89%	97%	88%	77%
Uasin Gishu	92%	78%	98%	100%	98%	86%
Vihiga	81%	80%	96%	97%	94%	75%
Wajir	95%	96%	100%	100%	100%	100%

	Diarrhea with Severe Dehydration	Non-severe pneumonia	Hypertension	Malaria	Postpartum hemorrhage	birth asphyxia
West Pokot	100%	100%	99%	99%	100%	99%
Cadre						
Doctors	84%	92%	96%	95%	97%	83%
Clinical Officers	80%	87%	96%	96%	93%	75%
Nurses	71%	68%	94%	93%	92%	74%
By Type						
Level 2	72%	74%	93%	94%	90%	69%
Level 3	75%	79%	96%	95%	95%	82%
Level 4	86%	89%	98%	96%	97%	83%
Level 5	84%	91%	91%	97%	96%	75%
By Location						
Urban	76%	82%	95%	94%	92%	74%
Rural	76%	76%	94%	95%	94%	77%
Sex						
Male	79%	83%	95%	95%	93%	75%
Female	74%	76%	95%	94%	93%	76%
Ownership						
Government	80%	80%	96%	96%	95%	79%
Private	73%	79%	94%	93%	90%	72%
NGO	69%	70%	90%	90%	86%	68%
FBO	73%	76%	92%	95%	93%	74%
Years of professional experience						
0-5 years	76%	77%	93%	94%	92%	77%
6-15 years	78%	81%	96%	95%	95%	76%
16-25 years	74%	81%	97%	96%	92%	76%
26+ years	74%	77%	95%	95%	87%	65%
All	76%	79%	95%	95%	93%	76%

7.4.2 Diagnostic accuracy

Diagnostic accuracy is defined as the average share of correct diagnoses provided in the 6 clinical cases. This was computed as the correct number of cases with correct diagnosis, over number of cases.



Figure 145: Diagnostic accuracy by healthcare workers

	Cases						
Sampled Health Workers	Diarrhoea with Severe Dehydration	Non-severe Pneumonia	Hypertension	Malaria	Post-Partum Hemorrhage (PPH)	Birth Asphyxia	Total
Health Worker 1							
Health Worker 2							
Health Worker 3							
Health Worker 4							
Health Worker 5							
.....							
.....							
Total							

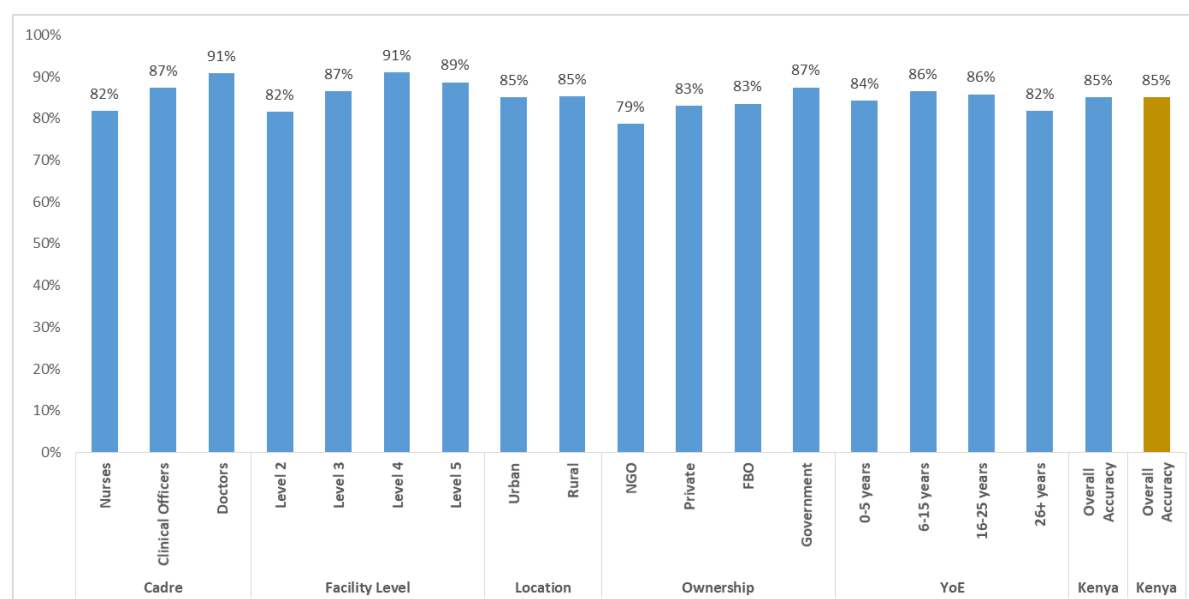
Diagnostic accuracy of health worker 1

Key findings

7.4.2.1 Overall

- Eighty five (85%) of all the cases were correctly diagnosed by the health care workers
- Doctors correctly diagnosed 91% of all cases while clinical officers and nurses correctly diagnosed 87% and 82% of the cases respectively.
- Health care workers in the higher-level facilities correctly diagnosed majority of the cases, 91% and 85% in level 4 and 5 facilities respectively compared to 82% of cases for level 2
- Diagnostic accuracy by health care workers in both rural and urban facilities was the same at 85% of all the cases
- Health care workers in public health facilities correctly diagnosed 87% of all cases while those in NGO, private and FBO facilities diagnosed 83% of the cases
- Health care workers with more than 26 years of experience had a slightly lower chance of diagnosing all the six conditions (82%) compared to those with 6-25 years of experience.

Figure 146: Proportion of six cases accurately diagnosed by healthcare providers by cadre; level of care; location; ownership and years of experience (N=34,712)



7.4.2.2 Diagnostic accuracy by county

- The findings revealed a variation in diagnostic accuracy across counties
- Health care workers in West Pokot County correctly diagnosed all cases
- The lowest proportion of correctly diagnosed cases was registered in Kiambu and Kajiado counties at 71%

Table 63: Proportion of healthcare workers who accurately diagnosed all the six cases (N=34,712)

County	Diagnostic Accuracy	No. of Providers
Baringo	79%	578
Bomet	76%	487
Bungoma	89%	840
Busia	86%	522
Elgeyo-Marakwet	86%	333
Embu	78%	519
Garissa	94%	323
Homa Bay	80%	800
Isiolo	84%	214
Kajiado	71%	776
Kakamega	85%	879
Kericho	77%	564
Kiambu	71%	1926
Kilifi	81%	841
Kirinyaga	73%	542
Kisii	93%	981



County	Diagnostic Accuracy	No. of Providers
Kisumu	88%	1243
Kitui	87%	689
Kwale	86%	611
Laikipia	86%	534
Lamu	89%	194
Machakos	92%	1208
Makueni	98%	655
Mandera	98%	447
Marsabit	94%	313
Meru	83%	1031
Migori	95%	853
Mombasa	86%	1029
Murang'a	87%	714
Nairobi	83%	4648
Nakuru	82%	1614
Nandi	86%	581
Narok	95%	385
Nyamira	98%	477
Nyandarua	92%	474
Nyeri	80%	1043
Samburu	86%	250
Siaya	92%	534
Taita-Taveta	94%	331
Tana River	80%	159
Tharaka-Nithi	82%	491
Trans-Nzoia	92%	538
Turkana	80%	602
Uasin Gishu	92%	772
Vihiga	87%	461
Wajir	98%	403
West Pokot	100%	303

7.4.3 Adherence to clinical guidelines in the diagnostic process

This is defined as the extent to which clinicians adhere to the standard clinical process in coming up with a diagnosis, including comprehensive history taking, physical examination and investigations.

The survey assessed health provider adherence to standard clinical process in diagnosis of diarrhea, malaria, pneumonia, PPH and hypertension using the following tracers;

Table 64 shows the standard clinical guidelines in the diagnostic process

Table 64: Health conditions and their examinations

Health Condition	History taking	Physical examination	Investigations
Uncomplicated malaria	Do you have any symptoms? - Duration of fever and chills? - General body weakness? - Headache - Joint pains - Sweating - Nausea - Dizziness - History of travel	Temperature - Weight - Pallor - Pulse rate 90/min - Respiratory rate 20/min - chest examination - Blood pressure 120/80	Microscopy - mRDT - FHG or HB - RBS
Acute diarrhea with severe dehydration	-Diarrhea (Duration, frequency, consistency and blood) - Vomiting - Any other symptoms - Breastfeeding - Playfulness Water treatment (Chemical/boiling) - Food preparation and son feeding - Hand washing - Immunization status	General(awake/lethargic/tiredness/fatigue) - AVPU assessment (Alert, Voice, Pain, Unresponsive) - Temperature gradient - Skin pinch - Capillary refill - Pallor - Oedema - Weight	Stool for ova and cyst/rota / adeno virus
Hypertension	Headache triggered by light, sound - Other symptoms/signs - Convulsions - Fever - Chest pains - Swelling feet - Shortness of breath - Thirsty more than usual	Temperature - BP - Pulse rate - respiratory rate - Weight - Height - Oedema	Lipids - Urinalysis - RBS - EUCs - ECG

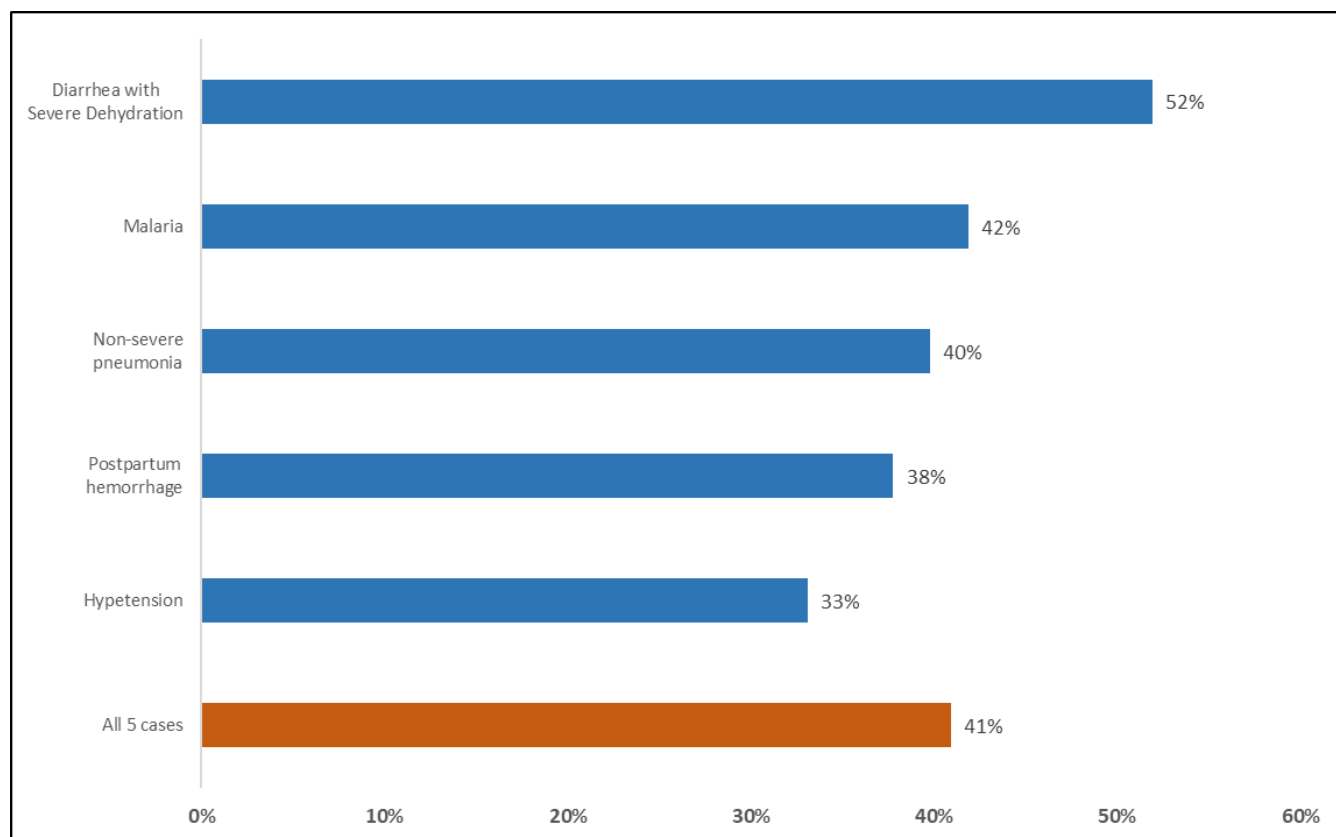
Health Condition	History taking	Physical examination	Investigations
	- Backache/joint pains - Smoking - Take alcohol - Heart failure - Family history of diabetes		
Pneumonia	- Duration of cough - Difficulty in breathing - Chest pain - Stridor - Wheezing - Chronic cough - General condition - Running nose - Any medication	- Temperature - Heart rate - Respiratory rate - Oxygen saturation - Grunting - Nasal flaring - Examine throat - Observe breathing	None or full hemogram
Post partum haemorrhage	- Time of delivery - Place of delivery - No of deliveries - History of prolonged deliveries - No of pads used/fully soaked - Dizzy - Placenta expelled - Time in labor - Labor augmentin/what was used - Attended ANC - Fibroids - Hypertension - Anaemia - Baby welfare - Risk factors	- Temperature - Pulse rate - Respiratory rate - Pallor - Blood pressure - Retained placenta - Level of consciousness	- Blood grouping/crossmatch - Hb - Bleeding time test - Clotting time test - Coagulation profile

Key findings

- Nationally, about four in every ten healthcare workers (41%) adhered to standard process in diagnosis of all the five cases namely diarrhea, pneumonia, malaria, hypertension and post-partum hemorrhage
- One in two (52%) healthcare workers adhered to the standard process in the diagnosis of diarrhoea while the least adherence was in diagnosis of hypertension at 33%.



Figure 147: Proportion of healthcare providers who adhered to the clinical guidelines in the diagnostic process (N=34,712)

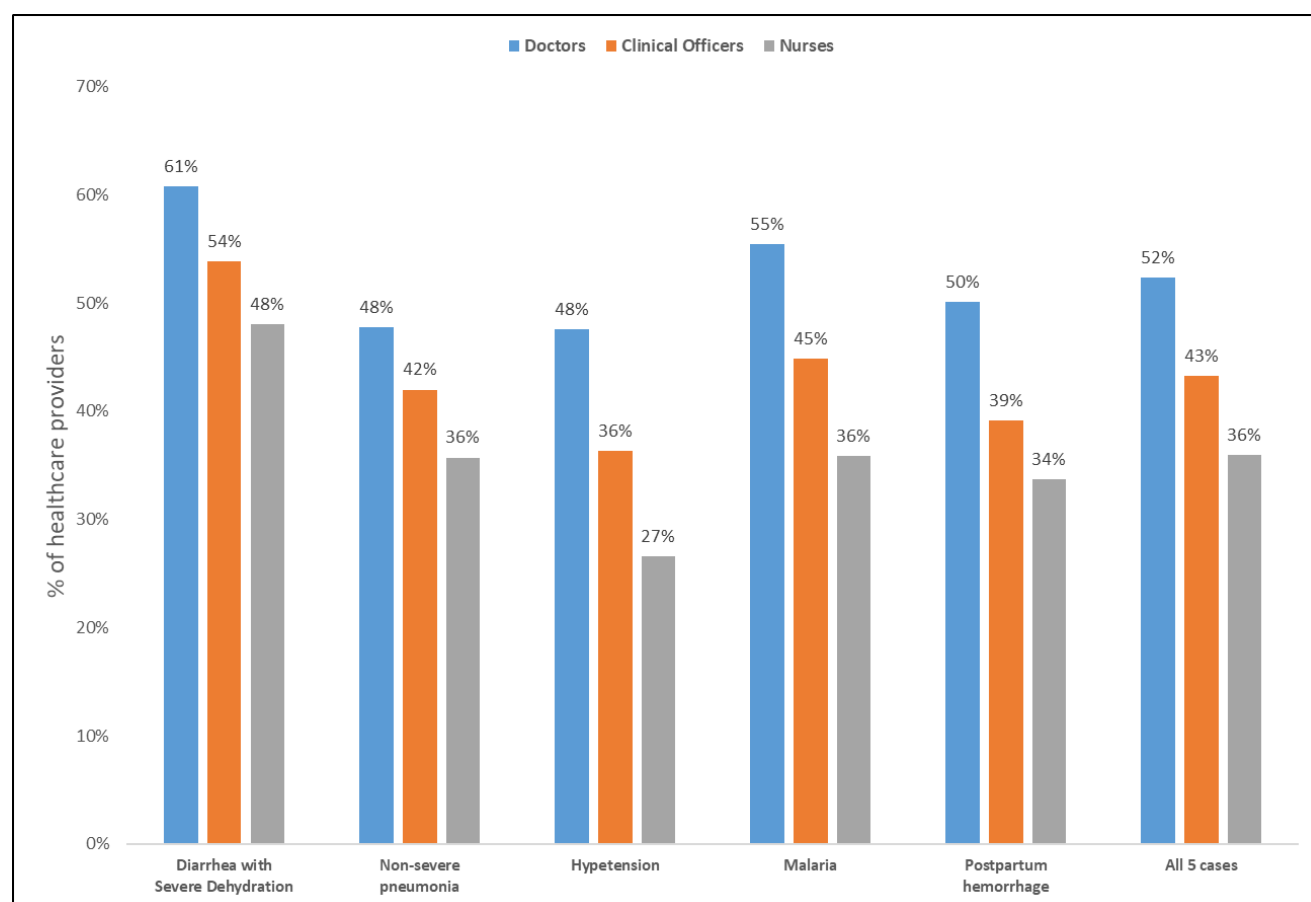


7.4.3.1 Adherence to clinical guidelines in the diagnostic process, by cadre

- There was a variation in the level of adherence to guidelines in diagnosis of all the five cases across cadres.
- Doctors adhered most to the clinical guidelines in diagnosis of all cases, followed by clinical officers and nurses.
- About half of the doctors (52%) adhered to the guidelines in diagnosis of all the five cases compared to 43% and 36% of clinical officers and nurses respectively.
- Slightly less than half of the doctors (48%) adhered to guidelines in diagnosis of both pneumonia and hypertension.



Figure 148: Proportion healthcare providers adhering to clinical guidelines in the diagnostic process by cadre (N=34,712)



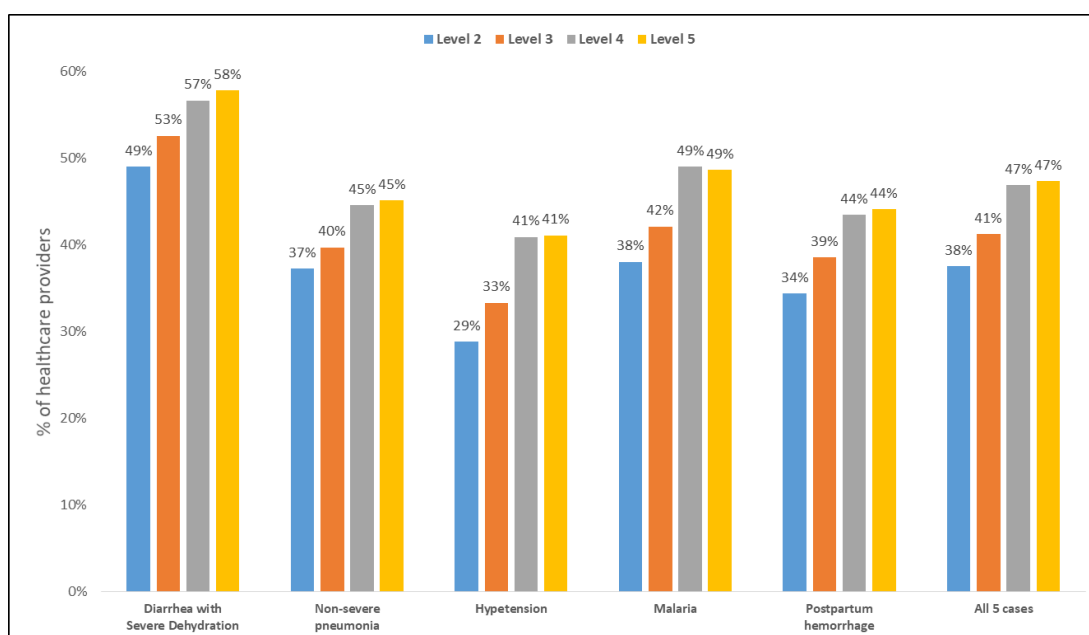
* Note: Nurses were only interviewed in Level 2 and Level 3 facilities

7.4.3.2 Adherence to clinical guidelines in the diagnostic process, by level of care

- Health care worker adherence to standard diagnostic procedures for all conditions increased with the level of care. Adherence to standard diagnostic procedures in level 4 and five facilities was almost the same for all the conditions.
- Less than half (47%) of healthcare workers in level 4 and 5 facilities adhered to guidelines for all the five cases compared to 41% and 38% of those in level 3 and 2 respectively



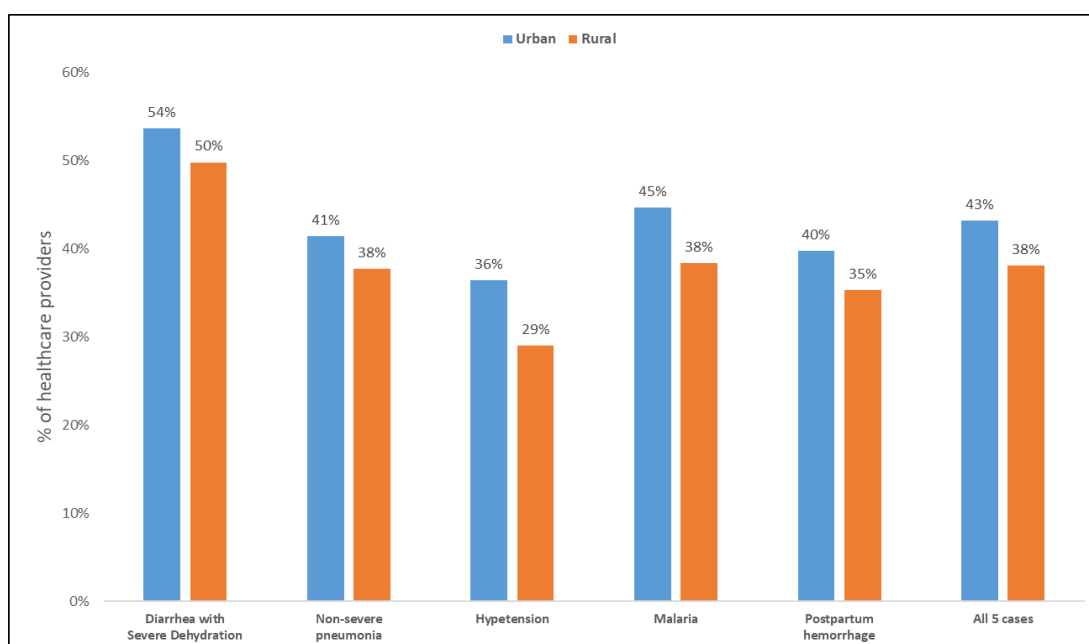
Figure 149: Proportion of healthcare providers adhering to clinical guidelines in the diagnostic process, by KEPH level (N=34,712)



7.4.3.3 Adherence to clinical guidelines in the diagnostic process, by facility location

- Adherence to guidelines in diagnosis of all the conditions was higher among health care workers in urban facilities compared to those in rural facilities.
- Slightly less than half (43%) of health care workers in urban facilities adhered to standard diagnostic process compared to 38% of those in rural facilities.

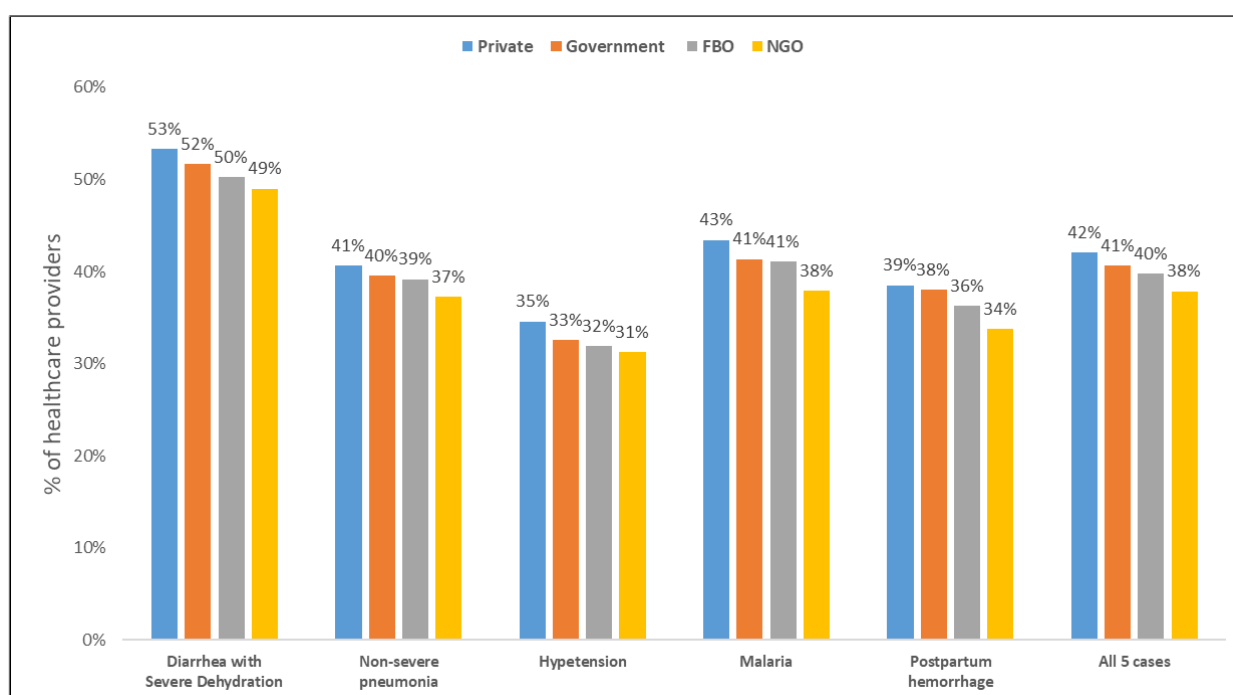
Figure 150: Proportion healthcare providers adhering to clinical guidelines in the diagnostic process, by facility location (N=34,712)



7.4.3.4 Adherence to clinical guidelines in the diagnostic process by facility ownership

- There was a minimal variation in adherence to guidelines among healthcare workers across the four types of facility ownership,
- Healthcare workers in private facilities had slightly higher adherence to the standard process in diagnosis of the five conditions,
- In private facilities, 42% of health care workers adhered to clinical guidelines in the diagnosis of all conditions compared to 41%, 40% and 38% of those in public, FBO and NGO facilities respectively.

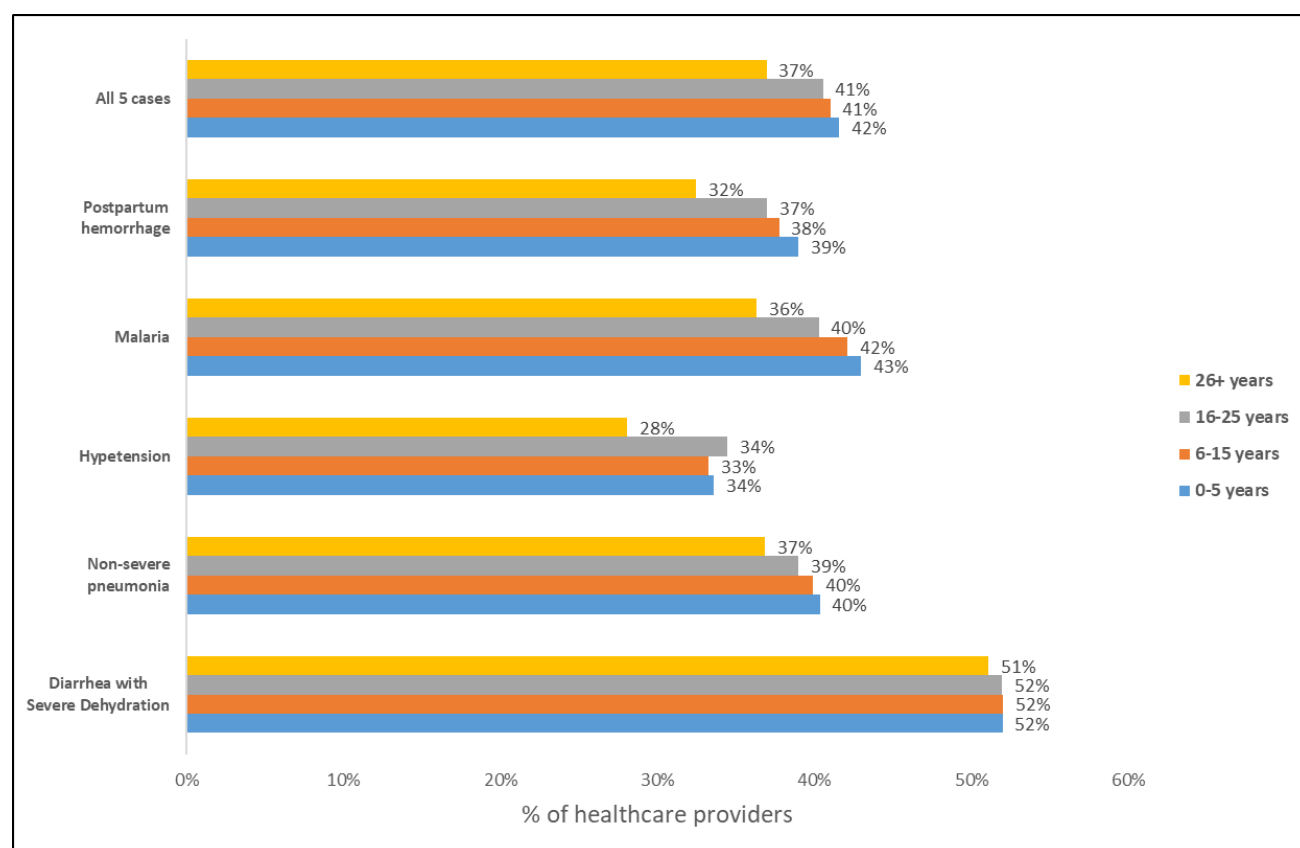
Figure 151: Proportion of healthcare providers adhering to clinical guidelines in the diagnostic process, by facility ownership (N=34,712)



7.4.3.5 Adherence to clinical guidelines in the diagnostic process, by years of experience

- Adherence to standard processes in diagnosing all the five conditions decreased with advancing age. The adherence rate was lower among healthcare workers with over 26 years of experience, at 37%, compared to those with up to 5 years of experience (42%) and those with 6 to 15 years of experience (41%).
- Adherence to standard processes in the diagnosis of diarrhea was almost equal irrespective of the years of experience
- The biggest disparity in adherence levels was in the diagnosis of PPH and malaria, with 32% and 36% of providers with over 26 years of experience adhering to guidelines, respectively, compared to 39% and 43% of those with up to 5 years of experience.

Figure 152: Proportion healthcare providers adhering to clinical guidelines in the diagnostic process, by years of experience (N=34,688)



7.4.3.6 Adherence to clinical guidelines in the diagnostic process, by county

Table 65 shows proportion healthcare providers adhering to clinical guidelines in the diagnostic process (N=34,712)

The findings showed a significant variation in health provider adherence levels across the counties. The performance varied from 30% in Homabay, Kirinyaga, and Embu, to 56% in Nyamira, for healthcare workers who followed guidelines in diagnosing all five conditions.

