

**ASSESSMENT OF FACILITY READINESS TO PROVIDE QUALITY
DELIVERY SERVICES IN KENYA**

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MASTER OF ARTS -**

POPULATION STUDIES

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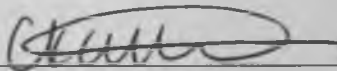


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DECLARATION

This project is my original work and has not been presented for a degree in any other University.


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This project has been submitted for examination with our approval as the University Supervisors.

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DEDICATION

This project is dedicated to my dearest Dr. Joseph Njehu.

Your support was invaluable.

ABSTRACT

This study focused on structural and process factors associated with the readiness of Kenyan health facilities to provide quality and appropriate care to mothers during delivery; and the extent to which clients perceive services to be of high quality. Data was obtained from the 2010 Kenya Service Provision Assessment. The results show that most facilities in Kenya generally attained a medium score for facility readiness to provide quality care for mothers during Delivery. Many facilities lacked simple items like maternal and emergency delivery guidelines, partographs, and covered waste receptacles. Many facilities did not show evidence of discussing Delivery data to make decisions and providing skilled delivery for home deliveries in addition to: poor linkage of the facility and traditional birth attendants in order to provide home based skilled delivery. There were marked differences in facility readiness by region and type of facility. For Facility readiness, Nairobi region performed best with no facility attaining a low score. Coast region performed equally well with Three government facilities attaining a high score. Nyanza had only one Government facility that attained a high score. In contrast Eastern, North Eastern, Rift Valley and Western Provinces had no facility that attained a high score. More Resources and Support structures need to be in place for North Eastern, Eastern, Rift Valley and Western regions in order to improve the quality of care to the level of Coast, Central and Nairobi regions. The community component of the study that was used to support the quantitative findings was used to reveal perceptions and attitudes of the community towards the Government facilities. The discussions with the Community Health Workers revealed that mothers in the community are aware of the importance of delivering in the facilities; however most of them prefer to deliver with Traditional Birth Attendants. The Main reasons given by the Community were that the mandatory HIV test done before delivery discourages the mother from Hospital delivery, Delivery costs at Government facility, Distance to the facility, Instances of harassment and abuse from the health care workers during delivery, pre conceived perceptions about the qualification of Health care workers in the facility and cultural beliefs.

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ABBREVIATIONS

KSPA	Kenya Service Provision Assessment
KDHS	Kenya Demographic Health Survey
MOH	Ministry of Health
GOK	Government of Kenya
DH	District Hospital
PGH	Provincial General Hospital
SUB DH	Sub-district Hospital
HCW	Health Care Worker
CHW	Community Health Worker

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CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND

Improving the quality of obstetric care in facilities is an essential strategy for reducing maternal and new born deaths (Van Den Broek and Graham 2009).High maternal mortality is an issue of concern in Kenya. The current maternal mortality ratio is estimated at 590/100,000.Many maternal and perinatal deaths could be averted if more women had access to quality obstetric care for life threatening complications of pregnancy and child birth. A number of needs assessments carried out by the Government of Kenya including the KSPA(Kenya service provision Assessment),KDHS(Kenya Demographic Health Survey).those by the WHO and population fund have identified the non use of standards and guidelines as a limiting factor in ensuring appropriate quality maternal care.

Basic training including medical, nursing ,midwifery and post graduate education in Kenya has historically been of a high standard, however the curriculum in pre service medical and nursing schools has not changed to keep up with the more recent developments in maternal care such as evidence based practice and continuing medical Education(standards for maternal care in Kenya,2002.)

Improving the quality of facility based care to prevent and treat frequent maternal complications is a critical component in the effort to reduce maternal deaths globally and in helping countries meet their targets for millennium development goals (MDG) 4 and 5. Although the majority of pregnant women attend antenatal care (92%), only 44% of deliveries in Kenya are facility-based (KNBS and ICF Macro, 2009).In order to improve the maternal mortality rates and utilization of maternal services in Kenya, it is important to assess the readiness of Kenyan facilities to provide quality reproductive health services. Capacity is measured by the presence of essential equipment and supplies in a location reasonably acceptable when providing a service. Quality of services, which is one aspect of capacity, is measured by the following characteristics of facilities: Training and supervision of staff, availability of service delivery protocols and client education materials, availability and use of health information records, the service delivery environment and facility systems for maintaining equipment and supplies. (KSPA 2004)

A facility's basic infrastructure can affect the standards of health services provided and influence client's willingness to use the facility. The obstacles to utilization of maternal health care are manifold. The major constraints are unavailability & inaccessibility of health facilities, poverty, exorbitant user charges and associated costs, and poor services offered at the facility (Ikamari, . 2004). To what extent the service delivery process meets generally accepted standards of care is a factor of capacity which affects the maternal mortality and utilization rates of reproductive health services in Kenya. Interactions between clients and providers should be assumed to see whether the process followed in service delivery meets the standards for acceptable content and quality of delivery should be observed to assess whether standard protocols have been observed. Issues that affect client and service providers within the service delivery environment should also be assessed to determine whether they affect the utilization of maternal services. Client satisfaction and providers training will determine the extent to which clients utilize the services.

1.2 PROBLEM STATEMENT

In addition to infectious diseases, maternal and neonatal conditions account for a substantial part of the health gap between rich and poor countries. For example, more than 99% of deaths occur in the developing world .The majority of deaths are caused by direct obstetric complications including hemorrhage, sepsis, eclampsia, obstructed labor and unsafe abortion practices. (WHO Maternal mortality fact sheet, May 2012) .In Kenya, complications related to pregnancy and childbirth are leading causes of morbidity and mortality translating to 590 maternal deaths per 100,000 live birth. Although 88 percent of Kenyan women attend ante natal care, only 40 percent deliver in the health facilities, and only 42 percent of all deliveries have skilled attendance at delivery.(Measure DHS,2004) In the Kenyan context, access to and use of quality delivery care are essential at reducing maternal morbidity and mortality. Improving the quality of obstetric care in facilities is an essential strategy for reducing maternal and new born deaths (Van Den Broek and Graham, 2009).According to the 2004 KSPA only 38% of all facilities provide delivery services, and less than a third of the facilities assessed had the guidelines for both normal and emergency deliveries. Alarmingly, only 20 percent of facilities offering delivery services were ready to contain emergency situations –only 20% had blood transfusion services. Provider knowledge was

also poor at only 10% of health care workers interviewed had received training in labor and delivery care, use of the Partograph and other life saving skills.

Since the 2010 KSPA was released in 2011, there has been no further analysis of the reproductive health data. A community component was also included in the 2010 KSPA study that will support the findings in this study. The purpose of this study was to therefore describe the delivery environment in facilities in Kenya, with a particular focus on quality of care in order to discern the degree to which service delivery constraints stand in the way in the reduction of unmet need. My research sought to identify the factors associated with the readiness of Kenyan health facilities to provide quality appropriate care to those seeking delivery services in facilities as well as support for the same using the Quantitative data collected during the study.

For the present study I have answered the following **research** questions:

1. Are Kenyan facilities ready to provide quality delivery services?
2. What is the environment of facilities that provide delivery services-by facility type, facility level and region?
3. How does the Quantitative community data support the quantitative findings?

1.3 OBJECTIVES OF THE STUDY

General Objective of the study

To assess the readiness of Kenya facilities to provide quality delivery services.

Specific Objectives of the study were:

- i. To Assess Facility readiness to provide quality delivery services by region, type and level
- ii. Quality of care assessed was assessed using a composite score.

- iii. Community component of the study was used to support Quantitative findings by Assessing the Knowledge and attitude of mothers towards the level of care given during delivery in Facilities.

1.4 JUSTIFICATION OF THE STUDY

It is well known from researches conducted that maternal mortality in Kenya is high because of the poor utilization of facility services, only half of all women deliver in health facilities. The major constraints are unavailability & inaccessibility of health facilities, poverty, exorbitant user charges and associated costs, and poor services offered at the facility (Ikamari, 2004). For maternal mortality to be reduced in this country we need to increase the utilization of maternal services to almost 100%. One way to increase utilization of services is to improve the quality of care, which will then increase client satisfaction and client uptake of services. The Government of Kenya needs to be advised on the level of quality of care in the delivery environment, and the level of provider knowledge. An analysis of the gaps in the delivery environment will inform the reproductive health sector on areas of improvement in order to have more mothers delivering in high quality facilities; hence reducing maternal mortality.

1.5 SCOPE & LIMITATIONS OF THE STUDY

According to the research team that led the KSPA2010, the community data that was collected for the study was of low quality because the data collectors were not properly trained and abstraction of data from the respondents was not well done. There was a challenge therefore in analyzing the data to support my quantitative findings. The Scripts that were available for Analysis were very few; some of the scripts were also transcribed in various mother tongues. Discussion themes were not consistent across all the groups. The KSPA2010 data only collected facility data but left out an important component which is patient level data. Patient level data could have been a useful addition in exploring the gaps in the facilities. It would have been useful to link both KSPA and KDHS datasets in order to analyse Quality of care outcomes for Maternal Mortality.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

A good starting point for this research was to define health care as defined by various entities. The World Health Organization (2004) defines health care as “services provided to individuals or communities by health service providers for the purpose of promoting, maintaining, monitoring or restoring health”. Closely related to this is the definition used by the British Department of Health. The British definition of health care consists of “services provided for, or in connection with, the prevention, diagnosis or treatment of illness, and the promotion and protection of public health” (British Department of Health 2004).

In Kenya, health care includes preventive, curative and rehabilitative measures of care (Ministry of Health 2005). According to the Standards for Maternal care in Kenya (2010), Maternal care standards must be Specific, Measurable, Achievable, Relevant and Timely. Each standard is set out as an objective followed by structure, process and outcome criteria. Most recently, health care particularly in developing countries has been linked to poverty. Alice et al (2008) carried out a quality of care study in three regions Nyanza, Coast and Eastern. The study concluded in general competency of health personnel in performing basic life saving skills was quite low, however the health care workers responded quite well to supportive supervision and regular feedback for the services they provide. According to O'Donnell (2007), poor people suffer from poor health and die younger as they have a higher than average child mortality. Three of the UN's eight Millennium Development Goals (MDGs) are aimed at addressing some specific health issues by 2015. These are; reducing child mortality; improving maternal health; combating spread of HIV/AIDS, malaria and other diseases. However, there is little progress made in achieving the health MDG's with one of the main reasons being deficiencies in access to health Care (United Nations Economic Commission for Africa 2008). Access to health care remains one of the biggest obstacles in the health of the poor. According to O'Donnell (2007), access to health consists of four dimensions, which are availability, accessibility, affordability, and acceptability.

