MINISTRY OF HEALTH

The State of the Health Referral System in Kenya: Results from a Baseline Study on the Functionality of the Health Referral System in Eight Counties

October 2013

FOREWORD

The Ministry of Health strives to provide equitable, affordable, accessible, and efficient quality health services for all Kenyans. The health sector is working to adopt a comprehensive continuum of care, with an objective to guide delivery of existing services and emphasize linkages across different levels of care throughout Kenya.

A referral system is a mechanism in the health care system that enables it to manage client health needs comprehensively with resources that are beyond those available locally. With this approach, the health sector has developed a referral strategy, standard guidelines, and forms to guide the sector in building an effective system that responds to the needs of rural and poor populations. In this way, the sector can help achieve Kenya's realization of Vision 2030, the Millennium Development Goals, and other health-related targets.

The delivery of health care services, as defined by Kenya Essential Package for Health (KEPH) norms and standards, has operational challenges that have caused inadequate linkages and continuum of care. These challenges have prompted the Ministry to develop a referral strategy. An effective referral strategy will ensure close relationships between all levels of care and ensure that clients receive the best possible care though rational use of health services and provide equitable specialized services to the populations that need it.

The general public often is unaware of where to get cost-effective health services. Many people have the perception that lower levels in the health care system provide lower quality care; therefore, they seek care at higher levels in the system, where specialists are concentrated. This preference for higher levels of care, even for simpler ailments, is not cost effective. In addition, a shortage of health workers across the health care system, especially at lower levels, lends credence to the client preference for higher, rather than lower, levels of care.

This assessment on the functionality of the Health Referral System will be used to inform the sector on the readiness to implement the referral strategy. It identifies gaps and makes recommendations to guide the effort.

It is my sincere hope that all health actors will identify specific input required to improve referral services in health facilities and steer the country toward a responsive, equitable, and client-centered health system.

Dr. Francis Kimani,

Director of Medical Services

ACKNOWLEDGEMENTS

ACRONYMS AND ABBREVIATIONS

ANC	Antenatal Care
ART	Antiretroviral Therapy
CCC	Comprehensive Care Clinics
CHEW	Community Health Extension Workers
CHMT	County Health Management Team
CHW	Community Health Workers
CO	Clinical Officer
COE	Centre of Excellence
CU	Community Unit
DHIS	District Health Information System
DHMT	District Health Management Team
DQA	Data Quality Assurance
FBO	Faith-based Organization
FGD	Focus Group Discussions
KEMRI	Kenya Medical Research Institute
KHSSP	Kenya Health Sector Strategic and Investment Plan
MOH	Ministry of Health
RSA	Referral System Assessment
RSPHS	Referral Strategy and Investment Plan for Health Services
RSS	Referral System Strengthening
TB	Tuberculosis
WHO	World Health Organization

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

EXECUTIVE SUMMARY

The right to the highest attainable standard of health is a fundamental human right and, central to this right within a hierarchical health system, is the existence of a well-functioning referral system that allows for continuity of care across the different tiers of care. Since the emergence of primary health care with the declaration of the Alma Ata declaration in 1978 that emphasized community participation, functional referral systems have been considered important requisites of a health system. For a referral system to be considered well-functioning, it needs to have at least the following elements:

1. A referral strategy informed by the assessments of population needs and health system capabilities
2. Adequately resourced referral facilities
3. Active collaboration between referral levels and across sectors
4. Setting-specific protocols for the referring and receiving facilities
5. Accountability for provider's performance and supportive supervision to improve performance
6. Formalized communication and transport arrangements between the referring facilities
7. Pro-poor protection against costs of emergency referrals
8. Capacity to monitor the effectiveness of the referral system
9. Government support of the referral system through the health policy

The Kenya Health Policy 2012–2030 has identified the need to strengthen the referral system in Kenya as a way of improving efficiency in the health system and improving patient outcomes. In the 2012–2018 Kenya Health Sector Strategic and Investment Plan (KHSSP 2012–2018), referral systems strengthening is one of the seven priority areas under investment area one of service delivery systems. Some of the critical investment priorities for the referral system outlined in the KHSSP 2012–2018 include (1) updated referral tools and guidelines at all levels, (2) orientation of the management teams on their referral roles and functions, and (3) tools for referral allowances for expertise movement and fuel for travel.

To inform the implementation of referral system strengthening activities, MEASURE Evaluation PIMA, in collaboration with the Ministry of Health conducted a baseline assessment to assess the functionality of the health referral system in eight counties in Kenya. The main aim of the study was achieved by exploring the following specific objectives:

1. Determine health referral patterns and referral processes in eight counties in Kenya.
2. Describe the barriers to effective management of the health referral system in eight counties in Kenya.
3. Describe the performance expectations for the referral system in selected health facilities and community units in eight counties in Kenya.
4. Assess referral initiation rates, referral uptake rate, and referral completion rates in selected health facilities and community units in eight counties in Kenya.
5. Assess current capacity of health providers to collect and use referral data for decision making in selected health facilities and community units in eight counties in Kenya.

Study Methods

The mixed methods cross-sectional study was conducted between June and July 2013 in eight counties: Garissa, Kakamega, Kilifi, Kirinyaga, Machakos, Nairobi, Nakuru, and Siaya. A total of 88 facilities and 27 community units (CUs) were included in the study. Questionnaires were used to collect data on the facility characteristics, referral processes and procedures, availability of referral tools, referral data collection and use, and the challenges to the referral system in the selected facilities and CUs. Retrospective referral data were also abstracted from medical registers for the calculation of referral indicators. Qualitative data were collected through focus group discussions with health care workers in the selected health facilities and CUs.

Results

All the facilities and CUs reported referring clients to other facilities; however, only 15 facilities and none of the CUs had guidelines on the referral processes. The facilities and CUs reported using several communication methods to refer clients to other facilities, and referral forms were used in only 32.7% of the facilities and CUs. For emergency referrals, 60.0% of the facilities and CUs reported providing transport for emergency referrals, although only 25 facilities provided an ambulance for free to the client.

Most of the sampled facilities had staff shortages as compared to the Ministry of Health national service standards and norms. On the availability of nurses, only 27 out of the 88 facilities fulfilled the staffing norms for nurses, while only 9 out the 29 level 4 facilities and level 5 facilities fulfilled the staffing norms for doctors. The focus group discussions revealed poor relationships between facilities, and the inadequate capacity to monitor the referral system, provide feedback, and ensure accountability in the referral system.

Conclusion

In conclusion, this study suggests that the health referral system in Kenya is less than optimal and the system needs immediate strengthening; however, strengthening the health referral system can be accomplished only through comprehensive interventions that will affect all elements of the referral system. The following recommendations at the national and county levels address some of the gaps identified by the study.

Recommendations at the national level:

1. Finalize the draft Referral Strategy and Investment Plan for Health Services to reflect the new constitution and recent changes in the health policy. The referral strategy should also reflect the health system capabilities and population needs.
2. Develop national referral guidelines to guide the referral processes at the referring and receiving facilities.
3. Develop standard referral forms for use by health workers to improve communication of referrals.
4. Revise the existing registers to allow recording of referral information or develop referral registers for use at the facilities.
5. Strengthen referral health information systems by including referral indicators in the District Health Information System, sensitization of health workers on the District Health Information System tools and routine data quality assurance.
6. Develop a standard referral system monitoring toolkit and curriculum to train health workers on referral system monitoring.

Recommendations at the county level:

1. Adequately resource health facilities according to the National Health Service Standards and Norms by increasing the number of health workers in hospitals where there are shortages, improving health infrastructure, and improving on the availability of medicines and other commodities.
2. Improve the emergency referral transport system by increasing the number of functional ambulances where there are shortages, put in place pro-poor protection mechanisms in case of emergency referrals, and improve coordination of emergency transport.
3. Avail and train health workers on the referral policies and guidelines. This will improve referral processes between facilities.
4. Train health workers on referral system monitoring by training on referral data collection, data analysis and interpretation, and use of referral data in decision making.
5. Institute referral performance monitoring systems and regularly provide feedback to the facilities.
6. Improve referral coordination between the referring and receiving facilities through stakeholder forums or other referral forums.
7. Provide regular supportive supervision to improve health service quality, build capacity in the lower lever facilities, improve accountability, and provide feedback to facilities.

CHAPTER 1: INTRODUCTION

This report presents results from a baseline study to assess the current state of the referral system in Kenya. The results of this study will guide the planning and implementation of referral system strengthening activities in Kenya. In collaboration with the Ministry of Health (MOH), MEASURE Evaluation PIMA conducted the assessment in eight counties in Kenya: Garissa, Kakamega, Kilifi, Kirinyaga, Machakos, Nairobi, Nakuru, and Siaya.

1.1 BACKGROUND

The right to the highest attainable standard of health is a fundamental human right.[1] Central to this right in the delivery of health care in a hierarchical health system is the existence of a well-functioning referral system that allows for continuity of care across different tiers of care.[2] Since the emergence of primary health care, with the declaration of the Alma Ata declaration in 1978 that emphasized on community participation, functional referral systems have been considered important requisites of a health system (Alma Ata).

Most health systems in the world are hierarchical, starting with primary care, to secondary care facilities, to the highest level of care, which consists of tertiary-level facilities that provide highly specialized services. In most developing countries, however, health referral systems across the various levels of care are weak, which affects the overall performance of the health system and contributes to negative health outcomes.

Some of the challenges in health referral systems in most developing countries include noncompliance with referrals, [3, 4] delays in referral completion [5-7], high numbers of self-referrals to higher-level referral facilities, [5, 8], weak health information systems to capture referral data, [9] poor transport arrangements for emergency referrals [10] and inadequately resourced referral facilities. [11] For example, a study that assessed referral patterns in children being treated for meningitis at two referral facilities in Nigeria found that 84% of the children that had been admitted with meningitis in the two facilities were self-referrals. [12] Referral facilities generally are used as primary care facilities, as observed in a study in Tanzania. [5]

1.2 ELEMENTS OF A FUNCTIONAL REFERRAL SYSTEM

A review of literature by Murray and colleagues in 2001[13] and a 2006 review by Murray and Pearson on maternity referrals in developing countries identified several elements of functional maternity referral systems.[9] The elements of functional referral systems include (1) a referral strategy that is informed by the population needs and local context (for example, disease patterns in the population, cultural and ethnic diversity, economic capability, health-seeking behavior, and population expectations from the health system); (2) a strategy informed by health system capabilities; (3) referral centers that are adequately resourced according to agreed-upon service standards to meet referral demands; (4) systems that have active collaboration between referral levels and across sectors; (5) referring and receiving facilities with setting-specific protocols, which include guidelines on referral processes at both referring and receiving facilities; and (6) a unified referral records system. Other prerequisites to a functional referral system include accountability for provider's performance and supportive supervision to improve performance, formalized communication and transport arrangements between the referring and receiving facilities, pro-poor protection against costs of emergency referrals, capacity to monitor the effectiveness of the referral system, and government support of the referral system through the health policy.

Although the elements of a functional referral system were identified specifically for maternity referrals, they can provide useful indicators for evaluating the performance of the overall referral system in a health system, as described in the text box. Other efforts to define functional referral systems have focused on HIV/AIDs referral networks. For example, an assessment of the HIV referral networks in Kenya, Nigeria, Swaziland, and Zambia recommended that for a referral system to be well-functioning, the following components are necessary: directory services available to service providers, a standard client referral form, referral tracking slips, referral registers at referring and receiving facilities, referral summary reports from the services providers to the central authority, and feedback reports from the central authorities to the service providers.[14]

Elements of a functional referral system, adopted from Monitoring and Evaluation Leadership [9]

- A referral strategy informed by the assessments of population needs and health system capabilities
- Adequately resourced referral facilities
- Active collaboration between referral levels and across sectors
- Setting-specific protocols for the referring and receiving facilities
- Accountability for provider's performance and supportive supervision to improve performance
- Formalized communication and transport arrangements between referring facilities
- Pro-poor protection against costs of emergency referrals
- Capacity to monitor the effectiveness of the referral system
- Government support of the referral system through the health policy

---

1.3 THE KENYAN CONTEXT

1.3.1 The Health System in Kenya

The Kenyan health system is organized around six levels of care, that fit into four tiers of care, based on the scope and complexity of the services offered (see Figure 1). At the first tier/level, the health system is organized in community units (CU) of about 100 households or 5,000 community members. The CU is run by community health workers (CHW), volunteers who are supervised by community health extension workers (CHEWs), who are employed by MOH. CHWs are mandated to identify illnesses at the household level, treat minor ailments, and initiate referrals to higher levels of the health system. CUs are governed by the Community Health Committee (CHC) that comprises community members, CHWs, CHEWs, and a link facility health care worker.

The second tier consists of primary care health facilities that have dispensaries (level II) and health centers (level III) run by nurses and clinical officers. Dispensaries can provide general outpatient services and antenatal monitoring, and also perform minor surgical procedures. A few dispensaries that have adequate infrastructure, staff and supplies also support and conduct deliveries. In addition to the services provided by the dispensaries, health centers provide basic inpatient services, including deliveries.

Figure 1: Kenya health care system with four tiers of care compared to the previous six levels of care [15, 16]

Health system organization by levels of care (levels 1-6)	Health system tiers
6 Tertiary hospitals	**Tier 4:** National referral facilities
5 Secondary hospitals	**Tier 3:** County referral facilities
4 Primary hospitals	
3 Health centres, maternities, nursing homes	**Tier 2:** Primary care facilities
2 Dispensaries/clinics	
INTERFACE	
1 Community: Village/households/families/individuals	**Tier 1:** Community services

The third tier consists of the county referral facilities, which include the former primary and secondary hospitals. These provide both outpatient and inpatient services. They are staffed with doctors, clinical officers, and nurses. Some secondary hospitals serve as training centers for clinical officers and nurses, while some provide internship opportunities for medical interns. The fourth tier, the national referral facilities that offer highly specialized care, is used for training and support research. Health facilities in the various tiers of care include government-owned facilities, faith-based organizations, and private health institutions. The government health system has the largest network of facilities and is the most used. The second largest network is faith-based health institutions, followed by private health care institutions based mainly in urban areas.

The management of health care in Kenya was previously under a centralized MOH that consisted of two ministries, Ministry of Medical Services and Ministry of Public Health Services. After the promulgation of the Kenya constitution in 2010, delivery of health care was devolved to 47 counties, but implementation of the devolved system started in June 2013. In the devolved system, the mandate of the national-level MOH consists of provision of care and management of the national referral health facilities, formulation of health policy, and provision of capacity building and technical assistance for the counties. The mandate of the counties includes, among others, the provision of health services and management of referrals in county health facilities and pharmacies. Kenya's health care system is transitioning from the centralized system to the devolved structure, which has not been fully defined yet.