Table 65: Proportion of healthcare providers who followed the recounted clinical process in diagnosis for the difference cases and variables (n=34,712)

	Diarrhea with Severe Dehydration	Non-severe pneumonia	Hypertension	Malaria	Postpartum hemorrhage	All 5 cases
By County						
Baringo	46%	35%	21%	30%	28%	32%
Bomet	56%	40%	36%	47%	43%	44%
Bungoma	49%	42%	35%	49%	41%	43%
Busia	47%	37%	28%	37%	34%	37%
Elgeyo-Marakwet	46%	36%	25%	32%	28%	33%
Embu	42%	33%	21%	28%	25%	30%
Garissa	61%	46%	48%	53%	55%	53%
Homa Bay	43%	33%	21%	29%	25%	30%



	Diarrhea with Severe Dehydration	Non-severe pneumonia	Hypertension	Malaria	Postpartum hemorrhage	All 5 cases
Isiolo	49%	38%	26%	35%	31%	36%
Kajiado	55%	43%	35%	42%	41%	43%
Kakamega	45%	39%	28%	40%	36%	37%
Kericho	45%	35%	26%	37%	30%	34%
Kiambu	51%	35%	31%	39%	34%	38%
Kilifi	58%	47%	36%	44%	45%	46%
Kirinyaga	40%	30%	23%	32%	26%	30%
Kisii	56%	44%	37%	42%	40%	44%
Kisumu	57%	44%	39%	53%	47%	48%
Kitui	50%	39%	31%	42%	36%	40%
Kwale	48%	34%	23%	34%	34%	35%
Laikipia	50%	38%	31%	39%	36%	39%
Lamu	50%	38%	28%	35%	36%	38%
Machakos	54%	40%	29%	38%	38%	40%
Makueni	59%	44%	40%	47%	45%	47%
Mandera	62%	51%	51%	54%	55%	54%
Marsabit	57%	41%	40%	49%	46%	46%
Meru	49%	37%	28%	37%	32%	37%
Migori	50%	36%	26%	36%	28%	35%
Mombasa	53%	39%	41%	47%	40%	44%
Murang'a	53%	39%	30%	43%	34%	40%
Nairobi	52%	41%	36%	44%	38%	42%
Nakuru	49%	36%	28%	38%	35%	38%
Nandi	52%	41%	33%	43%	39%	42%
Narok	52%	41%	33%	50%	39%	43%
Nyamira	68%	53%	45%	60%	54%	56%
Nyandarua	55%	44%	39%	43%	43%	45%
Nyeri	58%	45%	39%	44%	42%	45%
Samburu	49%	40%	30%	41%	39%	40%
Siaya	58%	42%	39%	44%	44%	45%
Taita-Taveta	57%	49%	44%	57%	56%	53%
Tana River	43%	30%	21%	32%	28%	31%
Tharaka-Nithi	45%	32%	24%	33%	29%	32%
Trans-Nzoia	51%	38%	32%	42%	35%	40%
Turkana	46%	33%	21%	30%	26%	31%



	Diarrhea with Severe Dehydration	Non-severe pneumonia	Hypertension	Malaria	Postpartum hemorrhage	All 5 cases
Uasin Gishu	52%	42%	39%	44%	42%	44%
Vihiga	55%	43%	35%	47%	38%	44%
Wajir	61%	44%	46%	53%	48%	50%
West Pokot	65%	50%	48%	57%	52%	54%
Cadre						
Doctors	61%	48%	48%	55%	50%	52%
Clinical Officers	54%	42%	36%	45%	39%	43%
Nurses	48%	36%	27%	36%	34%	36%
Facility Level						
Level2	49%	37%	29%	38%	34%	38%
Level3	53%	40%	33%	42%	39%	41%
Level4	57%	45%	41%	49%	44%	47%
Level5	58%	45%	41%	49%	44%	47%
Location						
Urban	54%	41%	36%	45%	40%	43%
Rural	50%	38%	29%	38%	35%	38%
Sex						
Male	53%	41%	35%	44%	39%	42%
Female	51%	39%	31%	40%	37%	40%
Ownership						
Government	52%	40%	33%	41%	38%	41%
Private	53%	41%	35%	43%	39%	42%
NGO	49%	37%	31%	38%	34%	38%
FBO	50%	39%	32%	41%	36%	40%
Years of professional experience						
0-5 years	52%	40%	34%	43%	39%	42%
6-15 years	52%	40%	33%	42%	38%	41%
16-25 years	52%	39%	34%	40%	37%	41%
26+ years	51%	37%	28%	36%	32%	37%
All	52%	40%	33%	45%	38%	41%

7.4.4 Correct treatment based on clinical guidelines

This was defined as the capacity of the health care worker to correctly treat and manage the conditions. The tracers used to assess treatment for each of the conditions are summarized in the Table 66;

Table 66: Standard treatment guidelines based on clinical diagnosis

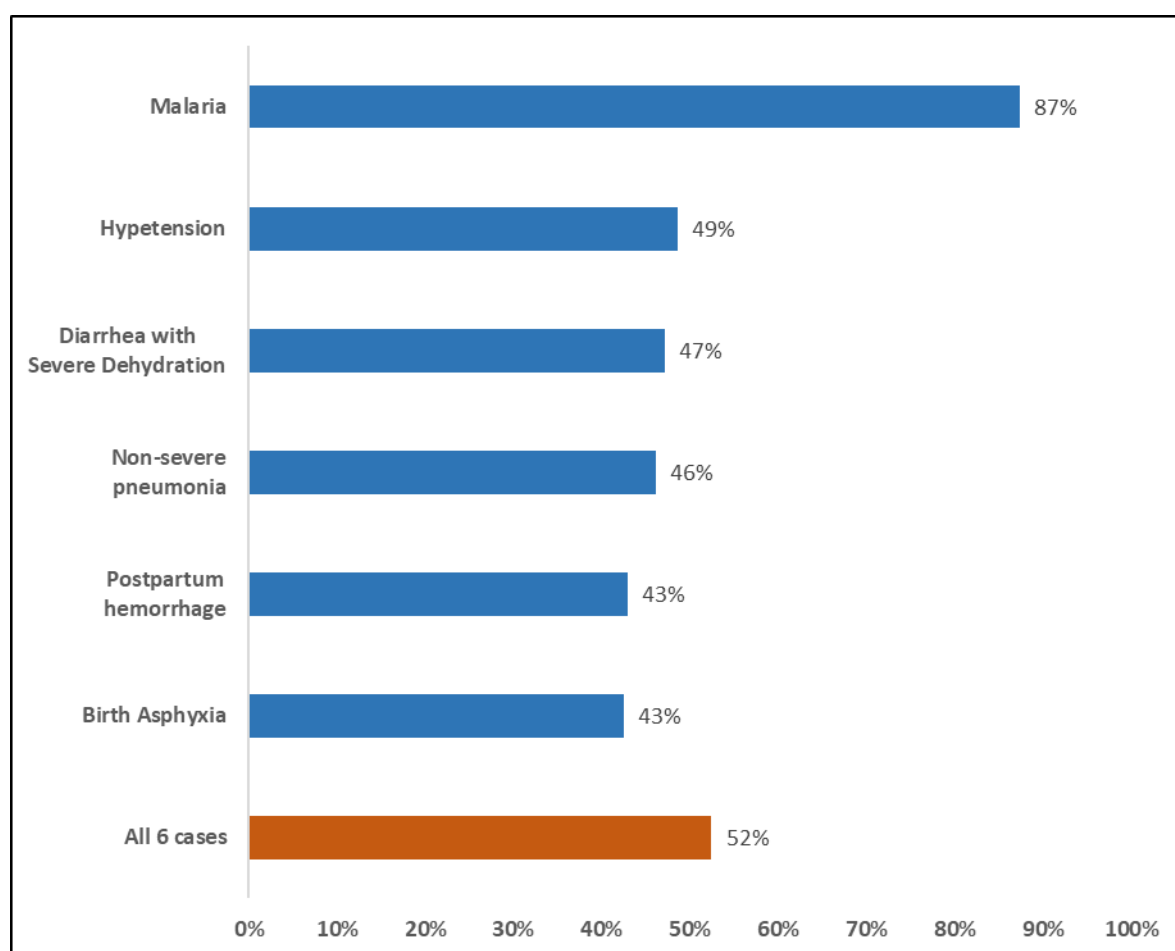
Condition	Treatment/management
Uncomplicated malaria	- AL to be administered at 0hrs, 8hrs, 24hrs, 36hrs, 48hrs and 60hrs - Antipyretics - Paracetamol
Acute diarrhoea with severe dehydration	- Admit the patient - Rehydration using ringer's lactate - No antibiotic- mostly viral - Reassess after 4 hrs. reclassify and treat - ORS 10mls per kg after every loose motion, - Zinc 20mg daily for 10 days
Hypertension	- Manage as outpatient - Low dose of angiotensin receptor blocker +calcium channel blocker OR - Hydrochlorothiazide+ calcium channel blocker - Low dose lipid lowering drugs(statins) - Paracetamol
Pneumonia	- Treat as outpatient - Give high dose of amoxicillin DT 40-45mg/kg 12hourly - 1ST dose at the clinic. Reassess child in two days - Paracetamol for fever management
Post partum haemorrhage	- Manage as inpatient - Put IV line/fluids - Self retaining catheter - Oxytocin - Uterine massage expel any clot - Give prostaglandins - Bi manual compression of the uterus - Surgery in case the above fails
Asphyxia of the newborn	- Immediately cut the umbilical cord and move baby to resuscitation area - Check airway for secretions - Position airway in sniffing position - Check Breathing for Respiration effort - Call for help. - Start ventilation with room air using bag valve mask device - Check circulation - Continue ventilation for an extra minute at 40-60 breaths per minute - Reassess airway, breathing and circulation

Condition	Treatment/management
	- Put baby on Oxygen (0.5-1Litre per minute) - Keep baby warm and dry - Monitor vital signs - Initiate feeding (IV fluids or expressed breast milk) - Brief care giver and family on the events, interventions and next steps

Key findings

- Slightly more than half (52%) of health workers provided correct treatment for all the six cases.
- There was a significant difference in the percentage of healthcare providers who provided appropriate treatment for the four specified conditions. The majority of healthcare workers (87%) correctly treated malaria, while asphyxia and postpartum hemorrhage (PPH) were treated accurately by 43% of the health workers.

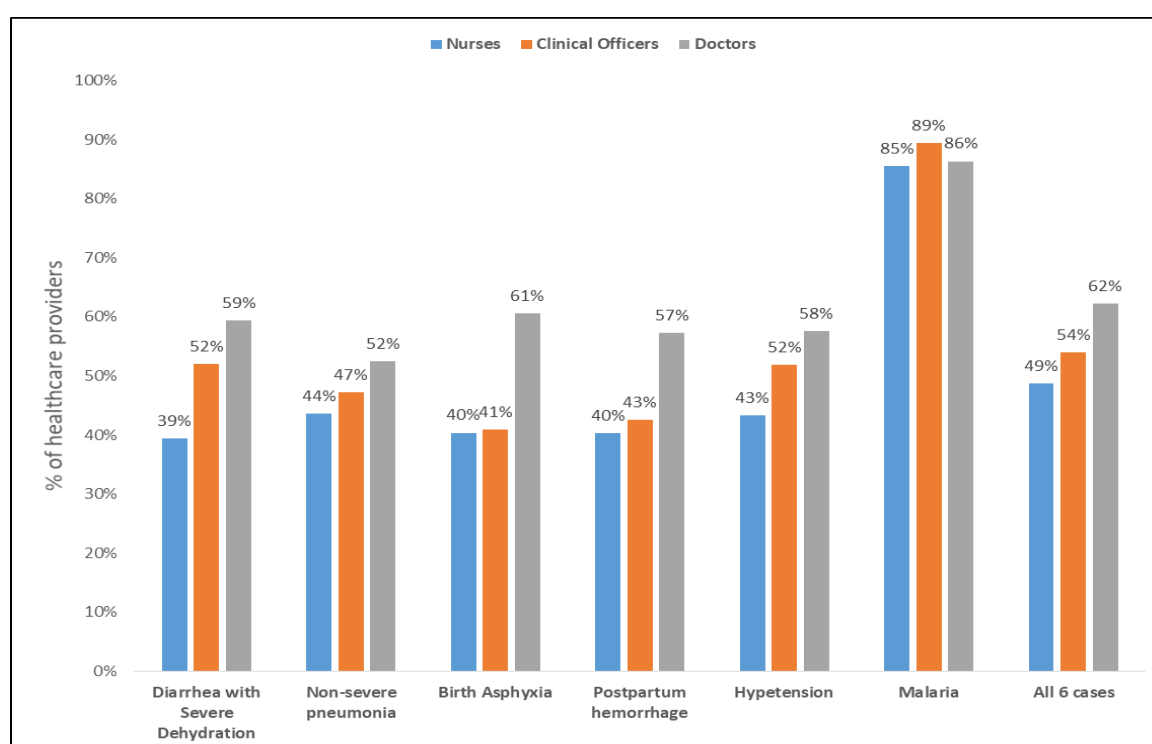
Figure 153: Proportion of healthcare workers who offered the correct treatment as per the guidelines (N=34,712)



7.4.4.1 Correct treatment, by cadre

- The findings showed a variation in the percentage of healthcare workers who correctly managed the four conditions. Results indicate that doctors were leading in the correct treatment of five out of the six conditions as compared to the other cadres.
- About two thirds of the doctors (62%) correctly managed all the six conditions compared to 54% and 49% of clinical officers and nurses respectively.
- Majority of clinical officers correctly managed malaria (89%) compared to 86% of doctors and 85% of nurses.
- The widest margin in correct management of the six conditions was for birth asphyxia which was correctly managed by 61% of the doctors compared to 40% of the nurses

Figure 154: Proportion of healthcare workers who offered correct treatment by cadre (N=34,712)



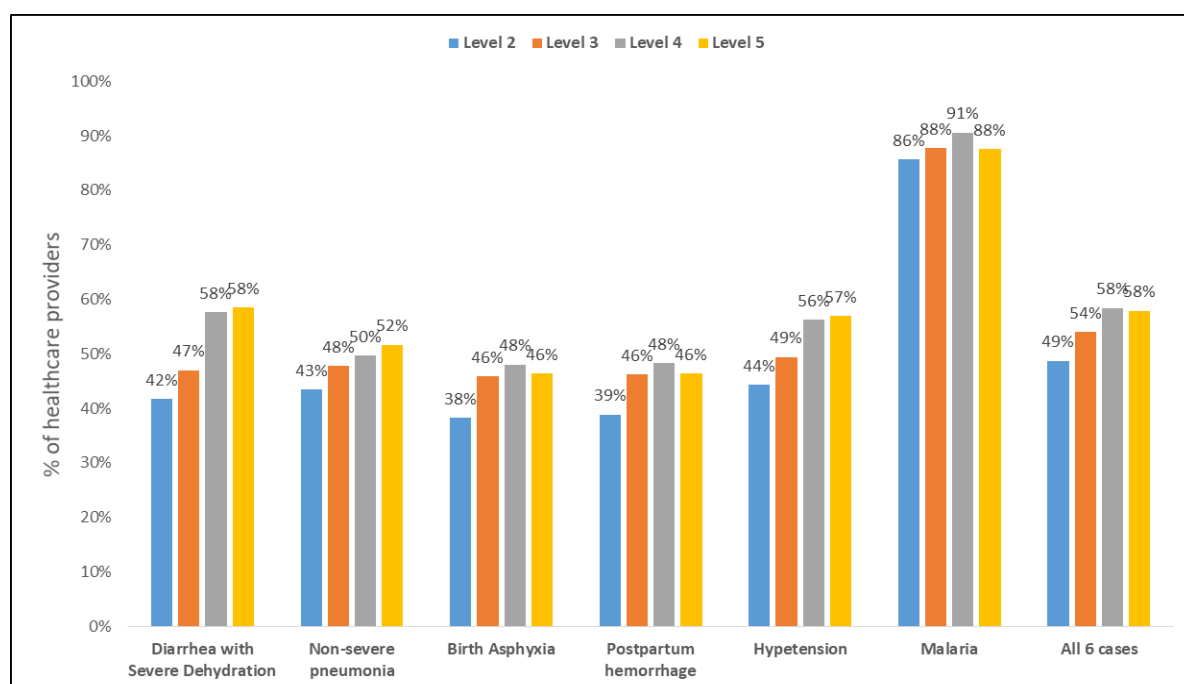
* Note: Nurses were only interviewed in Level 2 and Level 3 facilities

7.4.4.2 Correct treatment by KEPH level of care

- Although the variation across the four levels was not marked, the proportion of health care workers who correctly managed the four conditions was higher in level 4 and 5 facilities compared to lower-level facilities.
- Almost one in six (58%) of healthcare workers in levels 4 and 5 facilities correctly managed the four conditions compared to 54% and 49% of those in levels 3 and 2 respectively



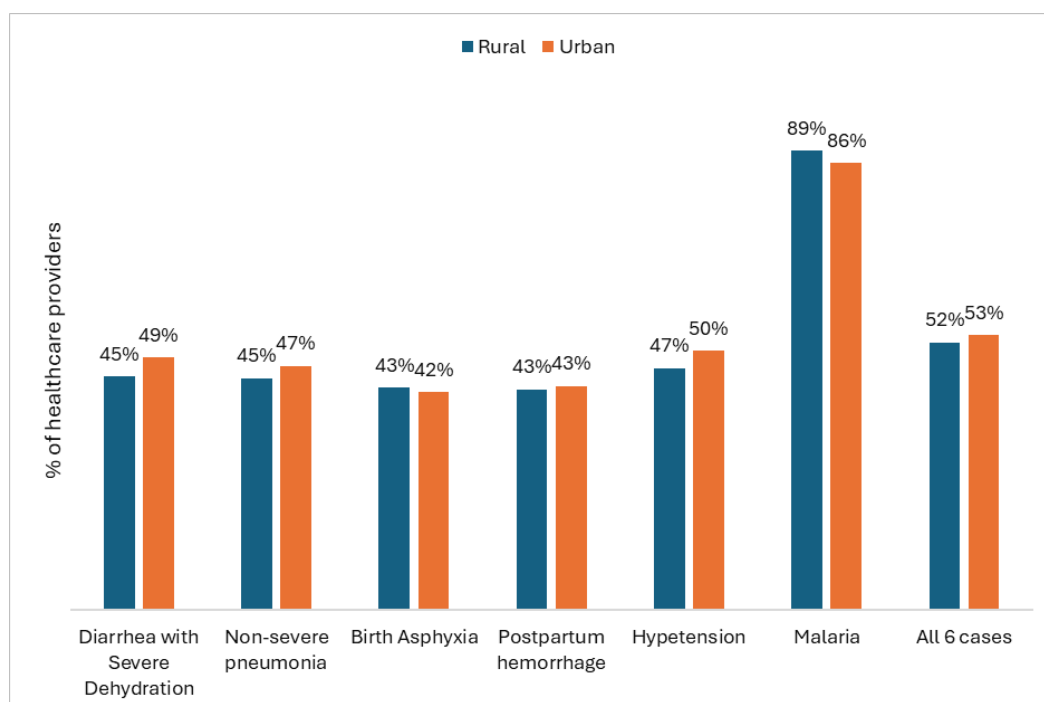
Figure 155: Proportion of healthcare workers who offered correct treatment by level of care (N=34,712)



7.4.4.3 Correct treatment by facility location

- There was a minimal variation in the percentage of health care workers who correctly managed all the four conditions based on the location of the facility
- Health care workers in urban facilities managed three conditions (diarrhea, hypertension and pneumonia) better than their colleagues in rural facilities

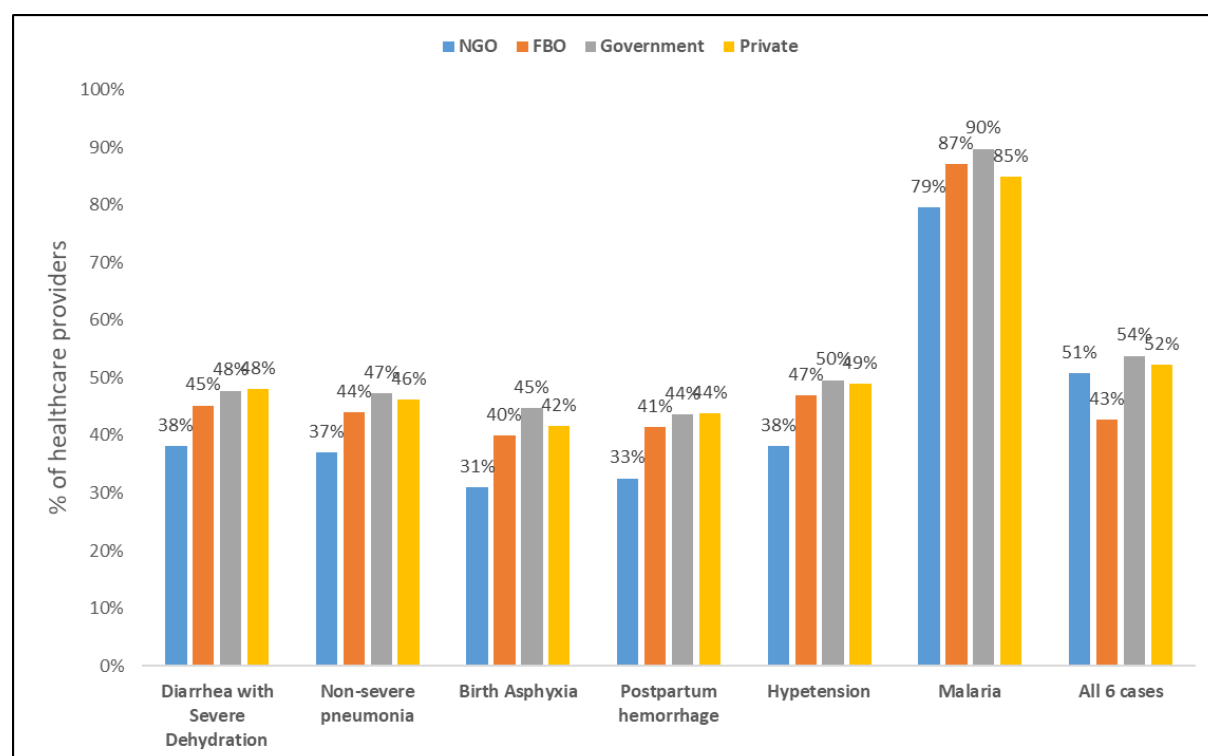
Figure 156: Proportion of healthcare workers who offered correct treatment by facility location (N=34,712)



7.4.4.4 Correct treatment by facility ownership

- The proportion of healthcare workers who correctly managed all the four conditions was highest in public facilities at 54% followed by private facilities, NGO and FBO facilities at 52%, 51% and 43% respectively.
- The lowest percentage of healthcare workers who correctly managed diarrhea (38%), pneumonia (37%), hypertension (38%), and malaria (79%) were employed in NGO facilities.

Figure 157: Proportion of healthcare workers who offered correct treatment by facility ownership (N=34,712)



7.4.4.5 Correct treatment, by healthcare providers' years of experience

- There was a slight variation in the proportion of healthcare workers who correctly managed all the conditions across the four years of experience categories.
- This variation ranged from 47% for those with more than 26 years of experience to 53% of those with 0-25 years of experience.
- Healthcare workers with over 26 years of experience consistently had the lowest percentages of correct management for the six conditions, 83% for malaria, 43% for hypertension, asphyxia, and pneumonia, and 39% for diarrhea.



Figure 158: Proportion of healthcare workers who offered correct treatment by providers' years of experience (N=34,688)

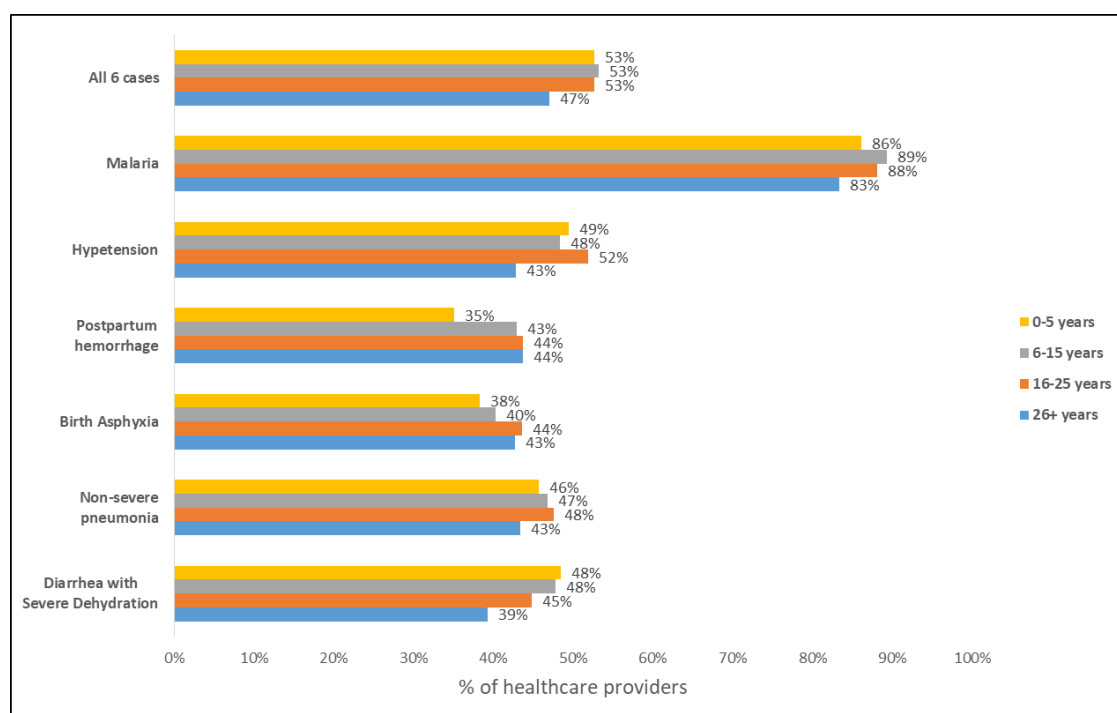


Table 67: Proportion of healthcare workers who offered the correct treatment as per the guidelines

	Diarrhea with Severe Dehydration	Non-severe pneumonia	Birth Asphyxia	Postpartum hemorrhage	Hypertension	Malaria	All 6 cases
Location							
Rural	45%	45%	43%	43%	47%	89%	52%
Urban	49%	47%	42%	43%	50%	86%	53%
Ownership							
NGO	38%	37%	31%	33%	38%	79%	51%
FBO	45%	44%	40%	41%	47%	87%	43%
Government	48%	47%	45%	44%	50%	90%	54%
Private	48%	46%	42%	44%	49%	85%	52%
YOE							
26+ years	39%	43%	43%	44%	43%	83%	47%
16-25 years	45%	48%	44%	44%	52%	88%	53%
6-15 years	48%	47%	40%	43%	48%	89%	53%
0-5 years	48%	46%	38%	35%	49%	86%	53%
Sex							
Female	46%	45%	43%	41%	47%	86%	51%
Male	49%	47%	42%	45%	50%	89%	54%

7.4.4.6 Correct treatment by county

Table 68 shows Proportion of healthcare workers who offered correct treatment by County (N=34,712)

- The proportion of healthcare workers who offered the correct treatment across the six cases differed across the 47 counties, ranging from 30% in Kirinyaga county to 70% in West Pokot county.
- All healthcare workers in Nyamira county were able to treat malaria correctly compared to 68% of those in Embu County.

Table 68: Proportion of healthcare workers who offered the correct treatment as per the guidelines

County	Malaria	Diarrhea with Severe Dehydration	Non-severe pneumonia	Birth Asphyxia	Postpartum hemorrhage	Hypertension	All 6 cases	No. of Providers
Baringo	83%	38%	35%	35%	34%	33%	36%	578
Bomet	94%	47%	56%	49%	35%	62%	51%	487
Bungoma	97%	60%	62%	47%	51%	59%	56%	840
Busia	93%	47%	44%	38%	39%	41%	43%	522
Elgeyo Marakwet	94%	43%	39%	40%	49%	39%	41%	333
Embu	68%	37%	37%	21%	26%	42%	32%	519
Garissa	82%	55%	51%	51%	53%	60%	52%	324
Homa Bay	88%	35%	33%	30%	32%	36%	33%	800
Isiolo	82%	42%	38%	23%	36%	40%	35%	214
Kajiado	76%	37%	35%	33%	38%	43%	35%	776
Kakamega	91%	55%	43%	42%	45%	42%	46%	879
Kericho	94%	40%	29%	27%	31%	36%	32%	563
Kiambu	80%	39%	38%	27%	34%	40%	35%	1926
Kilifi	98%	50%	59%	60%	60%	51%	56%	841
Kirinyaga	79%	28%	30%	32%	29%	39%	30%	542
Kisii	95%	62%	53%	57%	52%	53%	57%	981
Kisumu	97%	57%	50%	46%	53%	54%	51%	1243
Kitui	95%	50%	48%	38%	41%	51%	45%	689
Kwale	90%	47%	46%	46%	45%	50%	47%	611
Laikipia	84%	46%	46%	30%	41%	58%	41%	534
Lamu	74%	37%	38%	28%	34%	44%	34%	194
Machakos	86%	46%	42%	51%	38%	41%	47%	1208
Makueni	85%	51%	50%	62%	50%	55%	54%	655
Mandera	97%	73%	70%	65%	67%	76%	69%	447
Marsabit	99%	52%	51%	43%	44%	55%	48%	313
Meru	88%	40%	43%	39%	36%	47%	41%	1031
Migori	83%	48%	49%	39%	41%	53%	45%	853
Mombasa	84%	47%	47%	49%	42%	59%	47%	1029
Muranga	90%	47%	57%	45%	38%	42%	50%	714
Nairobi	78%	42%	46%	39%	42%	43%	42%	4648
Nakuru	89%	47%	44%	37%	35%	50%	43%	1613
Nandi	95%	57%	47%	50%	42%	57%	51%	581
Narok	97%	56%	44%	53%	51%	48%	51%	385
Nyamira	100%	64%	57%	41%	69%	61%	54%	477

County	Malaria	Diarrhea with Severe Dehydration	Non-severe pneumonia	Birth Asphyxia	Postpartum hemorrhage	Hypertension	All 6 cases	No. of Providers
Nyandarua	77%	46%	45%	44%	47%	52%	45%	474
Nyeri	93%	46%	45%	31%	41%	55%	41%	1043
Samburu	85%	44%	45%	45%	51%	53%	45%	250
Siaya	95%	52%	49%	56%	51%	51%	52%	534
Taita Taveta	92%	63%	51%	67%	67%	69%	60%	331
Tana River	86%	42%	34%	17%	27%	50%	31%	159
Tharaka Nithi	75%	45%	47%	42%	38%	45%	45%	492
Trans Nzoia	89%	33%	34%	47%	43%	35%	38%	538
Turkana	95%	44%	40%	42%	37%	46%	42%	602
Uasin Gishu	96%	49%	55%	58%	46%	61%	54%	772
Vihiga	93%	57%	57%	49%	53%	54%	54%	461
Wajir	85%	62%	59%	63%	63%	63%	61%	403
West Pokot	98%	68%	66%	75%	67%	62%	70%	303

7.4.5 Treatment Accuracy

- Treatment accuracy is defined as average share of correct treatment provided in the 6 clinical cases.
- Computed as number of cases with correct treatment over number of cases.

Table 69: Treatment accuracy of healthcare workers

Sampled Health Workers	Case Treatment						Total
	Diarrhoea with Severe Dehydration	Non-severe Pneumonia	Hypertension	Malaria	Post-Partum Hemorrhage (PPH)	Birth Asphyxia	
Health Worker 1							
Health Worker 2							
Health Worker 3							
Health Worker 4							
Health Worker 5							
.....							
.....							
Total							

Treatment accuracy of health worker 1

Findings.

- Slightly more than half (52%) of cases were correctly treated by the health workers.
- More cases were likely to be treated correctly by doctors (62%) compared to clinical officers (54%) and nurses (49%).
- Accuracy of treatment for the cases was higher in level 4 and 5 facilities at 58% compared to level 2 and 3 facilities at 49% and 54% respectively
- There was almost equal accuracy in the treatment of the six cases based on the location of the facility
- Health care workers in public health facilities correctly treated 54% of all cases while those in private, FBO and NGO facilities correctly treated 52%; 51% and 43% of the cases respectively
- Treatment accuracy was lowest among healthcare providers with more than 26 years' experience at 47%

Figure 159: Treatment accuracy disaggregated by cadre, facility level, location, ownership and years of experience (N=34,712, (N=34,688 for years of experience))

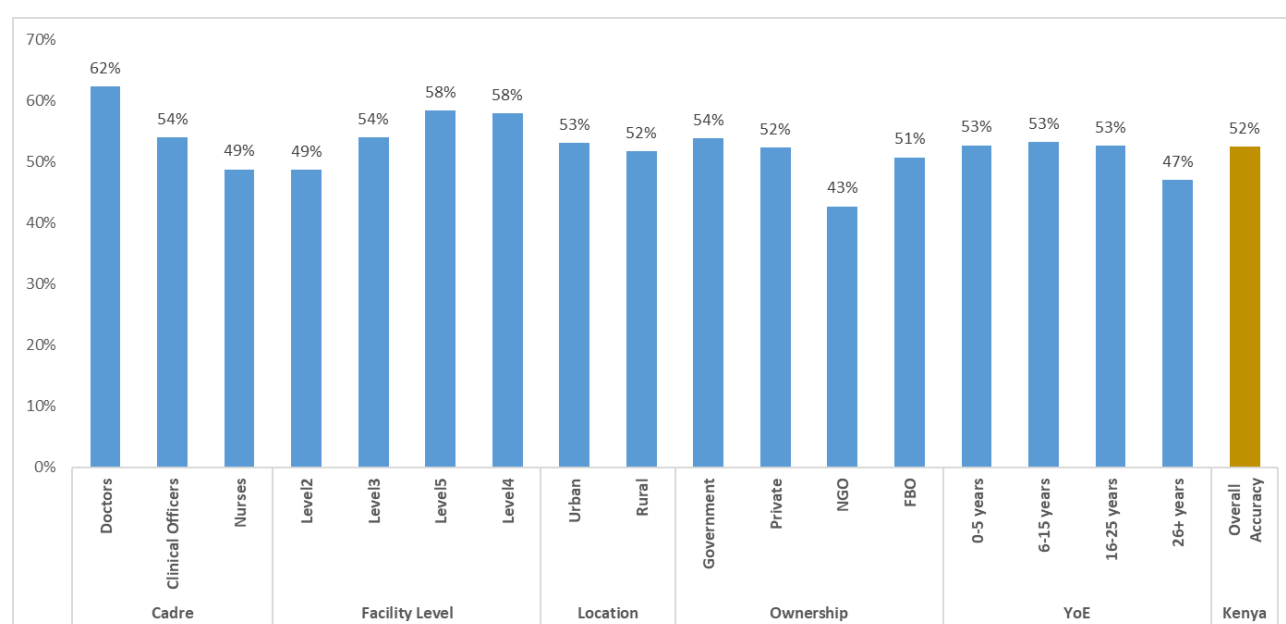


Table 70: Proportion of healthcare providers who followed the recommended clinical process in treatment of patients stratified by categories (n=34,712)

Group	Category	Proportion
Cadre	Doctors	62%
	Clinical Officers	54%
	Nurses	49%
Facility Level	Level 2	49%
	Level 3	54%
	Level 4	58%
	Level 5	58%

Group	Category	Proportion
Location	Urban	53%
	Rural	52%
Ownership	Government	54%
	Private	52%
	NGO	43%
	FBO	51%
YoE	0-5 years	53%
	6-15 years	53%
	16-25 years	53%
	26+ years	47%
Kenya	Overall Accuracy	52%

7.4.5.1 Treatment accuracy by county

Table 71 shows healthcare workers treatment accuracy by County (N=34,712)

There was varied performance across the counties with treatment accuracy highest in Mandera and West Pokot at 75% and 73% respectively and lowest in Kirinyaga and Embu at 39%. About 14 (30%) of the 47 counties recorded healthcare workers treatment accuracy below 50%.

Table 71: Accuracy in diagnosis vs treatment of the four cases by county

County	Diagnostic Accuracy	Treatment Accuracy	No. of Providers
Baringo	79%	43%	578
Bomet	76%	57%	487
Bungoma	89%	63%	840
Busia	86%	50%	522
Elgeyo-Marakwet	86%	51%	333
Embu	78%	39%	519
Garissa	94%	59%	323
Homa Bay	80%	42%	800
Isiolo	84%	44%	214
Kajiado	71%	44%	776
Kakamega	85%	53%	879
Kericho	77%	43%	564
Kiambu	71%	43%	1926
Kilifi	81%	63%	841
Kirinyaga	73%	39%	542
Kisii	93%	62%	981
Kisumu	88%	59%	1243
Kitui	87%	54%	689
Kwale	86%	54%	611
Laikipia	86%	51%	534



County	Diagnostic Accuracy	Treatment Accuracy	No. of Providers
Lamu	89%	42%	194
Machakos	92%	51%	1208
Makueni	98%	59%	655
Mandera	98%	75%	447
Marsabit	94%	57%	313
Meru	83%	49%	1031
Migori	95%	52%	853
Mombasa	86%	54%	1029
Muranga	87%	53%	714
Nairobi	83%	48%	4648
Nakuru	82%	50%	1614
Nandi	86%	58%	581
Narok	95%	58%	385
Nyamira	98%	65%	477
Nyandarua	92%	52%	474
Nyeri	80%	52%	1043
Samburu	86%	54%	250
Siaya	92%	59%	534
Taita-Taveta	94%	68%	331
Tana River	80%	43%	159
Tharaka-Nithi	82%	49%	491
Trans-Nzoia	92%	47%	538
Turkana	80%	51%	602
Uasin Gishu	92%	61%	772
Vihiga	87%	60%	461
Wajir	98%	66%	403
West Pokot	100%	73%	303

7.4.5.2 Correct diagnosis vs correct treatment (diarrhoea, pneumonia, hypertension and malaria)

- The findings show a decrease in the percentage of health care workers who offered the correct treatment compared to those who made the correct diagnosis for all the six cases
- The lowest margin in the proportion of those who made correct diagnosis and offered the right treatment was with malaria where 95% made the correct diagnosis while 87% offered the right treatment
- The difference between correct diagnosis and treatment was highest for hypertension where 95% of healthcare workers correctly diagnosed HTN while only about half of them (49%) managed it correctly.