In the developing world, millions suffer and die from treatable diseases due to maternal mortality, higher levels of disease and limited access to health care and social protection. Constraints are determined by the income of the household, the charges made for health care, and costs incurred to reach health services (Diop, Seshaman and Mulenga 1998; Gwatkin 2004; Hjortsberg 2003). Household income is a major constraint in the demand for health care. The monetary costs of health make income an important determinant in the utilization of care. As such, when poor people become ill, the entire household can be caught up in a downward spiral of lost income especially when the cost of health care is high (Gwatkin 2004; O'Donnell 2007).

High cost of health care is also another determinant of demand for health (Baltussen and Ye 2006). This is even worse for those who make out-of-pocket payments due to lack of insurance. Because the poor are more price sensitive than the better off, introduction of user fees or high charges often excludes them from essential services (O'Donnell 2007). However, this is not always the case as there are recorded cases where people continue using facilities despite high costs if quality is high. Abolition of user fees in Uganda was associated with an increase in utilization by the poor, but this was not true in South Africa, where fees for maternal and child health services were removed. This is so because the abolition of user fees in Uganda was linked to an increase in quality, whereas the abolition of user fees in South Africa led to poor health services. Evidence also shows that people continue to use health facilities with high costs as long as there is a combined improvement in quality of health and reduced travel distances (O'Donnell 2007). If high user charges are combined with improved quality and reduced travel time, utilization of health can increase, even for the poor.

According to O'Donnell (2007), when travel distances were reduced and quality improved in Bangladesh, it led to an increase in the levels of utilization. A reduction of travel distances reduces the costs incurred to reach health facilities and, therefore, increases utilisation. Travel costs especially in rural areas can be substantial. The distances to health care facilities and the poor condition of roads mean that time, effort and cost required to reach health facilities is high. Locating health facilities as close to the people as possible increases utilization. For example, in Ghana, halving the distance to public health facilities

was estimated to almost double the utilization rate (O'Donnell,2007).Preferences on the other hand are influenced by culture, knowledge of the potential benefits of health care, and the quality of the services available. Low demand for health care is often deep-rooted in attitudes that reflect culture and social norms(Betancourt et al.,2003).

Adherence to norms is largely influenced by the socioeconomic environment and gender attitudes. Research by Diop et al. (1998) found that households headed by individuals with secondary school or higher level of Education are likely to seek health care. In Indonesia, utilization of prenatal care increases when a woman exercises control over household finances. While in Africa, women make more use of public health care than men do in the high-income group, but the gender preference is the opposite in the low-income groups (O'Donnell 2007). Recognition of illness and the potential benefits of treatment, nonetheless, are still very low among the poor.

Gender attitudes are also important. According to Hjortsberg and Mwikisa (2002), demand for health care diminishes in response to the poor quality .O'Donnell (2007) cites an example in Ghana where a decline in quality of public health care was associated with a 40 per cent fall in utilization between 1979 and 1983. Low quality of health care can result in patients Forgoing care. Although the quantity rather than the quality of health services has been the focus historically in developing countries, ample evidence suggests that quality of care (or the lack of it) must be at the centre of every discussion about better health. In a study in Pakistan, only 56 percent of providers met an acceptable diagnostic standard for viral diarrhea, and only 35 percent met the acceptable standard for treatment (Thaver et al.,1988)

The process of providing care in developing countries is often poor and varies widely(Jon W Peabody,2009)A large body from industrial countries consistently shows variations in process, and trial countries consistently shows variation in process, and these findings have transformed how quality of care is perceived(McGlynn and others,2003).A 2002 study found that physicians complied with evidence based guidelines for at least 80 per cent of patients in only 8 of 306 US hospital regions(Wennberg.Fisher and Skinner 2002).Care in Tertiary and teaching referral hospitals and care provided by specialists may be better than care for the same cases in primary care facilities and by generalists(Walker, Ashley, and Hayes 1988).One explanation for variation and low quality care in the

developing world is lack of resources. Limited data indicate however that high quality care can be provided even in environments with severely constrained resources. A study in Jamaica which used a cross sectional analysis of government run primary care clinics showed that better process alone was linked to significantly greater birth weight (Peabody, Getler and Liebowitz, 1998) A study in Indonesia attributed 60 percent of all perinatal deaths to poor process and only 37 percent to economic constraints (Supratiko et al., 2002)

Recognizing the failure of previous training attempts to improve the quality of health services, the ministry of health with support from the USAID and participation with the local institutions, developed an innovative program in Peru. Aiming to reduce maternal and perinatal deaths, the program expected to increase the use of health services by improving care and strengthening links between the health services and the community health workers and midwives. The quality improvement implemented the following; Standardizing care, ensuring the availability at all times of essential supplies and equipment, making use of existing information systems and measuring patient satisfaction over time. Trainings were done under the coordination of a health facility member who was part of the disciplinary team. By the end of the three – year program demand for health services had increased considerably the success itself creating managerial problems in many instances. Motivation and satisfaction of patients and health workers had also increased, and also revenue collected though fee for service payment at the facilities rose. A demographic health survey in Peru between 1995 and 2000 found a significant overall reduction in maternal mortality, increases in peri natal coverage, and a higher proportion of deliveries in health facilities attended by professionals.

The process of providing quality of care in developing countries is often poor and varies widely. A large body of evidence from industrial countries show variations in process, and these findings have transformed how the quality of care is perceived. (McGlynn et al., 2006). A 2002 study found that clinicians complied with evidence based guidelines for at least 80 percent of patients in only 8 of 306 US hospital regions (Wennberg et al., 2007). Care in Tertiary and teaching hospitals may be better than care for the same in primary care facilities and by generalists (Walker et al., 1988)

The institute of medicine has launched a concerted effort to improve the quality of care, which they discerned as the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge. Although agreement about the need of quality of care is almost universal, the means of achieving effective improvement in overall quality of care is not well understood. Avedis Donabedian was a pioneer in the field of health care and he developed a framework of improving such efforts. Donabedian defined the health care triad of process, structure and outcome. Although there is now a robust evidence in the quality improvement structure on process and outcome, structure has received considerably less attention. Donabedian's commentary focused on physical structure, facilities and provider qualifications, and more modern quality accreditations and quality organizations such as the joint commission on Accreditation of health care. Organizations have historically viewed the structure largely from this 'nuts and bolts' perspective.

Population level considerations are also used to assess quality of care through the interaction between individual doctors and patients. However, emerging evidence shows that the average quality of care given by groups of doctors and other providers is an important determinant of overall community health status. For example, in cross sectional analysis in the former Yugoslav republic of Macedonia researchers found not only that patients health status was significantly higher in areas where quality was higher but also that the overall self reported status of those members of the general population who had not recently received care was higher (Peabody et al., 2006) When process is improved among a group of providers, the aggregate improvement in quality leads to better health outcomes for the entire patient population. In addition, resources can be allocated among clinical interventions based on actual effectiveness and the overall impact of care on the population. For example, cancer chemotherapy may be available and may prolong the lives of cancer patients. However it may result in fewer lives saved than the expansion coverage

(Agwanda et al., 2010) analysed the quality of Family planning services by incorporating all relevant elements in the FP unit into a single variable. A composite score was created to represent a facility's ability to provide appropriate family planning services. The total composite score reflected the readiness of a facility to provide appropriate quality

services to clients. The scores were subsequently divided into three categories (high, medium and low)

The Institute of Medicine looks at quality assessment from two perspectives- patient perception and technical or professional assessment. Patients' perceptions of quality depend on their individual characteristics and affect their compliance, follow up decisions and long term life style changes. Interpersonal relationships and cultural appropriateness, gender sensitivity long thought to be luxuries of wealthier countries – are also major determinants of patient access and utilization in developing countries. These findings have led to the inclusion of patient satisfaction and patient responsiveness as outcome measures. Technical assessment concerns whether providers meet normative standards for appropriateness of care or adherence to explicit evidence based criteria. Although patient perception is important researchers increasingly rely on objective, evidence based quality criteria that can be more readily linked to better health outcomes at both the individual and the population levels.

Research by Sixna, Kersens van campen and Peters (1998) led to the identification of four dimensions- these dimensions are: medical – technical competence of the caregivers, physical – technical condition of the care givers, and socio-cultural atmosphere of care organization. Studies in the developing world reveal that patients are more concerned with the structure and process of care. Research on urban consumer preferences in Fiji revealed that patients demand for an art of care, availability of drugs and personnel, good physical environment, technical quality, accessibility and in patient food (Haddad et al., 1998b). Similar research on quality of care in Tanzania resulted in categorization of six perceived quality in health care dimensions. These included the conduct of health staff, technical care, outcome of care, organization of the health care, drugs availability, and staffing levels (Haddad et al., 1998b)

Research in Guinea by Haddad (1998b) led to the classification of lay people's perception of the quality of primary health care services using five dimensions. The five dimensions identified were technical competence, attitudes and conduct of staff, availability and adequacy of resources and services, accessibility and effectiveness. Adequacy of resources and services refer to the structure. Technical competence and attitudes/conduct of staff and accessibility refer to the process while effectiveness refers to outcome. These dimensions of quality are discussed with examples in the developing world. Technical

competence addresses skills, capability and actual performance of health care providers in the diagnostic decision and treatment process.(Haddad et al.,1998b).Users of health care recognize the importance of a good diagnosis, adequate treatment as well as the need to receive sufficient information on the health problem and the treatment to follow(Haddad et al., 1998b)

Research in Zambia into patient perceptions quality of care by Hanson et al (2005) also identified correct diagnosis treatment and explanation of medical problem as important dimensions of quality. According to *Branco et al*, (2004) a lack of technical competence can range from minor deviations from standard procedures to major errors that decrease effectiveness or jeopardize patient safety. However, the role of staff attitudes is equally important. According to Veney et al (1993),research and writing on quality in health care has resulted in two principle points of controversy. The first involves the unit of analysis of quality of services. The question is whether quality is appropriately measured by examining the entire complex of service inputs, service process and service outcomes, or by examining only the service delivery process. A second point of controversy surrounds the issue of who defines quality: is it best defined by clients, providers, managers, policy makers, researchers, or by some or all of these? Most literature on the appropriateness of units of analysis is based on research into family planning services (Bruce 1990; Veney et al. 1993).Arguments concerning the appropriateness of the units of analysis in quality of family planning services criticize Donabedian's systems framework. Central to this criticism is that Donabedian gives the same weight to structure, process and outcome issues of quality. This has led to family planning researchers separating process factors from structure, and outcome factors. Pioneered by Bruce (1990), the focus on quality of family planning services has been reduced to the process (Veney et al. 1993). Bruce (1990) has defined quality of services into six specific elements of the process of service delivery. These include choice of methods, information given to clients, technical competence, inter-personal relations, follow-up/continuity mechanisms, and appropriate constellation of services. The Bruce framework has become the defining conceptualization in the discussion of quality of services in family planning services. With regard to general health care though, quality of care is popularly addressed by structure, process and outcomes. An adequate measure of quality requires examining the entire process of service inputs, process and outcomes (Donabedian ,2005).