1.3.2   The Health Referral System in Kenya

Continuity of care across the four tiers of care depends on a well-functioning referral system, strong linkages between and across the service tiers and adequately resourced facilities according to the service standards and norms (see Figure 2). The Kenya Health Policy 2012–2030[16] has identified the need to strengthen the referral system in Kenya as a way of improving efficiency in the health system and improving patient outcomes. In the KHSSP 2012–2018, [17] referral systems strengthening is one of the seven priority areas under investment area one of service delivery systems. Some of the critical investment priorities for the referral system outlined in KHSSP 2012–2018 include (1) updated referral tools and guidelines at all levels, (2) orientation of the management teams on their referral roles and functions, and (3) tools for referral allowances for expertise movement and fuel for travel. A draft referral strategy was developed in 2012 to operate the referral systems and guide the strengthening of linkages across the tiers of care for efficient health service delivery, as outlined in the Kenya Health Plan 2012–2030 and KHSSP 2012–2018. [18]

Figure 2: Kenya service delivery system illustrates the role of the referral chain
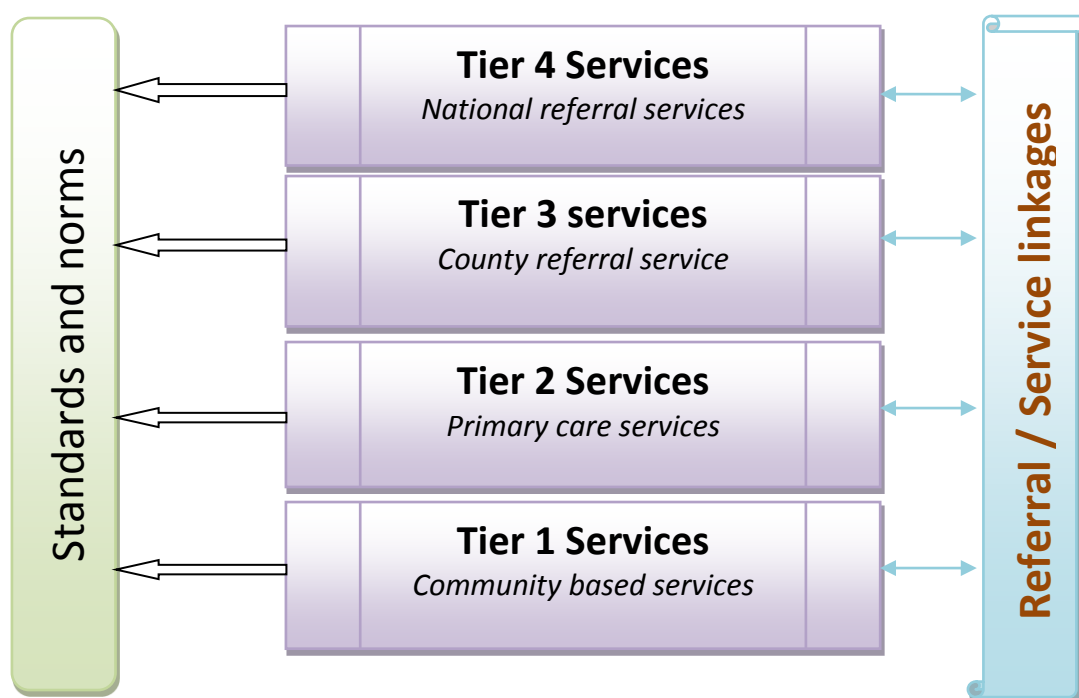
Source: Figure adapted from the Kenya Draft Referral Strategy and Investment Plan for Health Services 2012–2017

The draft Referral Strategy and Investment Plan for Health Services 2012–2017 (RSPHS 2012–2017) defines the referral system as "a mechanism to enable clients health needs be comprehensively managed using resources beyond those available where they access care."

The strategy classifies referrals in four categories that include: client movement, service or expertise movement, specimen movement and client parameter movement. For the referral system to be functional, it needs to operate in a functional health system, and the draft RSPHS 2012–2017 identifies various health system requirements for a well-functioning referral system[18] (see Table 1).

Table 1: Health system requirements for an effective referral system, as defined in the draft Referral Strategy and Investment Plan for Health Services 2012–2017[18]

Health System Building Blocks	Requirements
Health services	Service standards for each level of care
	Management guidelines
	Adequate infrastructure and equipment for delivery of service standards
Health workforce	Human resource norms by level
	Appropriate skills for management of referrals
Health information system	Functional health information system
	Tools for management of referrals (referral forms)
Essential products and technologies	Commodity and supply norms by level
	Adequate commodities and supplies to managed referrals
Health financing	Dedicated operational finances for maintaining an effective functional referral system
Leadership and governance	Adequate management and referral guidelines
	Regular supportive supervision
	Appropriate regulation and regulatory systems

1.4 STUDY OBJECTIVES

The main objective of this study was to assess the functionality of the health referral system in Kenya. To achieve the main objective, the study explored the following specific objectives:

1. Determine health referral patterns and referral processes in eight counties in Kenya.
2. Describe the barriers to effective management of the health referral system in eight counties in Kenya.
3. Describe the performance expectations for the referral system in selected health facilities and community units in eight counties in Kenya.
4. Assess referral initiation rates, referral uptake rates, and referral completion rates in selected health facilities and community units in eight counties in Kenya.
5. Assess current capacity of health providers to collect and use referral data for decision making in selected health facilities and community units in eight counties in Kenya.

State of the Health Referral System in Kenya: Results from a Baseline Study on the Functionality of the Health Referral System in Eight Counties

5

CHAPTER 2: METHODS

2.1 STUDY DESIGN

The baseline referral system assessment was a cross-sectional study undertaken between June and July 2013 in eight counties in Kenya: Garissa, Kakamega, Kilifi, Kirinyaga, Machakos, Nairobi, Nakuru, and Siaya. The survey included 88 health facilities and 32 CUs, or 11 health facilities and 4 CUs from each of the sampled counties. Figure 3 shows the geographical distribution of the study facilities.

Figure 3: The geographical distribution of the 88 facilities selected for inclusion in the study

State of the Health Referral System in Kenya: Results from a Baseline Study on the Functionality of the Health Referral System in Eight Counties

6
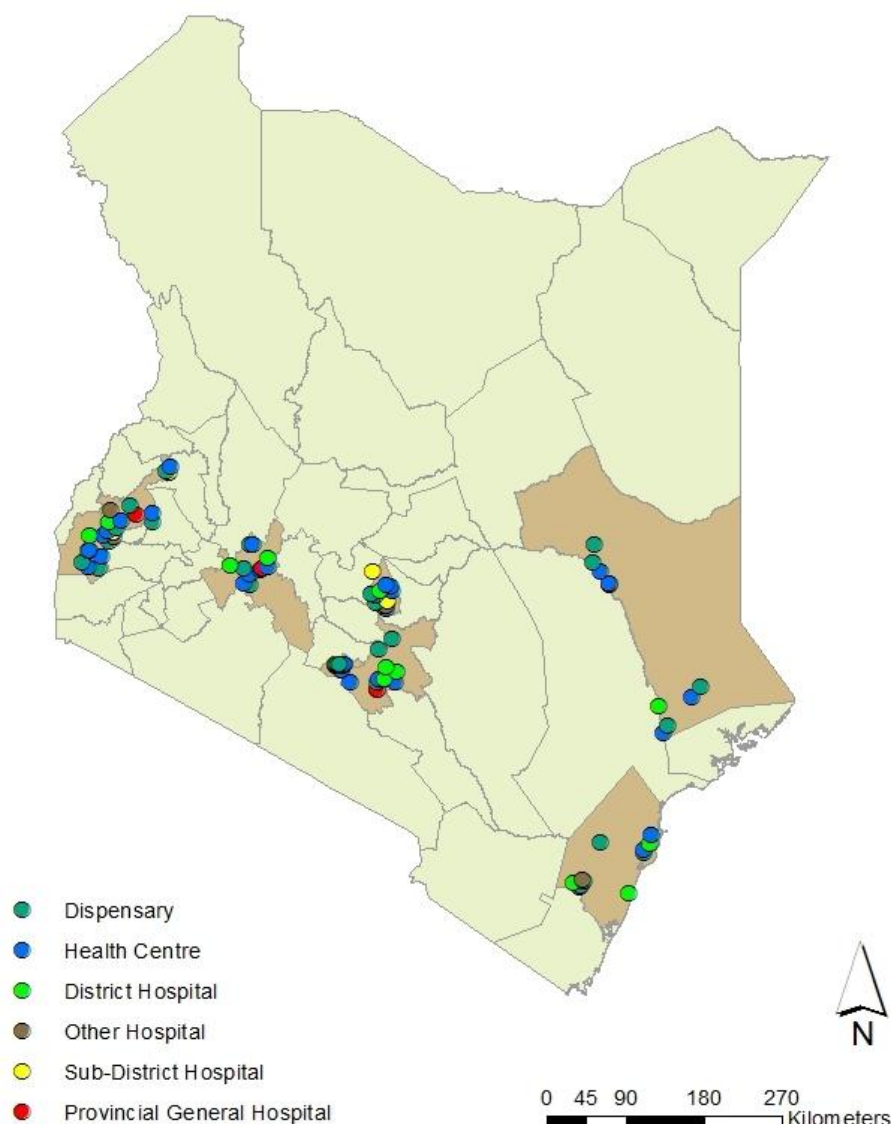
2.2 SAMPLE SIZE AND SELECTION

The survey used a multistage sampling method to select the facilities and CUs. The eight counties were purposively selected; in which one county was selected in consultation with the former provincial health management teams each of the former eight provinces. Six of the selected counties included counties where the World Health Organization (WHO) Kenya office had already started supporting referral-strengthening activities. The six counties include Kilifi, Kirinyaga, Machakos, Nairobi, and Nakuru. The remaining two counties were selected in consultation with MOH officials in the former provinces.

In each county, the largest government-owned county hospital and one hospital owned by a faith-based organization were selected for inclusion in the study (referred to as the county referral facility). To select lower level facilities, two districts (sub-counties) in each county were selected in consultation with the county health departments. In the two selected districts, one CU was purposively selected using a predetermined criterion to develop the CU to a center of excellence (COE). Three other CUs were randomly selected, one in the district that had the preselected CU and two in the other district. The link facilities for the four CUs, which were mostly dispensaries, were selected for inclusion in the study. Through consultations with MOH, three of the health centers that were perceived to receive the most referrals from the selected dispensaries or were nearest to each of the selected dispensaries were also selected for inclusion in the study. Finally, one district hospital (sub-county hospital) in each of the two selected districts was selected for inclusion in the study. Table 2 lists the number of facilities and community units selected for inclusion in the study.

Table 2: Distribution of selected study facilities and community units by county and facility type

County	Community units	Dispensaries	Health Center	Sub-county Hospital	Faith-based Organization hospital	County referral facility
Garissa	4	4	3	2	1	1
Kakamega	4	4	4	2	1	1
Kilifi	4	4	3	2	1	1
Kirinyaga	4	4	3	2	1	1
Machakos	4	3	4	3	1	1
Nairobi	4	3	4	2	1	1
Nakuru	4	3	4	2	1	1
Siaya	4	3	4	2	1	1

The study sample size was determined using the approach of Lemeshow and colleagues (1996), assuming a 25% referral initiation rate at a 5% confidence level. A 10% increase in the calculated sample size was made to allow for nonresponse, and this led to a sample size of 116 facilities and CUs.

2.3 DATA COLLECTION PROCEDURES

In each county, a team of five people comprising MEASURE Evaluation PIMA staff and MOH staff in each region was involved in data collection. In each health facility and community unit, a referral system assessment (RSA) questionnaire and a document review checklist were administered to the health care worker in charge of the facility or the CHEW in charge of the CU to assess the current functionality of the referral system. The RSA questionnaire and the document review checklist were adapted from the referral system assessment tools in the MEASURE Evaluation's Referral System Assessment and Monitoring Toolkit.[19] Focus group discussions (FGD) also were conducted with

State of the Health Referral System in Kenya: Results from a Baseline Study on the Functionality of the Health Referral System in Eight Counties

7

facility staff involved in referrals, such as clinicians, nurses, laboratory staff, head of departments in large facilities, and CHWs in CUs.

In addition, retrospective referral data were abstracted from maternity, antenatal clinic (ANC), postnatal clinic, tuberculosis (TB) clinic and comprehensive care clinics (CCC) for the months between January and June 2012 to calculate referral indicators. The selection of the departments was informed by consultations with MOH staff on the registers where referral data were likely to be recorded. Finally, the study used a data quality assurance (DQA) tool to assess the accuracy of the referral data reported in the MOH 711 summary tool.

2.3.1   Referral System Assessment Questionnaire and Document Review Checklist

The RSA questionnaire collected data on the facility catchment population, availability of human resources, availability of health services, referral processes and procedures, referral data collection and use, and the challenges to the referral system in the selected facilities and CUs. The document review checklist was used to assess the content of the available referral tools in facilities, such as the referral forms, referral guidelines, and referral directories, among others, that were obtained during the RSA questionnaire interview.

2.3.2   Focus Group Discussions

FGDs were conducted with facility staff mainly involved in referrals in the selected facilities. The FGDs in the county hospital and CUs comprised 8–12 participants, including clinicians, nurses, laboratory staff, and CHWs in CUs. Because of the limited number of staff in health centers and dispensaries, the FGDs involved fewer than eight participants. FGDs explored referral processes and procedures in the facilities and CUs, referral data collection and use, challenges in the referral system, and recommendations for improving the referral system.

2.3.3   Referral Data Abstraction

Retrospective data on referrals between January and June 2012 were abstracted to assess referral initiation rates, referral uptake rates, and referral completion within (intra-referrals) and between (inter-referrals) facilities and CUs. For intra-facility referrals, data collection focused only on HIV testing service points where data on referrals to the CCC were likely to be recorded. Data were abstracted from maternity, ANC, postnatal, and TB clinic registers. The total number of patients seen, the total number of referrals made to other departments, and the total number of HIV positive patients referred to CCCs were recorded. To identify completed referrals, data were abstracted from the pre-antiretroviral therapy (ART) register (MOH 261A) in the CCC clinics for the same period. All referrals to the CCC from within the facility were identified and data were abstracted on the number of referrals to the clinic by the referring department.

For inter-facility referrals out and into the facility, all referral data were abstracted from the maternity, ANC, and TB registers. Data on the total number of patients seen, number of patients referred to other facilities, numbers of patients referred in from other facilities, names of receiving or referring facilities, and the common causes of referrals were recorded.

In CUs, data were abstracted from the CHEW summaries to assess the referral initiation rates from CUs. The total number of referrals and the total catchment population for the CU were recorded. To assess referral completion rates, data abstraction focused on the referral booklets of four randomly selected CHWs in each CU. The referral forms in the CHW referral booklet are filled in duplicate;

one copy is given to the patient and the other copy is retained by the CHW. Referral completion was assessed by recording the total number of referrals per CHW and the facilities to which the referrals were made from the retained copies of the referral forms in the CHW referral booklet. In the CU link facilities, the original referral forms from the selected CHWs were collated and reviewed. The total numbers of completed referrals by CHW and disease condition were recorded for the same period.

Referral data were also abstracted from the MOH summary tool 711 and compared with the data abstracted from the primary registers in the maternity, TB, ANC, and CCC departments using the DQA tool.

2.4   DATA ANALYSIS

Quantitative data from the RSA questionnaire, document review checklist, and referral data abstraction questionnaires were double-entered into Microsoft Access data entry screens and analysis was carried out using Stata version 11.0 (Stata Corporation, College Station, TX, USA). Data were summarized to obtain proportion estimates by facility type. To assess the availability of human resources in the selected facilities, the reported numbers of staff available were compared to the standards for each facility type as outlined in the national MOH health service norms and standards.[20] Referral indicators were calculated as follows: referral initiation rate[i] was calculated as the number of clients referred from the initiating service or facility divided by the number of clients seen at the initiating service or facility for a specified period of time; referral completion rate[ii] was calculated as the number of referred clients for a particular service seen at the receiving service divided by the total number of referrals made for that service from the referring facility.

Qualitative data from the audio recordings from the FGDs were transcribed verbatim into MS Word files and imported into NVIVO 10 software to facilitate indexing, categorizing, and theorizing. Analysis entailed open coding and progressive categorization of issues using a combination of inductive (where analytical categories were derived gradually from the data) and deductive approaches (where data was coded based on the six health system building blocks).[21] Emerging categories subsequently were modified and grouped into themes relating to the six health system building blocks. In addition, attempts were made to identify nuances between the hospital sites that reflected the uniqueness of the data. Relationships and connections between the data coded were explored by annotating them along the key items (codes) used for ordering the interview questions.

Data from the emerging themes were later pooled into analysis charts to help develop a better understanding and connection between the reported data. At this stage, triangulation of data was enhanced through comparisons of analysis charts of the specific study regions to look for similarities and differences to support identification of key issues around the referral system.