Figure 160: Proportion of healthcare providers giving correct diagnosis, correct treatment for all the six for cases (N=34,712)

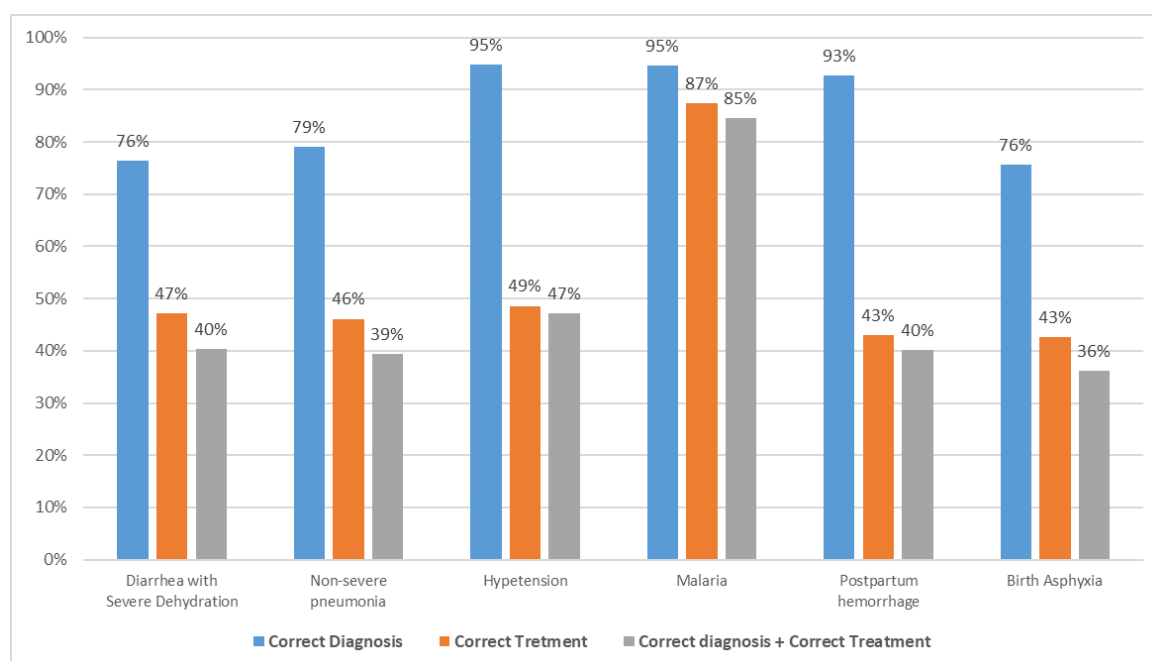


Table 72: Accuracy in diagnosis vs treatment in four cases

Kenya	Diarrhea with Severe Dehydration	Non-severe pneumonia	Hypertension	Malaria	Postpartum hemorrhage	Birth Asphyxia
Correct Diagnosis	76%	79%	95%	95%	93%	76%
Correct Treatment	47%	46%	49%	87%	43%	43%
Correct diagnosis + Correct Treatment	40%	39%	47%	85%	40%	36%

Table 73: Proportion of healthcare providers who followed the recommended clinical process in diagnosis and treatment by the different categories (n=34,712)

Group	Category	diagnosis	Treatment
Cadre	Nurses	82%	49%
	Clinical Officers	87%	54%
	Doctors	91%	62%
Facility Level	Level 2	82%	49%
	Level 3	87%	54%
	Level 4	91%	58%
	Level 5	89%	58%
Location	Urban	85%	53%
	Rural	85%	52%
Sex	Female	84%	51%
	Male	86%	54%
Ownership	NGO	79%	43%

Group	Category	diagnosis	Treatment
YoE	Private	83%	52%
	FBO	83%	51%
	Government	87%	54%
	0-5 years	84%	53%
	16-25 years	86%	53%
	26+ years	82%	47%
	6-15 years	86%	53%
Kenya	Overall Accuracy	85%	52%

7.4.6 Health Education

Health education provides patients with information about their conditions, treatment choices, and self-care techniques, enabling them to actively participate in managing their health. It plays a crucial role in clinical management as it improves patient care and leads to better health outcomes.

The following tracer items were used to assess health education for five cases namely malaria, hypertension, diarrhoea, pneumonia and post-partum hemorrhage

Table 74: Areas of Assessment for health education

Health condition	Health education
Malaria	- Adherence to the treatment - Emphasize on all the 6 doses in 3 days - In case of vomiting within 30 minutes repeat the dose - Incase the condition does not resolve return to the facility - Use of preventive measures i. e bed nets
Diarrhea	- ORS preparation and using - Hand hygiene - Food preparation and storage - Not withholding feeding - Taking oral fluids
Hypertension	- Dietary modification - Physical exercise - Stress reduction - Weight reduction - Limit salt foods - Stop alcohol - Disease condition/long-term expectation - Adherence to treatment
Pneumonia	- Antibiotic administration for 5 days - Feeding

Health condition	Health education
	- Danger signs - When to return to hospital
Post partum haemorrhage	- Danger signs - Initiate breastfeeding - Advocate for skilled birth attendance - Family planning

Key Findings

- About half of health care workers (51%) provided health education for all the five conditions
- Majority of the healthcare workers offered health education during management of diarrhea (60%) compared to 44% who provided health education during management for malaria.
- About 6 in every 10 doctors (61%) provided health education in all the 5 conditions compared to half of clinical officers(50%) and nurses(49%) respectively
- Health education for all the conditions was mostly offered by health care workers in level 4 facilities (55%) compared to 53% of those in level 3 and 50% of those in level 5 facilities
- There was a minimal variation in the proportion of healthcare workers who offered health education for all conditions at both rural and urban facilities (50% for those in rural facilities and 51% for those in urban facilities)
- Slightly more than half (55%) of healthcare workers with 16-25 years of experience provided health education for all the five conditions compared to 48% of those with over 26 years of experience.
- The proportion of male and female healthcare workers who offered health education in all conditions was almost equal (51% for male providers and 50% for female providers)

Table 75 shows proportion of healthcare workers who provided health education by various disaggregation groups, and all groups (N=34,712)

Table 75: Proportion of healthcare worker that provided health education as per guidelines

	Diarrhea with Severe Dehydration	Non-severe pneumonia	Hypertension	Malaria	Postpartum hemorrhage	All 5 cases	No. of Providers
County							
Baringo	46%	33%	36%	34%	32%	36%	578
Bomet	67%	55%	55%	54%	68%	60%	487
Bungoma	68%	58%	58%	60%	59%	61%	840
Busia	53%	38%	44%	49%	51%	47%	522

	Diarrhea with Severe Dehydration	Non- severe pneumonia	Hypertension	Malaria	Postpartum hemorrhage	All 5 cases	No. of Providers
Elgeyo-Marakwet	45%	41%	38%	37%	39%	40%	333
Embu	47%	32%	35%	27%	32%	35%	519
Garissa	64%	61%	60%	55%	72%	62%	323
Homa Bay	49%	38%	47%	37%	38%	42%	800
Isiolo	59%	33%	44%	27%	38%	40%	214
Kajiado	52%	38%	50%	33%	45%	43%	776
Kakamega	51%	30%	47%	34%	46%	42%	879
Kericho	46%	32%	41%	31%	35%	37%	564
Kiambu	49%	36%	42%	30%	36%	39%	1,926
Kilifi	77%	50%	73%	49%	63%	62%	841
Kirinyaga	44%	21%	38%	26%	29%	32%	542
Kisii	61%	47%	48%	52%	58%	53%	981
Kisumu	65%	55%	64%	60%	60%	61%	1,243
Kitui	66%	53%	53%	52%	58%	56%	689
Kwale	54%	32%	51%	39%	44%	44%	611
Laikipia	59%	26%	47%	29%	31%	38%	534
Lamu	63%	43%	51%	27%	42%	45%	194
Machakos	64%	45%	53%	44%	45%	50%	1,208
Makueni	65%	65%	61%	58%	67%	63%	655
Mandera	76%	82%	71%	57%	76%	72%	447
Marsabit	65%	65%	48%	52%	65%	59%	313
Meru	62%	51%	48%	43%	56%	52%	1,031
Migori	48%	43%	53%	36%	43%	45%	853
Mombasa	68%	51%	62%	45%	51%	55%	1,029
Murang'a	64%	46%	47%	49%	49%	51%	714
Nairobi	56%	44%	52%	42%	50%	49%	4,648
Nakuru	60%	40%	44%	38%	45%	45%	1,614
Nandi	52%	49%	47%	41%	44%	47%	581
Narok	67%	61%	59%	54%	58%	60%	385
Nyamira	74%	72%	64%	81%	80%	74%	477
Nyandarua	72%	53%	62%	41%	58%	57%	474
Nyeri	56%	41%	53%	30%	45%	45%	1,043
Samburu	63%	54%	54%	51%	58%	56%	250
Siaya	71%	51%	59%	62%	66%	62%	534
Taita-Taveta	75%	67%	62%	69%	69%	68%	331
Tana River	57%	30%	43%	43%	46%	44%	159

	Diarrhea with Severe Dehydration	Non- severe pneumonia	Hypertension	Malaria	Postpartum hemorrhage	All 5 cases	No. of Providers
Tharaka-Nithi	61%	44%	40%	39%	44%	46%	491
Trans-Nzoia	54%	46%	46%	41%	49%	47%	538
Turkana	53%	40%	42%	36%	40%	42%	602
Uasin Gishu	82%	68%	60%	60%	67%	68%	772
Vihiga	61%	52%	59%	56%	57%	57%	461
Wajir	79%	77%	63%	66%	87%	74%	403
West Pokot	85%	73%	66%	68%	83%	75%	303
Cadre							
Nurses	60%	45%	48%	43%	43%	49%	49%
Clinical Officers	58%	45%	53%	44%	44%	50%	50%
Doctors	68%	60%	62%	51%	51%	64%	61%
Facility Level							
Level 2	59%	43%	49%	42%	42%	48%	48%
Level 3	61%	46%	52%	46%	46%	53%	52%
Level 4	61%	54%	57%	46%	46%	55%	55%
Level 5	60%	48%	53%	43%	43%	48%	50%
Location							
Rural	59%	46%	49%	44%	44%	50%	50%
Urban	60%	47%	54%	44%	44%	51%	51%
Ownership							
FBO	56%	46%	49%	43%	43%	48%	48%
NGO	57%	36%	46%	38%	38%	47%	45%
Private	59%	46%	53%	43%	43%	50%	50%
Government	62%	47%	52%	45%	45%	52%	52%
Years of Experience							
0-5 years	59%	45%	52%	43%	43%	50%	50%
6-15 years	60%	46%	52%	45%	45%	51%	51%
16-25 years	63%	54%	53%	49%	49%	55%	55%
26+ years	61%	47%	46%	40%	40%	47%	48%
Sex							
Male	59%	48%	53%	45%	45%	52%	51%
Female	61%	45%	50%	43%	43%	50%	50%
All six cases	60%	46%	51%	44%	44%	52%	51%

Discussion

The capacity of healthcare workers to correctly diagnose and manage the six health conditions varied across the three cadres assessed, and level of care. Doctors had a higher probability of



correctly diagnosing and managing almost all the six conditions. The diagnostic accuracy and capacity to manage the six conditions among healthcare workers in lower-level facilities was limited compared to those in level 4 and 5 facilities. This could be attributed to the capacity and scope of care for the lower level facilities that largely handle minor health conditions and refer complicated or specialized cases to higher level facilities.

There was minimal to no difference in the diagnosis and treatment of the cases based on the location of facility. This suggests that geographical factors may not significantly influence clinical decision-making or the standard of care provided.

Public facilities performed better in the diagnosis and management of the clinical cases compared to private, FBO and NGO facilities. This points to better capacity among health care workers in public facilities and could be attributed to more trainings and availability of guidelines in government owned facilities.

The experience of healthcare workers also played a critical role in the quality of care provided. Interestingly, those with over 26 years of experience were found to be the least likely to arrive at a correct diagnosis or treatment compared to their less-experienced colleagues. This might suggest a possible rigidity in clinical practice among more seasoned professionals, who may rely heavily on established methods or may have become less flexible in adapting to new clinical guidelines and technologies.

The limited availability of health education indicates its lower prioritization in patient care, highlighting the need for structured systems to institutionalize health education as an integral part of patient management.

Recommendations

- Ensure availability, access and utilization of relevant clinical guidelines to all health providers to ensure standardized quality care
- Develop targeted training programs for healthcare workers in lower-level facilities and those working in FBO and NGO facilities to improve their diagnostic skills and management capabilities
- Identify the underlying causes for the disparities in performance among different facility types and experience levels to inform targeted interventions
- Encourage all healthcare facilities, especially private, FBO, and NGO facilities to integrate and enforce use of clinical guidelines into their practice



8. Human Resource Practice

Record Review

Record review involves the scrutiny of patient records/files in the target facilities for completeness and accuracy of documentation of care provided in specific service areas. Target records were Maternity, HIV-HTS records, HIV-ART records, TB records.

8.1 Delivery Care Record Review

More than 15,000 children and 830 women die every day globally from conditions that are preventable. When a woman dies in childbirth, her infant has only a 19% chance of surviving his or her first month. When interventions are delivered during labour and childbirth and immediate newborn care is provided, up to 51% of newborn deaths can be avoided. It is with this background that the quality of care assessment reviewed delivery care records that included intra-partum and post-partum monitoring of both the mother and the baby.

Variables that were assessed included mother's basic information, mother's medical and obstetric history, completion of partographs and post-partum monitoring of mother and baby.

The partogram is a tool used to monitor the mother and foetus during labour and also monitors progress of labour to allow for timely and effective decision making on the management of labour, complications and emergencies

The data collected was disaggregated by level of care, facility type of ownership and whether the facilities were in urban or rural areas.

Sample Selection

Delivery care records were sourced from facilities that provided maternity services. Records reviewed included Mother/Baby patient file, Cardex, Partograph, Maternity Electronic Medical Record (EMR.) Records of all women who had a normal vaginal delivery (SVD) with a live birth and had delivered within the 6 months specified period of June to December 2023 . Any records of a woman who presented to the facility already in second stage of labor or had a caesarean section or was referred out during labor or immediately after delivery were excluded for review.

Findings:

A total of **7,718** records from maternity were reviewed for documentation.

8.1.1 Documentation of Mother's basic information

Definition:

The record review assessed whether key components of the mother's basic information were documented in patient files. Completeness was measured across seven parameters:



Table 76: Mother's Basic Information Parameters

	Parameters
Documentation of Mother's Basic Information	• Mother's full name (at least 2 names) • Mother's age or date of birth • Gravidity and parity • Client/admission number • Date and time of admission • Medical history • Obstetric history

A file was considered complete when **all seven parameters** were documented.

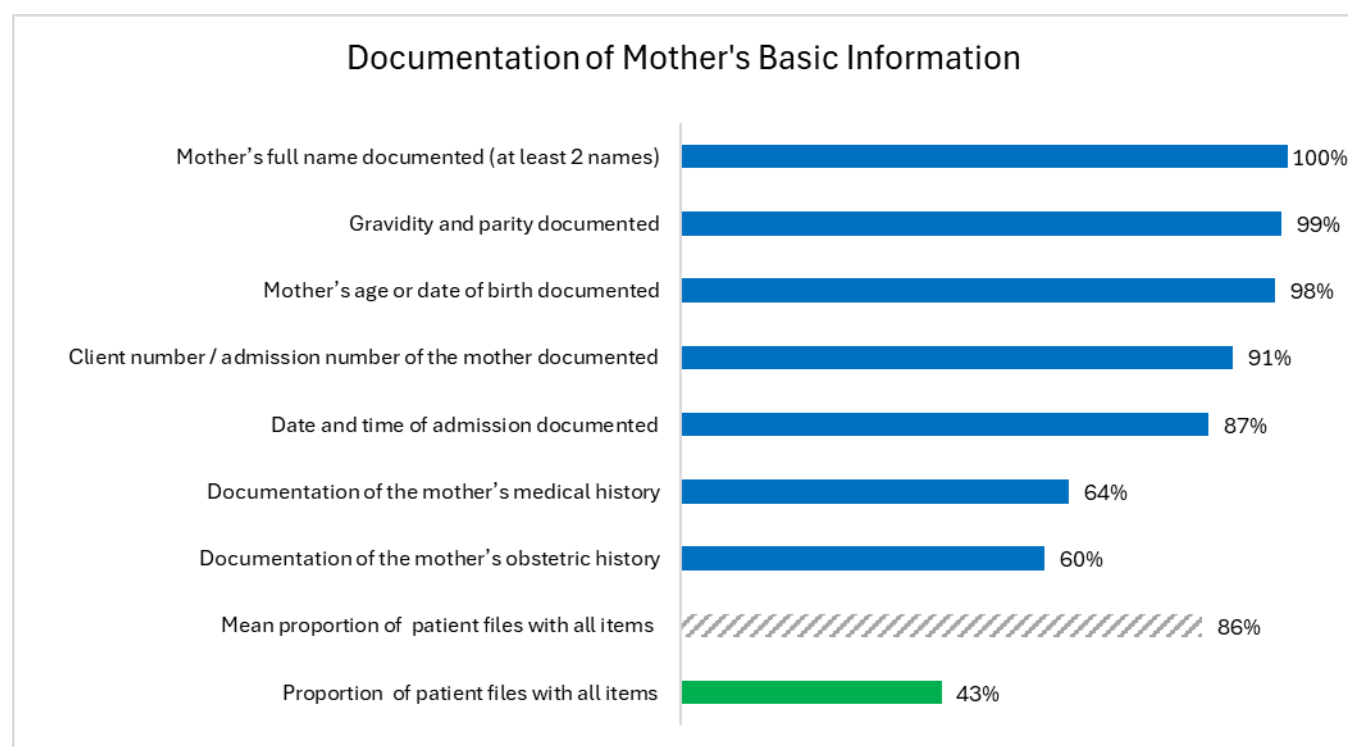
Findings:

Of the 7,718 records delivery records reviewed nationally,

- 43% of patient files had all seven parameters documented.
- The most documented parameter was the mother's full name (100%), followed by age/date of birth (98%) and gravidity/parity (99%).
- The least documented parameters were medical history (64%) and obstetric history (60%).
- On average, the mean proportion of items documented per file was 86% (about 6 of 7 items).
- Less than half of patient files (43%) had all seven parameters documented, despite an average of 86% per file



Figure 161: Documentation of mother's basic information



Disaggregation by KEPH level and ownership.

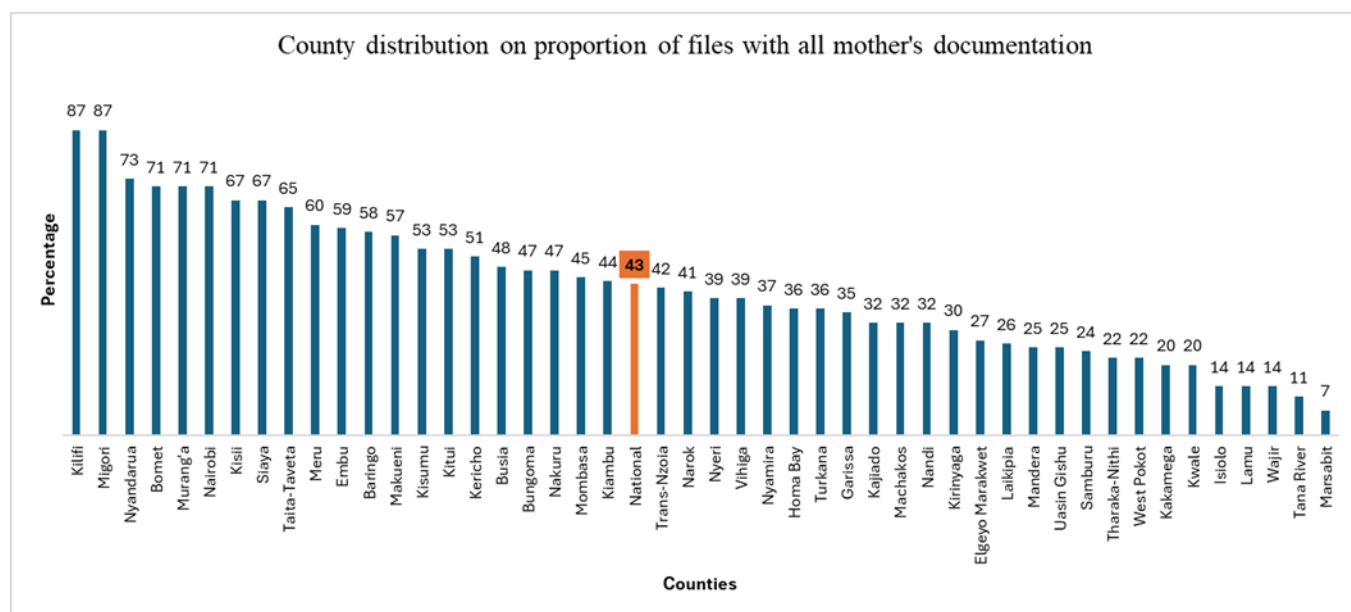
Table 77 show the disaggregation of completion of basic information by various facility characteristics.

- While documentation of complete basic information was lowest in level 2 facilities, higher-level facilities generally performed better. Levels 4 (56%) and 5 (56%) were similar.
- NGO (58%), private (53%) and faith based (49%) facilities outperformed public facilities (38%) in completeness of basic information.

County Disaggregation:

- Migori and Kilifi lead with 87% each, demonstrating strong systems and consistent delivery. Other high performing counties were Nyandarua (73%), Murang'a (71%), Bomet (71%), Nairobi (71%), Siaya (67%), and Kisii (67%).
- On the other end of the spectrum, Marsabit (7%), Tana River (11%), Lamu (14%), Wajir (14%), and Isiolo (14%) reflect the lowest complete documentation.

Figure 162: County distribution on proportion of files with all mother's documentation



- There is a wide variation in documentation of between parameters in counties such as Mandera, Nyamira, Isiolo, West Pokot, Kwale, Laikipia, Garissa, Samburu, Wajir, Marsabit where mother's biodata and admission information is almost universally documented in contrast to medical and obstetric histories.

Table 77: Percentage availability of documentation on Mother's basic information records

	Mother's full name documented (at least 2 names)	Gravidity and parity documented	Mother's age or date of birth documented	Client number / admission number of the mother documented	Date and time of admission documented	Documentation of the mother's medical history	Documentation of the mother's obstetric history	Mean proportion of patient files with all items	Proportion of patient files with all items	Number of Files
By County										
Baringo	100%	97%	96%	87%	83%	88%	72%	89%	58%	136
Bomet	100%	100%	99%	99%	97%	75%	76%	92%	71%	89
Bungoma	100%	99%	100%	91%	99%	79%	55%	89%	47%	269
Busia	98%	97%	96%	97%	79%	55%	69%	84%	48%	188
Elgeyo Marakwet	100%	98%	100%	99%	75%	42%	40%	79%	27%	126
Embu	99%	97%	96%	94%	92%	87%	73%	91%	59%	109
Garissa	100%	95%	99%	89%	96%	39%	61%	83%	35%	174
Homa Bay	100%	97%	96%	90%	68%	60%	61%	82%	36%	207
Isiolo	100%	100%	100%	68%	91%	65%	26%	79%	14%	69

	Mother's full name documented (at least 2 names)	Gravidity and parity documented	Mother's age or date of birth documented	Client number / admission number of the mother documented	Date and time of admission documented	Documentation of the mother's medical history	Documentation of the mother's obstetric history	Mean proportion of patient files with all items	Proportion of patient files with all items	Number of Files
Kajiado	99%	99%	98%	96%	96%	73%	39%	86%	32%	201
Kakamega	100%	97%	99%	87%	82%	45%	51%	80%	20%	212
Kericho	100%	97%	99%	87%	79%	72%	77%	87%	51%	148
Kiambu	100%	99%	99%	97%	96%	67%	63%	89%	44%	211
Kilifi	100%	100%	100%	98%	100%	100%	88%	98%	87%	212
Kirinyaga	100%	98%	97%	88%	79%	60%	72%	85%	30%	100
Kisii	100%	98%	100%	96%	86%	87%	84%	93%	67%	207
Kisumu	100%	99%	100%	99%	99%	74%	63%	91%	53%	192
Kitui	100%	99%	100%	97%	88%	81%	61%	89%	53%	208
Kwale	100%	100%	99%	89%	67%	47%	37%	77%	20%	223
Laikipia	100%	97%	99%	85%	68%	59%	45%	79%	26%	148
Lamu	99%	99%	100%	83%	62%	23%	18%	69%	14%	77
Machakos	100%	97%	93%	71%	88%	55%	57%	80%	32%	146
Makueni	100%	99%	98%	90%	87%	75%	77%	89%	57%	185
Mandera	100%	100%	100%	91%	100%	41%	43%	82%	25%	211
Marsabit	100%	93%	98%	68%	37%	20%	16%	62%	7%	152
Meru	100%	100%	99%	97%	84%	84%	79%	92%	60%	146
Migori	100%	100%	100%	100%	100%	90%	91%	97%	87%	222
Mombasa	100%	98%	99%	94%	99%	62%	55%	87%	45%	166
Murang'a	100%	96%	100%	98%	94%	86%	88%	95%	71%	105
Nairobi	100%	100%	100%	98%	96%	83%	79%	94%	71%	225
Nakuru	100%	98%	100%	91%	84%	81%	66%	88%	47%	218
Nandi	100%	100%	100%	93%	94%	61%	40%	84%	32%	114
Narok	100%	99%	99%	90%	98%	46%	82%	88%	41%	214
Nyamira	100%	100%	100%	94%	99%	54%	40%	84%	37%	207
Nyandarua	100%	100%	100%	100%	98%	98%	75%	96%	73%	106
Nyeri	100%	100%	97%	99%	82%	66%	67%	87%	39%	125
Samburu	100%	98%	94%	84%	75%	35%	42%	75%	24%	161
Siaya	100%	99%	100%	98%	100%	88%	72%	94%	67%	200
Taita-Taveta	100%	100%	100%	93%	100%	76%	87%	94%	65%	124
Tana River	99%	97%	97%	82%	39%	17%	24%	65%	11%	71

	Mother's full name documented (at least 2 names)	Gravidity and parity documented	Mother's age or date of birth documented	Client number / admission number of the mother documented	Date and time of admission documented	Documentation of the mother's medical history	Documentation of the mother's obstetric history	Mean proportion of patient files with all items	Proportion of patient files with all items	Number of Files
Tharaka-Nithi	100%	99%	87%	96%	41%	79%	59%	80%	22%	99
Trans-Nzoia	99%	98%	96%	93%	90%	61%	58%	85%	42%	130
Turkana	100%	100%	98%	90%	85%	40%	68%	83%	36%	282
Uasin Gishu	100%	100%	98%	97%	98%	91%	25%	87%	25%	125
Vihiga	100%	97%	99%	77%	91%	66%	63%	85%	39%	101
Wajir	100%	100%	94%	69%	90%	18%	34%	72%	14%	175
West Pokot	100%	100%	100%	94%	97%	33%	24%	78%	22%	202
By Managing Authority										
Public	100%	99%	98%	91%	87%	57%	56%	84%	38%	4,886
Private	100%	98%	99%	93%	89%	78%	68%	89%	53%	1,673
NGO	100%	98%	98%	89%	88%	70%	72%	88%	58%	104
Faith-Based	100%	99%	98%	93%	87%	70%	62%	87%	49%	1,055
By type										
Level 2	99%	98%	97%	84%	82%	38%	43%	77%	24%	1,724
Level 3	100%	99%	98%	91%	85%	62%	58%	85%	41%	2,721
Level 4	100%	99%	99%	96%	91%	79%	70%	91%	56%	3,138
Level 5	100%	100%	99%	89%	87%	83%	71%	90%	56%	135
By location										
Urban	100%	99%	99%	95%	91%	78%	69%	90%	55%	3,068
Rural	100%	98%	98%	89%	84%	54%	54%	83%	36%	4,650
All	100%	99%	98%	91%	87%	64%	60%	86%	43%	7,718

8.1.3 Completion of Partograph

A partograph is a tool used for monitoring the mother and foetus during the active phase of labour. It tracks the progress of labour and condition of mother and foetus to allow for timely intervention in case of an emergency or complication.

Table 78: Partograph records assessed

Completion of Partograph	• Foetal heart rate documented every 30 minutes • Cervical dilation documented every four hours • All maternal vital signs documented every 30 minutes

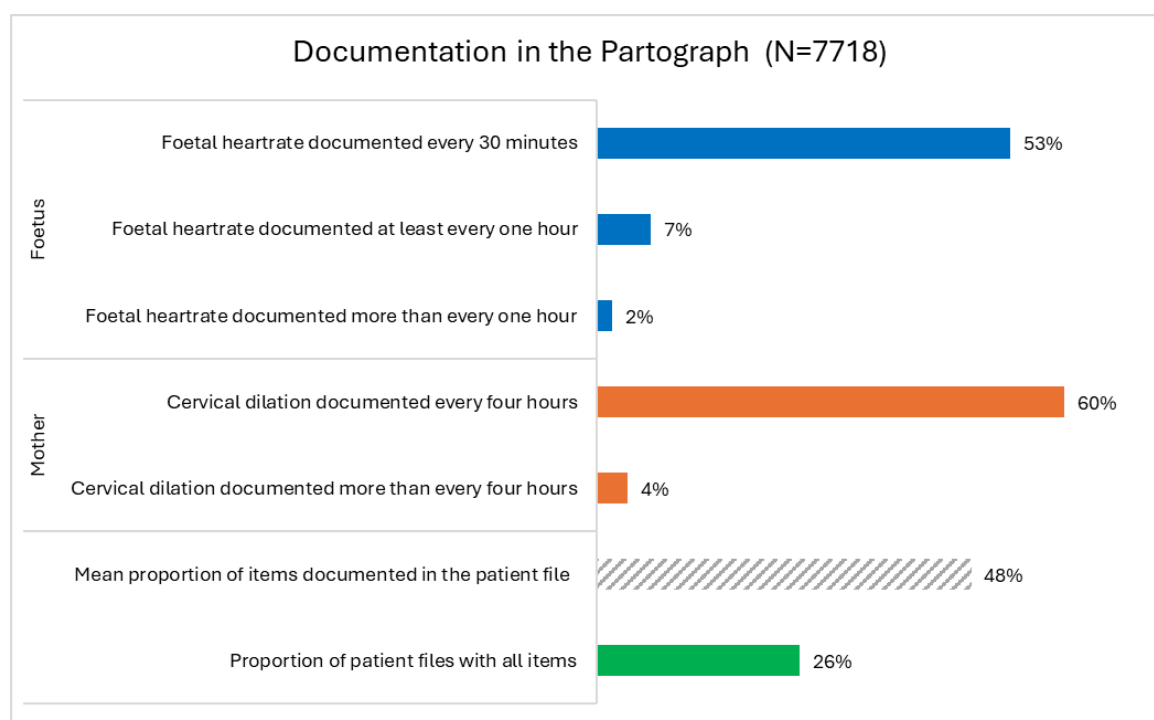
Facilities are expected to meet the standard of recording **all three parameters**.

Findings

Of the 7,718 records:

- 26% of patient files had all three parameters fully documented.
- The most documented parameter was cervical dilation (60%).
- The least documented parameter was all maternal vital signs (32%).
- On average, the mean proportion of items documented per file was 48%

Figure 163: Partograph documentation



Disaggregation by KEPH level and ownership.

Table 79 shows disaggregation of completion of the paragraph at by various facility characteristics.

- KEPH level: Complete documentation on the partograph was generally low across all levels of care ranging from 15% in level 2 facilities to 33% in Level 5 facilities.
- Ownership: NGO (37%), Private (35%) and faith-Based (33%) facilities all performed better in completion of all items of the partograph, compared to public facilities (22%).
- The quality of documentation in Public and rural facilities was consistently poor, particularly in documenting maternal vital signs (27% and 21% respectively).

County Disaggregation:

As shown in figure 161 below,

- The highest performing counties for intrapartum documentation were Baringo (69%), Nairobi (62%), Migori (61%), Kilifi (55%), Makueni (55%), Nyandarua (50%).

- The counties with the lowest completion of documentation in the all 3 partograph items Isiolo (1%), Nyeri (2%), Tana River (3%), Marsabit (3%), Elgeyo Marakwet (4%), Lamu (4%), Busia (5%).
- In Nyeri, cervical dilation was well documented (93%) but maternal vital signs were rarely recorded, leading to very low overall completeness.