However, the relationship between the structure, process and outcomes is not easily cut out, as the next paragraphs will discuss.

According to Peabody et al. (2004), structural measures are the easiest to obtain and most commonly used in studies of quality in developing countries. Structures rest on the assumption that given the proper settings and equipment, good medical care will follow (Donabedian 2005). Measuring structure offers the advantage of dealing with fairly concrete and accessible information (Peabody et al. 2004). The main limitation though is that the relationship between structure and process or structure and outcome, is often not well established. Material measures of structures such as shortages in medical staff, medications and facilities are not causally related to better health outcomes (Peabody et al. 2004). Although better technology or a more pleasant environment may be conducive to better-quality care, evidence indicates only a weak link between such structural elements and better health outcomes (Peabody et al. 2004). Nevertheless, there are notable exceptions to this. Physical improvements can either increase access to primary care in very poor settings or increase the volume of a clinical procedure, such as cataract surgery, that is specifically linked to better health outcomes (Peabody et al. 2004). At best, however, structure is a dull estimate of process or outcomes as its upgrading rarely improves the health of a population. Processes on the other hand can be used to measure whether proper medical care has been applied with every visit to the health facilities. Such information is obtained through clinical records, direct and indirect observation (Donabedian, 2005).

Peabody et al. (2004) identified additional measurement methods, which include administrative data, standardized patients and clinical vignettes. Evidence-based clinical studies have steadily revealed that process measures lead to better health outcomes (Bruce 1990; Peabody et al. 2004). The advantage with process measures is that they are a direct measure of quality and are easy to interpret. For instance, Mant (2001) shows that the use of aspirin in a myocardial infarction (heart attack) is a direct measure of quality. This is unlike measuring hospital mortality from heart attacks, which is indirect. However, limitations in process measurement can be problematic. Outcome in terms of recovery, restoration and survival has been widely used as indicators of quality of care. Advantages of its usage are that the validity of outcome indicators e.g. perinatal mortality is rarely questioned.

Furthermore, although some outcomes are unmistakable and easy to measure (death, for example), other outcomes are not. Outcomes, which are not clearly defined such as patient satisfaction, are difficult to measure. It is also difficult to define whether treatment has been successful or failed. Donabedian (2005) cites an example by McDermott et al (1960), who showed that, although fixing a congenitally dislocated hip joint in a given position is considered good medicine for the white man, it could prove crippling for the Navajo Indian who spends much time seated on the floor or in the saddle. For this reason, outcomes should be used with discrimination.

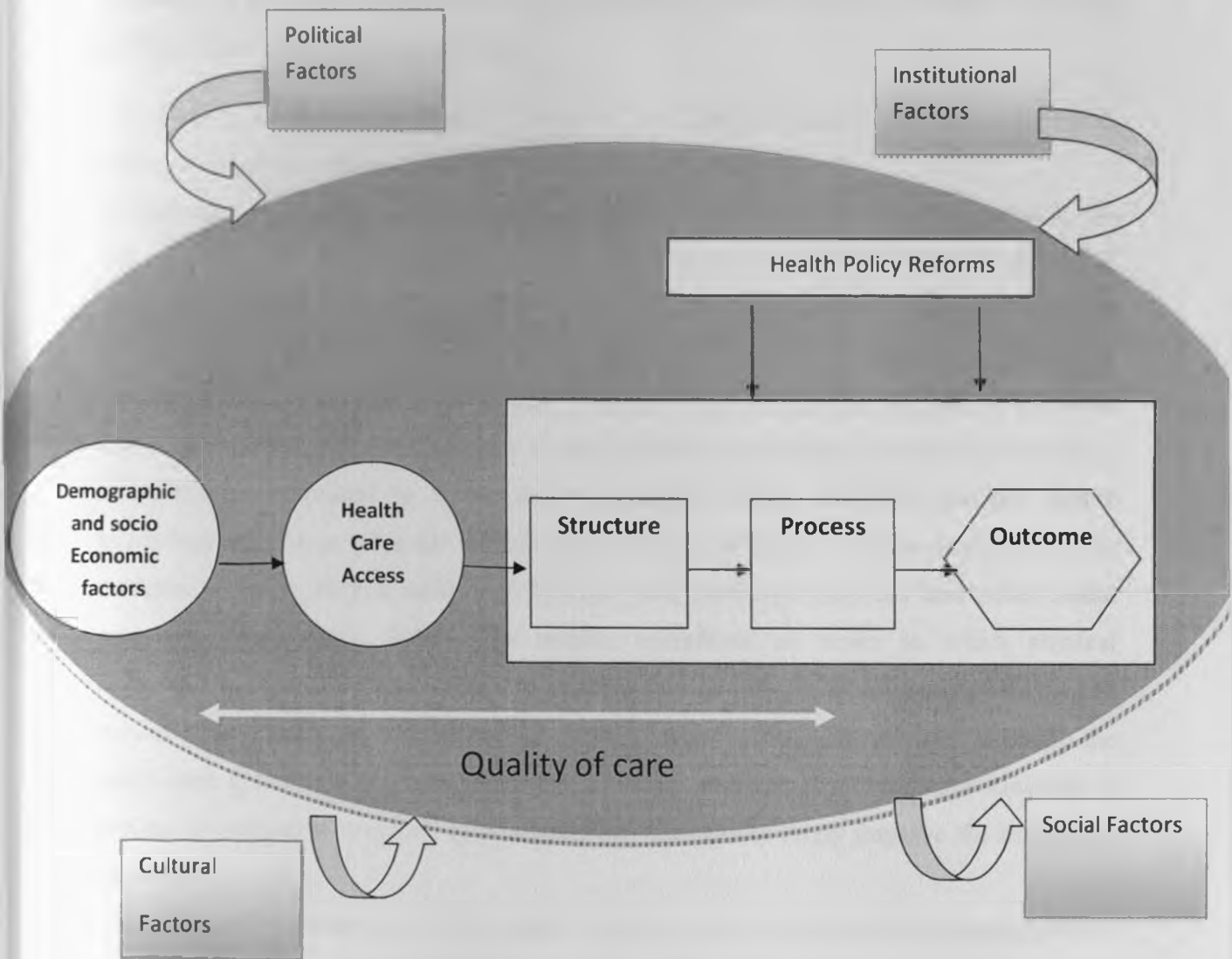
According to Peabody (2010) Good quality of care means that providers are able to manage an individual's or a population's health care by timely, skillful application of medical technology in a culturally sensitive manner within the available resource constraints. Eliminating poor quality involves not only giving better care but also eliminating under provision of essential clinical services (system wide microscopy for diagnosing tuberculosis, for example); stopping overuse of some care (prenatal ultrasonography or unnecessary injections, for example); and ending misuse of unneeded services (such as unnecessary hysterectomies or antibiotics for viral infections). A sadly unique feature of quality is that poor quality can obviate all the implied benefits of good access and effective treatment. At its best, poor quality is wasteful—a tragedy in severely resource-constrained health care systems. At its worst, it causes actual harm. Despite the urgency of improving health in developing countries, quality of care has been largely ignored. Both providers and patients agree this must change, but how can this goal be reached? Better quality leads to better health outcomes in developing countries. Process, the proximate determinant of health outcomes, can be measured in valid and reliable ways, such as clinical vignettes and electronic medical records. Measured in the above ways, the process of care in developing countries is poor. However, the process of care can be improved in the short term. Policies affecting structural conditions, including the actual process of care or the continual design and redesign of the health care system, have been shown to be effective in developing countries.

2.2 CONCEPTUAL FRAMEWORK

Deficiencies in quality of care represent neither the failure of professional compassion nor necessarily a lack of resources .Institute of Medicine (2001).Rather, they result from gaps in knowledge, inappropriate applications of available technology (Murray et al., 2000) or the inability of organizations to change (Berwick ,1989). Local health care systems may have failed to align practitioner incentives and objectives, to measure clinical practice, or to link quality improvement to better health outcomes. Increasing evidence, much of it developed since the mid 1990s, shows that quality can be improved rapidly. However, to improve clinical practice—and thus quality of care—quality must be defined and measured, and appropriate steps must be taken (Silimper et al., 2002).Better quality can improve health much more rapidly than can other drivers of health, such as economic growth, educational advancement, or new technology. Health systems provide health actions—activities to improve or maintain health. These actions take place in the context of and are influenced by political, cultural, social, and institutional factors.

Demographic and socioeconomic makeup, including genetics and personal resources, affect the health status of individuals seeking care. Access to the health care system is required to obtain the care that maintains or improves health, but simple access is not enough; the system’s capacities must be applied skillfully. Thus, quality means optimizing material inputs and practitioner skill to produce health. As the Institute of Medicine defines it, quality is “the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge” (Institute of Medicine 2001).

Fig 1: Quality of care framework.