---

[i] The proportion of clients referred from the initiating service or facility.
[ii] The proportion of referred clients that complete a referral at the receiving service or facility.

2.5 ETHICAL APPROVAL

The study protocol received ethical approval from the Kenya Medical Research Institute Ethical Review Committee (No. 375). Additional verbal approval was provided by the county health departments in the eight counties. In the facilities and CUs, informed consent was obtained from all participants before the questionnaires were administered and the FGDs conducted. Approval to abstract referral data was obtained from the facility in-charges, departmental in-charges of the maternity, ANC, postnatal, and TB clinics, and from the CHEWs and CHWs in the CUs.

State of the Health Referral System in Kenya: Results from a Baseline Study on the Functionality of the Health Referral System in Eight Counties

10

CHAPTER 3: RESULTS

3.1 DATA COLLECTED

A total of 88 health facilities and 32 community units were selected for the cross-sectional survey. Five out the 32 communities did not participate in the study, which left 27 participating CUs. Of the 88 facilities, 27 were dispensaries, 31 were health centers, 21 were hospitals, and 8 were county referral facilities. One of the facilities was a national referral facility for mental health. In each of the 88 health facilities and 22 of the 27 CUs, a referral system assessment questionnaire was administered to the facility in-charge or the CHEW in CUs (see Appendix, Table A.1). FGDs were conducted in 83 health facilities and 27 community units; referral data were abstracted from 85 health facilities. RSA questionnaires were missing for 10 of the 32 selected CUs; FGDs were not conducted in five facilities because of high workloads at the facilities during the day of the survey and limited staffing. Abstraction of referral data was not possible in some facilities because of missing or illegible registers or unavailability of the target service points in the facilities. Appendix Tables 6.1 and 6.2 show the distribution of data collected by county and health facility level.

3.2 AVAILABILITY OF SERVICES

The availability of health services in the facilities varied by facility type (see Appendix, Table A.3). All facilities provided general outpatient services and integrated maternal and child health and family planning services (MCH/FP), except for two dispensaries, which did not provide general outpatient services, but which provided integrated MCH/FP services only. All hospitals and county referral hospitals provided maternity, new-born, reproductive health, inpatient, and clinical laboratory services. While more than half (62.9%) of the dispensaries and a majority (90.3%) of health centers provided maternity services, only 40.7% and 61.3% of the dispensaries and health centers, respectively, provided new-born services. All of the county referral facilities provided imaging services, rehabilitation, emergency and specialized surgical operations, and outpatient surgical services, while only one provided specialized therapies, such as dialysis and chemotherapy.

3.3 AVAILABILITY OF HUMAN RESOURCES

The median numbers and ranges of some cadres of health care workers available in the sampled facilities are shown in Table 3 by health facility type and ownership. The median number of nurses in dispensaries and health centers were 2 (range, 1–11) and 5 (range, 5–23), respectively. The availability of human resources in the sampled facilities was compared with the national service norms and standards (see Appendix, Table A.4). Most of the sampled facilities had staff shortages compared to MOH national service standards and norms. For example, on the availability of nurses, only 18 out of 26 dispensaries and 3 level 3 facilities (health centers), 3 of the level 4 (former district hospitals), and 3 of the level 5 facilities (former provincial hospitals) fulfilled the staffing norms for nurses. A third of the level 4 facilities and 3 of the level 5 facilities fulfilled the staffing norms for doctors in their respective levels.

Table 3: Median number of health workers by cadre and facility level in facilities sampled, referral system assessment survey in Kenya, 2013

Health worker cadre	Government–owned Facilities					Faith–based Organizations
	Dispensaries, (n=27)	Health Center, (n=29)	Sub-county Hospital, (n=15)	County Referral Hospital, (n=8)	National Referral (n=1)[a]	(Health Centers, Hospitals) (n=8)
Doctors (general physician)	0	0	3 (0–8)	15 (6–35)	15	2 (0–14)
Specialized doctors	0	0	0 (0–6)	8 (1–13)	11	1 (0–22)
Dentist	0	0	1 (0–3)	3 (1–9)	4	0 (0–1)
Dental technologist	0 (0–2)	0 (0–1)	0 (0–4)	2 (0–5)	4	1 (0–1)
Community oral health officer	0	0 (0–2)	1 (1–3)	1 (0–2)	1	0 (0–1)
Psychiatrist	0	0	0 (0–1)	0 (0–8)	11	0 (0–2)
Pharmacist	0	0 (0–2)	2 (0–3)	5 (3–18)	9	0 (0–22)
Pharmaceutical technologist	0	0 (0–4)	1 (0–7)	2 (0–5)	0	3 (1–8)
Radiographer	0	0	1 (0–2)	5 (2–9)	3	1 (0–5)
Surgeons	0	0	0 (0–2)	2 (0–4)	0	1 (0–4)
Clinical officers	0 (0–2)	2 (0–5)	7 (2–14)	22 (4–31)	4	6 (0–12)
Specialized clinical officers	0	0 (0–1)	2 (0–5)	7 (0–24)	0	1 (0–2)
Nurses (Registered and enrolled nurses)	2 (1–11)	5 (2–23)	31 (12–97)	178 (62–420)	235	44 (6–55)
Laboratory technologists/ technicians	0 (0–2)	1 (1–3)	5 (1–11)	13 (10–32)	12	5 (1–7)
Physiotherapists	0	0 (0–3)	1 (0–4)	7 (2–18)	5	1 (0–2)
Occupational therapist	0	0 (0–1)	1 (0–2)	4 (2–11)	12	0 (0–1)
Orthopedic technologist	0 (0–1)	0	0 (0–3)	3 (1–5)	3	0 (0–1)
Nutritionists	0 (0–1)	0 (0–1)	1 (0–2)	3 (1–9)	5	1 (0–2)
HRIOs	0 (0–1)	0 (0–2)	2 (0–4)	3 (1–8)	9	1 (0–3)
Public health officers	1 (0–1)	1 (0–4)	1 (0–6)	1 (0–4)	3	0 (0–1)
Social worker	0	0 (0–2)	0 (0–1)	2 (0–4)	4	0 (0–5)

[a] The facility is a national mental health referral facility.
Note: Range shown in parenthesis.

State of the Health Referral System in Kenya: Results from a Baseline Study on the Functionality of the Health Referral System in Eight Counties

3.4 REFERRAL PATTERNS AND PROCESSES

3.4.1 Understanding of Referrals and Referral Patterns by Health Workers and CHWs

All community units and facilities reported they refer clients to other facilities. In the FGDs, when participants were asked about what the term "referral" means, most respondents described it as a process of receiving or transferring patients between and within facilities and proceeded to describe the facilities to which they transferred patients.

> *"Referral is the transfer from one point to another point. It can be one room to another room. The reason is when you are not able to deliver the expected services, you transfer that person or client to where he can meet the service he requires. It can be in or it can be out."* (Respondent, sub-county hospital).

In the FGDs, respondents saw referral as a process where a health worker attended to a patient who required some form of health service that they were unable to offer; and therefore, necessitating the need for referral to another health care provider in the same facility or outside the facility. In describing the referral process, respondents felt that the term covered the following situations:

Step 1: A patient in need of medical attention visits a health facility.
Step 2: An available health worker assesses the medical condition and concludes that:
   a. No skilled health worker is available to handle the condition;
   b. The available facilities, such as maternity wards or laboratory, are unable to deal with the condition.
Step 3: The health worker acts by referring the patient to a higher-level facility for treatment (out referral).

3.4.2 Referrals Out

From the questionnaire data, all facilities and CUs reported they refer clients to other facilities (see Table 4). The facilities reported that the most common causes of referrals out of facilities and CUs were medical conditions (34.1%), obstetric (23.3%), surgical (8.4%), and HIV-related services (5.6%), such as voluntary counselling and testing, and CCC (see Figure 4).

Figure 4: Most common causes of referrals out of sampled facilities and community units, Kenya 2013
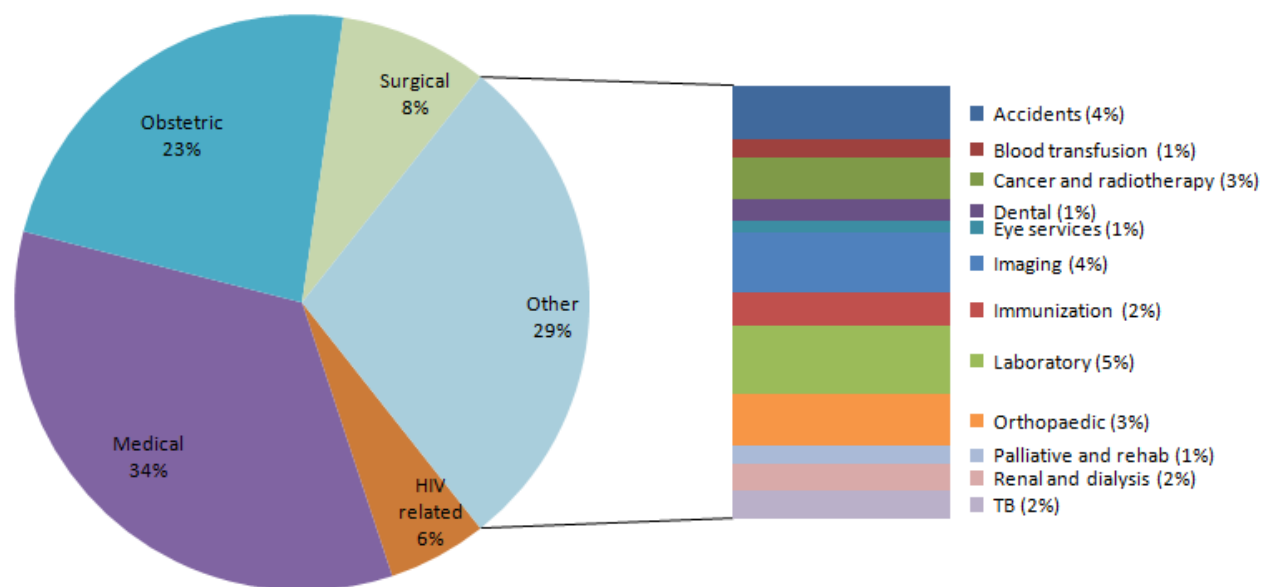
In the facilities, doctors, clinical officers, and nurses are responsible for initiating referrals while in CUs; CHEWs and CHWs are responsible for initiating referrals (see Table 4). Participants reported several methods are used to communicate referrals to receiving facilities: orally referring a client to another provider (22.7%), issuing standard referral forms (59.1%), and issuing handwritten notes (46.4%), among others (see Table 4). Standard referral forms are available in some CUs, but most of the referral forms available in facilities are for TB, CCC, and laboratory referral forms. The information contained in referral forms varied. Most available referral forms contained information client name, client ID, client characteristics, such as age and sex, name of the receiving facility, referral date, and reason for referral (see Figure 5).

On referral completion, few facilities and CUs have mechanisms in place to track referral completion. Most facilities and CUs relied on verbal reports from clients, if they returned to the facility (see Table 4). In the FGDs, participants said some facilities also rely on the nurse escorting a client for a report on completion in emergency referrals, but no mechanisms are in place to track cold referrals unless clients are counter–referred by receiving facilities.

> *"It has been a challenge…feedback has been a challenge…the only clients whom we can say unless someone got interested to know about the case or it is the case that the client has been referred back to us after diagnosis for continuity after investigation.. for management here like if we send to a facility, the facility can do what we had referred and sometimes send the patient back for the issues of follow up those are the clients we can comfortably say exactly of what happened but the rest are those who go and it is actually difficult for us to tell what happened on the other side."* (Respondent, FBO facility)

Figure 5a: Example of a referral form available in a CU

Figure 5b: Example of referral form in a facility

Table 4: Procedures for referring clients out of sampled facilities and CUs, referral system assessment survey 2013, Kenya

	Community units (n=22)	Dispensary (n=27)	Health Center (n=31)	Hospital (n=21)	County referral hospital (n=8)	National referral (n=1)	All facilities and CUs
Catchment population, median (range)	5,791 (692–18,750)	8,699 (1,229–106,000)	17,760 (4,563–119,376)	38,877 (8,140–500,000)	88,765 (42,123–335,653)	307,117	N/A
Facility/CU refers clients out	22 (100)	27 (100)	31 (100)	21 (100)	8 (100)	1 (100)	110 (100)
Cadre of person making referral							
Doctor only or doctor, clinical officer, and nurse	0	0	1 (3.2)	19 (90.5)	8 (100)	1 (100)	29 (26.4)
Clinical officer and nurse, or clinical officer only or nurse only	0	27 (100)	30 (96.7)	2 (9.5)	0	0	59 (53.6)
CHEW and CHW	22 (100)	0	0	0	0	0	22 (20.0)
Referral procedure [a]							
Oral	12 (54.6)	5 (18.5)	4 (12.9)	3 (14.3)	1 (12.5)	0	25 (22.7)
Standard referral form	18 (81.8)	6 (22.2)	14 (45.2)	20 (95.2)	6 (75.0)	1 (100)	65 (59.1)
Handwritten on blank paper	7 (31.8)	18 (66.7)	16 (51.6)	4 (19.1)	5 (62.5)	1 (100)	51 (46.4)
Escorting clients	14 (63.6)	5 (18.5)	12 (38.7)	10 (47.6)	5 (62.5)	1 (100)	46 (41.8)
Telephone	10 (45.5)	10 (37.0)	14 (45.2)	17 (81.0)	5 (62.5)	1 (100)	56 (50.9)
Handwritten on client's card/booklet	0	6 (22.2)	5 (16.1)	0	0	0	11 (10.0)
Referral completion tracking mechanism [b]							
Oral	10 (45.5)	11 (40.7)	14 (45.2)	11 (52.4)	3 (37.5)	0	49 (44.6)
Returned referral forms	2 (9.1)	0	0	1 (4.8)	1 (12.5)	0	4 (3.6)
Handwritten note	0	2 (7.4)	3 (9.7)	1 (4.8)	0	0	6 (5.5)
Telephone call	5 (22.7)	4 (14.8)	3 (9.7)	2 (9.5)	0	0	14 (12.7)
No mechanism	8 (36.3)	11 (40.7)	17 (54.8)	8 (38.1)	3 (37.5)	1 (100)	48 (43.6)
Transport available for emergency referrals	1 (4.5)	12 (44.4)	22 (71.0)	21 (100)	8 (100)	1 (100)	66 (60.0)
Type of transport offered for emergency referral							
Free ambulance	0	3 (11.1)	10 (32.3)	8 (38.1)	3 (37.5)	1 (100)	25 (22.7)
Ambulance for hire [c]	0	7 (25.9)	4 (12.9)	12 (57.1)	5 (62.5)	0	29 (26.4)
Other [d]	1 (4.6)	2 (7.4)	8 (25.8)	1 (4.8)	0	0	12 (10.9)

State of the Health Referral System in Kenya: Results from a Baseline Study on the Functionality of the Health Referral System in Eight Counties

16

	Community units (n=22)	Dispensary (n=27)	Health Center (n=31)	Hospital (n=21)	County referral hospital (n=8)	National referral (n=1)	All facilities and CUs
Emergency referrals accompanied							
Never	1 (4.6)	9 (33.3)	2 (6.5)	0	0	0	12 (10.9)
Sometimes	15 (68.2)	9 (33.3)	12 (38.7)	3 (14.3)	0	0	39 (35.5)
Always	6 (27.3)	9 (33.3)	17 (54.8)	18 (85.7)	8 (100)	1 (100)	59 (53.6)
Person accompanying emergency referral							
Nurse	0	17 (63.0)	27 (87.1)	21 (100)	8 (100)	1 (100)	74 (67.3)
CHW	21 (95.5)	1 (3.7)	0	0	0	0	22 (20.0)
Other [e]	0	0	2 (6.5)	0	0	0	2 (1.8)

NOTE: Number of facilities and community units and their corresponding percentages, shown in parenthesis.