Figure 164: County distribution on files with all relevant information captured in the partograph

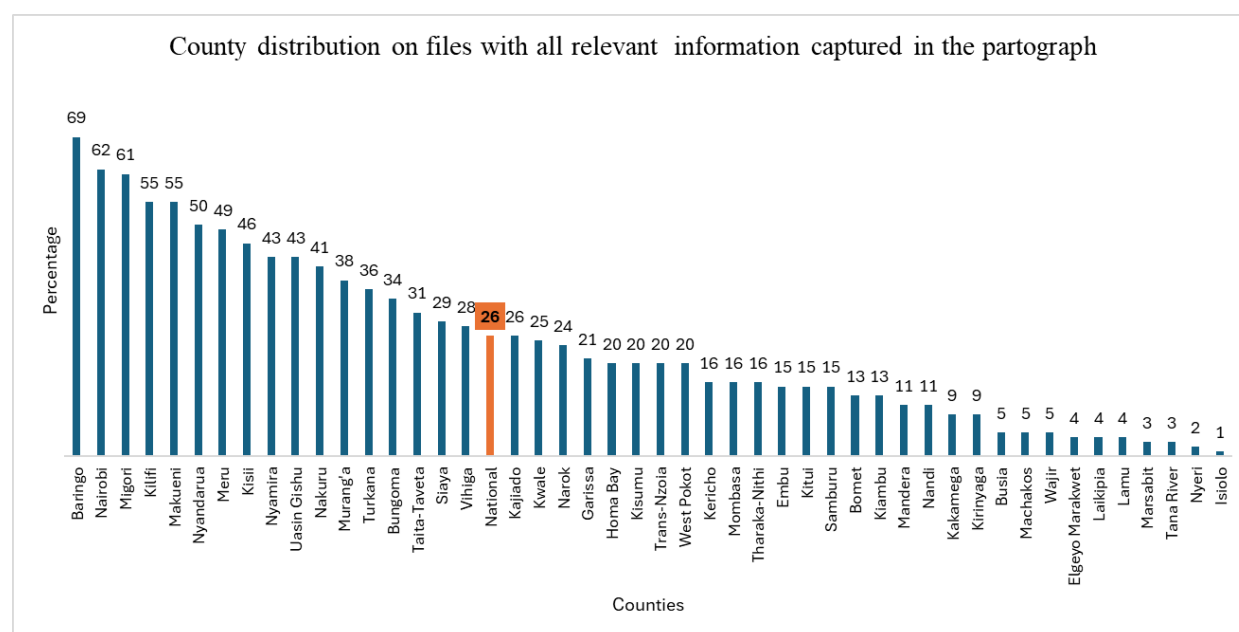


Table 79: Percentage availability of records for Completion of Partograph

	Foetal heartrate documented every 30 minutes	Cervical dilation documented every four hours	All the mother's vital signs documented every 30 minutes from time of admission to time of delivery	Mean proportion of patient files with all items	Proportion of patient files with all items	Number of Files
Baringo	76%	81%	1%	76%	69%	136
Bomet	43%	52%	2%	39%	13%	89
Bungoma	49%	51%	0%	45%	34%	269
Busia	46%	47%	13%	34%	5%	188
Elgeyo Marakwet	33%	34%	2%	25%	4%	126
Embu	72%	79%	3%	57%	15%	109
Garissa	35%	40%	3%	33%	21%	174
Homa Bay	22%	64%	8%	42%	20%	207
Isiolo	29%	29%	0%	20%	1%	69
Kajiado	40%	48%	18%	47%	26%	201

	Foetal heartrate documented every 30 minutes	Cervical dilation documented every four hours	All the mother's vital signs documented every 30 minutes from time of admission to time of delivery	Mean proportion of patient files with all items	Proportion of patient files with all items	Number of Files
Kakamega	60%	72%	6%	50%	9%	212
Kericho	53%	61%	5%	45%	16%	148
Kiambu	67%	73%	8%	52%	13%	211
Kilifi	82%	87%	0%	76%	55%	212
Kirinyaga	72%	78%	5%	54%	9%	100
Kisii	59%	65%	0%	58%	46%	207
Kisumu	86%	85%	9%	65%	20%	192
Kitui	59%	75%	2%	51%	15%	208
Kwale	52%	58%	2%	46%	25%	223
Laikipia	60%	64%	5%	43%	4%	148
Lamu	39%	31%	3%	25%	4%	77
Machakos	61%	66%	7%	44%	5%	146
Makueni	78%	81%	2%	74%	55%	185
Mandera	18%	23%	0%	19%	11%	211
Marsabit	8%	22%	0%	14%	3%	152
Meru	76%	79%	0%	69%	49%	146
Migori	80%	81%	0%	74%	61%	222
Mombasa	20%	69%	2%	48%	16%	166
Murang'a	76%	74%	2%	63%	38%	105
Nairobi	81%	86%	0%	77%	62%	225
Nakuru	63%	73%	11%	64%	41%	218
Nandi	40%	45%	19%	34%	11%	114
Narok	41%	45%	3%	38%	24%	214
Nyamira	43%	43%	0%	43%	43%	207
Nyandarua	88%	76%	20%	75%	50%	106
Nyeri	82%	93%	2%	59%	2%	125
Samburu	30%	31%	1%	26%	15%	161
Siaya	79%	78%	2%	63%	29%	200
Taita-Taveta	55%	62%	1%	50%	31%	124
Tana River	17%	20%	0%	13%	3%	71
Tharaka-Nithi	44%	79%	5%	50%	16%	99
Trans-Nzoia	33%	65%	2%	45%	20%	130
Turkana	44%	46%	0%	42%	36%	282
Uasin Gishu	66%	64%	5%	59%	43%	125
Vihiga	68%	74%	0%	57%	28%	101
Wajir	7%	10%	0%	8%	5%	175
West Pokot	21%	23%	0%	22%	20%	202
By Management Authority						



	Foetal heartrate documented every 30 minutes	Cervical dilation documented every four hours	All the mother's vital signs documented every 30 minutes from time of admission to time of delivery	Mean proportion of patient files with all items	Proportion of patient files with all items	Number of Files
Public	47%	54%	4%	43%	22%	4886
Private	63%	72%	3%	59%	35%	1,673
NGO	62%	64%	11%	58%	37%	104
Faith-Based	59%	67%	3%	55%	33%	1,055
By Type						
Level 2	29%	33%	2%	27%	15%	1,724
Level 3	51%	58%	4%	47%	27%	2721
Level 4	66%	75%	4%	60%	32%	3,138
Level 5	76%	84%	3%	66%	33%	135
By Location						
Urban	64%	72%	4%	58%	32%	3068
Rural	45%	51%	4%	41%	22%	4650
All	53%	60%	4%	48%	26%	7,718

8.1.4 Postpartum Examination

Figure 165 and Table 80 below show documentation of postpartum examination of mother and newborn on the partograph or other source document disaggregated by location, KEPH level and ownership and county.

Definition:

The record review used the six parameters in table 80 below to assess the documentation of the postpartum examination of the mother and the baby. Facilities are expected to have all 6 parameters documented

Table 80: Parameters documentation of the postpartum examination of the mother and the baby

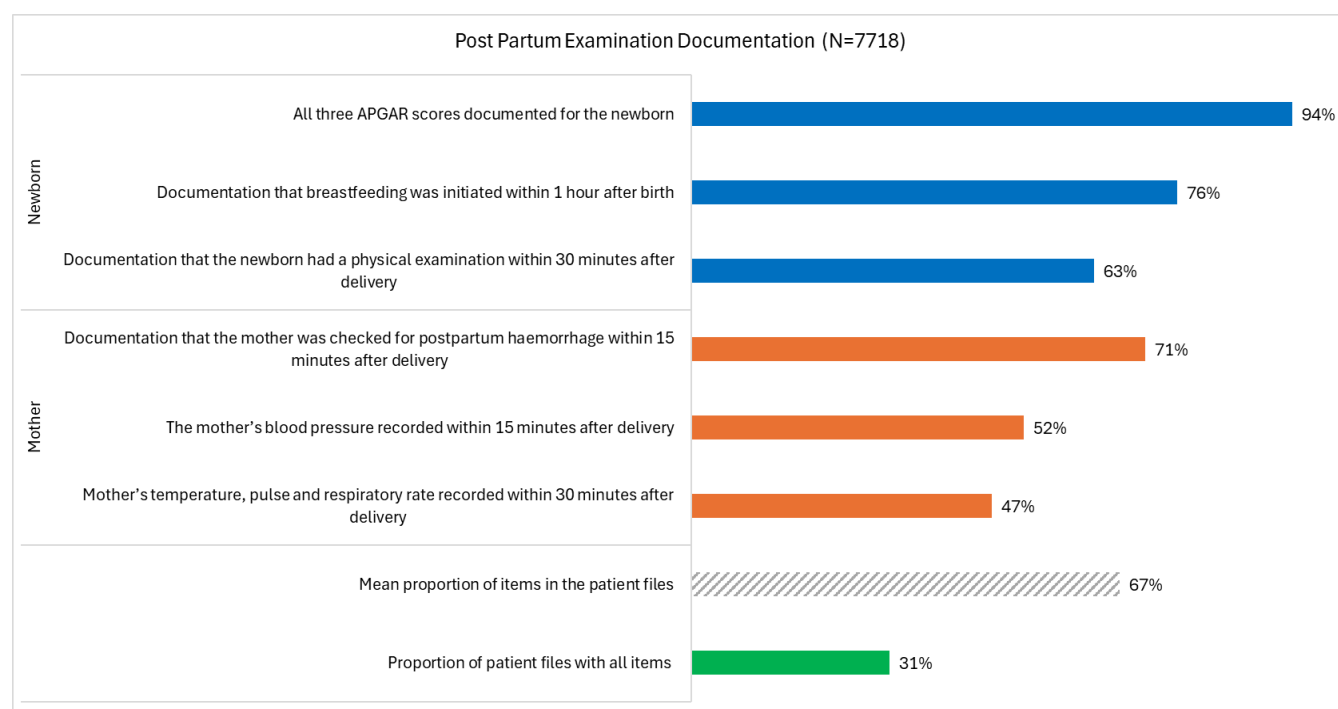
Mother	Newborn
- Documentation that the mother was checked for postpartum haemorrhage (PPH) within 15 minutes after delivery - The mother's blood pressure (BP) recorded within 15 minutes after delivery - Mother's temperature, pulse and respiratory rate recorded within 30 minutes after delivery	- All three APGAR scores documented for the newborn - Documentation that the newborn had a physical examination within 30 minutes after delivery - Documentation that breastfeeding was initiated within 1 hour after birth

Findings:

Of the patient records assessed (n=7718),

- Nearly a third (31%) of the records had all six parameters documented.
- Mother: Documentation that the mother was checked for postpartum haemorrhage within 15 minutes after delivery was the highest at 71% ,while documentation of the Mother's temperature, pulse and respiratory rate recorded within 30 minutes after delivery was the least at 47%.
- Newborn: The most documented parameter was all three APGAR score of the newborn at 94%, while the least documented was a physical examination for the newborn within 30 minutes after delivery
- The mean proportion of items recorded in a file was 67% (four of the six parameters).

Figure 165:Post partum examination documentation



Disaggregation by KEPH level and facility ownership:

As shown in table 83 below

- Documentation of initiation of breastfeeding for the newborn within 1 hour after birth was lowest in level 5 facilities at 69% and highest in level 4 facilities at 80%.
- Both documentation that the mother was checked for postpartum haemorrhage and the mother's blood pressure recorded within 15 minutes after delivery was highest in level 5 facilities at 76% and 60% respectively; and lowest in level 2 facilities at 61% and 35% respectively.

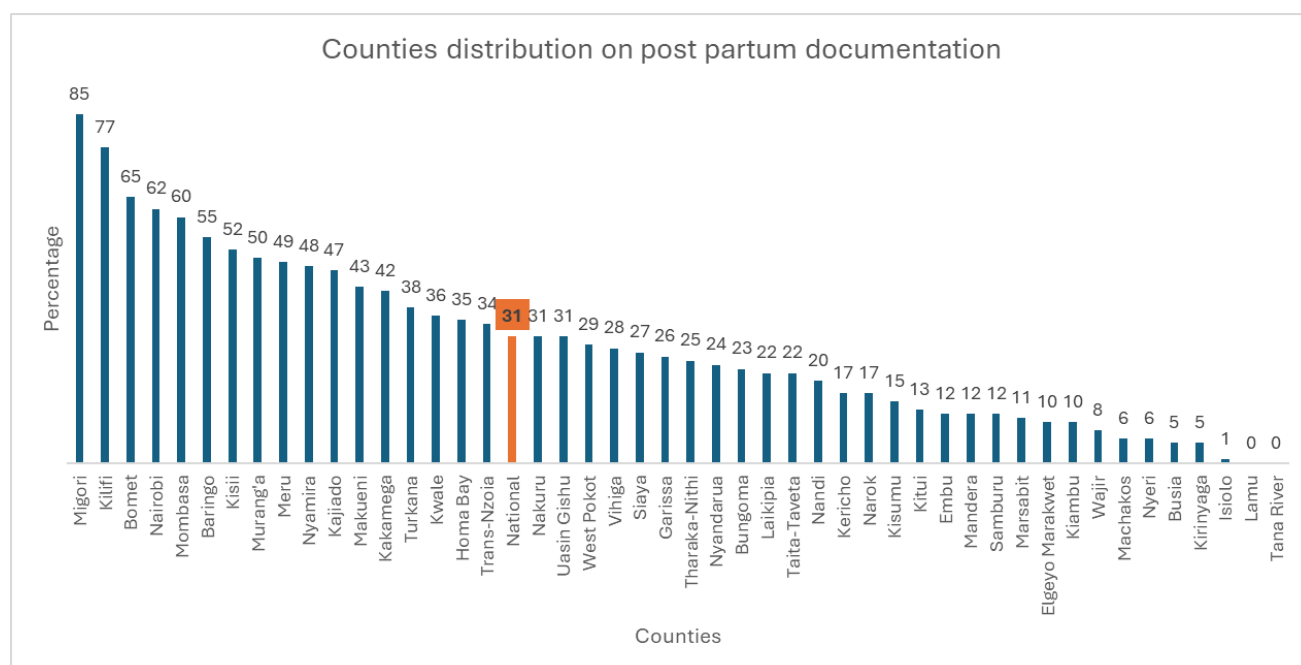
Ownership:

- Documentation of all three APGAR scores documented for the newborn was above 90% at facilities of all KEPH levels.

County disaggregation

- The highest performing county was Migori where 85% of the records assessed met the standards for postpartum examination documentation. Other top performers included Kilifi (77%), Bomet (65%), Nairobi (62%) and Mombasa (60%).
- Kirinyaga (5%), Busia (5%), Isiolo (1%), Tana River and Lamu (0%) had the lowest complete documentation of post-partum examination.
- In Tana River and Lamu counties, none of the records reviewed had all post-partum examination parameters documented and only 1% of records in Isiolo county.

Figure 166: County disaggregation of completed documentation of post-partum examination



Relative consistency of two immediate postpartum checks (PPH and BP) within 15 minutes of delivery

- Both checks are supposed to occur within 15 minutes, yet evaluation for PPH is consistently better documented than BP measurement.
- In Nyeri county for recording of an examination for PPH occurs 3.7 times more than recording of mothers blood pressure yet they have the same timeframe. In Isiolo the PPH evaluation recording is 3.1 times more than BP measurement
- Uasin Gishu has the largest absolute recording gap (59) between the two parameters

Table 81: Post partum examination documentation in different categories

	All three APGAR scores documented for the newborn	Documentation that the newborn had a physical examination within 30 minutes after delivery	Mother's temperature, pulse and respiratory rate recorded within 30 minutes after delivery	The mother's blood pressure recorded within 15 minutes after delivery	Documentation that the mother was checked for postpartum haemorrhage within 15 minutes after delivery	Documentation that breastfeeding was initiated within 1 hour after birth	Mean proportion of items in the patient files	Proportion of patient files with all items	Number of Files
By County									
Baringo	90%	86%	79%	74%	80%	73%	80%	55%	136
Bomet	90%	81%	79%	74%	75%	98%	83%	65%	89
Bungoma	93%	70%	36%	45%	78%	81%	67%	23%	269
Busia	84%	16%	16%	29%	41%	68%	42%	5%	188
Elgeyo Marakwet	99%	23%	27%	25%	50%	45%	45%	10%	126
Embu	92%	70%	31%	58%	86%	48%	64%	12%	109
Garissa	92%	74%	36%	51%	71%	76%	67%	26%	174
Homa Bay	97%	61%	58%	53%	70%	81%	70%	35%	207
Isiolo	94%	42%	23%	25%	71%	62%	53%	1%	69
Kajiado	81%	56%	54%	64%	68%	72%	66%	47%	201
Kakamega	95%	68%	70%	77%	75%	87%	79%	42%	212
Kericho	91%	86%	30%	41%	79%	64%	65%	17%	148
Kiambu	97%	66%	42%	63%	63%	48%	63%	10%	211
Kilifi	98%	85%	86%	87%	83%	89%	88%	77%	212
Kirinyaga	95%	54%	33%	53%	42%	29%	51%	5%	100
Kisii	96%	89%	61%	70%	90%	84%	82%	52%	207
Kisumu	98%	72%	86%	37%	68%	83%	74%	15%	192
Kitui	97%	37%	43%	68%	62%	89%	66%	13%	208
Kwale	90%	58%	52%	54%	85%	66%	68%	36%	223
Laikipia	98%	53%	41%	53%	85%	76%	68%	22%	148
Lamu	91%	10%	10%	22%	61%	10%	34%	0%	77
Machakos	91%	23%	35%	27%	60%	51%	48%	6%	146
Makueni	100%	79%	48%	90%	94%	98%	85%	43%	185
Mandera	87%	38%	17%	24%	40%	62%	45%	12%	211
Marsabit	95%	42%	17%	15%	46%	59%	46%	11%	152
Meru	93%	62%	70%	71%	85%	84%	77%	49%	146
Migori	100%	98%	92%	88%	99%	98%	96%	85%	222
Mombasa	98%	84%	70%	74%	87%	73%	81%	60%	166
Murang'a	97%	79%	59%	69%	87%	86%	79%	50%	105
Nairobi	93%	70%	82%	68%	80%	85%	80%	62%	225
Nakuru	95%	56%	56%	67%	52%	72%	66%	31%	218
Nandi	93%	78%	36%	52%	41%	85%	64%	20%	114
Narok	97%	57%	26%	24%	44%	86%	56%	17%	214
Nyamira	98%	77%	51%	52%	91%	97%	78%	48%	207



	All three APGAR scores documented for the newborn	Documentation that the newborn had a physical examination within 30 minutes after delivery	Mother's temperature, pulse and respiratory rate recorded within 30 minutes after delivery	The mother's blood pressure recorded within 15 minutes after delivery	Documentation that the mother was checked for postpartum haemorrhage within 15 minutes after delivery	Documentation that breastfeeding was initiated within 1 hour after birth	Mean proportion of items in the patient files	Proportion of patient files with all items	Number of Files
Nyandarua	98%	92%	41%	49%	80%	93%	76%	24%	106
Nyeri	98%	24%	18%	33%	67%	63%	51%	6%	125
Samburu	86%	48%	16%	37%	45%	45%	46%	12%	161
Siaya	99%	74%	43%	37%	40%	87%	63%	27%	200
Taita-Taveta	98%	70%	50%	35%	88%	89%	72%	22%	124
Tana River	86%	11%	1%	0%	10%	70%	30%	0%	71
Tharaka-Nithi	94%	94%	41%	76%	90%	74%	78%	25%	99
Trans-Nzoia	94%	77%	52%	68%	72%	67%	72%	34%	130
Turkana	94%	82%	45%	55%	84%	81%	73%	38%	282
Uasin Gishu	94%	44%	43%	36%	95%	98%	68%	31%	125
Vihiga	98%	68%	42%	73%	86%	66%	72%	28%	101
Wajir	91%	10%	9%	13%	47%	82%	42%	8%	175
West Pokot	99%	88%	61%	38%	94%	80%	77%	29%	202
By Type									
Level 2	89%	55%	33%	35%	61%	70%	57%	21%	1,724
Level 3	94%	60%	46%	50%	68%	74%	65%	30%	2,721
Level 4	97%	70%	56%	64%	78%	80%	74%	37%	3,138
Level 5	99%	73%	49%	60%	76%	69%	71%	33%	135
By Managing Authority									
Public	94%	59%	42%	47%	67%	74%	64%	26%	4,886
Private	96%	69%	57%	64%	76%	78%	73%	40%	1,673
NGO	92%	64%	63%	64%	77%	81%	74%	38%	104
Faith-Based	94%	73%	55%	59%	78%	78%	73%	38%	1,055
By Location									
Urban	96%	69%	55%	63%	78%	78%	73%	37%	3,068
Rural	93%	59%	42%	46%	66%	74%	63%	27%	4,650
All	94%	63%	47%	52%	71%	76%	67%	31%	7,718

Discussion

Documentation of the mother's basic information was generally strong for biodata such as name and parity, but incomplete medical and obstetric histories were common, undermining accurate diagnosis and appropriate care planning as emphasized in national guidelines.

Completion of the partograph was weakest, with only a quarter of records fully documented, reflecting inadequate intrapartum monitoring and limited ability to respond effectively to labor emergencies.

For postpartum examination, documentation of newborn parameters such as APGAR scores and breastfeeding initiation was relatively high, but maternal vitals and post partum haemorrhage checks were less consistently recorded, a critical gap given that post partum haemorrhage is the leading cause of maternal mortality in the country, hence the need for early detection of complications.

Poor performance was consistently recorded in lower-level, rural, and public facilities, pointing to inequities that must be addressed to realize universal health coverage.

Recommendations:

Table 82: Postpartum examination findings and recommendations

Findings	Recommendations
Documentation of identifiers (name, age, parity) was nearly universal, but medical and obstetric histories were weak, lowering overall completeness to 43%.	- Strengthen comprehensive history-taking by training and mentoring health workers, emphasizing adherence to national guidelines. - Integrate history-taking into supportive supervision and audits.
Completion of the partograph was weakest, with only 26% of records fully documented; cervical dilation was recorded more often than maternal vitals.	- Scale up practical training, mentorship, and supervision on partograph use, especially in lower-level, rural, and public facilities. - Integrate review of partograph completion into data quality reviews.
Postpartum examination documentation was relatively high for newborns (APGAR scores, breastfeeding). Maternal post-partum haemorrhage (PPH) evaluation and BP measurement did not align and have large difference among in some counties, indicating selective recording. Only 31% of records fully complete.	- Enforce postpartum monitoring standards through routine supervision and clinical audits with emphasis on the need to document all vitals - An evaluation for PPH should include BP measurement that also needs to be documented.
Performance gaps were widest in lower-level, rural, and public facilities compared to higher-level, private/NGO, and urban ones.	- Target quality improvement efforts at primary care, rural, and public facilities to address inequities. - Link investments and incentives to strengthened accountability for documentation of patient information.

8.2 HIV Services

The record review assessed various aspects of HIV services as shown in Table 83.

- HIV Testing and Counselling 10-19 years
- Clinical quality of HIV Care Services (Children < 15 Years of Age)
- Laboratory monitoring of ART Treatment (Children 0 to =< 15 years of age)
- HIV/TB in patients on ART (Children 0 to =< 15 years of age)

Findings

8.2.1 Documentation of HIV Testing and Counselling 10-19 years of age

Definition

The record review assessed whether key steps in HIV testing and counselling were documented in line with the **national HIV testing guidelines**, which recommend:

- HIV test results to be recorded and communicated to the client,
- Post-test counselling to be offered to all clients, and
- Comprehensive documentation of these steps as part of quality HIV testing services.

Completeness was defined as having all three parameters recorded in the patient file.

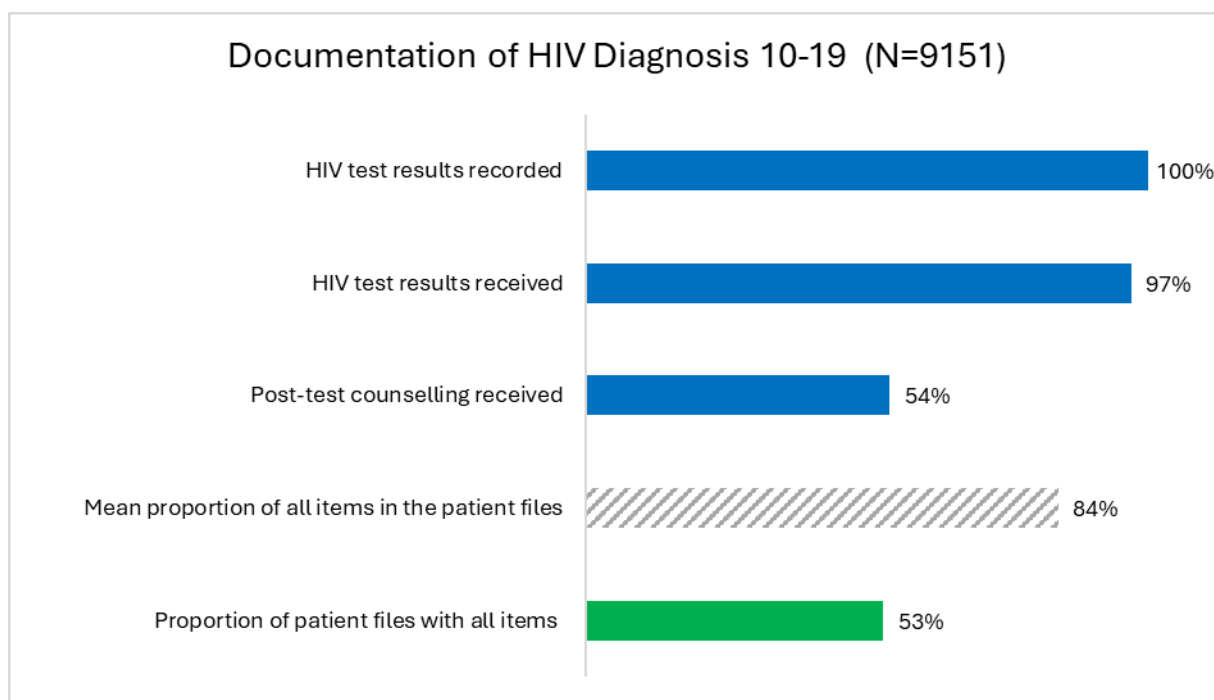
Table 83: Documentation of HIV Testing and Counselling 10-19 years of age

Domain	Parameters
HIV Counselling and Testing for Adolescents age 10-19 years	• HIV test results recorded • HIV test results received • Post test counselling received

Findings:

Of the 9,151 records reviewed,

- Nearly all patient files had HIV test results recorded (100%) and results received by clients (97%), consistent with national guidelines.
- However, only 54% had post-test counselling documented, making it the least captured parameter.
- Overall, just 53% of records contained all three items, with a mean completeness of 84%.



Disaggregation by location, KEPH Level and Facility Ownership

Table 85 shows the Documentation of HIV Testing and Counselling 10-19 years of age disaggregated by various facility characteristics

Facility level

- Performance generally improved with higher-level facilities: **Level 4 (57%)** had the highest proportion of complete files compared to **Level 2 (50%)**.
- Nonetheless, even at **Level 5**, completeness remained low at **51%**, indicating systemic challenges in counselling documentation.

Ownership

- Public facilities (55%) performed slightly better than private (45%) and NGO (49%) facilities.
- Faith-based facilities had the best documentation of post-test counselling (59%) and the highest completeness (59%).

Location

Rural facilities (55%) outperformed urban (51%) in complete documentation, contrary to typical patterns where urban facilities do better.

Disaggregation by county

- Counties with exceptionally high completeness include Narok (99%), Busia (97%), Migori (96%), Bungoma (95%), Baringo (95%), and Isiolo (91%).
- Counties with very poor performance include Tana River (1%), Nyeri (2%), Tharaka-Nithi (3%), Kisii (13%), Nyamira (18%), Kwale (18%), and Laikipia (6%), largely due to missing post-test counselling documentation.

Figure 167: Documentation of HIV Testing and Counselling 10-19 years of age distribution by county

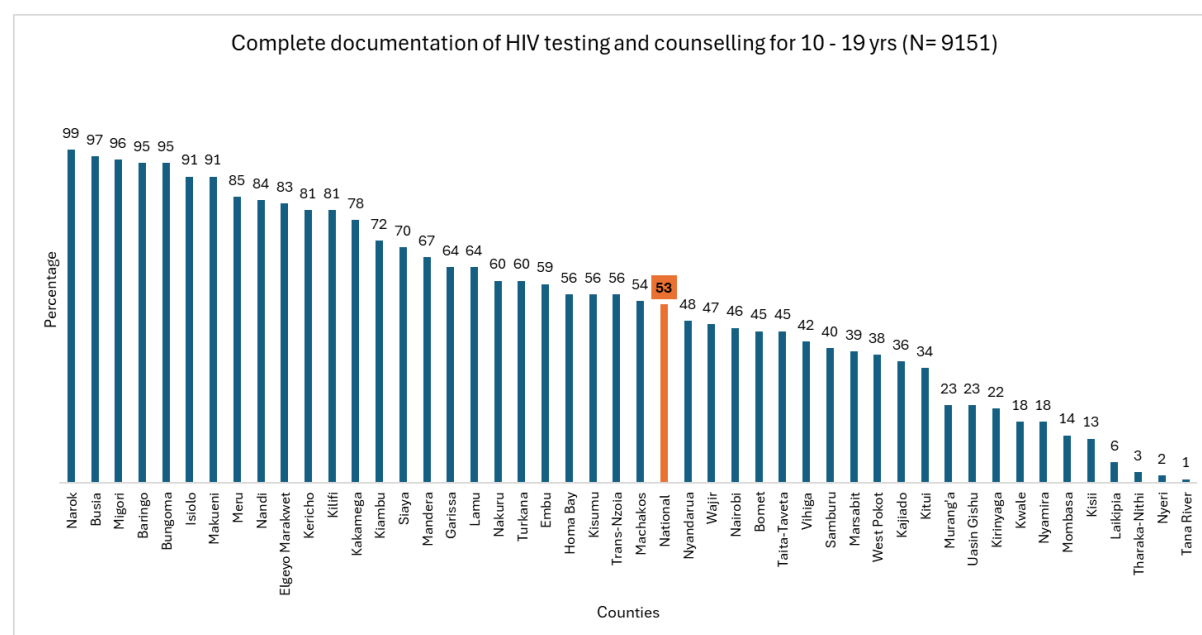


Table 84: Documentation of HIV Testing and Counselling 10-19 years of age

	HIV test results recorded	HIV test results received	Post-test counselling received	Mean proportion of all items at patient files	Proportion of patient files with all items	Number of Files
County						
Baringo	100%	100%	95%	98%	95%	182
Bomet	100%	100%	45%	82%	45%	279
Bungoma	100%	100%	95%	98%	95%	281
Busia	100%	100%	97%	99%	97%	209
Elgeyo Marakwet	100%	100%	83%	94%	83%	120
Embu	100%	98%	61%	86%	59%	160
Garissa	100%	100%	64%	88%	64%	85
Homa Bay	100%	98%	56%	85%	56%	266
Isiolo	100%	100%	91%	97%	91%	68
Kajiado	98%	92%	36%	76%	36%	159

	HIV test results recorded	HIV test results received	Post-test counselling received	Mean proportion of all items at patient files	Proportion of patient files with all items	Number of Files
Kakamega	100%	98%	78%	92%	78%	250
Kericho	100%	100%	81%	94%	81%	197
Kiambu	100%	99%	72%	90%	72%	242
Kilifi	98%	97%	82%	92%	81%	249
Kirinyaga	100%	93%	23%	72%	22%	201
Kisii	98%	99%	13%	70%	13%	329
Kisumu	99%	99%	56%	85%	56%	294
Kitui	100%	99%	35%	78%	34%	229
Kwale	100%	100%	19%	73%	18%	206
Laikipia	99%	88%	7%	65%	6%	201
Lamu	100%	89%	64%	85%	64%	95
Machakos	100%	100%	54%	85%	54%	211
Makueni	100%	99%	91%	97%	91%	273
Mandera	100%	100%	67%	89%	67%	43
Marsabit	100%	99%	39%	79%	39%	97
Meru	97%	97%	85%	93%	85%	228
Migori	100%	100%	96%	99%	96%	220
Mombasa	100%	98%	14%	71%	14%	248
Murang'a	100%	100%	23%	74%	23%	236
Nairobi	100%	98%	46%	81%	46%	278
Nakuru	100%	98%	61%	86%	60%	228
Nandi	99%	94%	85%	93%	84%	174
Narok	100%	100%	99%	100%	99%	206
Nyamira	100%	97%	18%	71%	18%	260
Nyandarua	100%	99%	48%	82%	48%	163
Nyeri	100%	93%	2%	65%	2%	174
Samburu	98%	93%	40%	77%	40%	152
Siaya	100%	100%	71%	90%	70%	221
Taita-Taveta	100%	100%	45%	82%	45%	165
Tana River	98%	55%	1%	51%	1%	80
Tharaka-Nithi	99%	90%	3%	64%	3%	159
Trans-Nzoia	100%	99%	57%	85%	56%	137
Turkana	99%	100%	60%	86%	60%	233
Uasin Gishu	100%	99%	23%	74%	23%	222
Vihiga	99%	97%	43%	80%	42%	205
Wajir	100%	100%	47%	82%	47%	113
West Pokot	100%	98%	38%	79%	38%	123

	HIV test results recorded	HIV test results received	Post-test counselling received	Mean proportion of all items at patient files	Proportion of patient files with all items	Number of Files
By Type						
Level 2	99%	96%	50%	82%	50%	3356
Level 3	100%	98%	54%	84%	54%	2832
Level 4	100%	99%	57%	85%	57%	2837
Level 5	100%	100%	51%	84%	51%	126
Facility Ownership						
Public	100%	98%	55%	84%	55%	6075
Private	99%	94%	45%	79%	45%	1617
NGO	99%	99%	49%	83%	49%	187
Faith-Based	100%	98%	59%	86%	59%	1272
By Location						
Urban	100%	97%	51%	83%	51%	3573
Rural	100%	98%	55%	84%	55%	5578
National	100%	97%	54%	84%	53%	9151

8.2.2 Clinical quality of HIV Care Services (Children < 15 Years of Age)

Definition

This section reviews documentation of essential elements of HIV care for children in line with the national pediatric HIV care guidelines. The guidelines recommend that:

- Every child initiating ART should undergo a confirmatory HIV test and a baseline CD4 count to identify advanced HIV disease (AHD).
- ART regimens and cotrimoxazole (CTX) prophylaxis should follow national standards.
- At each clinical visit, adherence status, TB symptom screening, and TB status should be documented.

Completeness was defined as having all seven parameters documented in a patient file.