Source: Peabody, 2000 (Adapted from the Donabedian Quality of care framework)

According to the Donabedian quality of care framework, Quality comprises three elements:

- **Structure** refers to stable, material characteristics (infrastructure, tools, technology) and the resources of the organizations that provide care and the financing of care (levels of funding, staffing, payment schemes, incentives).
- **Process** is the interaction between caregivers and patients during which structural inputs from the health care system are transformed into health outcomes.
- **Outcomes** can be measured in terms of health status, deaths, or disability-adjusted life years—a measure that encompasses the morbidity and mortality of patients or groups of patients. Outcomes also include patient satisfaction or patient response. Structural measures are the easiest to obtain and most commonly used in studies of quality in developing countries. Many evaluations have revealed shortages in medical staff, medications and other important supplies, and facilities, but material measures of structure, perhaps surprisingly, are not causally related to better health outcomes (Donabedian 1980). Although higher technology or a more pleasant environment maybe conducive to better-quality care, the evidence indicates only a weak link between such structural elements and better health outcomes (Donabedian, 1988). The notable exceptions are cases in which physical improvements either increase access to primary care in very poor settings or increase the volume of a clinical procedure, such as cataract surgery, that is specifically linked to the health care system (WHO 2000). At best, however, structure is a blunt approximation of process or outcomes; structural improvements by themselves rarely improve the health of a population.

Process, by contrast, can be measured with every visit to a provider. Measuring process is difficult, however, particularly in developing countries. The private nature of the doctor patient consultation, a lack of measurement criteria, and the absence of reliable measurement tools have limited the ability to assess process (Peabody et al., 2004). However, new methods are being developed that can provide valid measurements of clinical practice (Thaver 1998). In addition, evidence-based clinical studies have steadily revealed which process measures lead to better health outcomes. This combination of ubiquity, measurability, and linkage to health outcomes makes the measurement of process the preferred way to assess quality. Although good outcomes are the objective of all health

actions, outcomes alone are not an efficient way to measure quality for two reasons. The first is the quality conundrum. A patient may receive poor-quality care but may recover fully, or a patient may receive high-quality care for an illness such as cerebral malaria and still not recover. Second, adverse health outcomes are relatively rare and obviously do not occur with every encounter. The classic framework of structure-process-outcome is well established. However, in recent years the concept of quality has been expanded to include specific aims for improvement. For example, the Institute of Medicine's (2001) landmark report measurability, and linkage to health outcomes makes the measurement of process the preferred way to assess quality. The classic framework of structure-process-outcome is well established. However, in recent years the concept of quality has been expanded to include specific aims for improvement. For example, the Institute of Medicine's (2001) landmark report crossing the Quality Chasm, broadens the concept to include other, more contextual elements to illuminate how process changes can improve care. It focuses on six aims: patient safety, effectiveness, patient centeredness, timeliness, efficiency, and equity.

Population-Level Considerations: Quality is typically assessed through the interaction between individual doctors and patients. However, emerging evidence shows that the average quality of care given by groups of doctors and other providers is an important determinant of overall community health status. For example, in a cross-sectional analysis in the former Yugoslav Republic of Macedonia, researchers found not only that patients' health status was significantly higher in areas where quality was higher but also that the overall self-reported health status of those members of the general population who primary care clinics, showed that better process alone was linked to significantly greater birth weight (Peabody et al., 1998). A study in Indonesia attributed 60 percent of all perinatal deaths to poor process and only 37 percent to economic constraints (Supratikto et al., 2002). Cross-system or cross-national comparisons provide the best examples of the great variation in clinical practice in developing countries. In one seven-country study, researchers directly observing clinical practice found that 75 percent of cases were not adequately diagnosed, treated, or monitored and that inappropriate treatment with antibiotics, fluids, feeding or oxygen occurred in 61 percent of cases (Nolan et al., 2001). Another study compared providers' knowledge and practice in California and FYR Macedonia, using vignettes to adjust for case-mix severity. Although the quality of the overall or aggregate process was lower in FYR Macedonia, a

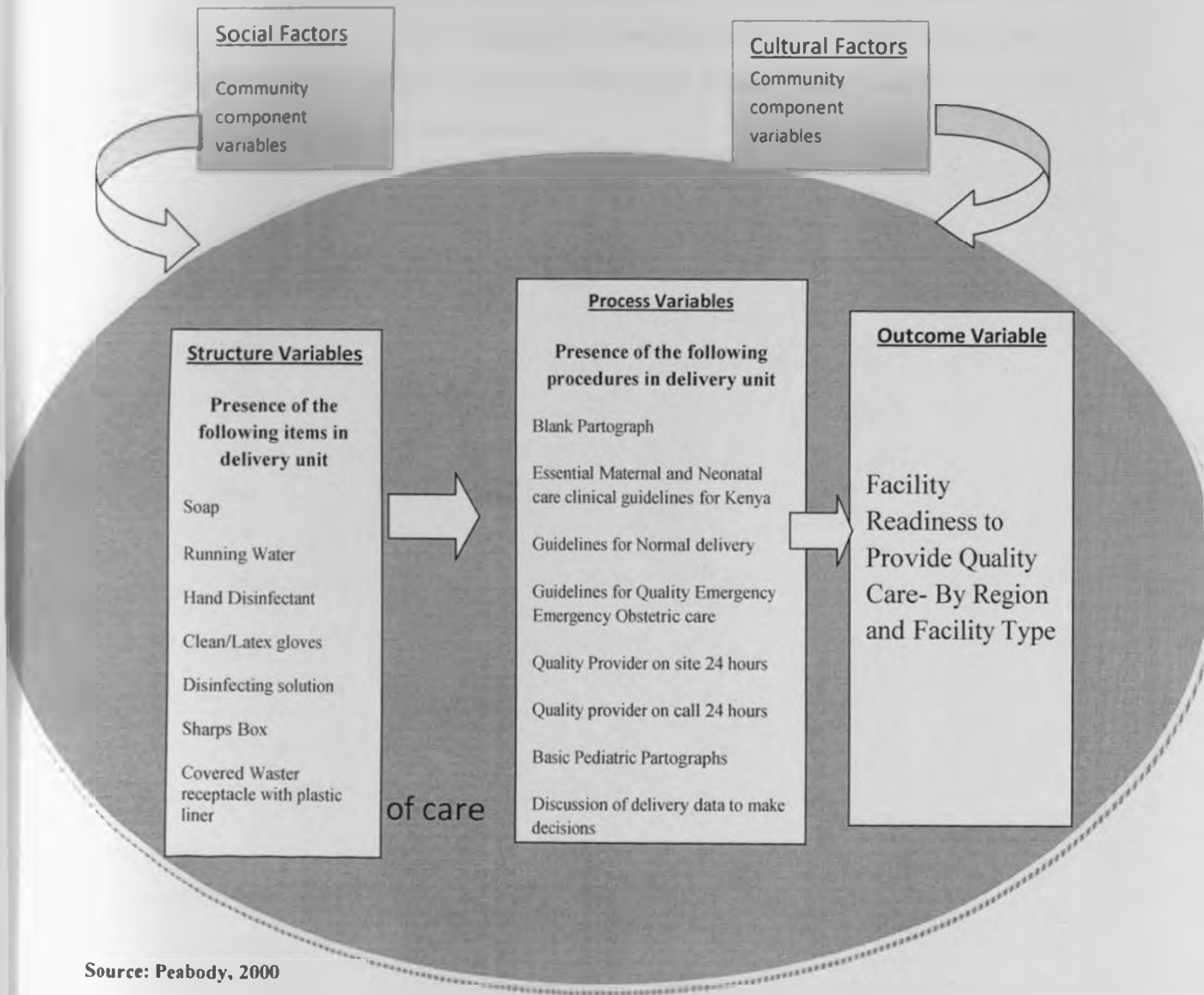
poor country, the top 5 percent of Macedonian doctors performed as well as or better than the average Californian doctor (Peabody, Tozija, et al., 2004)

2.3 OPERATIONAL FRAMEWORK

The study sought to modify the Donabedian quality of care framework that was adapted by Peabody and operationalize it as illustrated below (Fig 2). Two elements of the Quality of care framework were analyzed for this study: these are structure and process elements.

- Structure refers to stable, material characteristics (infrastructure, tools, and technology) and the resources of the GOK facilities that provide care and the financing of care.
- Process is the interaction between caregivers and patients during which structural inputs from the health care system are transformed into health outcomes

Fig 2: Operational Framework



2.4 OPERATIONAL HYPOTHESIS

- i. There is a significant difference in quality of care in the 8 regions of Kenya.
- ii. There is a significant difference in the structure of facilities in the 8 regions of Kenya
- iii. The Community strategy which seeks to increase the uptake of maternal services in the facilities may not be implemented effectively because of the quality of care given by the traditional birth attendants.

CHAPTER THREE

DATA AND METHODOLOGY

3.1 INTRODUCTION

This chapter presents a description of the sources of data, sample selection, data quality and the analytical tool to be used in this study so as to yield the necessary conclusions of Quality of care given to mothers during delivery in Government Of Kenya facilities.

3.2 DATA SOURCES

This study will be guided by the KSPA 2010 data (Kenya Service Provision Assessment). Four main types of data collection tools were used for the health facility component of the survey, the Facility Audit Questionnaires, the Observation Protocol, Exit Interviews, and Health Worker/Provider Interview Questionnaires.

In addition to the above-mentioned standard SPA tools, the following instruments were also Used to assess the quality of delivery care in the facilities:

- Observation of Routine (Normal) Delivery Care: Partograph, Active Management of the Third Stage of Labour, and Immediate Newborn Care
- Checklist for Management of Postpartum Haemorrhage
- Checklist for Manual Removal of Placenta
- Checklist for Internal Manual Compression of the Uterus
- Checklist for Compression of the Abdominal Aorta
- Checklist for Newborn Resuscitation
- Checklist for Severe Pre-eclampsia and Eclampsia

The following protocols were used to observe normal deliveries and how delivery-related complications are managed.

- Guide for in-depth interviews with community health workers, including community health extension workers (CHEWs)
- Guide for focus group discussions with mothers of young children ages 0-2 years.

These two guides supported the community component of the 2010 KSPA. I have used community component to further support my findings of the quantitative data.