[a] Facilities used multiple methods to refer clients (e.g., standard referral forms were available in most facilities for tuberculosis and comprehensive care clinics); therefore, the rest of the departments used other methods to refer clients.

[b] Facilities used multiple methods (e.g., for emergency referrals accompanied, the nurse would report completion to the facility, while other referrals had no tracking mechanism.

[c] Ambulance for hire includes (1) facility ambulance hired by clients, (2) ambulance offered by facility and client pays fuel costs, and (3) ambulance costs are shared between facility and client.

[d] Other includes wheelbarrow in community unit, a taxi for hire, facility utility vehicle, or other government cars, such as police cars.

[e] Referrals were accompanied by support staff or other facility staff.

State of the Health Referral System in Kenya: Results from a Baseline Study on the Functionality of the Health Referral System in Eight Counties

17

For emergency referrals, 66% of facilities and CUs reported offer transport to transfer emergency referrals to the receiving facilities, although this varied by type of facility (see Table 4). All hospitals, county referral facilities, and the national referral facility reported offering transport for emergency referrals. Types of transport offered for emergency referrals included, an ambulance provided free of charge (22.7%), an ambulance for hire (26.4%), and other forms of transport (10.9%), such as taxis, wheelbarrows, facility utility vehicle, and other government vehicles such as police cars. More than half (53.6%) of the facilities and CUs reported that emergency referrals were always accompanied, while 10.9% reported that emergency referrals were never accompanied. Most emergency referrals from health facilities were reported to be accompanied by a nurse, while most referrals from CUs were accompanied by CHWs. Several reasons were cited for not accompanying emergency referrals including: staff shortages, lack of transport for referrals, and some of the CHWs feared the referral outcome.

Referral initiation rates for inter–facility and intra–facility referrals were calculated for January to June 2012. Overall, the mean inter–facility referral initiation rate for maternity was 4.2%, but the percentage varied by facility type and was lowest in the county referral facilities. The mean inter–facility referral initiation rates were 4.5%, 6.9%, 4.9%, and 0.4% for the dispensaries, health centers, hospitals, and county referral facilities, respectively. Figure 6 shows monthly trends in maternity referral initiation rates in maternity departments by facility type.

Figure 6: Inter–facility maternity department referral initiation rates in selected facilities, January to June 2012
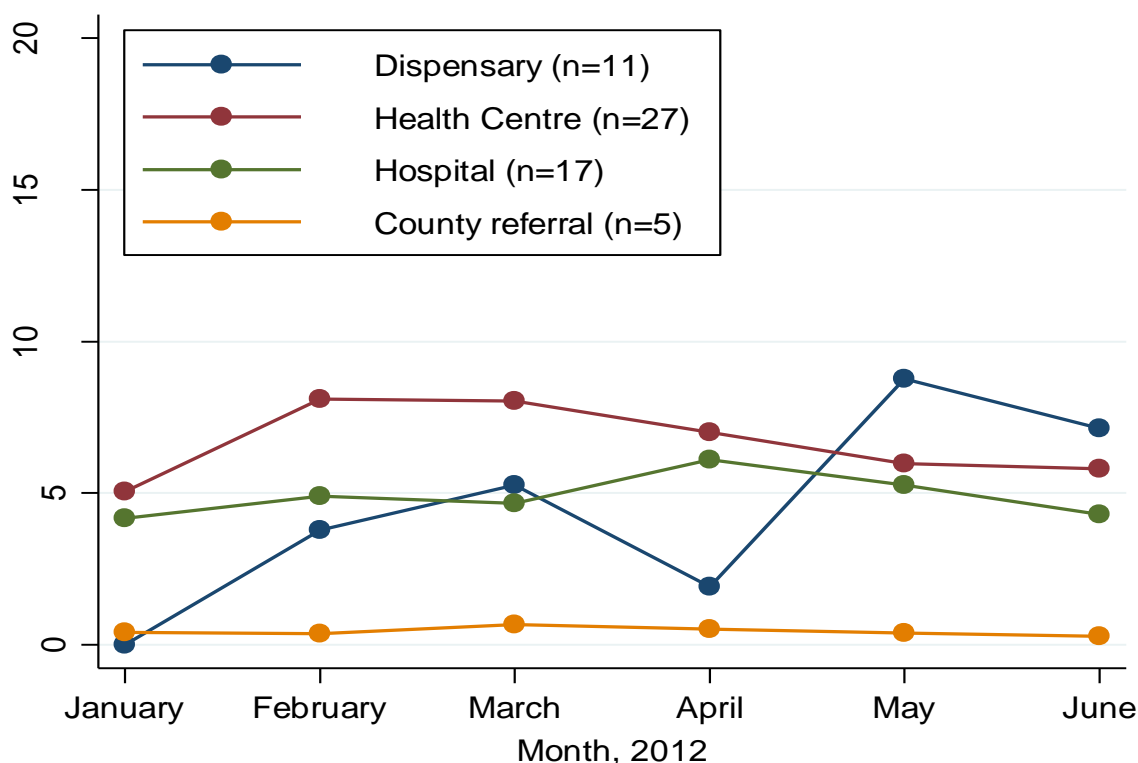
The mean inter-facility referral initiation rate from ANC was 4.0% and was highest in dispensaries (12.6%). The mean inter–facility referral initiation rate from ANC in the health centers, hospitals, and county referral facilities were 2.3%, 0.5%, and 0.5%, respectively. Figure 7 shows the monthly inter–facility referral initiation rates from ANCs by facility type for January to June 2012.

Figure 7: Inter–facility referral initiation rates for ANCs in selected facilities, January to June 2012
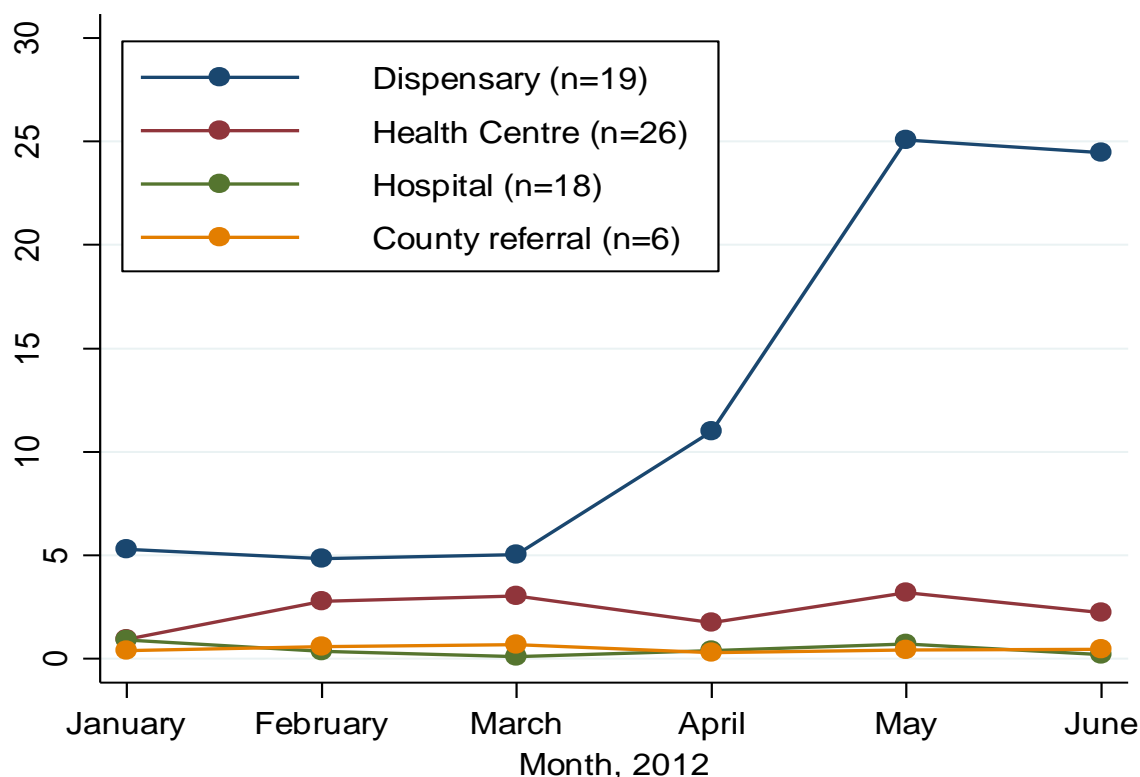
No intra–facility referrals were recorded in dispensaries; other levels of intra–facility referral rates ranged from a mean of 9.1%, 2.3%, and 1.6% in health centers, hospitals, and county referral facilities, respectively (see Figure 8).

State of the Health Referral System in Kenya: Results from a Baseline Study on the Functionality of the Health Referral System in Eight Counties

19

Figure 8: Intra–facility referral initiation rates for the maternity departments in the study facilities, January to June 2012
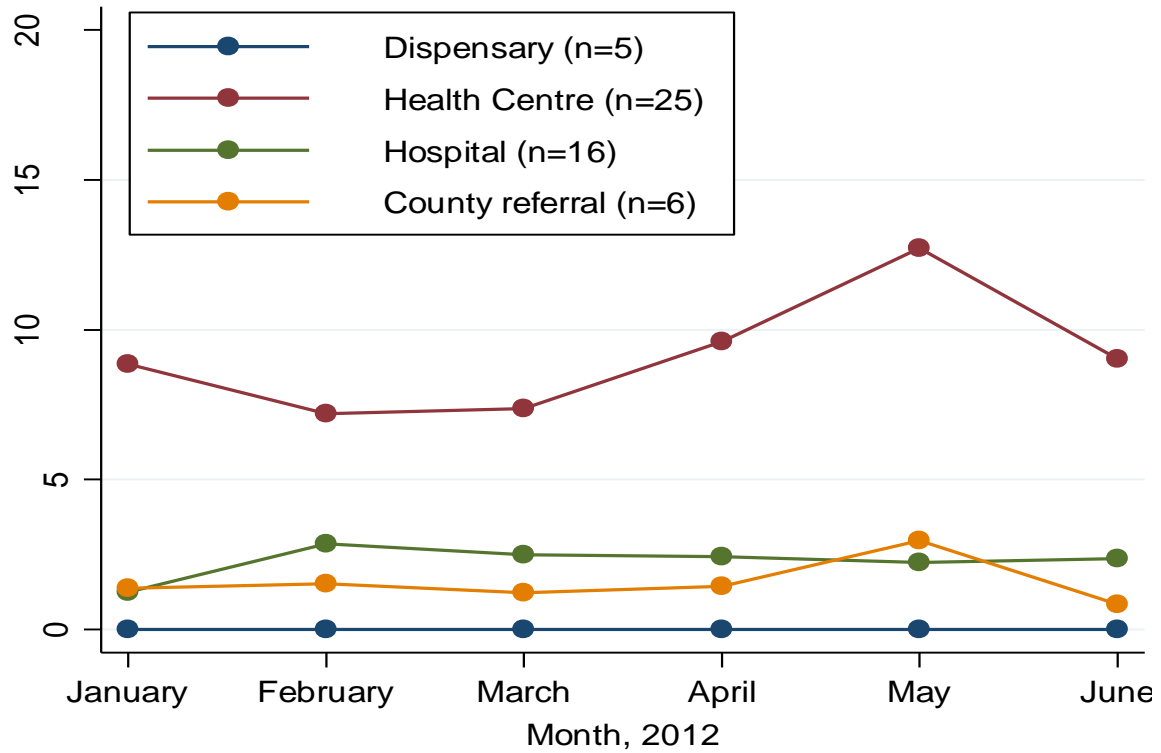
The monthly intra-facility referral rates for ANC were highest in the higher level facilities, for the six months ranging from a mean of 2.4% in dispensaries to 2.8%, 6.8%, and 5.8% in health centers, hospitals, and county referral facilities respectively (see Figure 9).

State of the Health Referral System in Kenya: Results from a Baseline Study on the Functionality of the Health Referral System in Eight Counties

20

Figure 9: Intra–facility referral initiation rates for the ANC departments in the study facilities, January to June 2012.
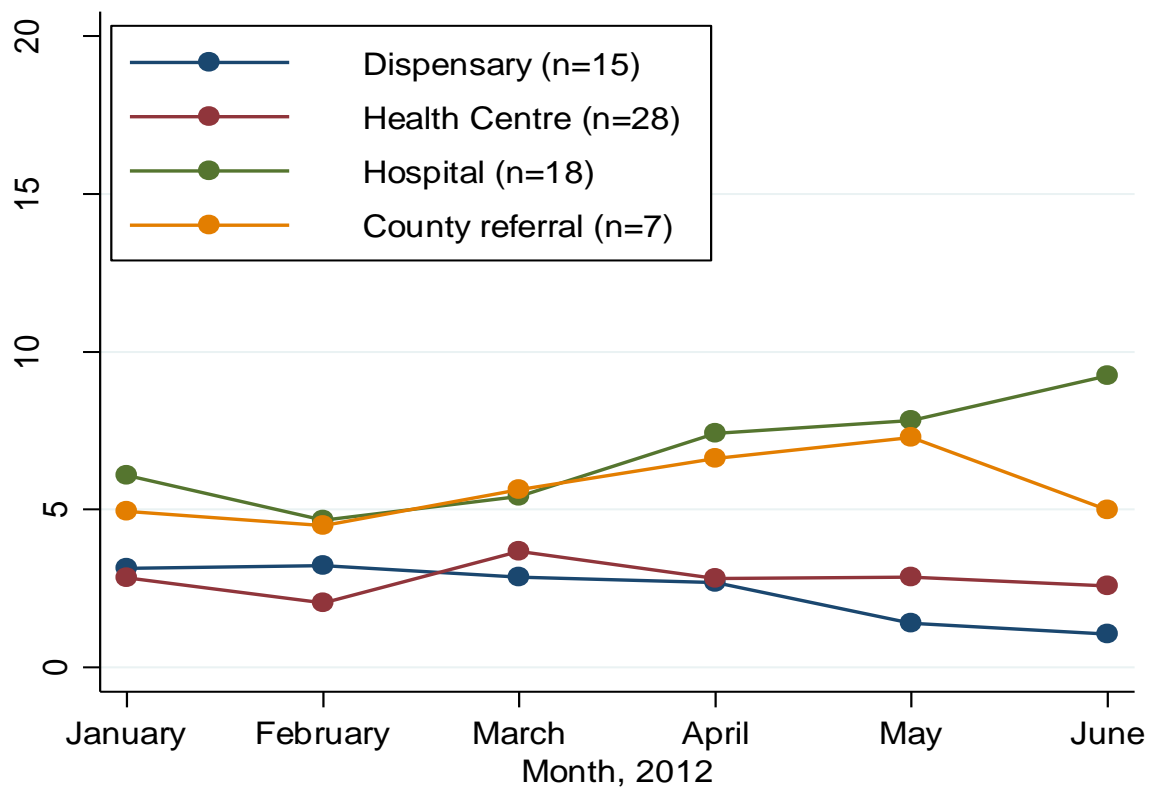
3.4.3   Referrals In

Most (78.2%) of the sampled facilities (n=83) and a few CUs (n=3) reported receiving referrals from other facilities. The most common reported causes of referrals into facilities were medical conditions (35.7%), obstetrics (23.2%), surgical (8.2%), HIV related (8.2%), and TB (7.7%) (see Figure 10).