Table 85: Services for children under 15 years

Domain	Parameters
HIV Services for Children < 15 years of Age	• Confirmatory HIV test before initiating ART • CD4 level measured before initiating ART • ART regimen according to national guidelines • Cotrimoxazole (CTX) prophylaxis according to national guidelines • Adherence status recorded at most recent clinical visit • Standard screening for TB recorded at most recent clinical visit



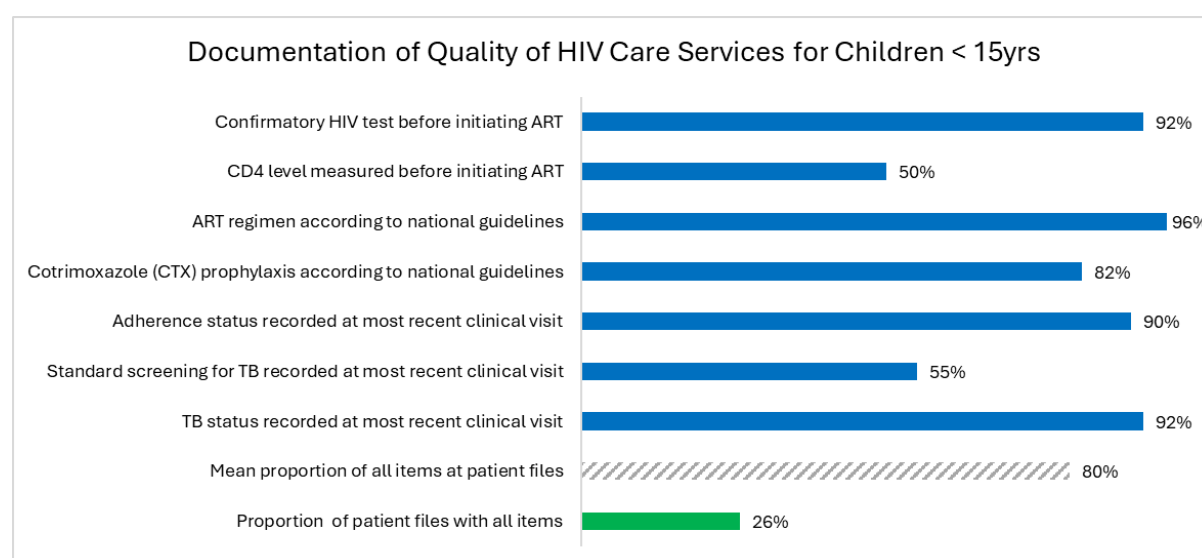
	• TB status recorded at most recent clinical visit

Findings

Of the 1,734 records of children (aged 0 =<15 years) in HIV Care services reviewed,

- Confirmatory HIV testing before ART initiation was documented for 92% of children, consistent with guideline recommendations.
- CD4 testing was much lower at 50%, despite being recommended as part of the AHD package.
- Most children were initiated on the nationally recommended ART regimen (96%), and 82% received CTX prophylaxis.
- Adherence status was recorded for 90% of children, but only 55% had standard TB screening documented, despite guidelines recommending TB screening at every clinic visit.
- TB status was recorded for 92%.
- Only 26% of files had all items documented, though the mean completeness per file was 80%.

Figure 168: Documentation of select services in paediatric HIV Care (N=1734)



Disaggregation by location, KEPH Level and Facility Ownership



Table 86 shows the documentation of Clinical quality of HIV Care Services (Children < 15 Years of Age)

Facility level

- Level 4 facilities had the highest completeness (27%). Level 2 and 5 facilities showed lower completeness (25%), reflecting gaps at both ends of the service spectrum.
- CD4 testing prior to initiation of ART was lowest in Level 2 (40%) and highest in Level 3 (55%).

Ownership

- Private facilities (44%) and faith-based facilities (35%) had higher proportions of fully complete files compared to public facilities (24%).
- Despite stronger overall completeness, NGO facilities had very low CD4 documentation (9%), highlighting inconsistency in quality.

Urban vs Rural

- Urban facilities outperformed rural ones: 31% of urban files had all items complete versus 23% in rural.
- TB screening was stronger in urban facilities compared to rural facilities (62% vs 49%).

Disaggregation by county

As shown in Table 86 and figure 166

- Top performing counties included Makueni (68%), Migori (66%), Nyamira (48%), Uasin Gishu (46%), and Busia (46%), with above-average completeness.
- Lowest performing counties included Tana River, Lamu, Isiolo, Garissa, Laikipia, Kirinyaga, Kiambu, and Vihiga, all with <10% completeness, mainly due to missing CD4 or TB screening documentation.
- Counties such as Narok, Kisii, and Nyeri had strong ART regimen adherence but very weak CD4 or TB documentation, indicating selective implementation.

Figure 169: Quality of HIV care services for children below 15yrs distribution by county

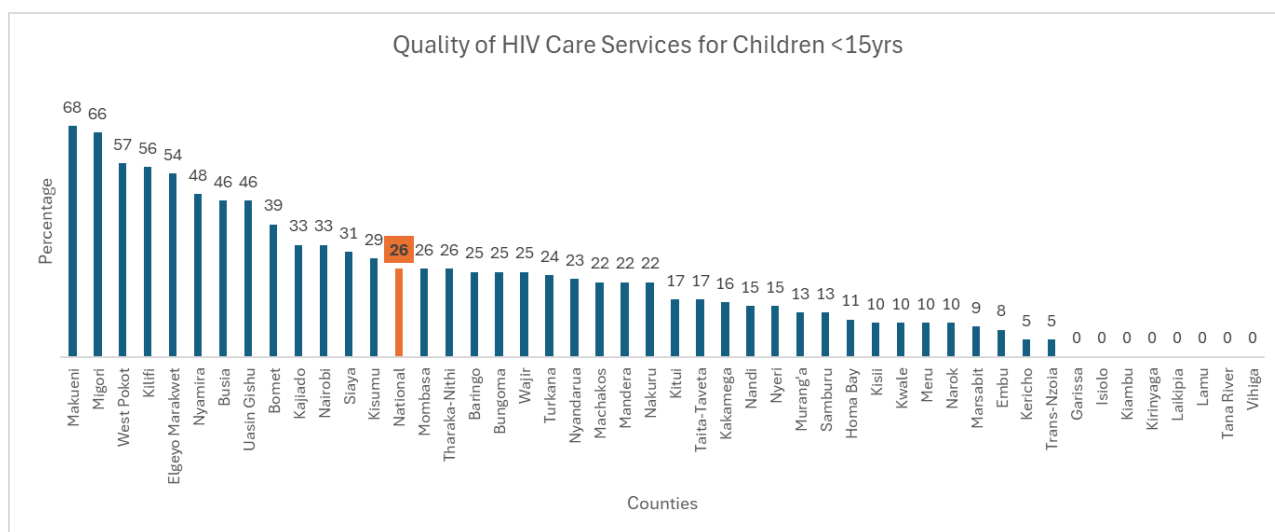


Table 86: Percentage availability of records for Quality of ART Services (Age=<15yrs)

	Confirmatory HIV test before initiating ART	CD4 level measured before initiating ART	ART regimen according to national guidelines	Cotrimoxazole (CTX) prophylaxis according to national guidelines	Adherence status recorded at most recent clinical visit	Standard screening for TB recorded at most recent clinical visit	TB status recorded at most recent clinical visit	Mean proportion of all items at patient files	Proportion of patient files with all items	Number of Files
By County										
Baringo	100%	33%	96%	55%	97%	50%	100%	76%	25%	33
Bomet	100%	69%	100%	66%	100%	98%	100%	91%	39%	36
Bungoma	100%	59%	83%	90%	91%	46%	100%	81%	25%	37
Busia	100%	50%	100%	98%	89%	68%	91%	85%	46%	28
Elgeyo Marakwet	100%	72%	100%	100%	97%	66%	94%	90%	54%	40
Embu	91%	63%	100%	79%	100%	8%	94%	77%	8%	13
Garissa	100%	19%	100%	100%	54%	81%	81%	76%	0%	5
Homa Bay	79%	33%	98%	65%	88%	46%	93%	72%	11%	98
Isiolo	67%	17%	100%	100%	17%	0%	17%	45%	0%	6
Kajiado	100%	75%	78%	81%	91%	71%	98%	85%	33%	40
Kakamega	99%	18%	100%	94%	100%	67%	84%	80%	16%	40
Kericho	96%	5%	100%	100%	100%	39%	99%	77%	5%	55
Kiambu	100%	32%	92%	83%	87%	30%	95%	74%	0%	29
Kilifi	100%	85%	100%	88%	85%	65%	84%	87%	56%	41
Kirinyaga	95%	11%	100%	100%	89%	67%	89%	79%	0%	7
Kisii	100%	34%	87%	79%	88%	37%	83%	73%	10%	53
Kisumu	81%	51%	100%	84%	93%	81%	99%	84%	29%	57
Kitui	100%	17%	91%	100%	97%	80%	100%	84%	17%	22

	Confirmatory HIV test before initiating ART	CD4 level measured before initiating ART	ART regimen according to national guidelines	Cotrimoxazole (CTX) prophylaxis according to national guidelines	Adherence status recorded at most recent clinical visit	Standard screening for TB recorded at most recent clinical visit	TB status recorded at most recent clinical visit	Mean proportion of all items at patient files	Proportion of patient files with all items	Number of Files
Kwale	77%	63%	92%	98%	47%	24%	45%	64%	10%	40
Laikipia	100%	0%	100%	100%	88%	77%	100%	81%	0%	8
Lamu	100%	40%	100%	100%	20%	0%	20%	54%	0%	5
Machakos	90%	56%	100%	81%	100%	85%	100%	87%	22%	21
Makueni	100%	88%	100%	92%	100%	80%	100%	94%	68%	55
Mandera	100%	67%	100%	67%	100%	67%	100%	86%	22%	9
Marsabit	100%	9%	96%	100%	98%	31%	95%	76%	9%	37
Meru	100%	45%	100%	67%	94%	62%	91%	80%	10%	52
Migori	100%	72%	98%	100%	87%	81%	95%	91%	66%	57
Mombasa	94%	45%	92%	99%	87%	59%	95%	82%	26%	109
Murang'a	100%	22%	100%	91%	96%	44%	92%	78%	13%	20
Nairobi	96%	60%	99%	82%	98%	68%	96%	86%	33%	94
Nakuru	99%	58%	91%	78%	75%	55%	93%	78%	22%	51
Nandi	100%	63%	93%	43%	81%	51%	95%	75%	15%	16
Narok	99%	51%	98%	77%	95%	17%	99%	77%	10%	85
Nyamira	100%	98%	100%	95%	100%	52%	100%	92%	48%	32
Nyandarua	81%	81%	100%	100%	94%	42%	90%	84%	23%	17
Nyeri	74%	50%	100%	65%	65%	60%	77%	70%	15%	22
Samburu	73%	21%	96%	96%	96%	13%	47%	63%	13%	17
Siaya	75%	38%	97%	67%	95%	50%	96%	74%	31%	176
Taita-Taveta	95%	91%	100%	49%	95%	41%	100%	82%	17%	18
Tana River	41%	6%	94%	24%	82%	0%	82%	47%	0%	17
Tharaka-Nithi	100%	87%	100%	87%	55%	52%	100%	83%	26%	7
Trans-Nzoia	95%	38%	100%	79%	86%	13%	75%	70%	5%	41
Turkana	95%	37%	100%	92%	83%	36%	95%	77%	24%	45
Uasin Gishu	96%	96%	96%	77%	85%	62%	100%	87%	46%	19
Vihiga	94%	43%	90%	53%	90%	40%	68%	68%	0%	9
Wajir	100%	25%	50%	100%	88%	50%	100%	73%	25%	8
West Pokot	100%	86%	100%	100%	100%	71%	100%	94%	57%	7
By Managing Authority										
Public	92%	51%	96%	81%	88%	51%	90%	85%	24%	1358
Private	95%	59%	94%	87%	97%	67%	97%	78%	44%	102
NGO	99%	9%	100%	97%	91%	61%	89%	78%	8%	34
Faith-Based	90%	50%	98%	84%	97%	66%	99%	83%	35%	240
By Type										
Level 2	95%	40%	97%	88%	89%	55%	89%	79%	25%	230

	Confirmatory HIV test before initiating ART	CD4 level measured before initiating ART	ART regimen according to national guidelines	Cotrimoxazole (CTX) prophylaxis according to national guidelines	Adherence status recorded at most recent clinical visit	Standard screening for TB recorded at most recent clinical visit	TB status recorded at most recent clinical visit	Mean proportion of all items at patient files	Proportion of patient files with all items	Number of Files
Level 3	89%	55%	96%	77%	90%	54%	93%	79%	27%	571
Level 4	93%	54%	97%	83%	92%	55%	95%	81%	27%	869
Level 5	85%	46%	98%	84%	89%	65%	94%	80%	25%	64
By Location										
Urban	94%	55%	96%	87%	92%	62%	95%	83%	31%	785
Rural	90%	45%	97%	78%	89%	49%	90%	77%	23%	949
All	92%	50%	96%	82%	90%	55%	92%	80%	26%	1734

8.2.3 HIV/ TB

TB screening and treatment status in patient on ART

Definition

This review assessed the documentation of TB screening and preventive treatment for PLHIV, in line with the national TB/HIV guidelines, which recommend:

- Intensified case finding at every clinical visit, including cough, fever, and weight loss screening.
- Documentation of TB exposure status.
- Assessment of eligibility for isoniazid (INH) preventive therapy and provision for eligible clients.

Completeness was defined as having all five parameters documented in a patient file.

Table 87: TB screening in patient on ART Children < 15 years of Age parameters

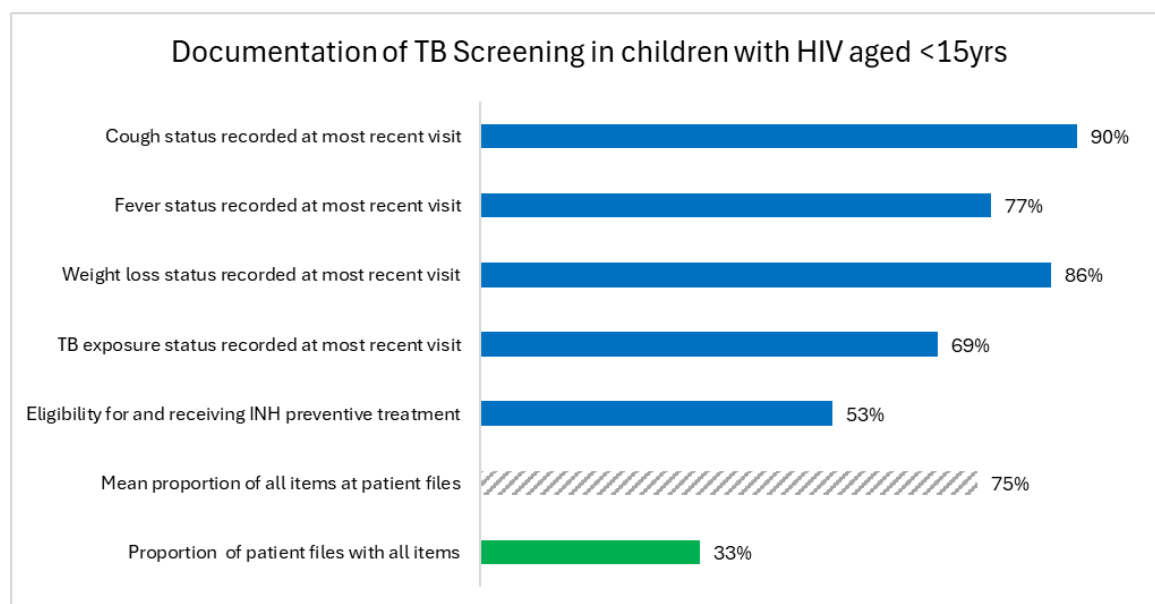
Domain	Parameters
TB screening in patient on ART Children < 15 years of Age	• Cough status recorded at most recent visit • Fever status recorded at most recent visit • Weight loss status recorded at most recent visit • TB exposure status recorded at most recent visit • Eligibility for and receiving INH preventive treatment

Findings:

Of the 1,734 records reviewed,

- Cough status was recorded for 90% of patients while fever (77%) and weight loss (86%) were less consistently documented.
- TB exposure status was recorded for only 69% of clients, below the national guideline requirement for universal documentation.
- Only 53% of patient files had documentation that clients eligible for INH preventive therapy were recorded as having received it.
- The mean completeness was 75%, but only 33% of patient files contained all five items

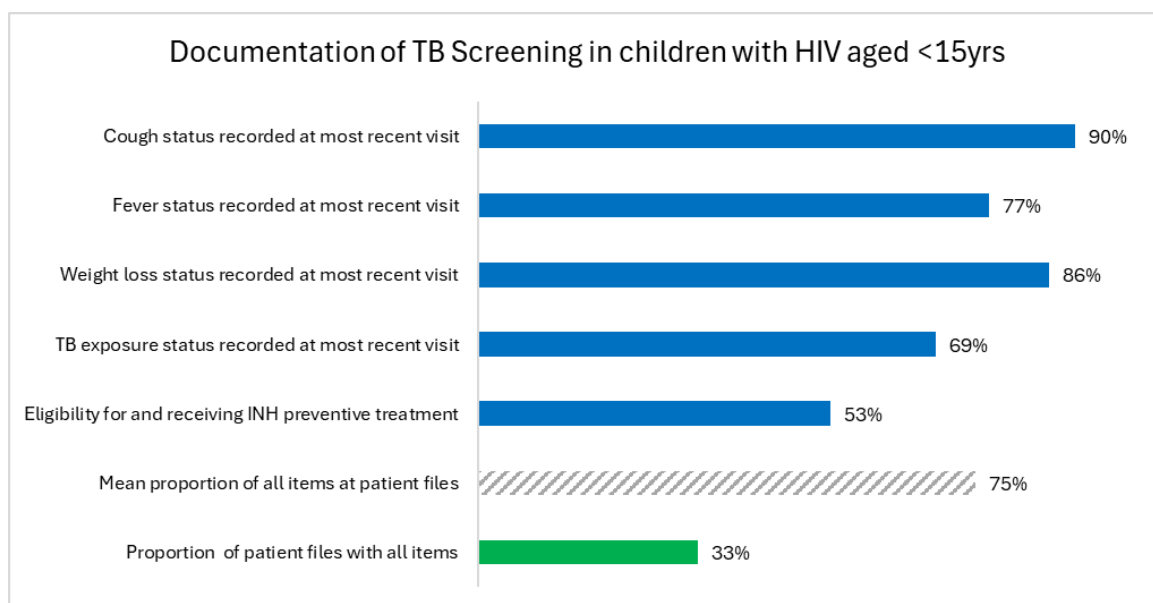
Figure 170: Showing TB screening and treatment status amongst patients on ART (N=1734)



Findings:

Of the 1,734 records reviewed,

- Cough status was recorded for 90% of patients while fever (77%) and weight loss (86%) were less consistently documented.
- TB exposure status was recorded for only 69% of clients, below the national guideline requirement for universal documentation.
- Only 53% of patient files had documentation that clients eligible for INH preventive therapy were recorded as having received it.
- The mean completeness was 75%, but only 33% of patient files contained all five items.



Disaggregation by location, KEPH Level and Facility Ownership

Table 89 shows the documentation of TB screening in children in HIV Care (aged 0 to =<15 Years of Age)

Facility level

- Level 3 facilities had the highest completeness (36%) compared to Level 2 (28%).
- Though higher-level facilities (Level 4 and 5) performed better on INH eligibility (54 and 58% respectively) they still did not achieve high overall completeness (34% and 49% respectively).

Ownership

- NGO facilities performed best on cough/fever/weight loss ($\geq 98\%$) but had very poor INH eligibility documentation (16%), bringing down completeness.
- Faith-based and private facilities showed stronger performance (37%) than public (33%)

Urban vs Rural

- Rural facilities lagged in INH preventive therapy documentation (57% vs 48%).

Disaggregation by county

- High-performing counties: Machakos (79%), Bomet (64%), Migori (66%), Nyeri (60%), Busia (51%), with higher proportions of complete files.
- Very low performance: Lamu (0%), Isiolo (0%), Nyamira (0%), Wajir (0%), where no files had all items documented.

- Counties such as Garissa and Mandera recorded strong documentation for cough, fever, and weight loss but failed on documentation of eligibility for and receiving INH preventive treatment

Figure 171: TB screening documentation in HIV positive children <15yrs documentation

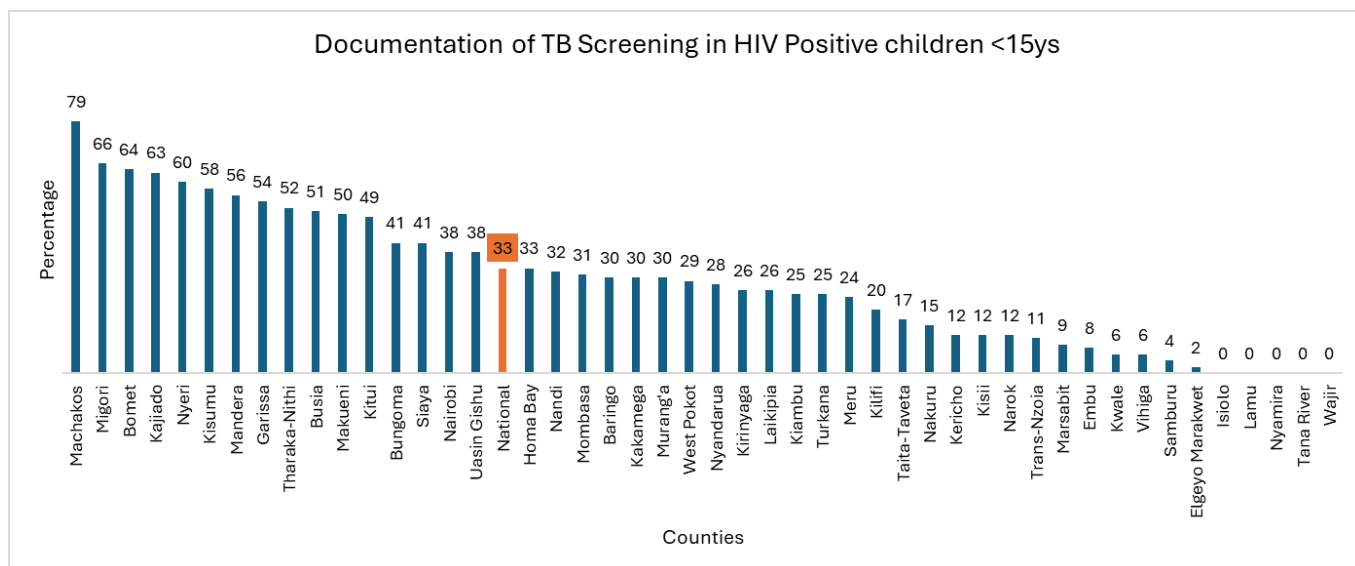


Table 88: Percentage availability of records for TB Screening and Treatment Status

	Cough status recorded at most recent visit	Fever status recorded at most recent visit	Weight loss status recorded at most recent visit	TB exposure status recorded at most recent visit	Eligibility for and receiving INH preventive treatment	Mean proportion of all items at patient files	Proportion of patient files with all items	Number of Files
By County								
Baringo	97%	52%	65%	78%	37%	66%	30%	33
Bomet	100%	100%	100%	98%	64%	93%	64%	36
Bungoma	100%	73%	81%	54%	54%	72%	41%	37
Busia	92%	79%	88%	76%	61%	79%	51%	28
Elgeyo Marakwet	94%	90%	94%	72%	2%	70%	2%	40
Embu	100%	33%	100%	60%	8%	60%	8%	13
Garissa	100%	100%	100%	81%	54%	87%	54%	5
Homa Bay	88%	70%	91%	68%	72%	78%	33%	98
Isiolo	50%	33%	50%	0%	0%	27%	0%	6
Kajiado	85%	85%	89%	84%	87%	86%	63%	40
Kakamega	76%	75%	91%	69%	35%	69%	30%	40
Kericho	100%	76%	95%	61%	24%	71%	12%	55
Kiambu	90%	50%	67%	70%	57%	67%	25%	29
Kilifi	79%	88%	97%	67%	23%	71%	20%	41
Kirinyaga	89%	78%	100%	89%	37%	79%	26%	7



	Cough status recorded at most recent visit	Fever status recorded at most recent visit	Weight loss status recorded at most recent visit	TB exposure status recorded at most recent visit	Eligibility for and receiving INH preventive treatment	Mean proportion of all items at patient files	Proportion of patient files with all items	Number of Files
Kisii	81%	63%	79%	56%	40%	64%	12%	53
Kisumu	100%	90%	98%	91%	71%	90%	58%	57
Kitui	100%	94%	100%	86%	57%	87%	49%	22
Kwale	66%	40%	59%	36%	7%	41%	6%	40
Laikipia	88%	88%	88%	88%	37%	78%	26%	8
Lamu	0%	0%	0%	0%	0%	0%	0%	5
Machakos	100%	85%	100%	100%	90%	95%	79%	21
Makueni	98%	97%	98%	84%	69%	89%	50%	55
Mandera	100%	89%	100%	67%	67%	84%	56%	9
Marsabit	84%	57%	62%	51%	24%	56%	9%	37
Meru	77%	70%	81%	73%	35%	67%	24%	52
Migori	94%	94%	94%	81%	67%	86%	66%	57
Mombasa	96%	96%	96%	60%	42%	78%	31%	109
Murang'a	92%	56%	100%	83%	52%	77%	30%	20
Nairobi	98%	90%	92%	77%	49%	81%	38%	94
Nakuru	92%	59%	94%	76%	32%	71%	15%	51
Nandi	73%	65%	88%	81%	49%	71%	32%	16
Narok	58%	56%	80%	45%	69%	61%	12%	85
Nyamira	100%	59%	98%	83%	25%	73%	0%	32
Nyandarua	67%	66%	94%	70%	33%	66%	28%	17
Nyeri	94%	80%	97%	71%	71%	83%	60%	22
Samburu	42%	21%	78%	34%	13%	38%	4%	17
Siaya	96%	94%	63%	62%	91%	81%	41%	176
Taita-Taveta	95%	46%	90%	85%	52%	74%	17%	18
Tana River	82%	6%	71%	53%	12%	45%	0%	17
Tharaka-Nithi	84%	52%	68%	68%	68%	68%	52%	7
Trans-Nzoia	75%	13%	87%	55%	60%	58%	11%	41
Turkana	87%	43%	96%	80%	45%	71%	25%	45
Uasin Gishu	100%	92%	66%	84%	69%	82%	38%	19
Vihiga	90%	40%	85%	63%	11%	58%	6%	9
Wajir	88%	100%	88%	63%	0%	68%	0%	8
West Pokot	100%	71%	100%	86%	29%	77%	29%	7
By Managing Authority								
Public	88%	72%	85%	67%	56%	74%	33%	1,358
Private	90%	88%	91%	71%	55%	79%	37%	102
NGO	100%	98%	98%	64%	16%	75%	12%	34
Faith-Based	94%	85%	89%	79%	51%	80%	37%	240

	Cough status recorded at most recent visit	Fever status recorded at most recent visit	Weight loss status recorded at most recent visit	TB exposure status recorded at most recent visit	Eligibility for and receiving INH preventive treatment	Mean proportion of all items at patient files	Proportion of patient files with all items	Number of Files
By Type								
Level 2	90%	79%	84%	64%	40%	71%	28%	230
Level 3	90%	77%	87%	72%	64%	78%	36%	571
Level 4	90%	74%	89%	72%	54%	76%	34%	869
Level 5	93%	80%	88%	79%	58%	80%	49%	64
By Location								
Urban	94%	83%	91%	74%	48%	78%	36%	785
Rural	87%	72%	82%	65%	57%	73%	30%	949
All	90%	77%	86%	69%	53%	75%	33%	1,734

Discussion:

For HIV testing and counselling among adolescents (10–19 years), documentation was strong for test results, with nearly all clients having both the test conducted and results recorded. This aligns with the Kenya HIV Testing Services Guidelines (2016), which emphasize timely return of results. However, post-test counselling was documented in only about half of the files, contrary to guideline requirements that counselling accompany every test to support disclosure, risk reduction, and linkage to ART initiation.

In HIV care services for children (0–15 years), most were initiated on ART regimens consistent with the Kenya Consolidated ART Guidelines (2022), and cotrimoxazole prophylaxis was also well documented. Adherence status was recorded for the majority of children. However, CD4 testing before ART initiation was documented in only half of the cases, despite its inclusion in the guidelines as part of the minimum package for identifying advanced HIV disease. Similarly, documentation of TB screening at routine visits was weak, missing opportunities for early case detection and undermining the integrated pediatric HIV/TB care model.

For TB screening and preventive therapy among children (0–15 years), cough status was almost universally recorded, reflecting alignment with NTLD-P guidelines on intensified TB case finding (2019). However, other parameters such as fever, weight loss, and TB exposure status were inconsistently documented. Most notably, INH preventive therapy was recorded in just over half of eligible patients, well below the guideline expectation for universal provision and documentation in eligible children. Completeness of files across all TB parameters was achieved in only a third of cases, indicating weak integration of TB preventive therapy into HIV care despite its prioritization in national guidance.

Table 89: HTS and HIV care recommendations

Key Findings	Recommendation



HIV testing results were well recorded, but post-test counselling was documented in only 54% of files.	Enforce routine documentation of counselling sessions, integrating mandatory fields into patient records.
In pediatric HIV care, CD4 testing was low (50%), despite its role in identifying advanced disease.	Expand access to CD4 testing and strengthen recording practices through integrated EMR prompts.
Pediatric ART regimens and cotrimoxazole prophylaxis were well documented, but TB screening (55%) was inconsistent.	Mandate recording of TB screening at every child's clinic visit using standard tools and supervision checklists.
In TB care, exposure status (69%) and INH preventive therapy (53%) were poorly recorded.	Provide mentorship and tools to ensure INH eligibility assessment and preventive therapy are systematically documented.
Completeness of patient files across all domains remained low (26–33%), with wide facility and county disparities.	Implement quarterly data quality audits and targeted feedback to facilities to drive improvements in completeness.

TB Treatment Status Amongst Active TB patients living with HIV

Of patients on ART with active TB, 96% were current on TB treatment. Those who had TB and had completed treatment while on ART were at 2% and were not eligible for TB treatment. However, 4% of the patients on ART had active TB and had not been enrolled in TB treatment.

Figure 172 and Table 90 below show Treatment Status for Active TB Patients on ART disaggregated by location, KEPH level and ownership and county.



Figure 172: Treatment Status for Active TB Patients on ART (N=59)

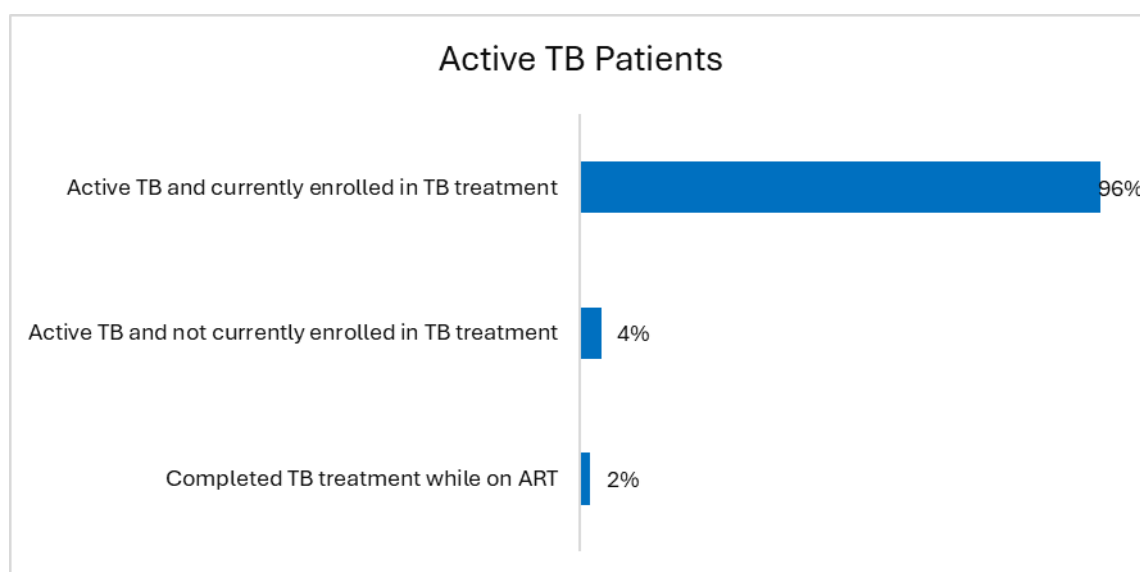


Table 90: Percentage of records for Active TB Patients

	Active TB and currently enrolled in TB treatment	Number of Files
By County		
Baringo	100%	1
Bomet	100%	2
Bungoma	100%	1
Busia	100%	1
Embu	100%	1
Homa Bay	100%	1
Kajiado	0%	1
Kakamega	100%	5
Kericho	100%	1
Kiambu	100%	2
Kilifi	100%	1
Kisii	100%	3
Kisumu	100%	3
Kitui	100%	1
Kwale	54%	2
Makueni	100%	4
Meru	100%	1
Migori	100%	4
Mombasa	100%	2
Nairobi	100%	8
Nakuru	56%	3
Nandi	100%	1
Narok	100%	1
Nyamira	100%	1
Siaya	100%	6

	Active TB and currently enrolled in TB treatment	Number of Files
Turkana	37%	2
Public	93%	43
Private	100%	5
Faith-Based	98%	11
Level 2	100%	11
Level 3	89%	16
Level 4	97%	26
Level 5	100%	6
Urban	98%	28
Rural	92%	31
All	96%	59

Growth monitoring for children under five on ART

Growth monitoring of children under 5 living with HIV (CLHIV) is a crucial aspect of HIV care. This enables the HCWs to find out whether the child's development is on track. It is important to act early if there are signs of potential developmental delay. Effective record-keeping and documentation are essential for enhancing the healthcare of these children. Nationwide, the availability of sex-specific growth charts was at 25%, while documentation for weight-plotted growth chart at the most recent visit was at 33%. For facility ownership performance, NGO's were at 65% for both availability of sex specific growth charts as well as weight plotted on growth chart at the most recent visit.

Figure 173 and Table 91 below show percentage of children under 5 on ART with select growth monitoring interventions disaggregated by location, KEPH level and ownership and county.

Figure 173: Percentage of children under 5 on ART with select growth monitoring interventions.