3.3 SAMPLING

The sample of facilities included in the 2010 KSPA survey was randomly selected from a Master Facility List (MFL) of 6,192 functioning health facilities in Kenya at the time of the survey. The MFL, obtained from the division of Health Information Systems, Department of Standards and Regulatory Services, included hospitals, health centers, maternity and nursing homes, clinics, and stand-alone VCT facilities under public, faith-based, private and NGO managing authorities. A sample size of 690 facilities that provide delivery services was selected for the survey. The sample was carefully designed to allow for key indicators to be presented at national and provincial levels, by type of facility, and by the different managing authorities.

3.4 VARIABLE DESCRIPTION

This section describes the dependent and independent variables.

Dependent Variables

Facility Readiness: Assessment of the Extent to Which the Facilities Are Ready to Provide Services According to Expected Standard.

At the facility level, appropriate service provision encompasses a variety of critical elements. I considered three loci where appropriateness of service provision may be assessed: the Delivery room environment (Infection control), the examination room (Infrastructure for delivery), and items to support quality services. To incorporate all of the relevant elements into a single variable; a composite score was created reflecting each facility's ability to provide appropriate delivery services. For each item, the score represents the weight given to the aspect of each dimension. For Example in the Infection control dimension the presence of soap and running water will be given the weight of $33.33/8$ if available and $16.66/2$ if reported (not seen) and 0 if unavailable. Similarly, under the infrastructure for delivery, a private room that ensures visual and auditory privacy is given the weight of $33.33/4$ if present in a facility, $16.66/2$ if reported (not seen) and 0 if not. Under the items to support quality

delivery services, if maternal guidelines are observed and are in use in the facility a full score is given 33.33/8, and a score of 0 will be given if the item is not in use. The total composite score will reflect the readiness of a facility to provide appropriate quality services to clients. The scores will be subsequently divided into three categories (high, medium, or low).

Table 1: Variables/Items:

Infection Control Items		
<i>Variable/Item</i>	<i>Score(Weight for presence in the facility)</i>	<i>Percent of facilities where item was observed</i>
Soap	33.33/8	39.57%
Running Water	33.33/8	38.13%
Hand Disinfectant	33.33/8	20.43%
Clean Latex Gloves	33.33/8	53.81%
Disinfecting Solution	33.33/8	51.65%
Sharps Box	33.33/8	96.26%
Covered waste receptacle with plastic liner	33.33/8	33.69%
Table cloth/plastic on any surface	33.33/8	94.12%
Infrastructure for delivery		
<i>Variable/Item</i>	<i>Score(Weight for presence in the facility)</i>	<i>Percent of facilities where item was observed</i>
Auditory privacy	33.33/4	52.09%
Delivery bed	33.33/4	99%
Examination light	33.33/4	38.42%
Meetings in the facility to discuss statistics of delivery in order to look at patterns of delivery care in order to improve quality	33.33/4	21.01%

Items to support Quality Services (Process)		
Variable/Item	Score (Weight for presence in the facility)	Percent of facilities where item was observed
Blank Partograph	33.33/7	44.03%
Essential Maternal and Neonatal care clinical guidelines for Kenya	33.33/7	11.37%
Guidelines for Normal delivery	33.33/7	21.01%
Guidelines for Quality Emergency Obstetric care	33.33/7	21.01%
Quality Provider on site 24 hours	33.33/7	41.73%
Quality provider on call 24 hours	33.33/7	42.83%
Basic Pediatric Partographs	33.33/7	10.94%
Rules for the Score		
<i>A variable will get full score if an item was observed (Full score = 4.167 OR 8.3325 OR 4.7614)</i>		
<i>A variable will get half score if an item was reported and not observed (Half Score = 2.08 OR 4.167 OR 2.380)</i>		
<i>A variable will get no score if an item was not observed or not reported (Zero Score = 0)</i>		
<i>Rule 1: Must score >90.00 to score a high category (This means that more than half had a maximum weight)</i>		
<i>Rule 2: Must score >=50.00 - <=89.99 to get a "medium" or "fair" category</i>		
<i>Rule 3: Must score <=49 to get a low category</i>		

Independent Variables

The independent variables include the **region** where the facility is located, and **the type of facility**. The region represents a variety of factors such as public differential investments in facilities and operation in different cultural and social contexts, while the managing authority represents not only different management systems but also the different costs of providing service. For example, a public service environment is subsidized by taxation, whereas a private organization may charge the full cost of service. The cost element, therefore, results in different workloads for service providers, with public service providers having higher

Workloads and also being more likely to provide services to clientele from various social and economic strata.

Analytical Approach

Descriptive statistics were used to show the distribution of quality of care by region and facility type. Cross tabulations were used to show any significant relationships that exist between each of the independent variables and the dependent variable. Qualitative analysis of the community component was conducted to support the quantitative findings. Geographic Mapping of the results in the map of Kenya will be done for easier presentation.

CHAPTER FOUR

FINDINGS

FACILITY READINESS TO PROVIDE QUALITY CARE BY REGION AND FACILITY TYPE

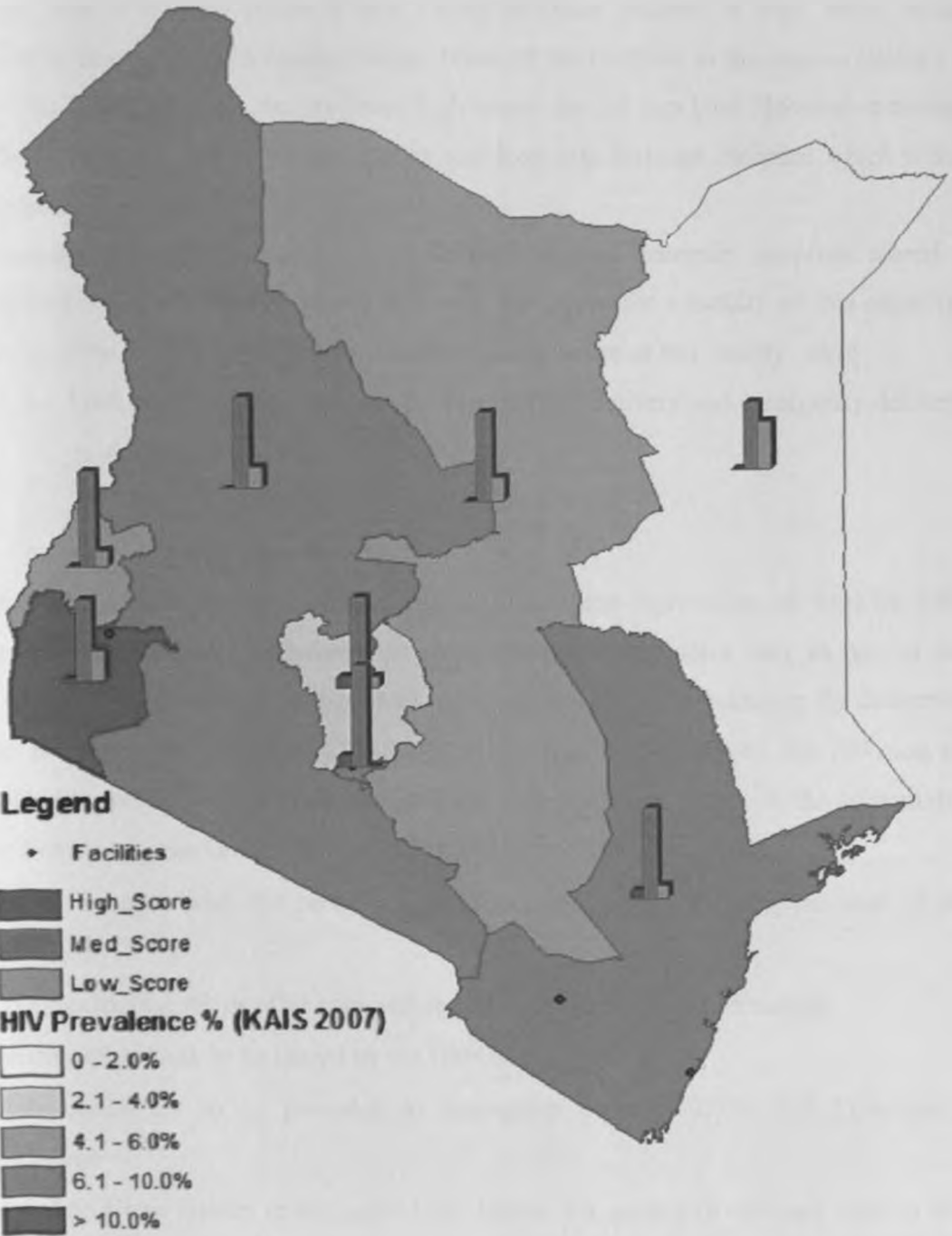
4.1 INTRODUCTION

This chapter presents the Quality of Care in each of the eight Regions in Kenya. The Quality of care in the Delivery section of each of the facilities will also be presented in this section. The Master Facility Code (MFL), a unique code assigned to each facility by the Government of Kenya, was used to identify the name of the facilities included in the sample. Analysis by Facility Type; Public, Private and Mission was also performed. For a facility to score a high score (90% and above), the facility should have gathered the highest score in at least 18 of the 19 variables that were used to assess structure and process