Figure 10: Common reported causes of referrals to the study facilities and CUs, Kenya 2013
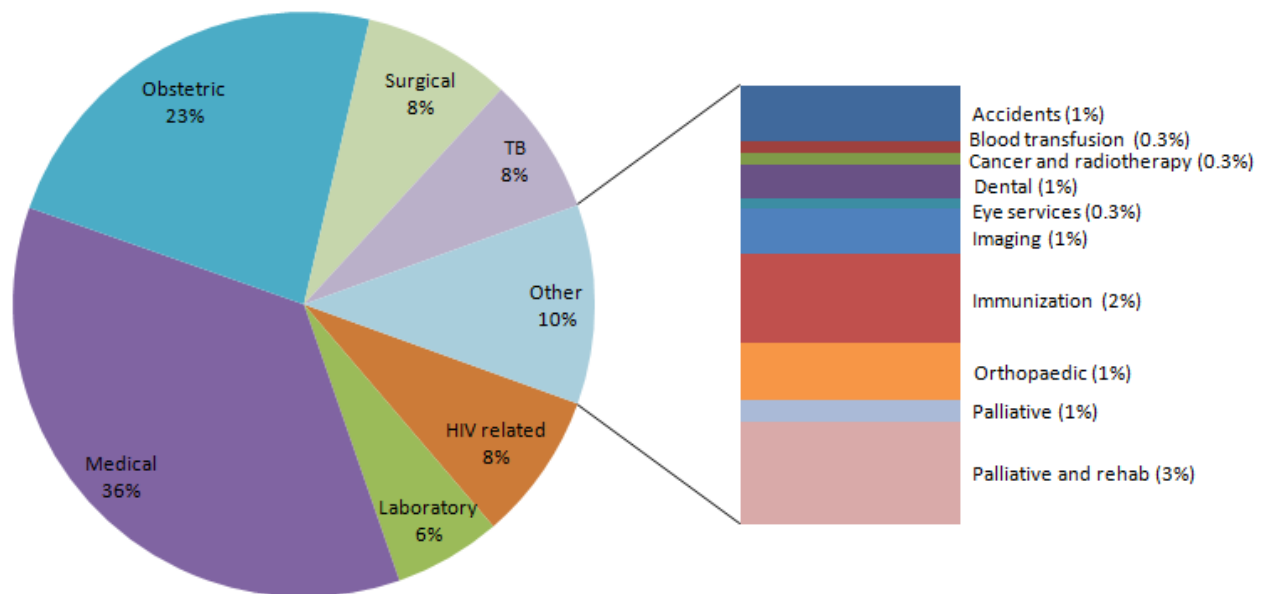
Referring facilities used various referral communication methods to refer clients to study facilities: oral referrals (30.9%), referral forms (32.7%), handwritten notes (39.1%), and other methods, as shown in Table 5. More than half (59.1%) of the facilities reported giving priority to referred clients who arrived with a referral note and 40.0% of the facilities and CUs reported that they counter–referred some referred clients back to the originating facility. Several methods were used to counter–refer clients (see Table 5).

A fifth of the facilities (n=22) reported that emergency referrals to the facility were never accompanied, while 19.1% and 39.1% reported that emergency referrals were always or sometimes accompanied to the facility from the originating facility respectively. Emergency referrals to the facilities were accompanied by a nurse (30.0%), clinical officer (4.6%), or CHW (29.1%), and the cadre of the person accompanying varied by facility type (see Table 5).

Table 5: Referral procedures for receiving referred clients into the study facilities and CUs, referral system assessment survey in Kenya, 2013.

	Community Units (n=22)	Dispensary (n=27)	Health Center (n=31)	Hospital (n=21)	County Referral Hospital (n=8)	National Referral (n=1)	All Facilities and Community Units (n=110)
Receives referrals	3 (13.6)	23 (85.2)	30 (96.8)	21 (100)	8 (100)	1 (100)	86 (78.2)
Method of referral communication [a]							
Oral	1 (4.6)	6 (22.2)	14 (45.2)	9 (42.9)	4 (50.0)	0	34 (30.9)
Standard referral form	1 (4.6)	13 (48.2)	8 (25.8)	10 (47.6)	3 (37.5)	1 (100)	36 (32.7)
Handwritten on blank paper	1 (4.6)	10 (37.0)	17 (54.8)	8 (38.1)	6 (75.0)	1 (100)	43 (39.1)
Client is escorted	0	10 (37.0)	8 (25.8)	10 (47.6)	6 (75.0)	0	34 (30.9)
Telephone	2 (9.1)	5 (18.5)	11 (35.5)	10 (47.6)	6 (75.0)	0	34 (30.9)
Client records (cards or booklets)	0	2 (7.4)	9 (29.0)	6 (28.6)	0	0	17 (15.5)
Priority given to referrals							
No	1 (4.6)	12 (44.4)	5 (16.1)	4 (19.1)	0	0	21 (19.1)
Yes	2 (9.1)	11 (40.7)	25 (80.7)	17 (81.0)	8 (100)	1 (100)	65 (59.1)
Counter–refer to originating service							
No	3 (13.6)	11 (40.7)	11 (35.5)	14 (66.7)	3 (37.5)	0	42 (38.2)
Yes	0	12 (44.4)	19 (61.3)	7 (33.3)	5 (62.5)	1 (100)	44 (40.0)
How often counter–referrals are made							
Always	0	5 (18.5)	2 (6.5)	0	0	0	7 (6.4)
Sometimes	0	7 (25.9)	17 (54.8)	7 (33.3)	5 (62.5)	1 (100)	37 (33.6)
Never	22 (100)	15 (55.6)	12 (38.7)	14 (66.7)	3 (37.5)	0	66 (60.0)
Counter–referral method [a]							
Oral	0	3 (11.1)	8 (25.8)	1 (4.8)	1 (12.5)	0	13 (11.8)
Standard counter referral form	0	1 (3.7)	0	1 (4.8)	0	0	2 (1.8)
Section of the referral form filled	0	2 (7.4)	4 (12.9)	1 (4.8)	0	0	7 (6.4)
Handwritten note on blank paper	0	4 (14.8)	7 (22.6)	3 (14.3)	2 (25.0)	0	16 (14.6)
Patient's card or booklet or discharge summaries	0	2 (7.4)	6 (19.4)	2 (9.5)	3 (37.5)	0	13 (11.8)
Frequency emergency referrals are accompanied							
Always	1 (4.6)	7 (25.9)	6 (19.4)	4 (19.1)	3 (37.5)	0	21 (19.1)
Sometimes	1 (4.6)	8 (29.6)	16 (51.6)	14 (66.7)	5 (62.5)	1 (100)	43 (39.1)
Never	1 (4.6)	8 (29.6)	8 (25.8)	3 (14.3)	0	0	22 (20.0)

State of the Health Referral System in Kenya: Results from a Baseline Study on the Functionality of the Health Referral System in Eight Counties

23

	Community Units (n=22)	Dispensary (n=27)	Health Center (n=31)	Hospital (n=21)	County Referral Hospital (n=8)	National Referral (n=1)	All Facilities and Community Units (n=110)
Person accompanying emergency referral [a]							
Clinical officer	0	0	2 (6.5)	2 (9.5)	1 (12.5)	0	5 (4.6)
Nurse	0	1 (3.7)	11 (35.5)	12 (57.1)	8 (100)	1 (100)	33 (30.0)
Community health worker	0	14 (51.9)	10 (32.3)	5 (23.8)	3 (37.5)	0	32 (29.1)
Relatives	0	3 (11.1)	7 (22.6)	3 (14.3)	0	0	13 (11.8)

Note: Number of facilities and community units and their corresponding percentages, shown in parenthesis.

[a] Multiple methods were used to refer and counter-refer clients into and out of facilities; referrals into one facility would be accompanied by different cadres of staff.

State of the Health Referral System in Kenya: Results from a Baseline Study on the Functionality of the Health Referral System in Eight Counties

24

3.4.4   Downward Referrals (Expertise Movement)

All 88 study facilities reported providing services or expertise to lower-level facilities. The services provided included specialized clinics, such as gynecology, psychiatry, and eye clinics, which were provided by 14 of the facilities. Four facilities provided surgical services, and 27 of 88 facilities provided outreach services for general outpatient services, immunization, family planning, HIV testing, and growth monitoring. Almost half the facilities (47.7%) reported providing downward referrals monthly and 8.2% provided the services weekly, 6.4% provided downward referrals quarterly, 0.9% provided downward services twice in a year, and 5.5% provided the services on as needed. The services provided downwards and the frequency of the downward referrals varied by facility type (see Table 6).

Table 6: Referral processes for downward referrals or expertise movement in facilities sampled, referral system assessment survey 2013, Kenya

	Community Units (n=22)	Dispensary (n=27)	Health Center (n=31)	Hospital (n=21)	County Referral Hospital (n=8)	National Referral (n=1)	All Facilities and Community Units (n=110)
Downward referrals or expertise provided	0	13 (48.1)	16 (51.2)	9 (41.9)	5 (62.5)	1 (100)	44 (40.0)
Type of services and expertise referred downward [a]							
Specialized clinics	N/A	0	4 (12.9)	5 (23.8)	4 (40.0)	1 (100)	14 (12.7)
Surgical services	N/A	0	2 (6.5)	1 (4.8)	1 (12.5)	0	4 (3.6)
Emergency services	N/A	0	3 (9.7)	2 (9.5)	0	0	5 (4.6)
Outreach services	N/A	12 (44.4)	11 (35.5)	3 (14.3)	1 (12.5)	0	27 (24.6)
Frequency of downward referrals							
Weekly	N/A	0	4 (12.9)	2 (9.5)	2 (25.0)	1 (100)	9 (8.2)
Monthly	N/A	10 (37.0)	8 (25.8)	1 (4.8)	2 (25.0)	0	21 (19.1)
Quarterly	N/A	1 (3.7)	2 (6.5)	3 (14.3)	1 (12.5)	0	7 (6.4)
Twice a year	N/A	1 (3.7)	0	0	0	0	1 (0.9)
As needed	N/A	1 (3.7)	2 (6.5)	3 (14.3)	0	0	6 (5.5)

Note: Number of facilities and community units and their corresponding percentages, shown in parenthesis.
[1]Facilities provided multiple types of downward referral services.

State of the Health Referral System in Kenya: Results from a Baseline Study on the Functionality of the Health Referral System in Eight Counties

26

3.5 AVAILABILITY OF REFERRAL GUIDELINES AND PROTOCOLS

Overall, only 15 (13.6%) facilities reported having referral guidelines or protocols in their facilities (see Table 7). No CU or county referral facilities reported having referral guidelines. Among facilities that reported having guidelines, 13 out 15 facilities had guidelines that were department specific; the remaining 2 facilities had referral guidelines for all referrals in the facility. Guidelines were available for CCC, TB, laboratory and maternity departments (see Table 7). In most facilities (14 out of 15) where referral guidelines were available, care providers were reported to have been provided with the guidelines; however, only providers in 8 out the 15 facilities were reported to have received training on the guidelines.

FGDs respondents reported a lack of written guidelines to help guide the referral process. The following quote from one respondent describes the intuitive guidelines used to manage the referral process:

> *"...we don't have guidelines but of course...you are sure that this is a government facility and the procedure is you refer this patient to the next...district hospital...that is the procedure and I think it applies to the whole country."* (Respondent, county referral hospital).

Although written guidelines were lacking, some respondents reported following good clinical practice or informal guidelines to handle emergencies. Respondents suggested these guidelines for receiving and sending referral patients:

Receiving referred patients

- Do not take more than 45 minutes to attend to patients.
- Review referral notes to determine action to be taken.
- Escort patient to appropriate department.

Referring patients

- Take no more than 45 minutes to attend to referrals (if emergency).
- Provide pre-referral investigations that include blood pressure, blood group.
- Complete a referral form or letter, or note.
- Call the referral facility before sending a patient and accompany the patient.
- Do not refer an emergency to a lower-level facility.

Despite this, respondents reported not knowing or receiving any MOH protocols or guidelines on the referral system. The document review showed that although clinical guidelines existed on when to refer a patient, no guidelines existed on referral processes except for laboratory specimen referrals for HIV and TB, where referral guidelines and standard referral forms were available.

Table 7: Availability of referral guidelines in facilities sampled, referral system assessment survey 2013, Kenya

	Community Units (n=22)	Dispensary (n=27)	Health Center (n=31)	Hospital (n=21)	County Referral Hospital (n=8)	National Referral (n=1)	All Facilities and Community Units (n=110)
Referral guidelines and protocols available	0	4 (14.8)	7 (22.6)	4 (19.1)	0	0	15 (13.6)
Services with referral guidelines							
Entire facility	0	1 (3.7)	0	1 (4.8)	0	0	2 (1.8)
Department-specific		3 (11.1)	7 (22.6)	3 (14.3)	0	0	13 (11.8)
Entire facility and departments	0						
Department guidelines available [a]							
Comprehensive care clinics	0	3 (11.1)	4 (12.9)	2 (9.5)	0	0	9 (8.2)
Tuberculosis	0	1 (3.7)	2 (6.5)	1 (4.8)	0	0	4 (3.6)
Maternity	0	2 (7.4)	5 (16.1)	1 (4.8)	0	0	8 (7.3)
Laboratory	0	0	1 (3.2)	0	0	0	1 (0.9)
Guidelines and protocols available to care providers	0	3 (11.1)	7 (22.6)	4 (19.1)	0	0	14 (12.7)
Care providers trained on guidelines		2 (7.4)	3 (9.7)	3 (9.7)	0	0	8 (7.3)
Evidence of guidelines training available	0	1 (3.7)	0	2 (9.5)	0	0	3 (2.7)
Care providers supervised on guidelines usage	0	3 (11.1)	2 (6.5)	2 (9.5)	0	0	7 (6.4)
Directory of services available	1 (4.6)	0	1 (3.2)	3 (14.3)	0	0	5 (4.6)

Note: Number and percentages of facilities and community units and their corresponding percentages, shown in parenthesis.

[a] Guidelines were available for multiple departments in a facility.

State of the Health Referral System in Kenya: Results from a Baseline Study on the Functionality of the Health Referral System in Eight Counties

28

3.6 REFERRAL RECORDS SYSTEM AND USE OF REFERRAL DATA

Overall, 75.5% of facilities and community units had a referral recordkeeping system, 71.8% had recordkeeping system for data on referrals out of the facility, but only 27.3% had a system for recording referrals into facilities (see Table 8). The most common recordkeeping system for referral data was recording referrals in individual patient records or a register for both referrals out (30.9%) and referrals in (17.3%). Some facilities had improvised registers for recording referrals (see Figure 11).