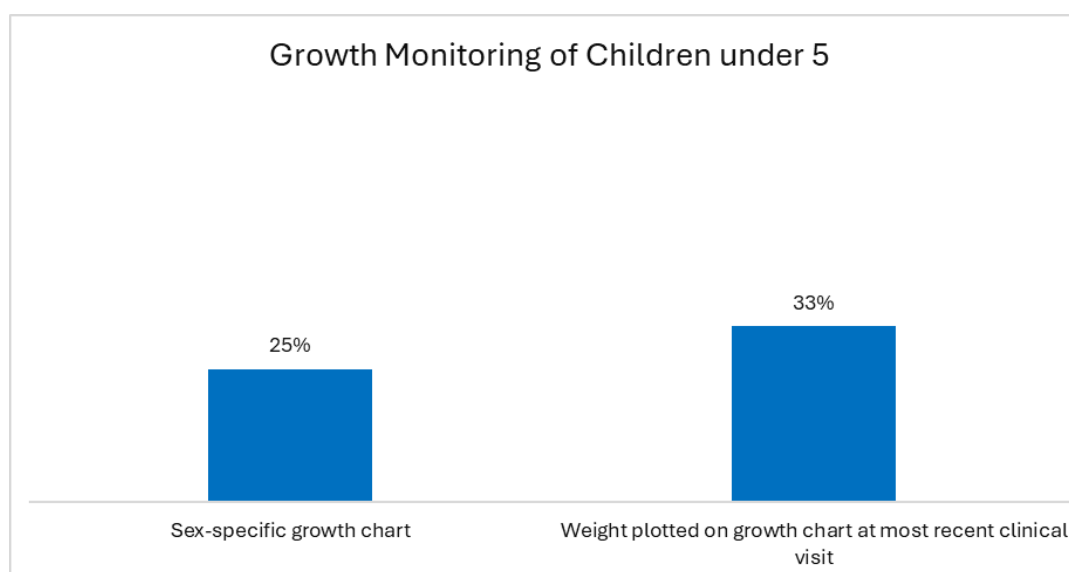


Table 91: Percentage availability of records for Growth Monitoring of Children under 5

	Sex-specific growth chart	Weight plotted on growth chart at most recent clinical visit	Number of Files
By County			
Baringo	18%	25%	33
Bomet	29%	29%	36
Bungoma	24%	20%	37
Busia	85%	83%	28
Elgeyo Marakwet	4%	5%	40
Embu	18%	58%	13
Garissa	54%	68%	5
Homa Bay	13%	15%	98
Isiolo	0%	17%	6
Kajiado	54%	54%	40
Kakamega	13%	31%	40
Kericho	7%	69%	55
Kiambu	0%	33%	29
Kilifi	62%	62%	41
Kirinyaga	22%	84%	7
Kisii	10%	23%	53
Kisumu	53%	52%	57
Kitui	26%	26%	22
Kwale	11%	26%	40
Laikipia	0%	12%	8
Lamu	0%	0%	5
Machakos	6%	62%	21
Makueni	29%	30%	55
Mandera	0%	33%	9
Marsabit	2%	2%	37
Meru	6%	10%	52
Migori	44%	43%	57
Mombasa	5%	13%	109
Murang'a	18%	44%	20
Nairobi	50%	58%	94
Nakuru	38%	35%	51
Nandi	7%	7%	16
Narok	15%	18%	85
Nyamira	9%	9%	32
Nyandarua	5%	10%	17
Nyeri	12%	29%	22
Samburu	0%	34%	17
Siaya	16%	26%	176
Taita-Taveta	22%	44%	18
Tana River	0%	0%	17
Tharaka-Nithi	26%	52%	7

	Sex-specific growth chart	Weight plotted on growth chart at most recent clinical visit	Number of Files
Trans-Nzoia	14%	10%	41
Turkana	34%	51%	45
Uasin Gishu	27%	36%	19
Vihiga	0%	22%	9
Wajir	38%	38%	8
West Pokot	71%	71%	7
By Managing Authority			
Public	22%	30%	1,358
Private	24%	38%	102
NGO	65%	65%	34
Faith-Based	25%	37%	240
By type			
Level 2	28%	37%	230
Level 3	22%	29%	571
Level 4	24%	35%	869
Level 5	19%	46%	64
By location			
Urban	31%	42%	785
Rural	19%	26%	949
All	25%	33%	1,734

Table 92: HTS and HIV care recommendations

Key Findings HTS and HIV care	Recommendations
Sub-optimal adherence to HTS quality standards for confirmation of HIV status before initiation of ART.	Institute intervention to address gaps in counties with low HIV status confirmation before ART initiation rates.
Poor CD4 uptake amongst clients newly initiating ART	Review and address gaps contributing to poor CD4 uptake including re-sensitizing of all HCWs as well as addressing laboratory supply chain interruptions.
Excellent uptake of ART regimens as per the guideline recommendation	
Sub-optimal cotrimoxazole uptake amongst eligible clients	Address gaps contributing to the low uptake of cotrimoxazole amongst eligible clients including re-sensitizing clients on current guideline as well as commodity supply chain interruptions.

Key Findings HTS and HIV care	Recommendations
Poor screening of TB amongst clients on care	Prioritise interventions to increase rates of TB screening amongst eligible clients including focus on poor performing counties by sensitizing HCWs and addressing documentation gaps.
CD4 and Viral Load Monitoring	
Sub-optimal uptake time to CD4 testing amongst clients newly initiating ART	Review and address gaps contributing to poor CD4 uptake including re-sensitizing of all HCWs as well as addressing laboratory supply chain interruptions.
Low viral load uptake at 6 and 12 months of ART	Address the low viral uptake adhering to the national guidelines; focus and interventions to Counties with poor VL uptake. Need to leverage on existing EMR systems to line list and flag clients due for VL for timely interventions.
Poor viral load suppression amongst clients	
HIV/ TB Co infection- TB Screening and Treatment status among patient with HIV	
- Sub-optimal documentation of TB screening and prevention services. - Low uptake for INH treatment	- Implement measures to address gaps in counties with low Sub-optimal documentation of TB screening and prevention services. - Address gaps contributing to the low uptake of for INH treatment.
TB Treatment	
- Excellent uptake for active TB clients enrolled in treatment. - Sub-optimal completion rates for TB treatment.	- Conduct training sessions for healthcare staff on the importance of comprehensive documentation, including how to accurately record treatment completion. Emphasize best practices and the implications of accurate data for care. - Provide enhanced adherence counselling to the clients.
Sub-Optimal documentation for growth monitoring of children under 5.	- Provide training for healthcare providers on the importance of accurate growth monitoring and documentation. - Ensure availability of growth monitoring charts at the health facilities.

8.3 Tuberculosis

This quality of care assessment involved reviewing TB data from the TB4 Register, TB Record Card, and TPT/Contact Management Register to evaluate documentation across selected facilities. The review focused on records of adult pulmonary TB clients (aged 15 and above) who had initiated treatment in the first six months of the prior year and remained on the national first-line TB treatment for at least six months.

A total of 4,999 records were reviewed to assess documentation quality in TB services, diagnostic practices, contact screening, and TB/HIV co-infections during the review period

Table 93: TB Services assessed

TB services
• Quality of TB services • Basis for diagnosis • Screening of contact persons • Patients with TB/ HIV co-infection

Key Findings

8.3.1 Quality of TB services

The review assessed key tracer indicators of TB care, in line with the **Kenya National Tuberculosis, Leprosy and Lung Disease Program (NTLD-P) guidelines** which recommend diagnosis using Sputum Smears and GeneXpert, Rifampicin resistance testing for all cases, initiation of treatment within seven days, and follow-up sputum monitoring at the 2nd, 5th and 7th months of treatment. Documentation of HIV status and patient weight changes at every clinical visit are also emphasized as part of integrated TB/HIV management.

Table 94: Quality of TB services

Domain	Parameters
Quality of TB services	• TB diagnosis based on positive diagnostic test • Correct TB treatment regimen • Treatment started within 7 days of diagnosis • Most recent drug collection on time • Rifampicin sensitivity status recorded • Sputum monitoring results recorded at second month of treatment • Sputum monitoring results recorded at fifth month of treatment



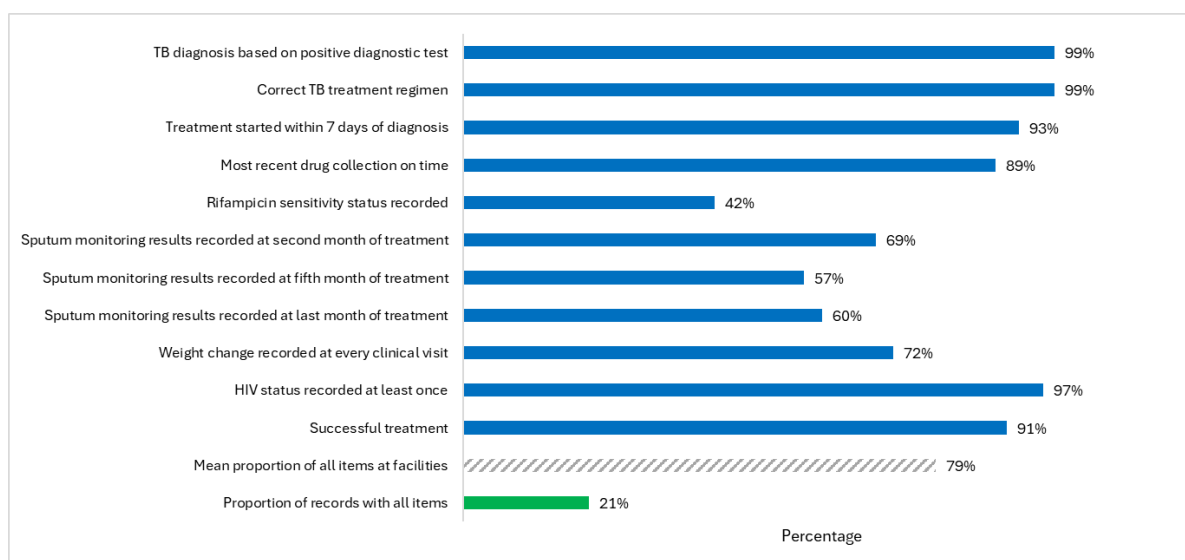
	• Sputum monitoring results recorded at last month of treatment • Weight change recorded at every clinical visit • HIV status recorded at least once • Successful treatment

Findings:

Of the 4,999 records reviewed nationally,

- Nearly all clients had TB diagnosis confirmed (99%), were started on the correct regimen (99%), and initiated treatment within seven days of diagnosis (93%).
- However, only 42% of files had Rifampicin sensitivity results, far below the guideline target of universal coverage.
- Follow-up sputum monitoring was also suboptimal: 69% at the 2nd month, 57% at the 5th month, and 60% at the last month.
- HIV status was documented in 97% of patients and weight change in 72%.
- Treatment success was documented at 91%.
- Only 21% of patient files contained all expected indicators.

Figure 174: Percentage of TB clients with tracer quality indicators documented (N=4999)



Disaggregation by location, KEPH Level and Facility Ownership

- By facility level, completeness was similar across all KEPH levels, but still suboptimal: Level 2 and 3 facilities recorded only 20% of patient files with all items, Level 4 slightly higher at 23%, and Level 5 lowest at 18%. This pattern shows that higher-level facilities did not always translate into more complete documentation.

- By facility ownership, public facilities showed 23% completeness, slightly better than faith-based (19%) and NGO facilities (15%), while private facilities had the lowest performance with only 13% of patient files complete. Despite expectations of better resourcing, private and NGO facilities lagged behind public sector facilities in documentation completeness.

Disaggregation by county

- At the county level, there was striking variation. The best-performing counties included Nyamira (67%), West pokot (54%) at above 50% (where the majority of files had all items documented).
- In contrast, counties such as Samburu (0%), Lamu (0%), Kakamega (2%), Wajir (3%), and Nyeri (3%) had extremely poor completeness, reflecting serious gaps in adherence to guideline requirements.

Figure 175: Quality of TB services county distribution

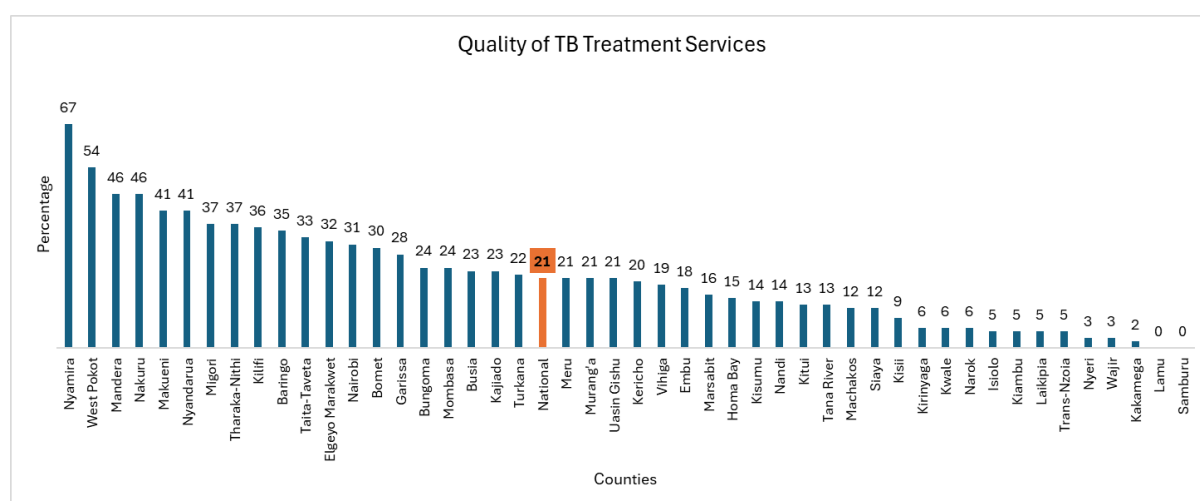


Table 95: Percentage availability of records for Quality of TB Services

	TB diagnosis based on positive diagnostic test	Correct TB treatment regimen	Treatment started within 7 days of diagnosis	Most recent drug collection on time	Rifampicin sensitivity status recorded	Sputum monitoring results recorded at second month of treatment	Sputum monitoring results recorded at fifth month of treatment
By County							
Baringo	99%	99%	96%	95%	60%	93%	76%
Bomet	100%	100%	97%	99%	43%	71%	67%
Bungoma	100%	99%	94%	92%	41%	80%	56%
Busia	100%	100%	96%	92%	44%	49%	44%
Elgeyo Marak wet	97%	90%	90%	92%	51%	86%	75%
Embu	100%	100%	86%	79%	46%	66%	55%
Garissa	97%	93%	98%	90%	50%	79%	72%
Homa Bay	99%	99%	92%	95%	49%	36%	28%

	TB diagnosis based on positive diagnostic test	Correct TB treatment regimen	Treatment started within 7 days of diagnosis	Most recent drug collection on time	Rifampicin sensitivity status recorded	Sputum monitoring results recorded at second month of treatment	Sputum monitoring results recorded at fifth month of treatment
Isiolo	100%	97%	100%	100%	54%	32%	16%
Kajiado	98%	98%	100%	89%	48%	69%	51%
Kakamega	100%	99%	72%	90%	25%	52%	41%
Kericho	100%	100%	94%	81%	41%	77%	62%
Kiambu	99%	99%	90%	90%	17%	69%	53%
Kilifi	100%	100%	97%	95%	60%	74%	56%
Kirinyaga	99%	99%	84%	87%	48%	62%	33%
Kisii	99%	99%	98%	98%	12%	63%	62%
Kisumu	100%	100%	93%	88%	34%	56%	41%
Kitui	100%	100%	96%	94%	21%	83%	75%
Kwale	100%	99%	85%	68%	40%	68%	49%
Laikipia	99%	98%	90%	31%	30%	61%	59%
Lamu	100%	100%	83%	67%	6%	53%	33%
Machakos	99%	99%	89%	88%	20%	84%	77%
Makueni	99%	98%	94%	96%	61%	83%	69%
Mandera	100%	97%	94%	94%	60%	74%	63%
Marsabit	100%	100%	96%	100%	37%	82%	63%
Meru	99%	97%	92%	93%	46%	72%	51%
Migori	100%	100%	95%	98%	46%	78%	77%
Mombasa	100%	98%	87%	90%	68%	57%	44%
Murang'a	99%	99%	95%	88%	33%	75%	65%
Nairobi	100%	100%	96%	99%	54%	68%	53%
Nakuru	100%	100%	82%	95%	76%	78%	75%
Nandi	100%	99%	86%	96%	56%	86%	60%
Narok	100%	100%	92%	94%	14%	75%	58%
Nyamira	100%	100%	100%	95%	85%	73%	74%
Nyandarua	99%	100%	99%	98%	55%	85%	82%
Nyeri	99%	99%	91%	63%	10%	70%	55%
Samburu	92%	94%	95%	42%	8%	46%	26%
Siaya	100%	100%	98%	96%	21%	43%	40%
Taita-Taveta	97%	96%	95%	95%	72%	61%	46%
Tana River	100%	100%	90%	90%	43%	50%	28%
Tharaka-Nithi	100%	100%	97%	97%	73%	91%	79%
Trans-Nzoia	99%	99%	92%	68%	16%	61%	49%
Turkana	100%	98%	98%	97%	69%	74%	41%
Uasin Gishu	100%	100%	100%	93%	27%	98%	89%
Vihiga	100%	98%	94%	92%	36%	67%	57%
Wajir	100%	100%	97%	97%	19%	43%	19%
West Pokot	99%	99%	99%	99%	62%	91%	88%
By Managing Authority							
Public	100%	99%	92%	90%	43%	72%	60%

	TB diagnosis based on positive diagnostic test	Correct TB treatment regimen	Treatment started within 7 days of diagnosis	Most recent drug collection on time	Rifampicin sensitivity status recorded	Sputum monitoring results recorded at second month of treatment	Sputum monitoring results recorded at fifth month of treatment
Private	99%	98%	93%	86%	35%	57%	43%
NGO	100%	100%	100%	85%	38%	67%	52%
Faith-Based	99%	99%	94%	90%	42%	64%	51%
By Type							
Level 2	99%	98%	92%	88%	44%	69%	56%
Level 3	99%	99%	93%	88%	39%	70%	56%
Level 4	100%	99%	93%	91%	43%	69%	57%
Level 5	100%	99%	93%	90%	48%	63%	55%
By Location							
Urban	99%	99%	93%	90%	46%	69%	57%
Rural	99%	99%	93%	89%	39%	69%	56%
All	99%	99%	93%	89%	42%	69%	57%

Table 96: Percentage availability of records for Quality of TB Services (Continued)

	Sputum monitoring results recorded at last month of treatment	Weight change recorded at every clinical visit	HIV status recorded at least once	Successful treatment	Mean proportion of all items at facilities	Proportion of facilities with all items	Number of Files
By County							
Baringo	85%	80%	97%	97%	89%	35%	75
Bomet	71%	100%	100%	97%	86%	30%	99
Bungoma	61%	99%	95%	97%	83%	24%	101
Busia	44%	86%	98%	92%	77%	23%	118
Elgeyo Marak wet	83%	53%	90%	98%	82%	32%	59
Embu	66%	43%	99%	92%	76%	18%	125
Garissa	78%	59%	91%	90%	82%	28%	58
Homa Bay	26%	83%	99%	93%	73%	15%	151
Isiolo	14%	100%	84%	76%	70%	5%	37
Kajiado	62%	69%	95%	93%	79%	23%	61
Kakamega	45%	64%	97%	92%	71%	2%	132
Kericho	62%	57%	94%	88%	78%	20%	122
Kiambu	59%	42%	98%	98%	74%	5%	163
Kilifi	80%	93%	97%	94%	86%	36%	140
Kirinyaga	45%	41%	95%	90%	71%	6%	111
Kisii	63%	85%	98%	92%	79%	9%	173
Kisumu	46%	65%	99%	93%	74%	14%	177
Kitui	73%	82%	99%	87%	83%	13%	157
Kwale	48%	43%	93%	88%	71%	6%	107
Laikipia	58%	34%	100%	96%	69%	5%	107
Lamu	44%	14%	97%	89%	62%	0%	36

	Sputum monitoring results recorded at last month of treatment	Weight change recorded at every clinical visit	HIV status recorded at least once	Successful treatment	Mean proportion of all items at facilities	Proportion of facilities with all items	Number of Files
Machakos	77%	57%	98%	96%	80%	12%	122
Makueni	66%	91%	99%	84%	86%	41%	160
Mandera	74%	77%	80%	86%	82%	46%	35
Marsabit	71%	61%	98%	92%	82%	16%	49
Meru	55%	52%	95%	86%	76%	21%	159
Migori	78%	98%	99%	98%	88%	37%	138
Mombasa	43%	93%	98%	78%	78%	24%	127
Murang'a	71%	68%	97%	100%	81%	21%	155
Nairobi	57%	95%	98%	94%	83%	31%	188
Nakuru	74%	83%	96%	89%	86%	46%	114
Nandi	68%	61%	93%	89%	81%	14%	84
Narok	61%	58%	99%	81%	76%	6%	104
Nyamira	73%	97%	100%	90%	90%	67%	105
Nyandarua	81%	88%	100%	98%	90%	41%	104
Nyeri	53%	56%	98%	88%	71%	3%	93
Samburu	40%	36%	92%	63%	58%	0%	78
Siaya	37%	79%	99%	88%	73%	12%	164
Taita-Taveta	48%	97%	95%	85%	81%	33%	79
Tana River	40%	43%	90%	83%	69%	13%	40
Tharaka-Nithi	81%	71%	100%	91%	89%	37%	75
Trans-Nzoia	58%	26%	96%	91%	69%	5%	76
Turkana	55%	97%	97%	86%	83%	22%	148
Uasin Gishu	84%	59%	96%	96%	86%	21%	82
Vihiga	58%	61%	99%	96%	78%	19%	89
Wajir	27%	62%	68%	59%	63%	3%	37
West Pokot	89%	99%	93%	98%	92%	54%	85
By Managing Authority							
Public	63%	72%	97%	91%	80%	23%	3,718
Private	48%	68%	95%	82%	73%	13%	458
NGO	51%	68%	100%	93%	78%	15%	73
Faith-Based	55%	73%	97%	91%	78%	19%	750
By Type							
Level 2	57%	71%	96%	88%	78%	20%	903
Level 3	62%	71%	97%	91%	79%	20%	1,686
Level 4	61%	73%	97%	91%	80%	23%	2,299
Level 5	61%	61%	96%	87%	78%	18%	111
By Location							
Urban	61%	72%	97%	90%	79%	22%	2,089
Rural	60%	71%	96%	91%	78%	20%	2,910
All	60%	72%	97%	91%	79%	21%	4,999

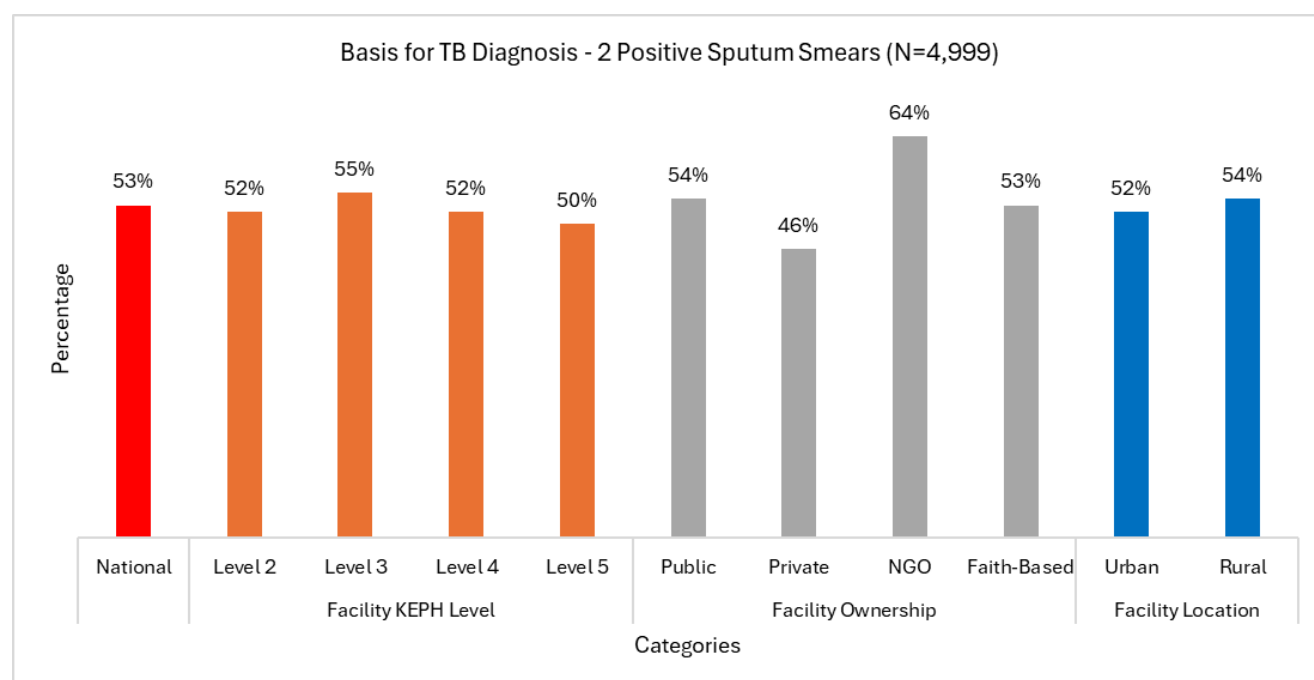
8.3.2 Documentation of Basis for TB diagnosis

The **Kenya National Tuberculosis, Leprosy and Lung Disease Program (NTLD-P) Guidelines (2022)** recommend that TB diagnosis by smear microscopy should include at least two positive sputum smears as part of bacteriological confirmation. Proper documentation of smear results is essential for accurate case classification, treatment initiation, and monitoring program quality.

Findings:

Of the 4,999 files reviewed, 53% of patients had two positive sputum smears documented.

Figure 176: Basis for TB diagnosis



Disaggregation by location, KEPH Level and Facility Ownership

As shown in Table 96 below and figure 170 above

- Across facility levels, documentation of two positive sputum smears ranged from 50% at level 5 facilities to 55% at level 3 facilities.
- By ownership, NGO facilities had the highest documentation of two positive smears at 64%, followed by public facilities at 54% and faith-based facilities at 53%. Private facilities reported the lowest performance at 46%.
- Documentation was comparable in urban (52%) and rural (54%) facilities

Disaggregation by county

- County-level variation was wide. The highest documentation of two positive smears was observed in Uasin Gishu (96%), Kilifi (87%), Turkana (89%), Mandera (91%), and Bomet (77%).
- By contrast, very low performance was recorded in Samburu (6%), Trans-Nzoia (14%), Lamu (11%), and Homa Bay (15%).
- Several counties showed a near-even split between one and two positive smear documentation, while others were skewed heavily toward one category, indicating inconsistent practices.

Figure 177: Basis for TB diagnosis county distribution

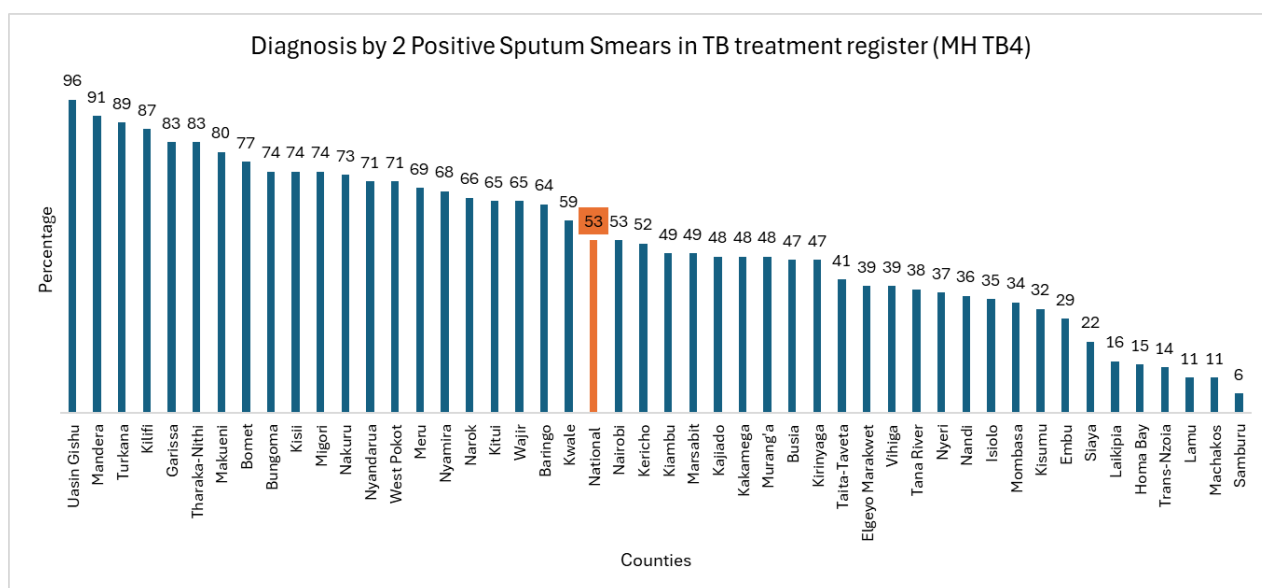


Table 97: Percentage availability of records for Basis for diagnosis

	2 positive Sputum smears	Number of Files
By County		
Baringo	64%	75
Bomet	77%	99
Bungoma	74%	101
Busia	47%	118
Elgeyo Marakwet	39%	59
Embu	29%	125
Garissa	83%	58
Homa Bay	15%	151
Isiolo	35%	37
Kajiado	48%	61
Kakamega	48%	132
Kericho	52%	122
Kiambu	49%	163
Kilifi	87%	140
Kirinyaga	47%	111



	2 positive Sputum smears	Number of Files
Kisii	74%	173
Kisumu	32%	177
Kitui	65%	157
Kwale	59%	107
Laikipia	16%	107
Lamu	11%	36
Machakos	11%	122
Makueni	80%	160
Mandera	91%	35
Marsabit	49%	49
Meru	69%	159
Migori	74%	138
Mombasa	34%	127
Murang'a	48%	155
Nairobi	53%	188
Nakuru	73%	114
Nandi	36%	84
Narok	66%	104
Nyamira	68%	105
Nyandarua	71%	104
Nyeri	37%	93
Samburu	6%	78
Siaya	22%	164
Taita-Taveta	41%	79
Tana River	38%	40
Tharaka-Nithi	83%	75
Trans-Nzoia	14%	76
Turkana	89%	148
Uasin Gishu	96%	82
Vihiga	39%	89
Wajir	65%	37
West Pokot	71%	85
By Management Authority		
Public	54%	3,718
Private	46%	458
NGO	64%	73
Faith-Based	53%	750
By Type		
Level 2	52%	903
Level 3	55%	1,686
Level 4	52%	2,299
Level 5	50%	111
By Location		
Urban	52%	2,089

	2 positive Sputum smears	Number of Files
Rural	54%	2,910
All	53%	4,999

8.3.4 Documentation of screening of contact persons of TB patients

Table 98: Parameters for documentation of screening of contact persons of TB patients

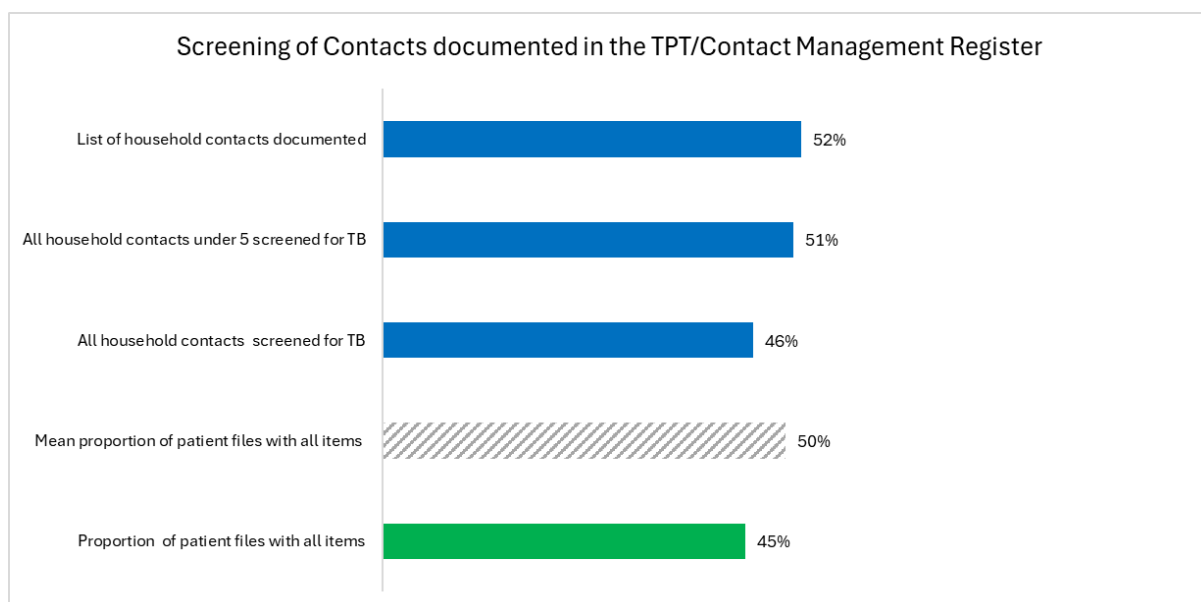
Domain	Parameters
Contact Screening for TB Patients	- List of household contacts documented - All household contacts screened for TB - All household contacts under 5 screened for TB

Findings

Of the 4,999 records reviewed,

- 52% of patient files documented a list of household contacts,
- 46% recorded that household contacts were screened for TB, and 51% included screening of under-fives.
- On average, 50% of items were documented, and 45% of patient files contained all required items.

Figure 178: Percentage of screening of contact persons of TB patients documented.



Disaggregation by location, KEPH Level and Facility Ownership

- By facility level, the proportion of files with all items was 44% at Level 2, 45% at Level 3, 46% at Level 4, and 44% at Level 5.

- By ownership, public facilities had 48% of files with all items, faith-based facilities 42%, private facilities 35%, and NGO facilities 27%.
- By location, rural facilities performed slightly higher (46%) than urban facilities (44%).