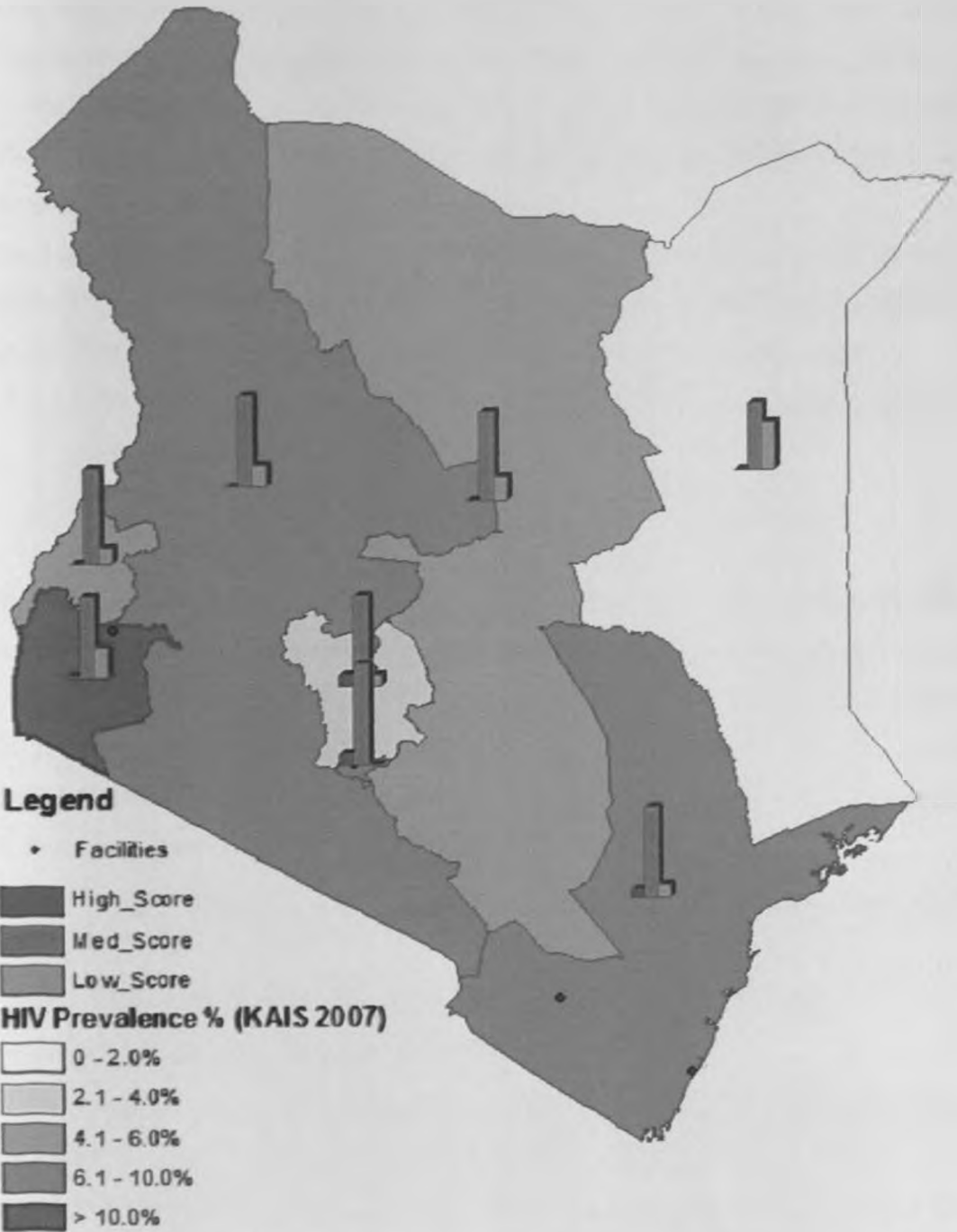
4.1 FINDINGS BY REGION

According to the map shown below, Most of facilities in Kenya fall in the “medium” category of the Score. All the Facilities in the Nairobi sample scored high or medium scores, none attained a low score. Coast Region had most facilities in the Medium category, while some attained High and Low Scores. In Central Region most facilities attained a Medium score, while some attained low and high scores. All the other Regions also had most facilities attain a medium score. The best performing Regions were Coast and Nairobi. Coast Region had three facilities that attained a High score, with Coast PGH attaining the Highest Score in the Country. Nairobi Region also performed well because none of the facilities in the Region attained a Low Score. The Worst Performing Regions in the Analysis were North Eastern, Rift Valley and Eastern Regions that had the most facilities that attained low scores.

Quality of Care - Performance by Region



Quality of Care - Performance by Region



4.2 NAIROBI REGION

A total of thirty one facilities were assessed in Nairobi region. 1 National referral hospital, 1 District Hospital, 1 Sub District Hospital, 17 private hospitals, 6 Health Centers, 2 dispensaries and 3 nursing homes. 9.68% (n=3) facilities attained a high score while 90.32(n=28) facilities attained a medium score. None of the facilities in this region attained a low score. The Three hospitals that achieved high scores are the Aga Khan Hospital- a private facility, the Nairobi hospital, a private facility and Kenyatta National Hospital which is the national referral hospital.

- Pumwani maternity hospital, one of Kenya's biggest maternity hospitals scored a medium score of **60.4075**, which is a very low score for a facility of this capacity.

Some of the critical items that lowered the quality score of this facility were :

- Lack of all guidelines in the facility- normal delivery and emergency delivery guidelines.
- Lack of covering of the bin for infection control
- Lack of a pediatric partograph

Only one facility, Bahati health centre in the region reported to be working with skilled attendants/community midwives to provide home emergencies only as part of the facility's services. Therefore No relationships are being maintained to backstop the deliveries conducted at home. The community midwife model was established by the Division of Republic Health and was to backstop the facilities with skilled deliveries at the community level. The following guidelines are outlined in the policy to guide the model:

- Proper linkages with the health facility to ensure proper backstop in case of an emergency
- Community midwives offer personalized ANC services in the community
- Certificate of work to be issued by the DMOH
- Clear distinction to be provided to distinguish between TBAs and Community midwives
- St Lukes Cona Health centre scored the lowest for quality of delivery care in the region at a score less than 40.

The following is a table with a summary of scores attained in the region

Graph 1: Breakdown of scores– Nairobi Region

Nairobi Region - Scores

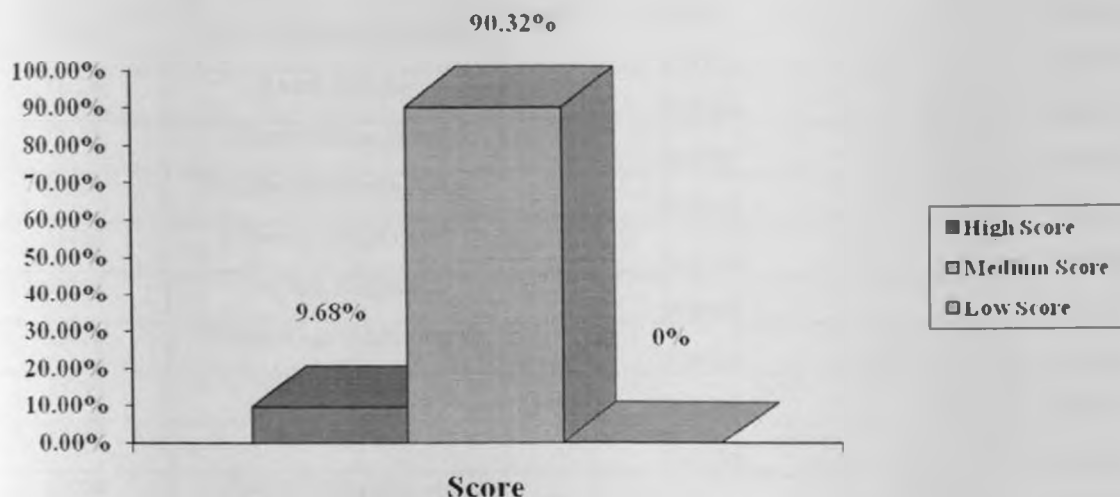


Table 2: Breakdown of scores attained by facility – Nairobi Region

MFL Code	Facility Name	Score	Classification of Score
12867	Aga khan Hospital	89.5712	High
12874	Avenue Hospital	74.9925	Medium
12879	Bahati Health Centre	58.3243	Medium
12944	Kabete Barracks Dispensary	69.7815	Medium
12976	Huruma Anursing Home	64.5737	Medium
12984	Jamaa mission Hospital	77.0725	Medium
13016	Kayole II Sub District Hospital	68.6791	Medium
13023	Kenyatta National Hospital	89.5712	High
13042	Langata hosp	83.3252	High
13064	Mariakani Cottage Hospital	70.8263	Medium
13070	Marura Nursing home	62.4938	Medium
13077	Mathare North HC	56.2412	Medium
13080	Mbagathi District Hospital	66.6600	Medium
13086	Melchezedek Hospital	72.9062	Medium
13090	Metropolotan Hospital	70.7668	Medium
13098	MP Shah Westlands	66.6600	Medium
13111	Nairobi Hospital	93.7375	High
13115	Nairobi West Hospital	79.1588	Medium

13117	Nairobi Womens hospital	83.3250	Medium
13125	Nimoli Medical centre	54.1550	Medium
13149	Privider Intermath dispensary	56.2381	Medium
13156	Pumwani Maternity Hospital	56.2413	Medium
13158	Radent Hospital	66.6598	Medium
13175	Salama Nursing Home	64.5737	Medium
13200	St Catherines Health Centre	72.9062	Medium
13203	St Francis Health Centre	62.4938	Medium
13205	St John Hospital	66.6600	Medium
13213	St lukes Cona Health Centre	52.0750	Medium
13241	Umoja Hospital	66.6600	Medium
13247	Victory Hospital	64.5738	Medium
13258	Westland's Health Centre	62.4875	Medium

4.3 CENTRAL REGION

In Central region a total of 49 facilities were included in my analysis. Out of these 49 facilities, 1 (2%) is a County referral hospital (PGH), 6 (12.24%) District Hospitals, 8 (16.32%) Sub District Hospitals, 20 (41%) are non Government hospitals, 4 (44%) are health centres, 2 (44.08%) nursing Homes.

For a facility to score a high score (90% and above), the facility should have gathered the highest score in at least 18 of the 19 variables that were used to assess structure and process. Two facilities in Central, a County referral hospital (Nyeri PGH) and a Faith Based hospital (Tumu Tumu PCEA) scored highest (90% and above). The poorest scores (less than 50%) were from two facilities, Tigoni District Hospital and Ol Kalau Sub District Hospital. Ol Kalau district Hospital was upgraded to sub district hospital recently and this may explain the low scores for the facility. There is also a high turnover of doctors at the facility because of the harsh climatic conditions at Ol Kalau which contributes to the low quality scores in the hospital.

According to the KDHS 2010 25.9% of deliveries are conducted at home. None of the facilities in the region reported to be have skilled attendants from the facility attend home deliveries as part of facility services. None of the facilities reported to be having any home deliveries reported to the facility during that year. This shows that the model of community midwives is no longer in use in the regions.