Figure 11: Example of improvised referral register in one of the selected facilities
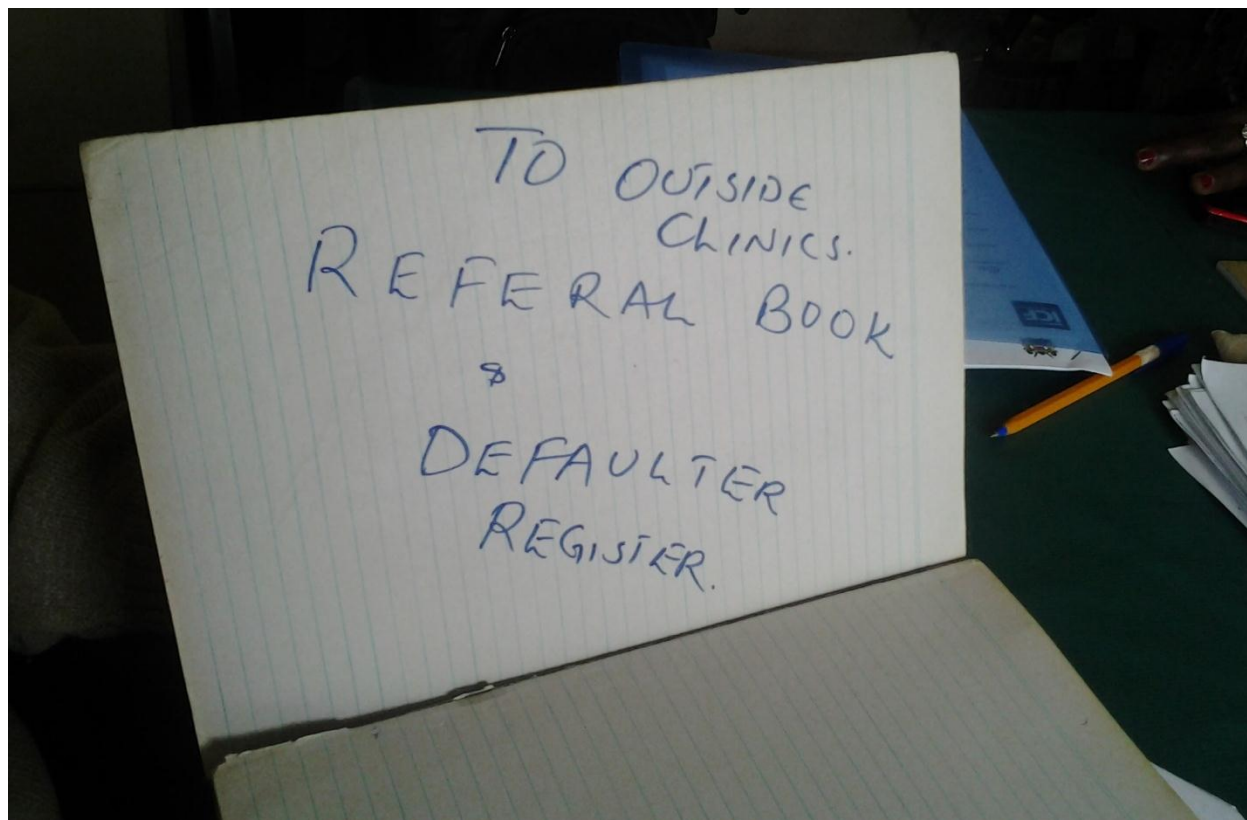
Various cadres of staff were reported to be responsible for referral data in the facilities and CUs: facility in–charges (22.7%), clinical officers (6.4%), nurses (35.5%), and health records and information officers (20.0%) (see Table 8). Most people responsible for referral data had not received any training on data management; for the few who had received training, the most common training was on the use of the national Health Management Information System (16.4%). Although almost half of the facilities and CUs (46.4%) reported archiving referral data, the most common method of archiving was on paper–based individual patient records (51.0%). Referral data were analyzed in only 26 of the facilities and CUs, and reports were discussed in only 20 of the facilities and CUs.

In the FGDs, respondents reported that the lack of referral data hindered the functioning of the referral system. Respondents in all hospitals stated that referral data were aggregated monthly, but they also reported that the data were not used except in situations where they felt the need to provide feedback to a lower-level facility. Some respondents suggested that the lack of referral data

meant that facilities were unable to tell if a referral was completed and it hindered planning at the facility level to meet the needs of referred patients.

> **"***The only problem is that we are not able to document whether we sent a patient to the CCC and that patient reached the CCC…there is these gaps and then making sure that indeed I sent somebody to the TB clinic or whether the client reached the TB clinic.***"** (Respondent, county hospital)

Some respondents blamed the lack of referral data on a shortage of health workers, and they said the shortage affected referral data collection. Some respondents suggested that while it was the responsibility of the records officer to tally data, the most important issue was whether the health worker recorded the data initially to pass on to the records officer.

> *"The shortage (of health workers) and workload…if you are alone, you are the one admitting the patient, you are the one delivering the patient…in maternity for example you are the one to admit, you are in the labour ward, are in antenatal and postnatal, you are referring, just one nurse; so sometimes workload can make you not to be able to attend well to the patient."* (Respondent, sub-county hospital)

In addition, the lack of data on referrals was attributed to a lack of documents to record referrals. The following quotes show that even with willingness to record data, but the lack of registers, further inhibited the willingness to collect these data.

> *"We have not taken referrals actually for priority of reporting. I know the data for referrals is important but the management has not put that to capture all referrals and to document all referrals but we have a bigger picture of how many referrals we receive and the number of people who come."* (Respondent, county hospital)

> *"The barriers, one, data collection tools are not there in the units that are referring. They don't have in their register a column where the patient will be referred sometimes. Because what we have is the referral notes and referrals forms. We don't have a register where you show where you have referred, what you referred, number of these. We just give the referral notes and it does not have a carbon copy. So if he goes with it there is nowhere to show. Data collecting tools I think are not adequate."* (Respondent, county hospital)

3.7 ACCURACY OF REPORTED REFERRAL DATA

The quality of referral data was assessed by comparing the monthly number of referrals counted in maternity, ANC, and CCC registers and the number of referrals reported in the MOH summary 711 for 72 facilities. Overall data were compared for a total of 222 months but only 39.6% of the monthly counts of referrals reported in the maternity register matched the numbers reported in the MOH 711 summary register for each month per facility (see Figure 12). In 17.6% of the times, the MOH 711 register over–reported the numbers of maternity referrals while in 42.8% of the times, the MOH 711 register under–reported maternity referrals.

Figure 12: Relationship between the number of referrals counted in the maternity register (MOH 333) and the number of referrals reported in the MOH 711 summary register, January to June 2012 in eight counties in Kenya
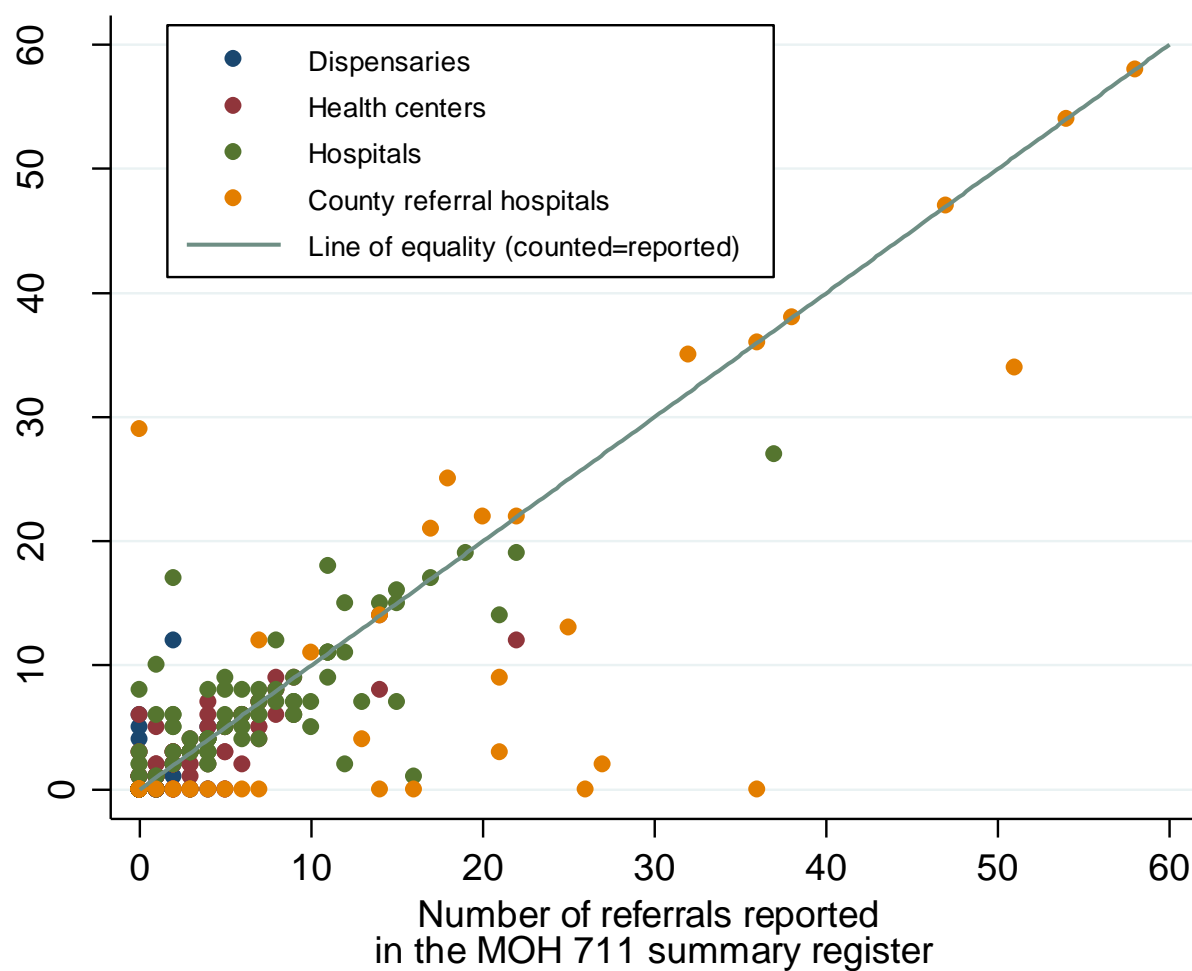
Table 8: Recording and use of referral data in the facilities and community units sampled for the referral system assessment survey 2013, Kenya

	Community Units (n=22)	Dispensary (n=27)	Health Center (n=31)	Hospital (n=21)	County Referral Hospital (n=8)	National Referral (n=1)	All Facilities, Community Units (n=110)
Referrals out							
Record keeping system available	17 (77.3)	13 (48.2)	23 (74.2)	18 (85.7)	7 (87.5)	1 (100)	79 (71.8)
Type of recordkeeping system [a]							
Patient register or individual medical record	0	8 (29.6)	14 (45.2)	7 (33.3)	5 (62.5)	0	34 (30.9)
Electronic medical records	0	0	0	2 (9.5)	1 (12.5)	0	3 (2.7)
Referral register	1 (4.6)	0	6 (19.4)	5 (23.8)	2 (25.0)	1 (100)	15 (13.6)
Retain copies of the referral form	13 (59.1)	2 (7.4)	5 (16.1)	9 (42.9)	1 (12.5)	0	30 (27.3)
Others [b]	2 (9.1)	4 (14.8)	6 (19.4)	3 (14.3)	1 (12.5)	0	16 (14.6)
Referrals in							
Referral recordkeeping system available	0	6 (22.2)	9 (29.0)	9 (42.9)	5 (62.5)	1 (100)	30 (27.3)
Type of recordkeeping system							
Patient register or individual medical record	0	3 (11.1)	7 (22.6)	5 (23.8)	4 (50.0)	0	19 (17.3)
Referral register	0	0	1 (3.2)	1 (4.8)	0	1 (100)	3 (2.7)
Others [c]	0	3 (11.1)	1 (3.2)	3 (14.3)	1 (12.5)	0	8 (7.3)
Referral data analysis and use (referrals in and out)							
Person responsible for keeping referral records							
Facility or department in-charge	3 (13.6)	9 (33.3)	9 (29.0)	3 (14.3)	1 (12.5)	0	25 (22.7)
Clinical officer	1 (4.6)	1 (3.7)	4 (12.9)	1 (4.8)	0	0	7 (6.4)
Nurse	1 (4.6)	17 (63.0)	10 (32.3)	9 (42.9)	2 (25.0)	0	39 (35.5)
Health records and information officer	0	2 (7.4)	4 (12.9)	12 (57.1)	3 (37.5)	1 (100)	22 (20.0)
CHEW	16 (72.7)	3 (11.1)	4 (12.9)	0	0	0	23 (20.9)
CHW	10 (45.5)	1 (3.7)	0	0	0	0	11 (10.0)
Others [d]	1 (4.6)	2 (7.4)	2 (6.6)	1 (4.8)	0	0	6 (5.5)
Person responsible for data trained on data management	6 (27.3)	6 (22.2)	10 (32.3)	11 (52.4)	4 (50.0)	1 (100)	38 (34.6)
Type of training [e]							
Health Management Information System	2 (9.1)	4 (14.8)	5 (16.1)	6 (28.6)	0	1 (100)	18 (16.4)
Professional training	0	0	3 (9.7)	2 (9.5)	2 (25.0)	1 (100)	8 (7.3)
CHEW training	4 (18.2)	0	0	0	0	0	4 (3.6)
Other [f]	2 (9.1)	2 (7.4)	3 (9.7)	2 (9.5)	0	0	9 (8.2)
Referral data storage or archiving mechanism	12 (54.6)	9 (33.9)	13 (41.9)	11 (52.4)	5 (62.5)	1 (100)	51 (46.4)

State of the Health Referral System in Kenya: Results from a Baseline Study on the Functionality of the Health Referral System in Eight Counties

32

	Community Units (n=22)	Dispensary (n=27)	Health Center (n=31)	Hospital (n=21)	County Referral Hospital (n=8)	National Referral (n=1)	All Facilities, Community Units (n=110)
Type of referral data storage or archiving mechanism							
Paper individual patient records	9 (40.9)	3 (11.1)	8 (25.8)	5 (23.8)	1 (12.5)	0	26 (51.0)
Paper summary registers	3 (13.6)	4 (14.8)	2 (6.5)	1 (4.8)	2 (25.0)	0	12 (23.5)
Both paper and electronic in individual patient records	0	2 (7.4)	1 (3.2)	5 (23.8)	2 (25.0)	1 (100)	11 (21.6)
Paper individual patient records and summary registers	0	0	2 (6.5)	0	0	0	2 (3.9)
No mechanism	10 (45.5)	18 (66.7)	18 (58.1)	10 (47.6)	3 (37.5)	0	59 (53.6)
Referral data analyzed	7 (31.8)	9 (33.3)	7 (22.6)	3 (14.3)	0	0	26 (23.6)
Analysis report discussed	6 (27.3)	8 (29.6)	5 (16.1)	3 (14.3)	0	0	22 (20.0)
Referral report discussion forum							
Facility management team	0	4 (14.8)	1 (3.2)	1 (4.8)	0	0	6 (27.3)
Department staff meetings	0	2 (7.4)	2 (6.5)	2 (9.5)	0	0	6 (27.3)
CHEW or CHW monthly meetings	5 (22.7)	1 (3.7)	0	0	0	0	6 (27.3)
General staff meetings	0	2 (7.4)	2 (6.5)	0	0	0	4 (18.2)
Stakeholder network or consortium for coordinating referrals available	1 (4.6)	6 (22.2)	2 (6.5)	4 (19.1)	2 (25.0)	0	15 (13.6)
Members of the referral network or consortium							
County Health Management Team or Sub-County Health Management Team	1 (4.6)	3 (11.1)	2 (6.5)	4 (19.1)	1 (12.5)	0	11 (10.0)
NGOs	0	3 (11.1)	0	0	1 (12.5)	0	4 (3.6)
Referral forum meeting frequency							
Monthly	0	3 (11.1)	1 (3.2)	4 (19.1)	1 (12.5)	0	9 (8.2)
Quarterly	1 (4.6)	1 (3.7)	0	0	0	0	2 (1.8)
On need basis	0	2 (7.4)	1 (3.2)	0	1 (12.5)	0	4 (3.6)
Copy of the referral meeting minutes available	1 (4.6)	2 (7.4)	1 (3.2)	0	0	0	4 (3.6)

Note: Number of facilities and community units and their corresponding percentages, shown in parenthesis.

[a] Multiple referral recordkeeping systems were in place in one facility.

[b] Other referral recordkeeping systems included improvised referral registers, daily activity sheets, tally sheets, referral forms kept in a file and in the ward admission books.

[c] Other referral recordkeeping systems for referrals in included recording the referrals in the daily bed returns, filing the referral forms, and recording in the ward admission books.

[d] Others include peer educators, customer care officers, casual clerks, and the community health committee in the community units.

[e] Multiple types of data management trainings had been undertaken in a single facility.

State of the Health Referral System in Kenya: Results from a Baseline Study on the Functionality of the Health Referral System in Eight Counties

33

f Other data management trainings included data management trainings, data for decision-making training, and data entry and analysis from various organizations, such as NASCOP, JICA, and Aphia Plus.