Disaggregation by county

- By county, the highest proportions of files with all items were in Bomet (93%), West Pokot (81%), and Makueni (70%).
- The lowest were in Wajir (5%), Isiolo (11%), and Lamu (19%).
- While some counties such as Bomet and West Pokot demonstrated high levels of documentation and screening, nationally fewer than half of files contained all required items, with large disparities across counties

Figure 179: Screening of contacts documented in the TPT/Contact Management Register

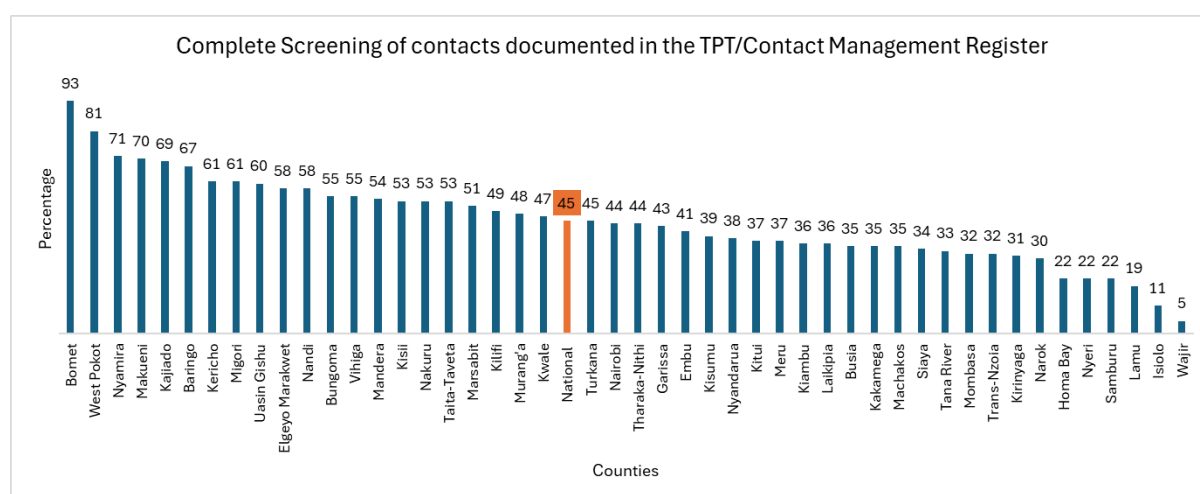


Table 99: Percentage availability of records for Screening of Contact Persons

	List of household contacts documented	All household contacts screened for TB	All household contacts under 5 screened for TB	Mean proportion of items in patient files	Proportion of patient files with all items	Number of Files
By County						
Baringo	77%	68%	73%	73%	67%	75
Bomet	93%	93%	93%	93%	93%	99
Bungoma	64%	58%	61%	61%	55%	101
Busia	44%	36%	40%	40%	35%	118
Elgeyo Marakwet	81%	59%	75%	72%	58%	59
Embu	48%	42%	46%	45%	41%	125

	List of household contacts documented	All household contacts screened for TB	All household contacts under 5 screened for TB	Mean proportion of items in patient files	Proportion of patient files with all items	Number of Files
Garissa	47%	45%	45%	45%	43%	58
Homa Bay	27%	22%	26%	25%	22%	151
Isiolo	11%	11%	11%	11%	11%	37
Kajiado	74%	72%	70%	72%	69%	61
Kakamega	39%	36%	38%	37%	35%	132
Kericho	67%	61%	64%	64%	61%	122
Kiambu	50%	37%	48%	45%	36%	163
Kilifi	56%	49%	56%	53%	49%	140
Kirinyaga	32%	31%	32%	31%	31%	111
Kisii	58%	53%	58%	56%	53%	173
Kisumu	42%	39%	42%	41%	39%	177
Kitui	47%	38%	45%	43%	37%	157
Kwale	51%	47%	51%	50%	47%	107
Laikipia	50%	36%	46%	44%	36%	107
Lamu	22%	19%	19%	20%	19%	36
Machakos	43%	35%	42%	40%	35%	122
Makueni	79%	74%	76%	76%	70%	160
Mandera	57%	54%	57%	56%	54%	35
Marsabit	51%	51%	51%	51%	51%	49
Meru	47%	39%	44%	43%	37%	159
Migori	62%	61%	62%	61%	61%	138
Mombasa	43%	33%	41%	39%	32%	127
Murang'a	55%	50%	53%	52%	48%	155
Nairobi	51%	46%	49%	48%	44%	188
Nakuru	63%	56%	59%	59%	53%	114
Nandi	69%	58%	68%	65%	58%	84
Narok	32%	30%	32%	31%	30%	104
Nyamira	72%	72%	71%	72%	71%	105
Nyandarua	44%	38%	43%	42%	38%	104
Nyeri	29%	22%	29%	27%	22%	93
Samburu	24%	22%	24%	24%	22%	78
Siaya	49%	37%	46%	44%	34%	164
Taita-Taveta	58%	53%	58%	57%	53%	79
Tana River	43%	33%	35%	37%	33%	40
Tharaka-Nithi	60%	45%	57%	54%	44%	75
Trans-Nzoia	46%	34%	41%	40%	32%	76
Turkana	49%	45%	49%	48%	45%	148
Uasin Gishu	65%	62%	62%	63%	60%	82
Vihiga	63%	60%	58%	60%	55%	89
Wajir	22%	5%	22%	16%	5%	37

	List of household contacts documented	All household contacts screened for TB	All household contacts under 5 screened for TB	Mean proportion of items in patient files	Proportion of patient files with all items	Number of Files
West Pokot	85%	82%	84%	84%	81%	85
By Managing Authority						
Public	55%	49%	53%	93%	48%	3718
Private	42%	35%	41%	61%	35%	458
NGO	33%	27%	33%	40%	27%	73
Faith-Based	47%	42%	46%	72%	42%	750
By Type						
Level 2	50%	45%	49%	52%	44%	903
Level 3	52%	46%	50%	39%	45%	1686
Level 4	54%	47%	52%	31%	46%	2299
Level 5	46%	44%	45%	45%	44%	111
By Location						
Urban	51%	45%	50%	49%	44%	2089
Rural	53%	47%	51%	51%	46%	2910
All	52%	46%	51%	50%	45%	4999

8.4.4 Documentation in Patients with TB/ HIV co-infection

The **Kenya National Guidelines for the Management of Tuberculosis and Leprosy (2022 edition)** and the **Kenya HIV Guidelines (2022)** recommend that all TB patients should be routinely tested for HIV, and all those with a positive HIV test must be promptly initiated on ART as part of integrated HIV/TB care. Proper documentation of HIV status and ART initiation is essential for monitoring co-infection management and for ensuring program quality.

Table 100: Parameters for TB/HIV co-infection

Domain	Parameters
TB/HIV co-infection	- With a positive HIV test result - Started on ART

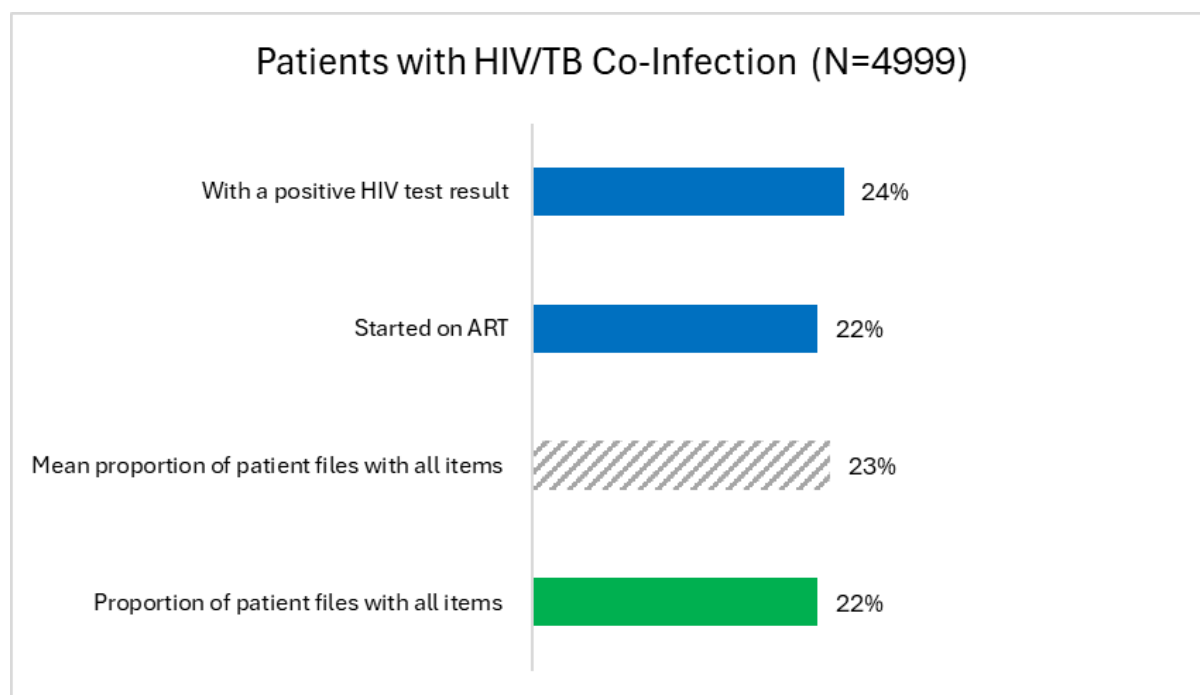
Findings:

Of the 4,999 records reviewed,

- 24% of TB patients had a positive HIV test documented, and 22% were recorded as having been started on ART.
- The mean proportion of patient files with all items was 23%, and the proportion of files with all items documented stood at 22%.



Figure 180: Percentage of TB clients tested for HIV and documented.



Disaggregation by location, KEPH Level and Facility Ownership

- **Facility Level**

Across facility levels, the proportion of files with all items documented was lowest at level 2 facilities (19%) and level 3 facilities (19%), while level 4 facilities had the highest documentation at 26%. Level 5 facilities followed closely with 24%.

- **Ownership**

By facility ownership, documentation was highest in faith-based facilities, with 31% of patient files having all items, while public facilities recorded 22%. NGO facilities had lower performance at 19%, and private facilities recorded the lowest at 17%.

- **Urban/Rural**

Documentation was slightly higher in rural facilities (23%) compared to urban facilities (21%).

Disaggregation by county

- There was wide county variation. Counties with the highest proportion of files with all items included Siaya (57%), Kisumu (57%), and Homa Bay (56%), reflecting counties in the high HIV burden lake region. Migori also performed relatively well at 40%.
- By contrast, some counties showed very low documentation, with Garissa, Wajir, and Marsabit at 0–2%, and West Pokot at 4%.

Figure 181: Documentation of ART initiation in patients with TB/HIV Coinfection

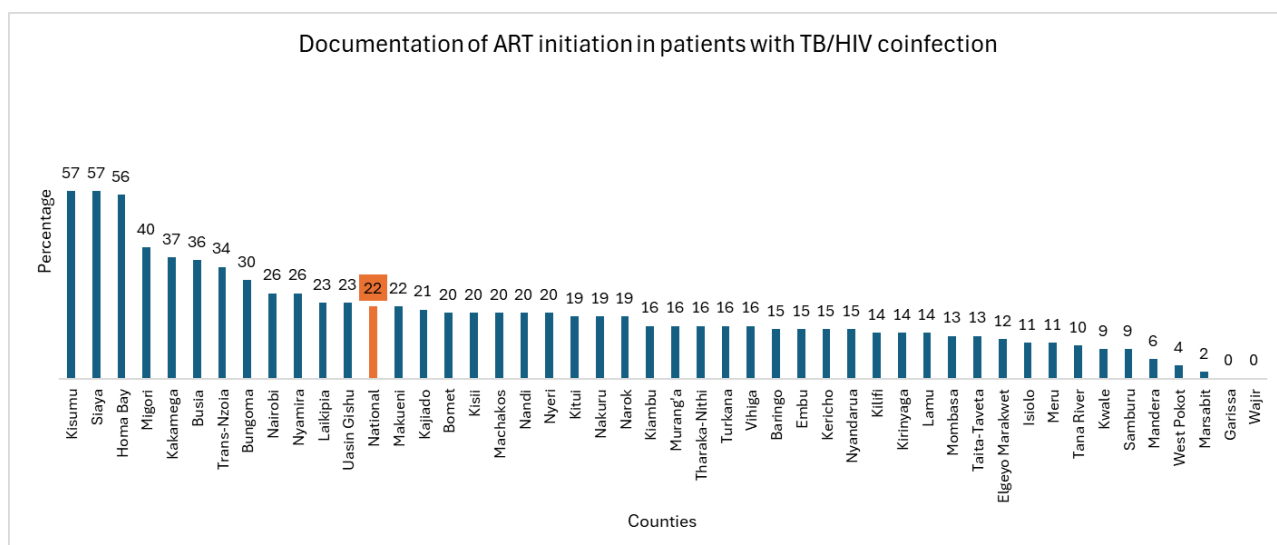


Table 101: Percentage availability of records for Patients with HIV/TB Co-infection

	With a positive HIV test result	Started on ART	Mean proportion of patient files with all items	Proportion of patient files with all items	Number of Files
By County					
Baringo	15%	15%	15%	15%	75
Bomet	21%	20%	21%	20%	99
Bungoma	32%	30%	31%	30%	101
Busia	38%	36%	37%	36%	118
Elgeyo Marak wet	15%	12%	14%	12%	59
Embu	16%	15%	16%	15%	125
Garissa	0%	0%	0%	0%	58
Homa Bay	57%	56%	57%	56%	151
Isiolo	19%	11%	15%	11%	37
Kajiado	23%	21%	22%	21%	61
Kakamega	39%	37%	38%	37%	132
Kericho	16%	15%	15%	15%	122
Kiambu	22%	16%	19%	16%	163
Kilifi	16%	14%	15%	14%	140
Kirinyaga	14%	14%	14%	14%	111
Kisii	21%	20%	20%	20%	173
Kisumu	58%	57%	58%	57%	177
Kitui	19%	19%	19%	19%	157
Kwale	11%	9%	10%	9%	107
Laikipia	23%	23%	23%	23%	107
Lamu	17%	14%	15%	14%	36

	With a positive HIV test result	Started on ART	Mean proportion of patient files with all items	Proportion of patient files with all items	Number of Files
Machakos	20%	20%	20%	20%	122
Makueni	23%	22%	22%	22%	160
Mandera	6%	6%	6%	6%	35
Marsabit	2%	2%	2%	2%	49
Meru	14%	11%	13%	11%	159
Migori	40%	40%	40%	40%	138
Mombasa	15%	13%	14%	13%	127
Murang'a	21%	16%	19%	16%	155
Nairobi	28%	26%	27%	26%	188
Nakuru	20%	19%	20%	19%	114
Nandi	20%	20%	20%	20%	84
Narok	20%	19%	20%	19%	104
Nyamira	28%	26%	27%	26%	105
Nyandarua	17%	15%	16%	15%	104
Nyeri	20%	20%	20%	20%	93
Samburu	13%	9%	11%	9%	78
Siaya	57%	57%	57%	57%	164
Taita-Taveta	15%	13%	14%	13%	79
Tana River	10%	10%	10%	10%	40
Tharaka-Nithi	16%	16%	16%	16%	75
Trans-Nzoia	37%	34%	36%	34%	76
Turkana	16%	16%	16%	16%	148
Uasin Gishu	24%	23%	24%	23%	82
Vihiga	18%	16%	17%	16%	89
Wajir	0%	0%	0%	0%	37
West Pokot	4%	4%	4%	4%	85
By Managing Authority					
Public	23%	22%	22%	22%	3,718
Private	19%	17%	18%	17%	458
NGO	19%	19%	19%	19%	73
Faith-Based	33%	31%	32%	31%	750
By type					
Level 2	20%	19%	20%	19%	903
Level 3	21%	19%	20%	19%	1,686
Level 4	27%	26%	27%	26%	2,299
Level 5	26%	24%	25%	24%	111
By location					
Urban	23%	21%	22%	21%	2,089
Rural	25%	23%	24%	23%	2,910
All	24%	22%	23%	22%	4,999



Discussion

Basis for diagnosis

Just over half of the patients had their diagnosis supported by two positive sputum smears, while slightly fewer had only one smear documented. Counties varied widely: in some, nearly nine out of ten patients had two smears recorded, while in others only a handful did. This inconsistency suggests that adherence to national diagnostic standards remains uneven across regions.

Quality of TB services

Most patients were started on the correct TB regimen and began treatment within a week of diagnosis, reflecting strong alignment with treatment guidelines. However, documentation of rifampicin resistance testing was recorded for less than half of patients, showing a substantial gap in drug resistance monitoring. Follow-up sputum monitoring was also inconsistently recorded: about two-thirds had results at the second month, just over half at the fifth month, and slightly more at the end of treatment. Nearly all patients had their HIV status checked at least once, and around three-quarters had their weight monitored during treatment. Treatment success was high, with about nine in ten patients completing treatment.

Contact tracing

Records showed that only about half of TB patients had their household contacts listed or screened, and just over half of the under-five contacts were screened. Counties showed large variation, with some—like Bomet and West Pokot—documenting nearly all contacts, while in others barely a tenth of records included contact tracing. Performance was somewhat stronger in rural areas than in urban ones, but overall the practice of systematically documenting and screening contacts, especially children, was weak.

TB/HIV co-infection

Among patients with TB, about a quarter had a positive HIV result recorded, and of these only about one in five had evidence of starting ART. Faith-based facilities had relatively stronger documentation compared to public or private ones. Rural facilities also appeared to perform slightly better than urban ones. Still, in many northern counties almost no patients had HIV/TB co-infection management recorded. This shows a significant missed opportunity to integrate TB and HIV services in line with national HIV/TB collaborative guidelines.

Key Finding and Recommendations:

Table 102: Finding and Recommendations for TB/HIV co-infection

Findings	Recommendations
Only 53% of patients had two positive sputum smears documented; wide variation across counties (as low as <20% in Samburu, Lamu).	Strengthen laboratory documentation and quality assurance systems; enforce NTLD-P standards for smear/GeneXpert confirmation at all facility levels.

Correct TB regimen and initiation within 7 days achieved (>90%), but Rifampicin resistance documented in only 42%; sputum follow-up <70%.	Scale up access to GeneXpert and enforce routine DST; reinforce follow-up sputum monitoring at months 2, 5, and end of treatment.
Contact tracing poorly documented (45%–52%); under-5 screening inconsistent; large disparities across counties.	Prioritize household contact and under-5 screening through mentorship, supervision, and integration into routine reporting tools.
Only 22% of TB/HIV co-infected patients recorded as started on ART; lower performance in northern arid counties.	Scale up HIV/TB collaborative services; ensure universal testing and immediate ART initiation as per HIV/TB guidelines.
Documentation gaps persist across public, private, NGO, and faith-based facilities despite high treatment success rates (91%).	Institutionalize periodic data quality audits and targeted capacity-building for private/NGO facilities where gaps are widest.

9. Client-Centered Care

Quality health care services should be: **Effective** – providing evidence-based healthcare services to those who need them; **Safe** – avoiding harm to people for whom the care is intended and **Patient-centered** – providing care that responds to individual preferences, needs and values. Patient Centered approach to delivery of healthcare services is based on people's legitimate needs and expectations. Patients are regarded as partners and health service providers should treat patients holistically looking at the clinical perspective as well as emotional, mental, spiritual, social, and financial perspective. High quality patient centered care accounts for people's needs, preferences, and values promoting acceptability of the healthcare services. Measuring patients' perceptions of the quality of care and services they receive can offer healthcare practices valuable information and data on which to build quality improvement (QI) initiatives. One common mechanism for assessing patient perceptions is through the use of surveys that capture self-reported patient assessments of multiple touchpoints during their medical care experiences.

The Kenya Quality Model for Health has two principles namely - Customer orientation and involvement of people which gives guidance on the patient centered care initiatives to be undertaken by health facilities. Indicators on patient centered care following assessment of health facilities measure the percentage of facilities providing patient-centered quality of care and should regularly be tracked through targeted Health Facility assessments.

The National Health Facility Assessment on Quality of Care measured the degree to which patient centered care is provided by looking at the following parameters: **the process, mechanism and models** used to collect patient feedback to inform the quality-of-care services provided.



Table 103: Patient Feedback structures and process

Structures:	Processes: What was done to the client
● System for performance reviews, patients' feedback	● Client Experience
● Health facility system for client feedback	● Client Satisfaction

Findings

9.1 Facility Level

9.1.1 Systems for Performance Review and Patient Feedback.

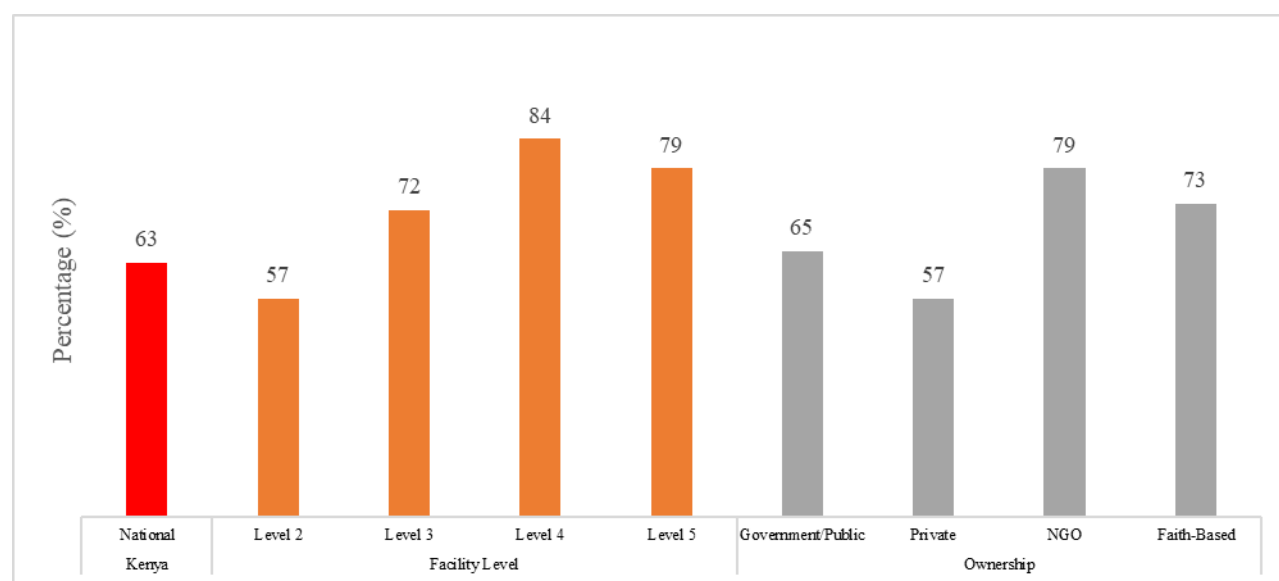
Health facilities are required to have a process where the facilities conduct routine performance review using data on the services provided, health outcomes and patients' feedback. Without such a process the facilities are unable to track or monitor service delivery and patients' perspectives.

Health facility with routine process for performance review.

Nationally, only 63% of the facilities had a routine process for performance review based on data on facility services, outcomes, or patient feedback. Level 4 facilities had the highest proportion of facilities with a routine process for performance review at 84% compared with only 57% of level 2 facilities. By facility ownership – NGO facilities had the highest percentage of facilities with a routine process at 79% with FBOs at 73%, public at 65% and private having only 57% of facilities with a system for performance review.

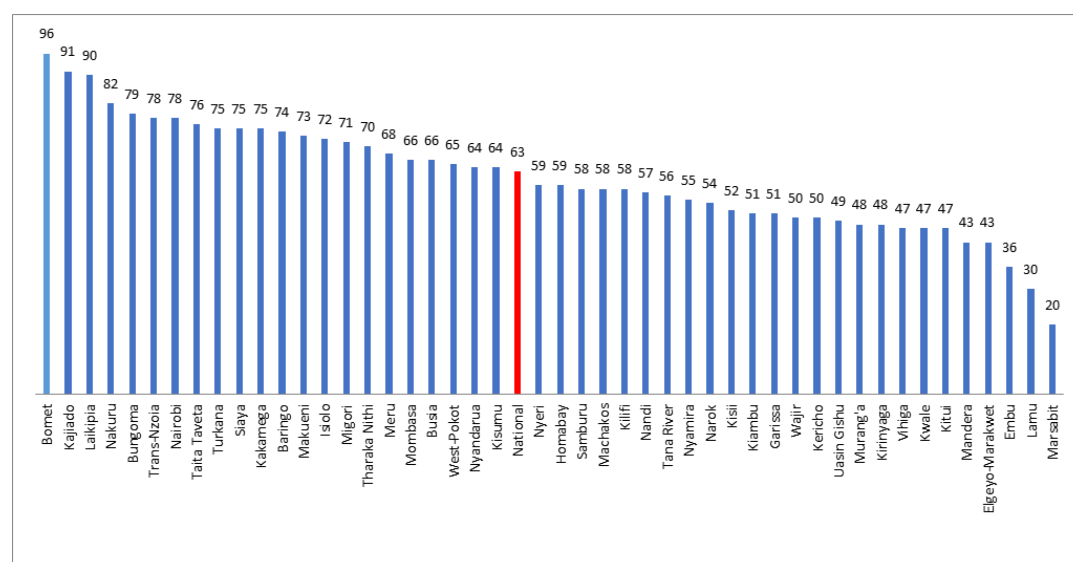


Figure 182: Percentage of facilities with a routine process for performance review based on data on facility services, outcomes, or patient feedback (N=13,361)



The top three counties with routine processes for performance review are Bomet at 96%, Kajiado at 91% and Laikipia at 90%. Marsabit (20%) Lamu (30%) and Embu (36%) had the least percentage of facilities with routine processes for performance review.

Figure 183: Percentage of facilities with a routine process for performance review based on data on facility services, outcomes, or patient feedback by county (N=13,361)

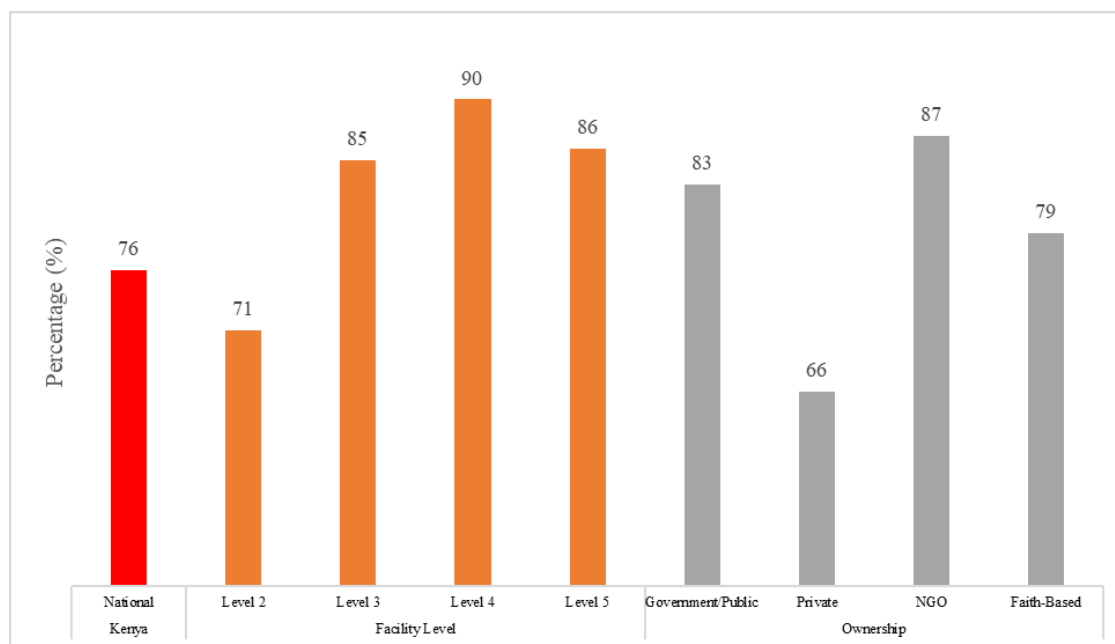


Health facility-mechanism to collect community/client feedback.

Clients' feedback provides crucial information on the experience of care from the patient's perspective and can provide valuable information for improving the quality of service. Nationally, 76% of all facilities had a mechanism for collecting patient's feedback, NGO (87%) and Public at 83%. Only 66% of private facilities had implemented a mechanism to engage the community/client. (Fig 184). Among the level of care, 90% of level 4 facilities had implemented

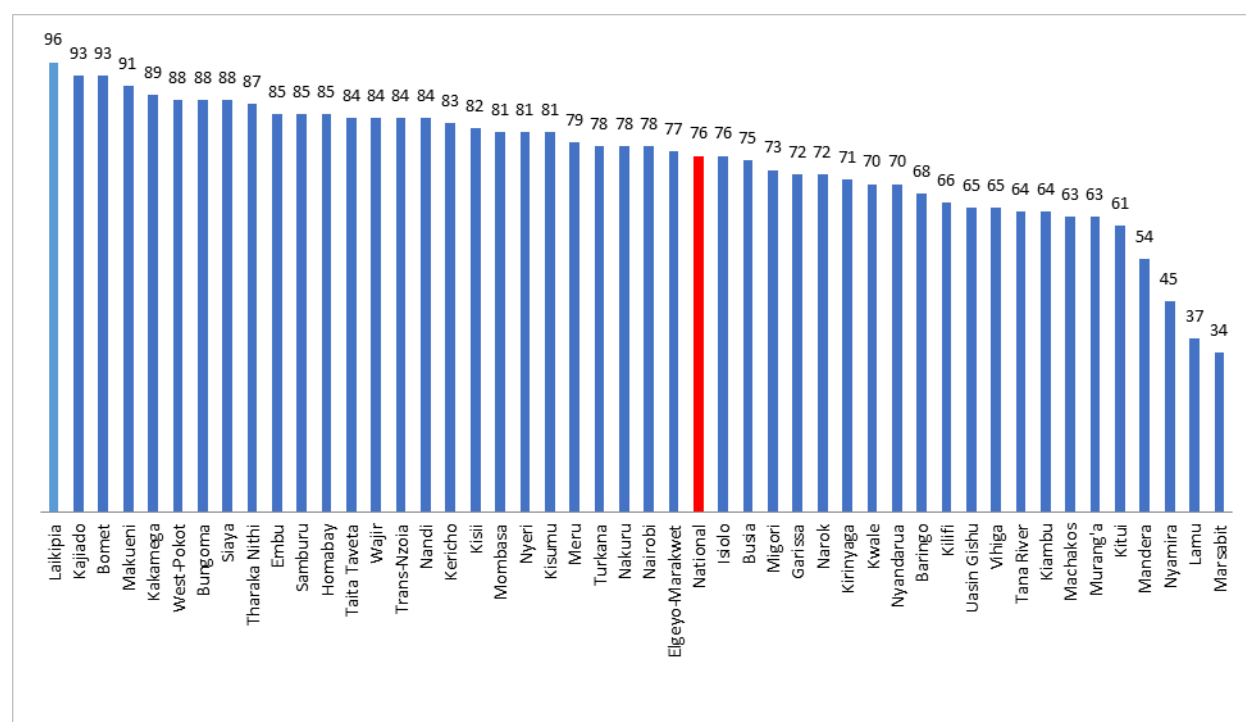
a mechanism to collect community/client feedback. This is in stark comparison to only 71% of level 2 facilities that had implemented a mechanism to collect community/client feedback.

Figure 184: Percentage of Facilities that implemented any mechanism to engage the community/client (N=13,361)



Four counties had over 90% of their facilities which a mechanism to engage the community/client. (Fig 185) These were Laikipia at 96%, Kajiado and Bomet both at 93% and Makueni at 91%. Marsabit had the least percentage of facilities with a mechanism to engage the community at 34% followed by Lamu at 37%.

Figure 185: Percentage of Facilities that implemented any mechanism to engage the community/client by county (N=13,361)



Methods used to collect client feedback at health facility level

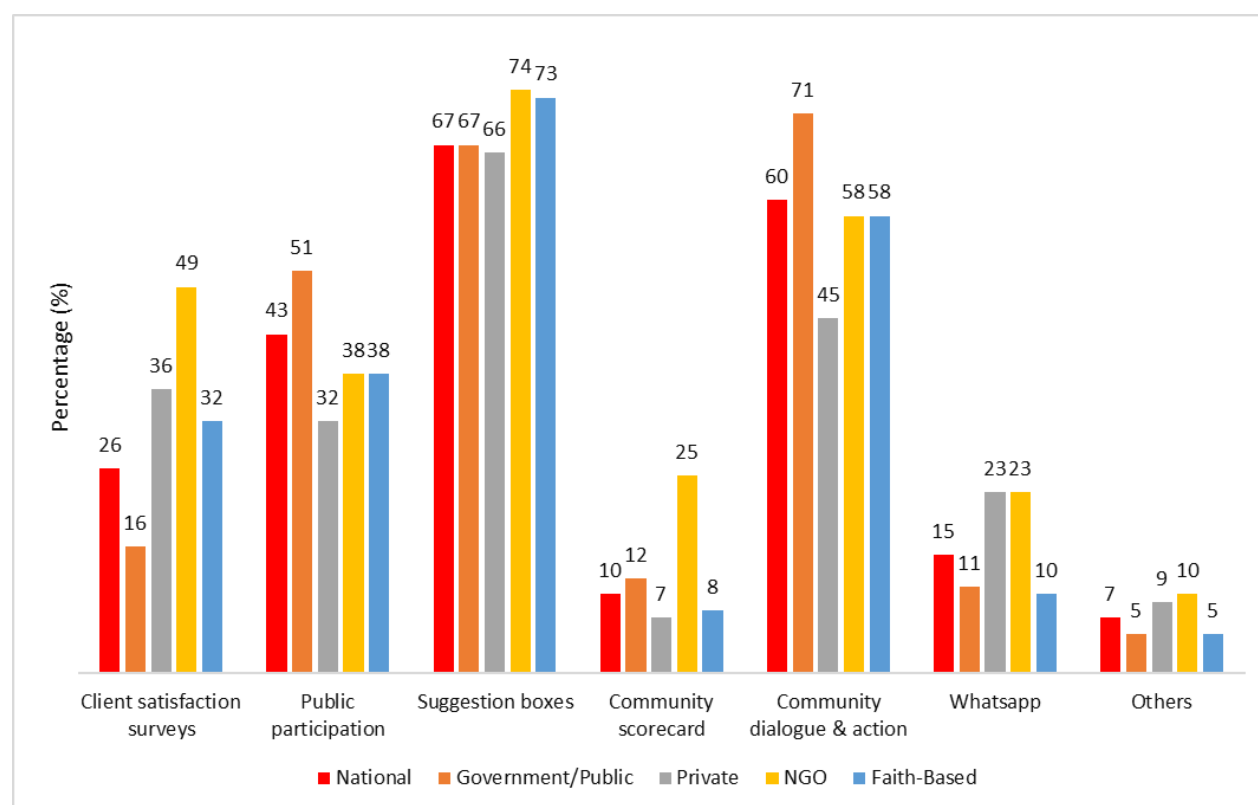
Six client survey methods were assessed as a means of collecting feedback as follows: Client satisfaction surveys, public participation, Suggestion boxes, Community scorecard, Community dialogue and action, WhatsApp and other methods not provided in the list.