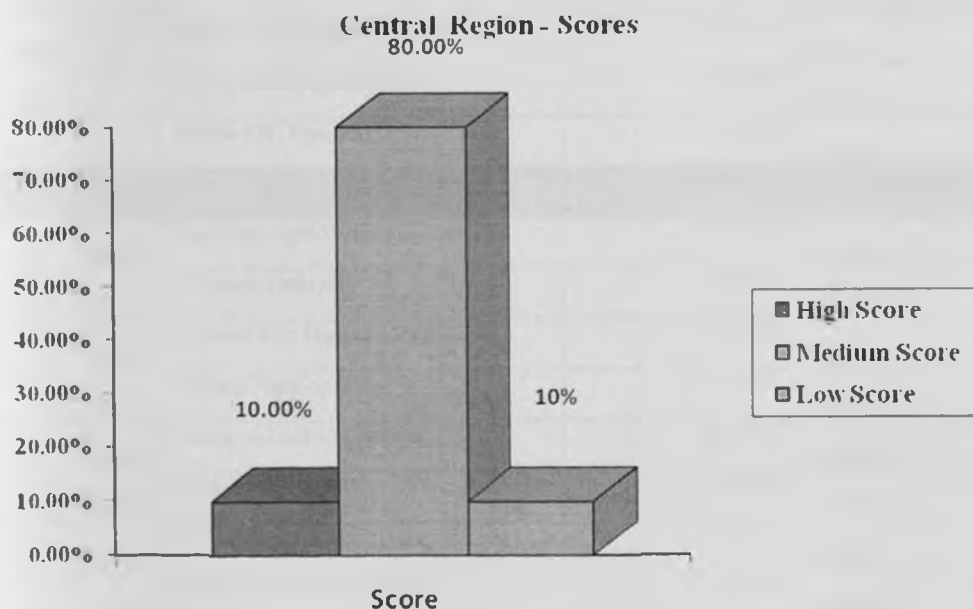
The Nyeri PGH catchment area is not clearly defined because it is a county referral hospital; therefore the study did not report the percent catchment population that delivers in the facility. However no community deliveries were reported by the community midwives in the year of the study.

Tumu Tumu hospital reported to be conducting roughly 40% of deliveries in the Nyeri central catchment area. There have also been no home deliveries conducted and reported by community midwives in the catchment population. The two facilities have the highest scores in the country but women are still delivering at home in the region . Why aren't more women delivering in the facility? Why isn't the community midwife model being implemented in the region to backstop facility services and prevent maternal mortality?

From the study, Nyeri PGH scored high quality scores however there is no relationship between the facility and the community midwives. Delivery is at 40% of the catchment population, therefore where does the rest of the catchment population deliver? Why aren't more women delivering in the facility?

The following table shows the percent of facilities that scored high, medium and low.

Graph 2: Breakdown of scores– Central Region



The table below shows facility by respective score and score classification.

Table 3: Breakdown of scores– Central Region

MFL Code(Master Facility Code)	Facility Name	Score	Score Classification
10049	Baricho Health Centre	60.4106	Medium
10083	Central Memorial Hospital	58.3275	Medium
10089	Charity Medical Centre	66.6644	Medium
10100	XXXXXXXXXXXXXXXXXX	72.9062	Medium
10170	Endarasha Rural Health Centre	72.9093	Medium
10249	Gichiche Health Centre	56.2443	Medium
10267	Githumu Hospital	66.6688	Medium
10349	Immaculate Heart of Mary Hosp	70.8262	Medium
10368	Jamii Hospital	74.9925	Medium
10387	Kanaan Medical Centre	62.4937	Medium
10459	Kandara Health Centre	68.7431	Medium
10470	Kangema Sub District Hospital	77.0756	Medium
10485	Karatina District Hospital	70.8231	Medium
10507	Karuri Health Centre	77.0756	Medium
10518	Immaculate Heart Hospital	64.5768	Medium
10539	Kiambu District Hospital	66.6644	Medium
10565	Kirinyaga SubDistrict Hospital	47.9118	Low
10591	Kihara SubDistrict Hospital	79.1587	Medium
10602	Kijabe AIC Hospital	83.3256	Medium
10603	Kikuyu (PCEA) hospital	87.4912	Medium
10609	Kimbimbi Sub District Hospital	77.0756	Medium
10610	Kimende Orth MH	56.2443	Medium
10639	Kirwara Sub District Hospital	72.9093	Medium
10662	Limuru Nursing Home	79.1587	Medium
10686	Maragua District Hospital	81.2418	Medium
10763	Mukurweini Sub District Hospital	70.8262	Medium
10765	St. Mulumba MH	79.1587	Medium
10777	Murang'a District Hospital	79.1587	Medium
10782	Muriranjias Sub District Hospital	60.4106	Medium
10806	Mwea Medical Centre	58.3275	Medium

10808	Mwea Mission Our Lady	79.1587	Medium
10819	Naidu Hospial	79.1587	Medium
10821	Nanyuki Cottage Hospital	81.2355	Medium
10825	Nazareth Hospital	66.6644	Medium
10859	Ngarariga Health Centre	68.7431	Medium
10869	Ngoliba Health Centre	68.7431	Medium
10872	Ngorongo Health Centre	64.5768	Medium
10887	North Kinangop Catholic Hosp	70.8262	Medium
10891	Nyahururu Private Hosp	72.9062	Medium
10903	Nyeri Provincial General Hospital	89.5743	High
10916	Olkalau Sub District Hospital	39.5793	Low
10922	Othaya Sub District Hospital	68.7431	Medium
11013	Sinai Mat and Med Centre	64.5768	Medium
11094	Thika Level 5	79.1587	Medium
11097	Thika Nursing Home	79.1587	Medium
11104	Tigoni District Hospital	45.8287	Low
11124	Tumu Tumu PCEA Hosp	91.6575	High
11156	Waka Mat Home	70.8168	Medium
11161	Wamagana Health Centre	66.6506	Medium

4.4 COAST REGION

A total of Forty two facilities were assessed in Coast region.1 County referral hospital, 10 District Hospitals, 8 private Hospitals, 5 Health Centers, 1 dispensary and 5 nursing/maternity homes. A total of 7.14% (n=3) facilities attained a high score while 80.95% (n=34) facilities attained a medium score, 11.90% (n=5) had a low score.

The Three hospitals that achieved high scores are all government facilities, which are the Coast PGH, MoiVoi District Hospital and Mariakani District hospital .Coast PGH was the best performing facility in Kenya, by attaining full score of 100.Coast PGH reported to have a skilled attendants/midwives routinely provide deliveries or attend home delivery emergencies as part of the facility's services. However none of the facilities knew the number of home deliveries that were conducted and reported to their facilities by the community midwives.

Kiunga Health centre scored the lowest for quality of delivery care. The following is a table with a summary of scores attained in the region.

Graph 3: Breakdown of scores– Coast Region

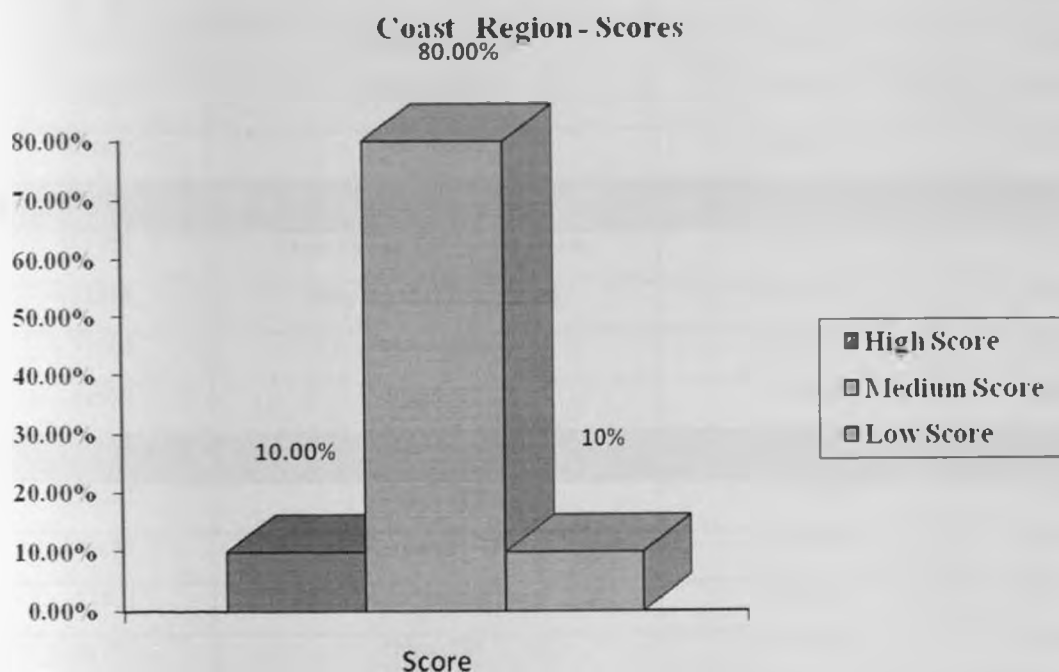


Table 4: Breakdown of scores– Coast Region

MFL Code	Facility Name	Score	Classification of score
11198	Adu Dispensary	37.4962	Low
11203	Aga Khan Hospital	74.9924	Medium
11208	Al Farooq Hospital	49.9954	Low
11289	Coast PGH	100.0000	High
11393	Shimo la tewa disp	35.4131	Low
11411	Hola DH	79.1587	Medium
11432	Jibana SDH	66.6568	Medium
11434	Jocham Hosp	79.1587	Medium
11454	Kanamai HC	56.2443	Medium
11455	Kasigau rdch	60.4105	Medium
11468	Kiembeni Community	35.4131	Low
11480		79.1587	Medium
11489	Kisimani HC	60.4106	Medium

11492	Kiunga HC	20.8281	Low
11507	Kwale DH	70.8262	Medium
11512	Lamu DH	74.9924	Medium
11523		54.1580	Medium
11552	Makwasinyi Disp	68.7431	Medium
11555	Malindi DH	87.4912	Medium
11562	Marafa HC	58.3243	Medium
11566	Mariakani DH	89.5712	High
11570	Marie Stopes NAURSING Home	62.4937	Medium
11573	Mary Immac Cottage Hosp	79.1587	Medium
11600	Mewa Hosp	66.6599	Medium
11634	Malco HC	72.9093	Medium
11641	Moi DH Voi	91.6575	High
11643	Mombasa Hosp	83.3249	Medium
11655	Msambweni DH	87.4912	Medium
11673	Mtwapa Nursing home	60.4106	Medium
11711	Ngao DH	83.3249	Medium
11734	Pandya memorial hsp	74.9925	Medium
11748	Rabai Rural heath demonstration ctre	68.7431	Medium
11764	Sagala HC	60.4106	Medium
11774	Sayidah family hosp	79.1587	Medium
11787	Shimba Hills HC	64.5768	Medium
11818	St Lukes kaloleni	66.6599	Medium
11829	Star Hosp	54.1584	Medium
11840		79.1587	Medium
11881	Vipingo rural demonstrtion ctre	77.0756	Medium
11896	Watamu Maternity	62.4903	Medium
11906	Wesu DH	83.3218	Medium
11912	Zion Community Clinic	68.7431	Medium

4.5 NYANZA REGION

A total of fifty eight facilities were assessed in Nyanza region. 1 County referral hospital, 5 District Hospitals, 16 Sub District Hospitals, 10 private Hospitals, and 12 Health Centers, 5 dispensaries, 2 clinics and 6 nursing/maternity homes. One facility 1.72% (n=1) facilities attained a high score while 72.41 % (n=42) facilities attained a medium score. 25.86% (n=15) had a low score. Nyanza is one of the regions with the most facilities that scored low scores.