State of the Health Referral System in Kenya: Results from a Baseline Study on the Functionality of the Health Referral System in Eight Counties

34

3.8 ACCOUNTABILITY FOR PROVIDER PERFORMANCE AND SUPPORTIVE SUPERVISION

A few facilities and CUs (13.6%) reported having stakeholder networks or consortiums where referrals were discussed and coordinated. The stakeholder networks and consortiums included the county health management teams, sub-county health management team, health facilities, and nongovernmental organizations (see Table 8). In the FGDs, respondents reported that the lack of accountability in the referral system contributed to inappropriate referrals, in terms of necessity and quality. The lack of accountability also resulted in patients bypassing lower-level facilities where quality was perceived to be lower, and therefore, resulting in overcrowding in higher-level facilities. The following quotes highlight the issues of referral inappropriateness and lack of accountability:

> *"I think the system broke down somewhere down the line...But now you see these referrals are coming without any information and sometimes they are coming alone because they are saying in that particular facility there is no petrol...you know that is what they usually say...'there is no petrol, the vehicle broke down, and there is no doctor' and you see...who is there is waiting for a client to come and then refer...and what I have heard and I think that is from people on the ground...what they do...even the doctors who are there...they sign those transfers [referral forms] earlier and maybe they went away even a week ago...and then what they did...they just wrote transfer, transfer so that when the nurse gets a patient...is just to write and the signature from the doctor is already there or the one who is supposed to be there is there."*
> (Respondent, county referral facility)

The lack of accountability was hindered by the lack referral data, therefore making it difficult for the facilities that received inappropriate referrals to give feedback to the referral initiating facilities.

> *"The use of this referral data can be useful and it can help because somebody who is in management to know why are you are referring so many patients...and using that data they will know whether it is people who are not working...whether they have a shortage and they can use that information to help them even get the personnel or whatever they need to improve their facility, so I think the problem here has been this referral information is not made use of and there is no way we would help or say people are not working and we don't have evidence because patients come...you know they can even tell you they went there and the doctor was not there because they want you to receive them. So to us we cannot use that and say exactly that is the reason the patients are coming to us but if we have the number of people coming from a certain area and that information is used by the managers like now we have the director of the health facility and everything in the County that information will help."* (Respondent, county referral facility)

3.9 LINKAGES AND RELATIONSHIPS BETWEEN FACILITIES

Overall, only five facilities and CUs reported having a directory of services providing a list of services provided at the referral facilities, and only three had formal agreements with referral facilities. Respondents felt they intuitively knew about services provided by other facilities, depending on the level of facility in the health system hierarchy; others called referral facilities to ask about services and others knew about services provided through past experiences.

In the FGDs, respondents said the lack formal agreements between facilities and the lack of referral guidelines affected the referral process. Some respondents reported poor reception at receiving facilities, which at times resulted in the health workers non–adherence with good clinical practice, patients not adhering to referral advice, poor patient outcomes and clients being sent back to the referring facilities without being attended.

> *"I know their fears are that they don't like maternal deaths to be counted so many of their hospital and that's why every time you take a maternal patient to [the referral facility] if you are not careful you can really be bullied and you can even be told to deliver…They don't want to enter that patient in their register. If you joke around they can even deliver there on the bed then they tell you we have delivered your patient, now go back."* (Respondent, sub-county facility)

> *"Actually it has been a challenge not necessarily patients from this facility but with some facilities we hear from outside. What some people are doing they just put the patient in the vehicle and when the driver gets there he leaves the patient alone telling them to get in."* (Respondent, sub-county facility)

> *"Like in [health center] there's a maternity which is very active during the daytime but when it comes at night I don't know what happens the clients are just chased away from the gate…before they reach they are told that vehicle that is bringing you here let it not leave before it has taken you…directing to the watchman make sure it doesn't leave the patient we don't have power…they give excuses…if you send the patient there they tell you they went but even before we arrived they said they can't attend to me. And sometimes they end up delivering in the…In the streets so you better refer to another facility."* (Respondent, Health Center)

3.10 CHALLENGES IN THE REFERRAL SYSTEM REPORTED IN THE FGDS

In the FGDs respondents were asked what other challenges influenced the functioning of the referral system. In addition to the previously reported constraints, respondents added lack of infrastructure, such as ambulances, staff shortages, lack of commodities, such as medicines and laboratory reagents, and other issues, such as poverty, poor road networks, insecurity, and culture affected the referral system.

3.10.1 Poverty and Societal Norms

Poverty was reported to be a major influence over referrals. Respondents reported that for some patients, referral to higher-level facilities was expensive, with some patients preferring to stay home and not go to the referral facility.

> *"…So if you tell this client that to go to [another facility] and she knows she needs fare to go…she opts not going. So instead of coming back to you because you have already written ultrasound and she has not gone she decides now to go and sit at home and even at delivery she doesn't want to come back here because she knows she has not done as the doctor instructed…"* (Respondent, sub-county hospital)

In Garissa and Kilifi counties, respondents reported that local societal norms also played an important role in determining use of the referral system, even to the extent that a husband could not give consent for surgical procedures or referral without consent from senior members of the community or the spouse's parents.

State of the Health Referral System in Kenya: Results from a Baseline Study on the Functionality of the Health Referral System in Eight Counties

36

"*This community...their decision (to refer) is made by very special people in the community. One of the things leave alone referrals, giving consent for theatre for example maternity. The husband cannot give the consent – is the father of the woman who was married many years ago who is to give consent. So the husband will be there helpless waiting for the father–in–law consent. It is serious and this is the same for even referral, that they cannot make decision of referral. It has to be made by very specific people in the community.*" (Respondent, county referral hospital)

3.10.2   Poor Road Network

The road network was reported to influence functionality of the referral system. Distance to health facilities influenced patients' choices, where higher-level hospitals were chosen over lower-level ones if they were near. In rural areas, poor transport network was reported to hinder the movement of patients.

"*Okay the road network to the facility from the catchment population. You will find maybe I give a scenario like a mother starts labour knows all about the dangers in pregnancy she is ready to come to the hospital but there is no means so in that process of struggling you find that they reach the facility late where you cannot do anything much.*" (Respondent, health center)

3.11 SUGGESTIONS FOR IMPROVEMENT FROM THE FGDS

Respondents in the FGDs suggested ways to improve the referral system. These suggestions mainly responded to challenges they faced in the referral system. Following is a summary of some of the suggestions:

1. Human Resources for Health
   - *Increase the number of health workers in hospitals*. This would reduce the health worker shortage and allow health workers to properly record referrals, and thus begin to improve the referral system.
2. Leadership and Governance
   - *Avail and train health workers on referral policies and guidelines*. This would increase knowledge of what is needed to get the referral system to function properly. Trained health workers will inform others on the correct procedures for referral.
3. Health Services Delivery
   - *Improve the health infrastructure*. This would help in having space to handle emergencies and walk–in patients at hospitals. Infrastructure could lead to an increased supply of essential commodities and technologies.
4. Health Information Systems
   - *Use referral data to improve the referral system*. This analysis of referral data would help hospitals plan for their services and could help ensure the availability of staff and medical equipment to address the workload.

The following quotes highlight these issues:

"*Let me say we are not badly off. The only thing we still talk on the infrastructure and the human resource. We find sometimes that there is an emergency....we refer because*

we are very few. Someone has to go there and there they come back again. So the human resource and the infrastructure to be strengthened…" (Respondent, sub-county hospital)

"I think those who have come with those policies are the ones who come like if it is here they call a sessions, workshops or whatever one or two days they take people through that and then the people who have been taken through can now roll out to other people and also I was saying with coming of the policies and the guidelines I think also with the data capturing tools or the data tools will also have a space to capture the referrals because once there are tools to capture there at least would be information people will get that feedback and then people what they are doing, how many referrals they are handling and how many they took and the feedback," (Respondent, county referral hospital)

CHAPTER 4: DISCUSSION

A well–functioning referral system is essential to ensure continuity of care in a health system; however, most referral systems in developing countries are less than optimal. In this cross–sectional study, we assessed the current status of the health referral system in eight counties in Kenya. The results suggest that although the need to strengthen the referral system is explicitly stated in the health policy and in the Health Sector Strategic and Investment Plan, many gaps still exist in the referral system. The gaps identified include: (1) lack of clear guidelines on referral processes, (2) inadequately resourced facilities according the national service standards and norms, (3) lack of formal communication and transport mechanisms, (4) poor relationships between referring and receiving facilities, (5) lack of pro–poor protection mechanisms for emergency referrals, (6) inadequate capacity to monitor the referral system and provide feedback, and (7) inaccurately reported referral data.

The results suggest that although all facilities reported referring clients to other facilities, no guidelines existed to guide the referral processes. The lack of guidelines may have led to the reported poor relationships between referring and receiving facilities, as reported in the FGDs. Respondents said some referrals were not honored or health workers escorting emergency referrals were bullied or harassed at the receiving facility. The lack of guidelines may also have led to inappropriate referral practices by health care workers, as reported in the FGDs, and thus result in unnecessary referrals in referral facilities, overcrowding, and bypassing of lower-level facilities by patients. Referral guidelines for inter–facility and intra–facility referrals are necessary to guide health workers on referral communication to both clients and receiving facility or service, improve the appropriateness of referrals in terms of necessity and quality, provide guidance on pro–poor protection mechanisms in emergency referrals, and guide receiving facilities on the referral reception processes. MOH has developed a national referral strategy and investment plan, but the strategy is yet to be finalized and updated with changes in the constitution on the devolved system of governance and with the changes in health policy.

This study highlights the poor relationships that exist between referring and receiving facilities. In the FGDs, some respondents reported hostile reception at referral receiving facilities, patients being sent away from referral facilities, and delays in receiving emergency referrals in receiving facilities. Respondents from receiving facilities said they felt that providers at lower levels sent unnecessary referrals, often with poor documentation, and that at times providers at lower-level facilities used the referral system to avoid work in their facilities. The relationships between facilities can be improved by strengthening referral system performance monitoring, providing supportive supervision to facilities to build capacity of the health workers on the use of the referral system, making health care workers accountable for their referral decisions, and having forums to coordinate and discuss referrals.

The assessment results also highlight the weaknesses in the referral health information systems: (1) a lack of standard referral forms and registers to record referral information; (2) some registers have a provision for recording referral information, but referral data were not perceived as priority; and (3) reported referral data were mostly inaccurate, with only 40% of the monthly data reported in the MOH summary tool matching data from the primary data sources. The lack of clear guidelines on referral data and lack of demand for referral data may have resulted in inaccuracies in reported referral data observed in this study. The results also suggest that some health workers were willing to record referral data, as shown by the availability of improvised referral registers in

some facilities and as discussed in the FGDs; however, training on data quality and data management may be needed to improve the quality and use of referral data.

Bypassing primary care facilities was reported to be a challenge to the health referral system in Kenya. This finding is consistent with reports from other developing countries, where bypassing lower-level facilities has been reported. [5,12,22] Distance to primary care facilities, perception of higher quality of care at referral facilities, lack of knowledge about the referral system, primary facility opening hours, and dysfunctional primary care facilities have been cited as possible reasons for bypassing primary care facilities. [5,23] Some health systems have introduced bypassing fees at referral facilities, but such measures have been criticized for creating inequalities in access by locking out the poor from referral facilities. Improving service delivery at lower-level facilities and providing patient education on the referral system may increase the use of lower-level facilities.

This study is not without limitations. First, the study may have underestimated the referral initiation rates because of the lack of data on referrals and errors in recording referrals. Secondly, this study did not include client surveys, and therefore, it may have missed out on the clients' perspective on the referral system. Finally, the purposive sampling of counties and some facilities may have led to sampling bias, but we are confident that the bias is unlikely to explain the observed results.

In conclusion, the gaps identified highlight weaknesses in the Kenyan referral system and identified gaps that may lead to a negative feedback loop, further leading to failures in the system. Figure 13 shows an example of a negative feedback loop in a referral system. Chapter 5 highlights some recommendations to improve the referral system at both the national and county levels.

Figure 13: Example of a negative feedback loop due to failures in a health referral system

State of the Health Referral System in Kenya: Results from a Baseline Study on the Functionality of the Health Referral System in Eight Counties

40
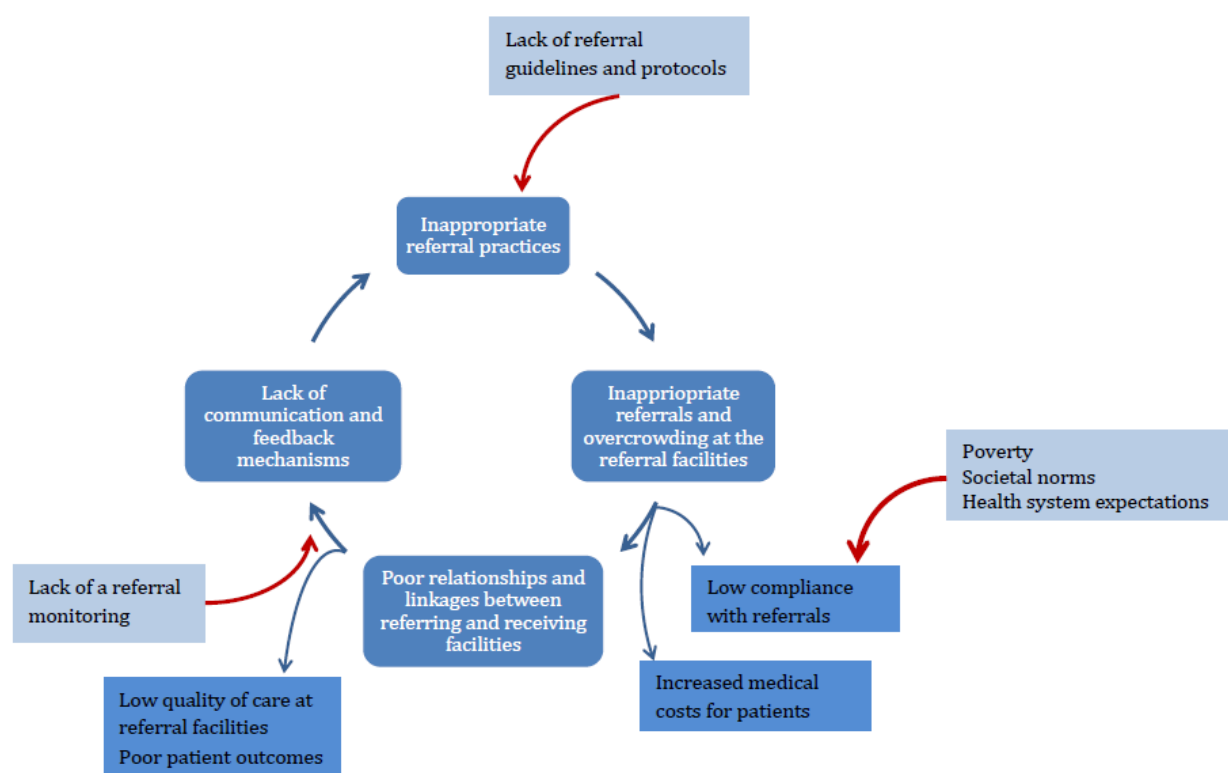
CHAPTER 5: CONCLUSION AND RECOMMENDATIONS

In conclusion, this study suggests that the health referral system in Kenya is less than optimal and the system needs to be strengthened immediately. Strengthening the health referral system can be accomplished only through comprehensive interventions that will affect all elements in the referral system. Following is a list of recommendations at the national and county levels to address some of the gaps the study identified:

National level

1. Finalize the draft Referral Strategy and Investment Plan for Health Services to reflect the new constitution and new changes in the health policy. The referral strategy should also reflect health system capabilities and population needs.
2. Develop national referral guidelines to guide the referral processes at referring and receiving facilities.
3. Develop standard referral forms for health workers to use to improve communication in referrals.
4. Revise existing registers to allow recording referral information or develop referral registers for use at facilities.
5. Strengthen referral health information systems by including referral indicators in the District Health Information System; sensitize health workers to the DHIS tools and routine data quality assurance.
6. Develop a standard referral system monitoring toolkit and curriculum to train health workers on referral system monitoring.