The results reveal that nationally, suggestion boxes (67%) were the most preferred method employed followed by community dialogue and action (60%). (Fig 5). In Public hospitals – the most popular methods used were – community dialogue and participation (71%), suggestion boxes (67%) and public participation (51%) while in private facilities, suggestion boxes (66%), community dialogue and participation (45%) and client satisfaction surveys (36%) were the most preferred methods.

Generally, community scorecard (10%) and WhatsApp (15%) were the least used methods in all facilities. It would be interesting to further assess how the responses received from the clients are utilized to inform delivery.



Figure 186: Percentage of facilities implementing mechanisms to engage clients by ownership



9.1.2 Audio or Visual Privacy

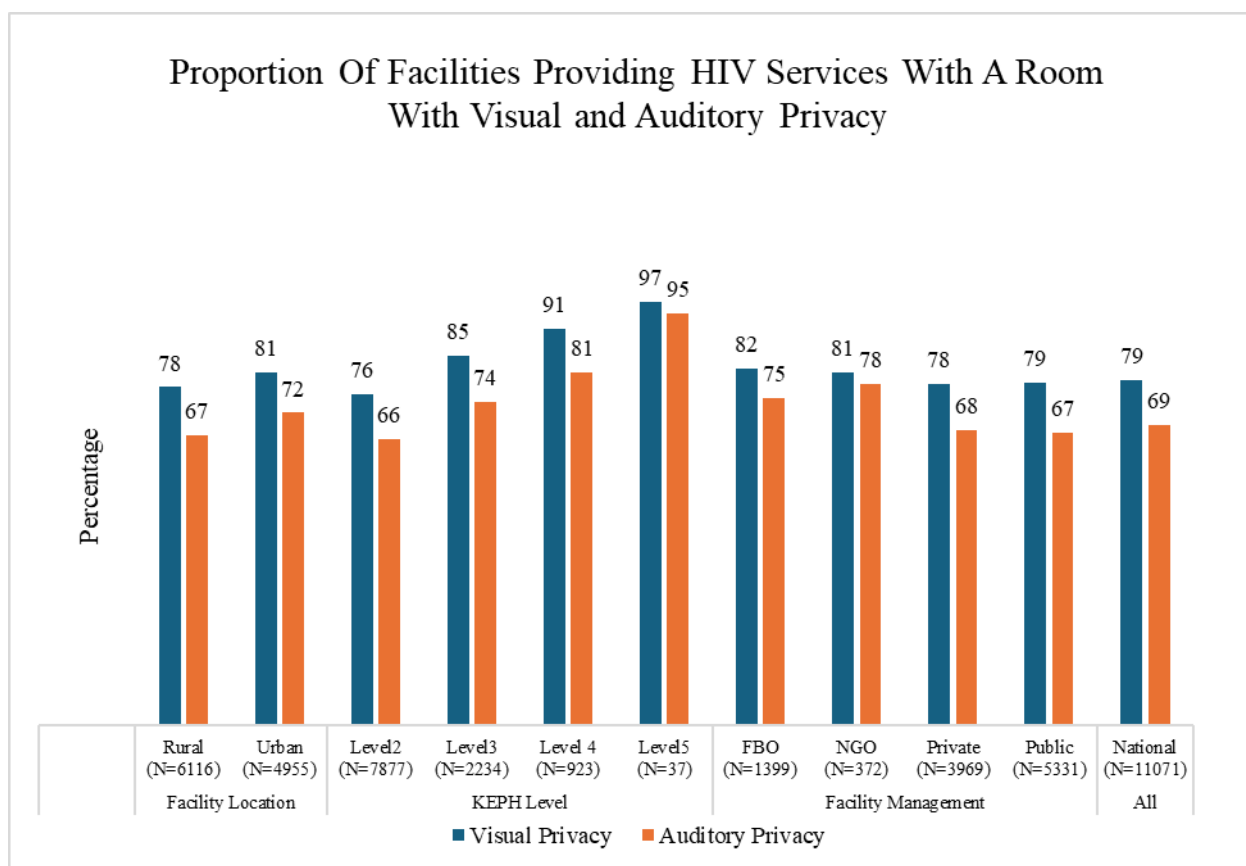
Privacy is an important aspect for quality of care to clients. Sensitive clinical examinations, treatments, or procedures may predispose patients to feelings of vulnerability and emotional discomfort. Breaches of privacy can affect a client's dignity and may even cause harm to the client.

For the assessment - visual and auditory privacy was assessed at the postpartum examination areas and the HIV testing area.

Of the 11,071 health facilities providing HIV services, the room used had visual privacy at 79% and auditory privacy at 69%. The highest privacy was provided at Level 5 facilities with 97% and 95% visual and auditory privacy, respectively.



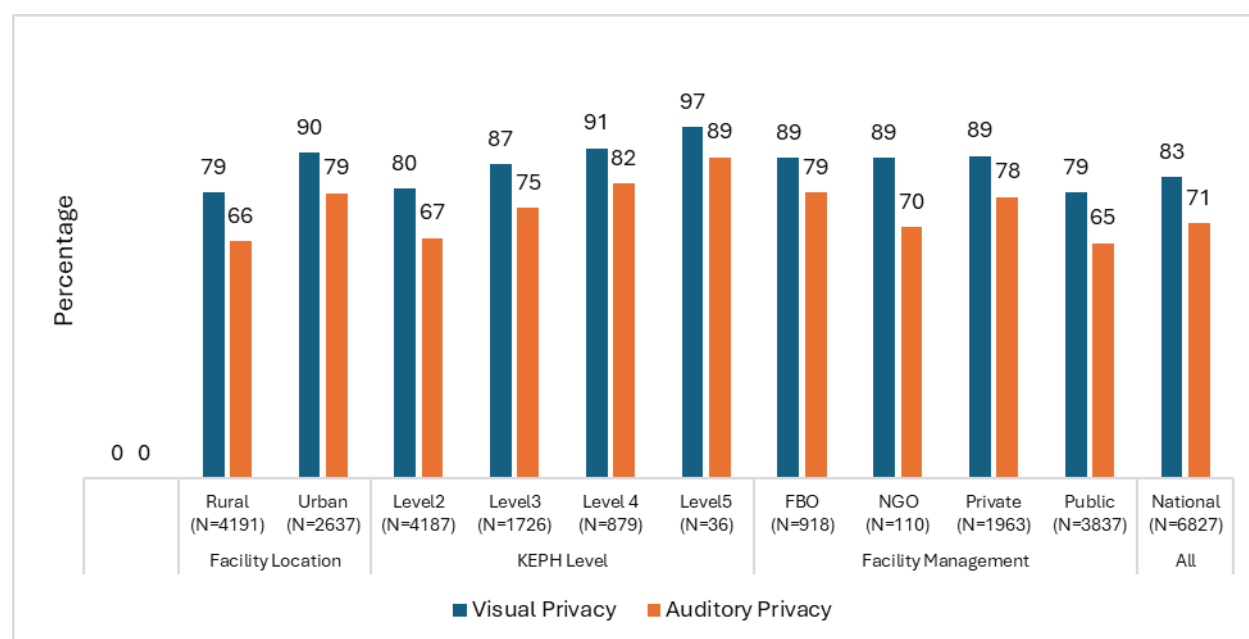
Figure 187: Proportion of Facilities Providing HIV Services with A Room with Visual and Auditory Privacy (N=11,071)



Of the 6827 facilities providing post-partum services, 83% had visual privacy and 71% auditory privacy in the room used to deliver the services. Public health facilities had the least privacy at 79% and with only 65% visual and auditory privacy, respectively, while level 5 facilities provided the highest level of privacy.



Figure 188: Proportion of Facilities Providing Post-Partum Services with a Room with Visual and Auditory Privacy (n=6827)



9.2 Family Planning Client Exit Interview

The FP interview was administered to clients 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. The interview focused on the level of satisfaction and overall experience of clients with the FP services received.

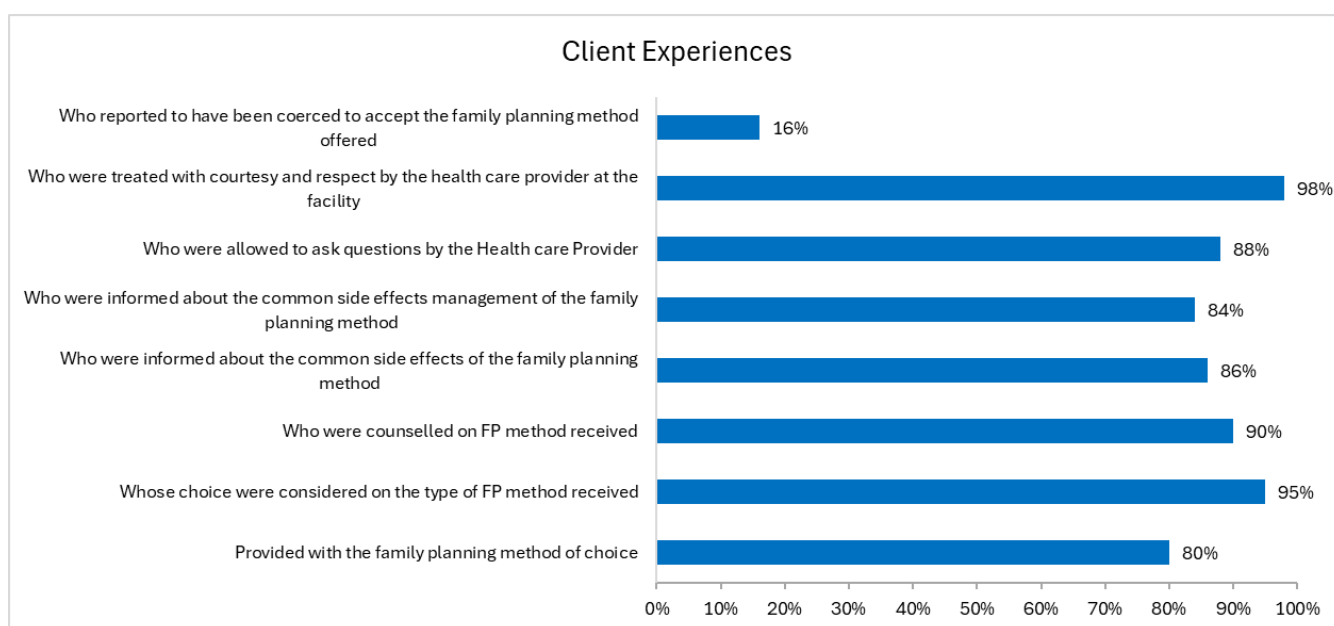
The client satisfaction data provides a comprehensive view of the family planning service experience in Kenya, highlighting key areas such as wait times, cleanliness, privacy, and healthcare provider interactions.

Findings

9.2.1 Client experiences

Of the sampled clients, 80% were provided with their family planning method of choice, and 95% of clients felt their choice was considered in selecting the method. Counselling rates remained high at 90%, with 86% being informed about common side effects and 84% being informed about managing these side effects. Notably, 88% of clients were allowed to ask questions, and 98% felt treated with courtesy and respect, while 16% of clients reported feeling coerced into accepting a family planning method.

Figure 189: Percentage of FP client experiences on the FP services provided (n=1,601)



Disaggregation by location, KEPH level and ownership

Table 104 below shows disaggregation of family planning client experiences by location, KEPH level and ownership

A slightly lower percentage of clients at level 5 facilities reported receiving the method of choice (71%) compared to other levels of care with level 3 being the highest at 83%. All clients at level 5 felt they were treated with courtesy and respect by the health care providers at the facility, however, the coercion rate was highest at 24% compared to the other levels ranging between 14% and 17%.

Urban facilities had a lower percentage of clients receiving their method of choice (77%) and a slightly higher coercion rate (19%) compared to rural areas. On the other hand, rural facilities reported higher percentages in providing the method of choice (85%) and lower coercion rates (12%). This could point to a more constrained service environment or greater provider influence in urban settings. These findings suggest that clients in rural areas may have more autonomy in making their family planning choices, though the level of information provided about side effects management is lower than in urban settings.

Table 104: Percentage availability of records for Patient Experiences

	Provided with the family planning method of choice	Whose choice were considered on the type of FP method received	Who were counselled on FP method received	Who were informed about the common side effects of the family planning method	Who were informed about the common side effects Managing of the family planning method	Who were allowed to ask questions by the Health care provider	Who were treated with courtesy and respect by the health care provider at the facility	Who reported to have been coerced to accept the family planning method offered	Number of Files
By County									

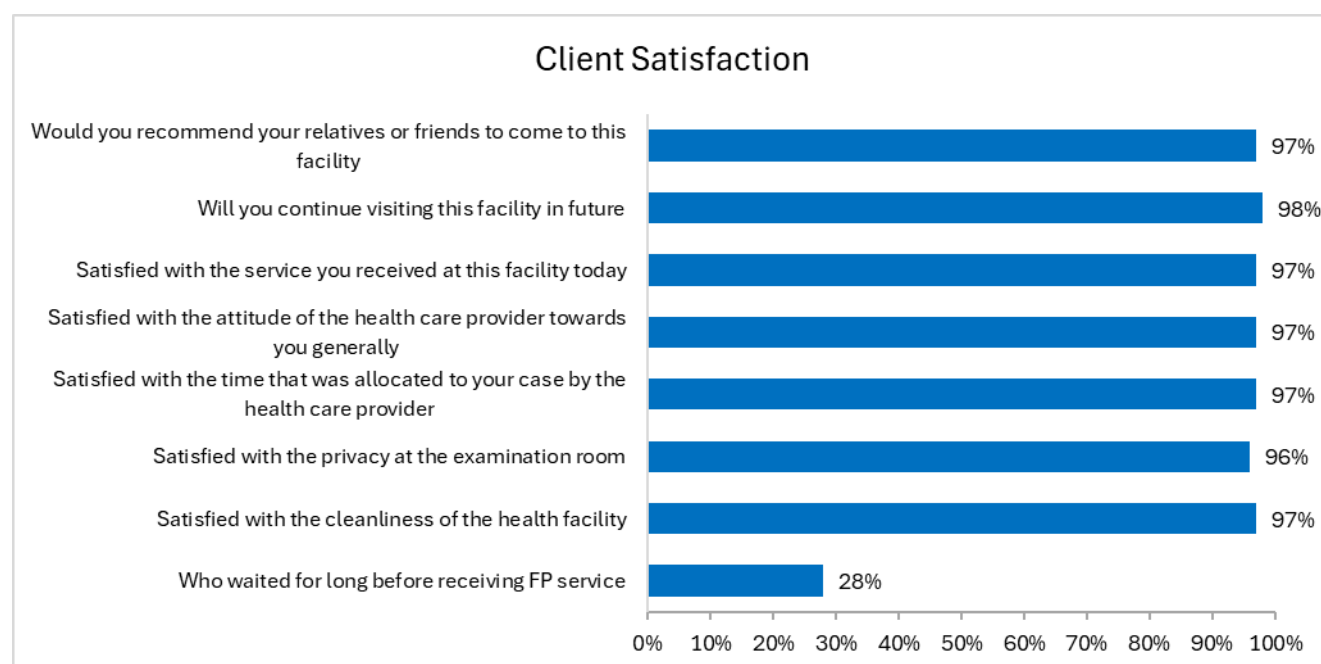
	Provided with the family planning method of choice	Whose choice were considered on the type of FP method received	Who were counselled on FP method received	Who were informed about the common side effects of the family planning method	Who were informed about the common side effects Managing of the family planning method	Who were allowed to ask questions by the Health care provider	Who were treated with courtesy and respect by the health care provider at the facility	Who reported to have been coerced to accept the family planning method offered	Number of Files
Baringo	60%	87%	100%	100%	100%	100%	100%	40%	15
Bomet	90%	98%	98%	98%	98%	98%	100%	7%	42
Bungoma	71%	95%	93%	85%	90%	78%	98%	24%	41
Busia	67%	100%	70%	67%	70%	80%	100%	30%	30
Elgeyo-Marakwet	87%	97%	93%	77%	83%	97%	100%	10%	30
Embu	90%	95%	90%	90%	90%	86%	100%	10%	21
Garissa	100%	92%	92%	92%	92%	92%	100%	0%	12
Homabay	90%	93%	90%	90%	88%	90%	98%	8%	40
Isiolo	28%	39%	39%	39%	33%	44%	44%	17%	18
Kajiado	88%	94%	94%	91%	91%	97%	100%	13%	32
Kakamega	78%	97%	98%	88%	87%	89%	100%	16%	104
Kericho	78%	98%	100%	100%	98%	98%	100%	22%	41
Kiambu	83%	97%	95%	86%	86%	93%	98%	12%	59
Kilifi	59%	86%	86%	86%	82%	77%	86%	27%	22
Kirinyaga	92%	92%	100%	92%	92%	92%	100%	8%	12
Kisii	74%	98%	79%	72%	62%	87%	98%	21%	47
Kisumu	82%	78%	64%	67%	64%	67%	96%	13%	45
Kitui	80%	93%	65%	53%	57%	68%	100%	15%	40
Kwale	81%	95%	81%	74%	77%	65%	98%	12%	43
Laikipia	87%	100%	96%	96%	96%	91%	96%	13%	23
Lamu	60%	100%	80%	80%	80%	80%	100%	40%	5
Machakos	74%	74%	68%	61%	52%	68%	84%	10%	31
Makueni	86%	98%	95%	90%	88%	88%	100%	13%	115
Mandera	67%	100%	100%	100%	100%	100%	100%	33%	9
Marsabit	100%	100%	0%	0%	0%	0%	100%	0%	1
Meru	77%	100%	82%	82%	82%	95%	100%	14%	22
Migori	92%	100%	92%	92%	92%	100%	100%	8%	12
Mombasa	74%	96%	91%	89%	78%	83%	96%	26%	46
Murang'a	94%	97%	94%	81%	78%	89%	97%	3%	36
Nairobi	76%	90%	90%	84%	79%	97%	98%	21%	62
Nakuru	91%	98%	97%	94%	94%	94%	99%	7%	106
Nandi	93%	98%	95%	95%	95%	95%	98%	5%	56
Narok	50%	93%	86%	79%	79%	93%	100%	43%	14
Nyamira	21%	84%	89%	89%	84%	89%	100%	74%	19
Nyandarua	60%	98%	100%	93%	90%	100%	100%	40%	40
Nyeri	91%	100%	93%	91%	93%	98%	100%	9%	44
Samburu	85%	100%	100%	85%	85%	92%	100%	15%	13
Siaya	84%	100%	89%	89%	79%	95%	100%	16%	19
Taita Taveta	65%	96%	92%	77%	77%	85%	96%	31%	26

	Provided with the family planning method of choice	Whose choice were considered on the type of FP method received	Who were counselled on FP method received	Who were informed about the common side effects of the family planning method	Who were informed about the common side effects Managing of the family planning method	Who were allowed to ask questions by the Health care provider	Who were treated with courtesy and respect by the health care provider at the facility	Who reported to have been coerced to accept the family planning method offered	Number of Files
Tana River	67%	100%	100%	100%	100%	83%	100%	17%	6
Tharaka Nit hi	52%	100%	100%	100%	100%	100%	96%	48%	25
Trans-Nzoia	93%	100%	88%	80%	85%	90%	100%	7%	41
Turkana	92%	92%	77%	77%	69%	85%	100%	8%	13
Uasin Gishu	91%	100%	97%	97%	92%	92%	98%	6%	66
Vihiga	94%	94%	88%	81%	75%	94%	100%	6%	16
Wajir	86%	100%	100%	100%	100%	100%	100%	14%	7
West-Pokot	79%	100%	97%	94%	94%	79%	91%	21%	34
By Managing Authority									
Government/Public	80%	95%	90%	85%	84%	88%	98%	16%	1,413
Private	81%	97%	95%	98%	92%	95%	100%	17%	124
NGO	82%	88%	76%	71%	65%	76%	100%	18%	17
Faith-Based	77%	85%	83%	81%	81%	83%	89%	11%	47
By Type									
Level 2	78%	93%	92%	87%	87%	88%	96%	17%	394
Level 3	83%	96%	89%	83%	81%	87%	98%	14%	407
Level 4	80%	95%	89%	85%	84%	88%	98%	17%	751
Level 5	71%	98%	96%	98%	96%	92%	100%	24%	49
By Location									
Urban	77%	94%	90%	87%	84%	89%	97%	19%	341
Rural	85%	95%	90%	84%	84%	87%	98%	12%	698
Missing	77%	95%	91%	87%	85%	89%	98%	19%	562
All	80%	95%	90%	86%	84%	88%	98%	16%	1,601

9.2.2 Client satisfaction

Almost all clients were satisfied with the quality of care provided, including cleanliness of the facility, time allotted to them by the healthcare provider and attitude of the healthcare providers towards them. Majority reported they would continue visiting the facility in the future and would recommend the facility to their relatives and friends. Satisfaction with the waiting time was however very low with 28% of the clients reporting having waited for long before receiving FP services.

Figure 190: Percentage of FP clients satisfied with the care provided (n=1,601)



Disaggregation by location, KEPH level and ownership

Table 105 below shows disaggregation of family planning client experiences by location, KEPH level and ownership

Clients who visited level 5 facilities showed the highest levels of satisfaction with the services provided and the healthcare provider attitude (100%) each, this points to a more efficient delivery service at these higher-level facilities. Clients visiting other levels of care also reported high satisfaction with overall service delivery ranging between 96% and 98%. Level 2 facilities, while still showing high satisfaction across most indicators, reported the highest percentage of long waiting time (31%), indicating that lower-tier facilities may struggle more with client flow. Clients from urban facilities show slightly lower satisfaction with privacy (93%) and a slightly higher percentage of clients waiting for long (26%). However, satisfaction with overall service and willingness to recommend the facility is still high, at 97% and 96% respectively. Rural facilities, by contrast, report higher satisfaction with privacy (97%) and slightly lower wait times (27%), with a 98% willingness to recommend the facility, suggesting a strong level of trust in rural family planning services.

Table 105: Percentage availability of records for Quality of Care

	Who waited for long before receiving FP service	Satisfied with the cleanliness of the health facility	Satisfied with the privacy at the examination room	Satisfied with the time that was allotted to your case by the health care provider	Satisfied with the attitude of the health care provider towards you generally	Satisfied with the service you received at this facility today	Will you continue visiting this facility in future	Would you recommend your relatives or friends to come to this facility	Number of Files
By County									
Baringo	13%	100%	100%	93%	100%	100%	100%	100%	15
Bomet	19%	98%	95%	98%	100%	100%	100%	100%	42

	Who waited for long before receiving FP service	Satisfied with the cleanliness of the health facility	Satisfied with the privacy at the examination room	Satisfied with the time that was allotted to your case by the health care provider	Satisfied with the attitude of the health care provider towards you generally	Satisfied with the service you received at this facility today	Will you continue visiting this facility in future	Would you recommend your relatives or friends to come to this facility	Number of Files
Bungoma	29%	98%	88%	98%	98%	98%	98%	98%	41
Busia	53%	97%	93%	97%	100%	97%	100%	97%	30
Elgeyo-Marakwet	27%	100%	100%	97%	100%	100%	100%	100%	30
Embu	48%	100%	100%	95%	100%	100%	100%	90%	21
Garissa	50%	100%	100%	92%	92%	100%	100%	100%	12
Homabay	5%	98%	98%	98%	98%	95%	98%	98%	40
Isiolo	22%	33%	39%	44%	44%	44%	39%	44%	18
Kajiado	25%	97%	100%	91%	100%	100%	97%	97%	32
Kakamega	42%	99%	99%	99%	98%	99%	100%	99%	104
Kericho	34%	100%	100%	100%	100%	100%	100%	100%	41
Kiambu	15%	98%	97%	98%	98%	95%	98%	98%	59
Kilifi	18%	86%	77%	86%	86%	86%	86%	86%	22
Kirinyaga	50%	92%	100%	100%	100%	100%	100%	100%	12
Kisii	13%	87%	96%	98%	98%	96%	98%	100%	47
Kisumu	20%	96%	91%	96%	96%	98%	98%	96%	45
Kitui	15%	100%	98%	90%	100%	95%	100%	100%	40
Kwale	19%	98%	93%	98%	98%	98%	98%	98%	43
Laikipia	30%	100%	100%	100%	100%	100%	96%	100%	23
Lamu	0%	100%	100%	100%	100%	100%	100%	100%	5
Machakos	23%	81%	84%	81%	81%	84%	84%	84%	31
Makueni	37%	100%	100%	100%	97%	96%	100%	98%	115
Mandera	0%	100%	100%	100%	100%	100%	100%	100%	9
Marsabit	0%	100%	0%	0%	100%	100%	100%	100%	1
Meru	14%	100%	100%	100%	100%	100%	100%	100%	22
Migori	33%	100%	100%	92%	100%	100%	100%	100%	12
Mombasa	35%	98%	93%	98%	93%	96%	100%	98%	46
Murang'a	19%	94%	94%	97%	97%	97%	94%	94%	36
Nairobi	39%	100%	98%	100%	100%	98%	100%	98%	62
Nakuru	30%	100%	97%	99%	99%	99%	97%	98%	106
Nandi	13%	98%	96%	98%	96%	98%	98%	98%	56
Narok	57%	100%	100%	86%	93%	100%	100%	100%	14
Nyamira	21%	95%	100%	100%	100%	100%	100%	100%	19
Nyandarua	40%	100%	100%	98%	98%	100%	100%	100%	40
Nyeri	23%	100%	95%	100%	100%	100%	100%	100%	44
Samburu	38%	100%	100%	100%	100%	100%	100%	100%	13
Siaya	16%	95%	95%	100%	100%	100%	100%	100%	19
Taita Taveta	23%	96%	100%	100%	100%	100%	100%	100%	26
Tana River	67%	83%	100%	100%	100%	100%	100%	100%	6
Tharaka Nithi	24%	100%	100%	100%	96%	100%	100%	100%	25
Trans-Nzoia	37%	100%	100%	100%	100%	100%	100%	100%	41

	Who waited for long before receiving FP service	Satisfied with the cleanliness of the health facility	Satisfied with the privacy at the examination room	Satisfied with the time that was allotted to your case by the health care provider	Satisfied with the attitude of the health care provider towards you generally	Satisfied with the service you received at this facility today	Will you continue visiting this facility in future	Would you recommend your relatives or friends to come to this facility	Number of Files
Turkana	46%	100%	77%	100%	92%	100%	100%	100%	13
Uasin Gishu	30%	100%	100%	98%	98%	98%	98%	98%	66
Vihiga	69%	81%	94%	100%	100%	94%	94%	100%	16
Wajir	14%	100%	100%	100%	86%	100%	100%	100%	7
West-Pokot	26%	97%	94%	94%	94%	97%	94%	94%	34
By Managing Authority									
Government/Public	28%	97%	96%	97%	97%	97%	98%	98%	1,413
Private	32%	100%	99%	100%	100%	99%	100%	100%	124
NGO	53%	100%	100%	88%	94%	100%	100%	100%	17
Faith-Based	21%	87%	89%	89%	89%	81%	89%	87%	47
By Type									
Level 2	31%	96%	94%	96%	96%	96%	96%	96%	394
Level 3	29%	97%	98%	98%	97%	98%	98%	98%	407
Level 4	27%	97%	96%	97%	98%	97%	98%	98%	751
Level 5	22%	96%	94%	96%	100%	100%	98%	96%	49
By Location									
Urban	26%	97%	93%	96%	96%	97%	97%	96%	341
Rural	27%	97%	97%	97%	97%	97%	98%	98%	698
Missing	32%	97%	96%	97%	98%	97%	98%	98%	562
All	28%	97%	96%	97%	97%	97%	98%	97%	1,601

DISCUSSION

Overall, the data suggests that family planning services in Kenya are generally well-delivered across different facility levels, ownership types, and geographic settings, with some areas requiring improvement. Level 5 facilities, despite offering the most comprehensive counseling and information, show the highest level of perceived coercion, indicating a potential issue with how family planning options are being communicated at these high-tier facilities. Private facilities tend to offer better services in terms of client counselling and information but face similar challenges with coercion. NGO and Faith-Based facilities, which typically serve smaller populations, show some gaps in providing adequate counselling and information but tend to have lower coercion rates.

The survey also reveals that rural facilities generally perform better than urban ones in terms of method choice and lower coercion rates, indicating that rural clients may experience more client-centered care despite potentially fewer resources. Urban facilities, while potentially better staffed, may need to address the higher rates of perceived coercion.



Client satisfaction with family planning services in Kenya is generally high across most settings, with notable differences in waiting times and some aspects of service quality. Private and higher-level public facilities (Level 4 and Level 5) report the highest levels of client satisfaction, with more efficient service delivery and fewer complaints about waiting times. In contrast, lower-level and faith-based facilities, though generally well-regarded, may need to address issues related to longer wait times and slightly lower client satisfaction in areas like cleanliness and provider interactions.

The higher waiting times reported in NGO and Level 2 facilities, coupled with the fact that many clients remain satisfied with the quality of care despite delays, suggests that these facilities may be understaffed or overburdened but still provide quality services.

While urban facilities offer a good level of service, rural facilities show slightly better outcomes in terms of privacy and lower coercion rates, indicating that clients in rural areas may experience a more personalized and less pressured care environment.

Conclusion/ Recommendations

While the overall experience of family planning clients in Kenya is positive, targeted improvements, particularly in client autonomy and communication about method choice in higher-tier and urban facilities, could enhance client satisfaction and trust in the system.

Efforts to reduce waiting times, particularly in lower-level and NGO facilities, could further enhance client satisfaction.



10. Contextual Report

The contextual report captures issues beyond the structured tools that were captured by the data collection teams, that were relevant to quality of care.

Denied access and inaccessibility

Facilities run by MSF in Garissa County declined to provide Human Resource data citing data privacy concerns. The facility in charge insisted that the information on Human Resource could only be provided by the MSF Country office in Nairobi or the Geneva office. Some private facilities in Uasin Gishu and Kisumu Counties denied the data collection teams access, without giving a justification. Four facilities in Marsabit County could not be accessed due to insecurity during the exercise.

Mis-categorization

It was noted that some facilities in five counties (Wajir, Embu, Nyeri, and Trans Nzoia), were miscategorized as level 4 hospitals while they failed to meet the criteria for staffing and infrastructure, most having had no medical officers, and a theatre as required by existing norms and standards.

Staff Availability

During the survey, significant absenteeism by Health Care Workers was observed in several counties, particularly in Marsabit, Elgeyo Marakwet, Tharaka Nithi and Kericho among others, with no clear reason why staff were not at work. This resulted in improper cadres clerking and managing patients including Community Health Assistants, Community Health Promoters, Pharmaceutical technologists, Laboratory technologists and technicians, Community Oral Health Officers and Nutritionists.

In addition, it was noted that some facilities had the prerequisite infrastructure needed for a level 4 hospital but lacked the necessary human resources. This included two facilities in Kericho and one facility each in Elgeyo Marakwet, Tharaka Nithi, Kisumu and Isiolo.

Unique

In Kiambu County, family planning clients were being charged for the services within a County specific system (WamatangiCare). This has resulted in low family planning uptake.

In Bungoma County, it was noted that a large number of medical students attached to a facility were compromising privacy and confidentiality.



11. References

1. Kenya Service Availability and Readiness Assessment Mapping (SARAM) Report, 2013. World Health Organization.
2. Kenya Health Master Facility (KMFL) List 2023
3. World Health Organization (WHO). (2024). *Maternal Perinatal Death Surveillance and Response (MPDSR) Guidelines*. [Guidelines for conducting maternal and perinatal death audits]
4. Kenya National Action Plan on Prevention and Containment of Antimicrobial Resistance (2017-2022)
5. Kenya National Antimicrobial Resistance Surveillance Action Plan (2017-2022)
6. Kenya Harmonized Health Facility Assessment (KHHFA) 2018
7. WHO's Harmonized Health Facility Assessment (HHFA) platform
8. Kenya Service Provision Assessment Survey, 2010. Ministry of Health, Kenya.
9. Kenya Demographic and Health Survey, 2022. Ministry of Health, Kenya.
10. Kenya Stepwise Survey for Non-Communicable Diseases Risk Factors, 2015. Ministry of Health, Kenya.
11. Kenya Health Facility Census, 2023. Ministry of Health, Kenya.
12. Kenya Health Policy 2014-2030, 2014. Ministry of Health, Kenya.
13. Vision 2030, 2008. Government of Kenya.
14. Kenya Health Sector Strategic and Investment Plan, 2018-2023. Ministry of Health, Kenya.
15. Constitution of Kenya, Fourth Schedule, 2010. Republic of Kenya.
16. Kenya Essential Demographic Indicators Report, 2022. National Council for Population and Development.
17. Ministry of Health Strategic Plan, 2018-2023. Ministry of Health, Kenya.
18. Human Resources for Health Norms and Standards Guidelines for the Health Sector, 2014. Ministry of Health, Kenya.
19. Kenya Essential Package for Health (KEPH), 2012. Ministry of Health, Kenya.
20. Towards Universal Health Coverage: The Kenya Health Strategic and Investment Plan, 2014-2018. Ministry of Health, Kenya.
21. Kenya Quality Model for Health, 2014. Ministry of Health, Kenya.
22. Pharmacovigilance Guidelines, 2019. Pharmacy and Poisons Board of Kenya.



23. Infection Prevention and Control, 2019. World Health Organization.
24. World Health Organization (2023). *Joint Health Inspection Checklist and Kenya Quality Model for Health Standards*. Geneva, Switzerland: WHO.
25. Kenya Demographic and Health Survey (KDHS) 2022. Nairobi, Kenya: KNBS.
26. Maternal and Perinatal Death Surveillance and Response (MPDSR) Report 2023. Nairobi, Kenya: Ministry of Health.
27. Kenya Medical Research Institute (KEMRI) & Ministry of Health (2024). Human Resources for Health Density and Norms Assessment, 2024. Nairobi, Kenya: KEMRI.
28. World Health Organization (2022). Global Health Workforce Statistics: Estimating the Threshold of Health Workforce Densities for UHC in Africa. Geneva, Switzerland: WHO.
29. National Policy on Patient Safety, Health Worker Safety, and Quality of Care 2021. Nairobi, Kenya: Ministry of Health.



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