County level

1. Adequately resource health facilities according to the National Health Service Standards and Norms by increasing the number of health workers in hospitals to alleviate shortages, improve the health infrastructure, and improve on the availability of medicines and other commodities.
2. Improve on the emergency referral transport system by increasing the number of functional ambulances to alleviate shortages, put in place pro–poor protection mechanisms for emergency referrals, and improve coordination of emergency transport.
3. Avail and train health workers on the referral policies and guidelines to improve referral processes between facilities.
4. Train health workers on referral system monitoring by training them on referral data collection, data analysis and interpretation, and use of referral data in decision making.
5. Institute referral performance monitoring systems and regularly provide feedback to the facilities.
6. Improve referral coordination between referring and receiving facilities, through stakeholder forums or other referral forums.
7. Provide regular supportive supervision to improve health service quality, build capacity in lower-level facilities, improve accountability, and provide feedback to facilities.

REFERENCES

1.   World Health Organization (WHO). (2005). Constitution of the World Health Organization. Geneva.
2.   Backman, G., Hunt, P., Khosla, R., Jaramillo–Strouss, C., Fikre, B. M., Rumble, C., Pevalin, D., Paez, D. A., Pineda, M. A., Frisancho, A., Tarco, D., Motlagh, M., Farcasanu, D., Vladescu, C. (2008). Health systems and the right to health: an assessment of 194 countries. *Lancet* 372, 2047–85.
3.   Darmstadt, G. L., El Arifeen, S., Choi, Y., Bari, S., Rahman, S. M., Mannan, I., Winch, P. J., Ahmed, A. S., Seraji, H. R., Begum, N., Black, R. E., Santosham, M., Baqui, A. H. (2009). Household surveillance of severe neonatal illness by community health workers in Mirzapur, Bangladesh: coverage and compliance with referral. *Health Policy Plan,* 25, 112–24.
4.   Ilboudo, T. P., Chou, Y. J., Huang, N. (2011). Compliance with referral for curative care in rural Burkina Faso. *Health Policy Plan*, 27, 256–64.
5.   Font, F., Quinto, L., Masanja, H., Nathan, R., Ascaso, C., Menendez, C., Tanner, M., Schellenberg, J., Alonso, P. (2002). Paediatric referrals in rural Tanzania: the Kilombero District Study – a case series. *BMC Int Health Hum Rights*, 2, 4.
6.   Kallander, K., Tomson, G., Nsungwa–Sabiiti, J., Senyonjo, Y., Pariyo, G., Peterson, S. (2006). Community referral in home management of malaria in western Uganda: a case series study. *BMC Int Health Hum Rights,* 6, 2.
7.   Peterson, S., Nsungwa–Sabiiti, J., Were, W., Nsabagasani, X., Magumba, G., Nambooze, J., Mukasa, G. (2004). Coping with paediatric referral––Ugandan parents' experience. *Lancet,* 363, 1955–6.
8.   Kruk, M. E., Mbaruku, G., McCord, C. W., Moran, M., Rockers, P. C., Galea, S. (2009). Bypassing primary care facilities for childbirth: a population–based study in rural Tanzania. *Health Policy Plan,* 24, 279–88.
9.   Murray, S. F., Pearson, S. C. (2006). Maternity referral systems in developing countries: current knowledge and future research needs. *Soc Sci Med*, 62, 2205–15.
10.   Hussein, J., Kanguru, L., Astin, M., Munjanja, S. (2012). The effectiveness of emergency obstetric referral interventions in developing country settings: a systematic review. *PLoS Med*, 9, e1001264.
11.   Hsia, R. Y., Mbembati, N. A., Macfarlane, S., Kruk, M. E. (2012). Access to emergency and surgical care in sub–Saharan Africa: the infrastructure gap. *Health Policy Plan*, 27, 234–44.
12.   Akpede, G. O., Omoigberale, A. I., Dawodu, S. O., Olomu, S. C., Shatima, D. R., Apeleokha, M. (2005). Referral and previous care of children with meningitis in Nigeria: implications for the presentation and outcome of meningitis in developing countries. *J Neurol Sci*, 228, 41–8.
13.   Murray, S. F., Davies, S., Phiri, R. K., Ahmed, Y. (2001). Tools for monitoring the effectiveness of district maternity referral systems. *Health Policy Plan*, 16, 353–61.
14.   Ricca, J. G., Negroustoueva, S. (2009). Development of a monitoring framework for referral within a network of HIV/AIDs service providers. Condensed final report based on four case studies.
15.   Ministry of Health Kenya. (2005). Reversing the trends. The Second National Health Sector Strategic Plan of Kenya – NHSSP II 2005–2010.
16.   Ministry of Health Kenya. (2013). Sessional Paper No. 6 of 2012 of the Kenya Health Policy 2012–2030 (Draft).
17.   Ministry of Health Kenya. (2012). Accelerating the attainment of Health Goals. The First Kenya Health Sector Strategic and Investment Plan – KHSSP July 2012–June 2018.

18. Ministry of Health Kenya. (2013). Referral Strategy and Investment Plan for Health Services – July 2012 – June 2017. Nairobi: Technical Planning and Monitoring / Coordinating Departments.
19. MEASURE Evaluation. (2013). Referral Sytems Assessment and Monitoring Toolkit.
20. Ministry of Health Kenya. (2006). Norms and Standards For health service delivery.
21. Pope, C., Ziebland, S., Mays, N. (2000). Qualitative research in health care. Analysing qualitative data. *BMJ*, 320, 114–6.
22. Low, A., de Coeyere, D., Shivute, N., Brandt, L. J. (2001). Patient referral patterns in Namibia: identification of potential to improve the efficiency of the health care system. *Int J Health Plann Manage*, 16, 243–57.
23. Mojaki, M. E., Basu, D., Letskokgohka, M. E., Govender, M. (2011). Referral steps in district health system are side–stepped. *S Afr Med J*, 101, 109.

APPENDIX 1: DATA TABLES

Table A.1: Referral system assessment questionnaires, document review checklists completed, and focus group discussions conducted, referral system assessment survey 2013, Kenya

County name	RSA Questionnaire and document review checklist							Focus group discussions (FGD)						
	CU (n=22)	Disp (n=27)	HC (n=31)	Hosp (n=21)	County Hosp (n=8)	National referral (n=1)	Total	CU (n=27)	Disp (n=27)	HC (n=31)	Hosp (n=21)	County Hosp (n=8)	National Referral (n=1)	Total
Garissa	4	4	5	1	1	0	15	4	4	5	1	1	0	**15**
Kakamega	0	4	4	3	1	0	12	3	0	3	2	1	0	**9**
Kilifi	4	4	3	3	1	0	15	4	3	3	3	1	0	**14**
Kirinyaga	4	3	3	3	1	0	14	4	3	3	3	1	0	**14**
Machakos	2	3	3	4	1	0	13	2	2	2	4	1	0	**11**
Nairobi	4	3	4	2	1	1	15	4	3	4	2	1	1	**15**
Nakuru	0	3	5	2	1	0	11	2	2	5	2	1	0	**12**
Siaya	4	3	4	3	1	0	15	4	3	4	3	1	0	**15**

CU=community unit, Disp=dispensary, HC=health center, Hosp=hospital

State of the Health Referral System in Kenya: Results from a Baseline Study on the Functionality of the Health Referral System in Eight Counties

44

Table A.2: Number of facilities where referral data were abstracted by facility level, department, and county (n=85)

County name	Maternity				Antenatal Care				Postnatal				Tuberculosis				Community Care Clinic			
	Disp	HC	Hosp	Total	Disp	HC	Hosp	Total	Disp	HC	Hosp	Total	Disp	HC	Hosp	Total	Disp	HC	Hosp	Total
Garissa	3	5	2	**9**	4	5	3	**11**	3	5	2	**10**	0	3	2	**5**	0	4	2	**6**
Kakamega	3	4	4	**11**	3	4	4	**11**	0	0	4	**4**	1	4	4	**9**	2	4	4	**10**
Kilifi	4	3	4	**11**	4	3	4	**11**	1	0	3	**4**	3	3	4	**10**	0	3	4	**7**
Kirinyaga	1	3	4	**8**	3	3	4	**10**	3	3	4	**10**	3	3	4	**10**	1	3	4	**8**
Machakos	2	4	5	**11**	2	4	5	**11**	1	3	4	**8**	3	4	4	**11**	2	4	4	**10**
Nairobi	0	1	2	**3**	3	4	4	**11**	2	4	3	**9**	1	3	3	**7**	1	2	3	**6**
Nakuru	0	4	3	**7**	3	4	3	**10**	0	0	1	**1**	1	4	3	**8**	0	4	3	**7**
Siaya	0	4	3	**7**	0	4	3	**7**	0	4	1	**5**	0	4	3	**7**	0	4	2	**6**

CU=community unit, Disp=dispensary, HC=health center, Hosp=hospital

State of the Health Referral System in Kenya: Results from a Baseline Study on the Functionality of the Health Referral System in Eight Counties

45

Table A.3: Availability of services in facilities sampled, referral system assessment survey 2013, Kenya

Available services	Dispensary, n (%) (n=27)	Health Center, n (%) (n=31)	Hospital, n (%) (n=21)	County Referral Hospital, n (%) (n=8)	National Referral (n=1)[1]
General outpatient	25 (92.6)	31 (100)	21 (100)	8 (100)	1 (100)
Integrated MCH/FP	27 (100)	31 (100)	21 (100)	8 (100)	1 (100)
Accident and emergency	8 (29.6)	21 (67.7)	13 (61.9)	3 (37.5)	0
Emergency life support	0	0	0	0	0
Maternity	17 (62.9)	28 (90.3)	21 (100)	8 (100)	0
Newborn services	11 (40.7)	19 (61.3)	21 (100)	8 (100)	0
Reproductive health services	24 (88.9)	27 (87.1)	21 (100)	8 (100)	1 (100)
In patient	1 (3.7)	16 (51.6)	21 (100)	8 (100)	1 (100)
Clinical laboratory	9 (33.3)	25 (80.7)	21 (100)	8 (100)	1 (100)
Specialized laboratory	0	3 (9.9)	6 (28.6)	6 (75.0)	1 (100)
Imaging	0	2 (6.4)	14 (66.7)	8 (100)	1 (100)
Blood safety	0	7 (22.6)	13 (61.9)	7 (87.5)	0
Rehabilitation	1 (3.7)	2 (6.5)	15 (71.4)	8 (100)	1 (100)
Palliative care	2 (7.4)	5 (16.1)	7 (33.3)	7 (87.5)	0
Specialized clinics	9 (33.3)	22 (71.0)	18 (85.7)	7 (87.5)	1 (100)
Emergency and specialized surgical operations	1 (3.7)	4 (12.9)	12 (57.1)	8 (100)	0
Outpatient surgical operations	5 (18.5)	14 (45.2)	17 (81.0)	8 (100)	0
Specialized therapies (e.g., dialysis, chemotherapy)	0	0	2 (9.5)	1 (12.5)	0

[1]The facility is a national mental health referral facility.

State of the Health Referral System in Kenya: Results from a Baseline Study on the Functionality of the Health Referral System in Eight Counties

46

Table A.4: Availability of health workers in facilities sampled compared to the National service norm and standards, referral system assessment survey 2013, Kenya

Health worker cadre	Level 2 (n=27)		Level 3 (n=31)		Level 4 (n=24)		Level 5 (n=5)	
	Staffing norm/ facility	Facilities meeting norm, n (%)	Staffing norm/ facility	Facilities meeting norm, n (%)	Staffing norm/ facility	Facilities meeting norm, n (%)	Staffing norm/ facility	Facilities meeting norm, n (%)
Doctors (general physician)					6	8 (33.3)	18	3 (60.0)
Specialized doctors							24	0 (0)
Dentist					1	13 (54.2)	2	4 (80.0)
Dental technologist					1	7 (29.2)	4	1 (20.0)
Community oral health officer			1	2 (6.5)	1	9 (37.5)		
Pharmacist					1	18 (75.0)	3	4 (80.0)
Pharmaceutical technologist			1	13 (41.9)	2	11 (45.8)	4	2 (40.0)
Radiographer					1	20 (83.3) (23)		5 (100)
Clinical officers			2	20 (64.5)	7	13 (54.2) (23)	4	5 (100)
Specialized clinical officers							12	2 (40.0)
Nurses (registered and enrolled nurses)	2	18 (66.7)	16	3 (9.7) [a]	68	3 (12.5) (21)	178	3 (60.0)
Laboratory technologists, technicians			1	31 (100)	3	18 (75.0) (23)	7	5 (100)
Physiotherapists							1	5 (100)
Occupational therapist							1	5 (100)
Orthopedic technologist							1	5 (100)
Social worker							1	4 (80.0)

Note: The numbers are compared to the Ministry of Health service norms and standards.[20]

One facility, a national mental referral hospital, was excluded from the analysis.

[a] Data were missing from two facilities.

State of the Health Referral System in Kenya: Results from a Baseline Study on the Functionality of the Health Referral System in Eight Counties

47

APPENDIX 2: LIST OF PERSONNEL INVOLVED IN THE SURVEY

Garissa County

Nimo Hussein, MEASURE Evaluation, Field Supervisor
Nzou Joseph
Nyaga Njuguna
Farhiya Omar
Abdi Shale, Health Records and Information Officer

Kakamega County

Linda Kagasi, MEASURE Evaluation, Field Supervisor
Sammy Amdany, Health Records and Information Officer
Kevin Lumwanji, District Public Health Officer, Kakamega
Job Mabonga, Health Records and Information Officer
Ibrahim Onyando Muswa, Attachment at Vihiga District Hospital

Kilifi County

Francesca Nzuve, MEASURE Evaluation, Field Supervisor
Elizabeth Barasa, External Data Collector
Livingstone Bwora, Sub-County Health Records and Information Officer, Kaloleni
Cecilia Lumumba, External Data Collector
Chris Ziroh, County Health Records and Information Officer

Kirinyaga County

Susan Kinyua, MEASURE Evaluation, Field Supervisor
Ruth Wambui Kiyaiyu, Health Records and Information Officer
John Githinji Mugenyo, Community Health Strategy Focal Person
Jonathan Lando Owino, External Data Collector
Bernard Sompoika Roika, External Data Collector

Machakos County

Joseph Mutunga, MEASURE Evaluation, Field Supervisor
Diana Mbeke, External Data Collector
Jane Mulwa, External Data Collector
Patrick Musyoki, Health Records and Information Officer
Caroline Ndegwa, Community Health Focal Person

Nairobi County

Moses Njatha, MEASURE Evaluation, Field supervisor
Vivian Cherotich, External Data Collector
Rakeli Wanjiru Kiiru, Community Health Strategy Focal Person
Julia Jeptoo Kimutai, Community Health Strategy Focal Person
Irene Awuor Maeri, External Data Collector
Samuel Waweru, Health Records and Information Officer, Starehe

Nakuru County

Jonathan Chelang'a, MEASURE Evaluation, Field Supervisor
Haggai W Barasa, External Data Collector
Benard Kiptrotich Bowen, Health Records Information Officer
Wilfred Wachira Mwai, Public Health Officer, Subukia Sub-County
John Kipruto Kipyegomen, Nursing Officer, Olenguruone District Hospital

Siaya County

Christine Nyagaya, MEASURE Evaluation, Field Supervisor
Zuberi Asuman, Health Records and Information Officer, Gem
Benjamin Balla, Health Records and Information Officer, Rarieda
David Oluoch, Community Health Strategy Focal Person, Rarieda
Grace Omwanda, Health Records and Information Officer, Bondo