Unfortunately, two district hospitals in the region scored low scores.

The only facility that attained a high score is Nyanza PGH. Kanyenya Sub District hospital, Kombewa DH, Mbita DH were among the facilities that scored a low score.

Graph 4: Breakdown of scores– Nyanza Region

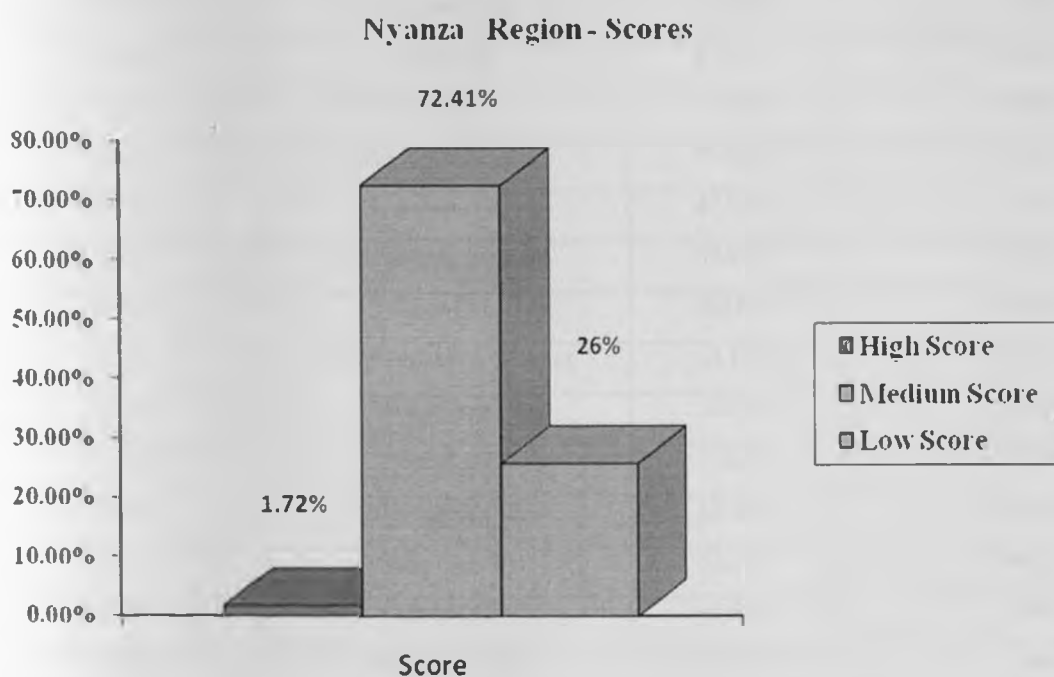


Table 5: Breakdown of scores- Nyanza Region

MFL Code	Facility Name	Score	Score Classification
13465	Aga Khan	87.4912	Medium
13476	Ambira Sub District Hospital	68.7433	Medium
13488	Asumbi HC	56.2412	Medium
13492	Awendo Sub DH	68.7453	Medium
13515	Bosongo Hosp	79.1587	Medium

13547	Eronge HC	54.1554	Medium
13567	Getembe Hosp	49.9825	Low
13575	Girango Disp	39.5762	Low
13582	God Jope Disp	39.5762	Low
13588	Got A gulu Sub DH	60.4075	Medium
13612	Ibeno Sub DH	56.2412	Medium
13613	Igare Med Clinic	58.3212	Medium
13618	Inuka Hosp & maternity home	56.2353	Medium
13622	isana Maternity and Nursing	47.9025	Low
13638	Kabondo Sub DH	56.2412	Medium
13648	Kaluo Disp	41.6562	Low
13673	Kenyena SubDH	39.5762	Low
13675	Kenyerere Disp	41.6562	Low
13678	Masaba DH	85.4053	Medium
13698	Kipkebe Disp	77.0725	Medium
13703	Kisii Hosp- Level 5	73.8262	Medium
13714	Kombewa DH	47.9087	Low
13717	Komotobo Mission HC	52.0753	Medium
13726	Kuria DH	58.32437	Medium
13739	St Elizabeth Lwak Mission	68.7443	Medium
13745	Malcalder sub DH	52.0754	Medium
13772	Marani DH	77.0725	Medium
13776	Marie stopes clinic	62.4875	Medium
13785	Masogo Sub DH	52.0753	Medium
13798	Mbita DH	41.6562	Low
13809	Minyena Disp	35.4122	Low
13833	Muhuru HC	54.1554	Medium
13840	Ndere HC	64.5737	Medium
13841	Ndhiwa Sub DH	56.2412	Medium
13851	Ngisiru Disp	33.3237	Low
13856	Nightingale Med Centre	56.2412	Medium
13858	Ntimaru Sub DH	77.0725	Medium
13880		70.8231	Medium
13891	Nyamache Sub DH	72.9062	Medium

13913	Nyamira maternity	49.9952	Medium
13916	Nyamusi Sub DH	52.0752	Medium
13924	Nyangena Sub DH	47.9087	Low
13925	Nyangena Hosp	72.9062	Medium
13939	Nyanza PGH	91.6575	High
13964	Ogango HC	54.1554	Medium
13968	Ogra HC	62.4812	Medium
13970	Oleje memorial	37.4868	Low
13995	Oasno Nursing home	37.4868	Low
14022	Rachuonyo DH	66.6654	Medium
14037	Rapcom Nursing an Maternity	62.4843	Medium
14056	Roadblock Clinic	56.2412	Medium
14075	Sena IIC	58.3243	Medium
14103	St Camillas Mission	68.7456	Medium
14120	st Monica Hosp	74.9893	Medium
14134	Suna Nursing Maternity	37.4923	Low
14148	Tingiwangi HC	52.0753	Medium
14166	Verna HC	60.4075	Medium
14175	Yala Sub DH	72.9093	Medium

4.6 RIFT VALLEY REGION

A total of fifty eight facilities were assessed in Nyanza region.1 County referral hospital, 11 District Hospitals, 10 Sub District Hospitals, 13 private Hospitals, 13 Health Centers, 1 dispensary, and 9 nursing/maternity homes. There was no facility in this region that attained a high score.81.03 %(n=47) facilities attained a medium score, 18.97 % (n=11) had a low score.

The Rift valley PGH attained a medium score that was on the lower side. Bondeni Maternity attained the highest medium score and was the best performing in the region. It is alarming to note that several Sub District hospitals in the region that provide delivery services did not have a delivery bed. these were

- Rumuruti DH
- Sigor Sub DH

- Kaptumo Sub DH

Graph 5: Breakdown of scores– Rift Valley Region

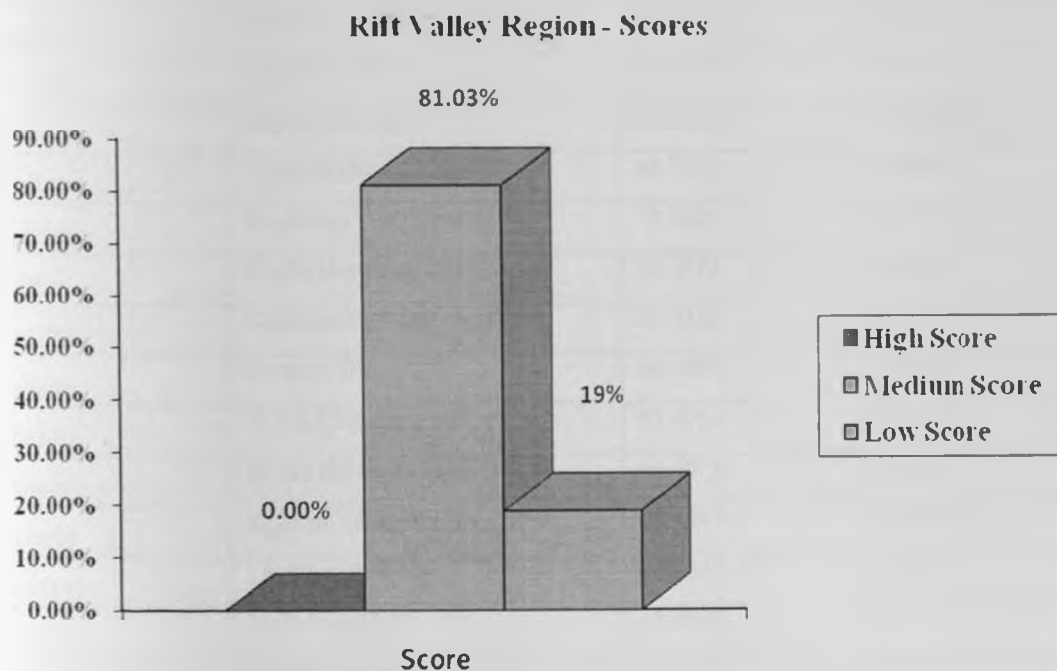


Table 6: Breakdown of scores– Rift Valley Region

MFL Code	Facility Name	Score	Score Classification
14178	AIC IITEIN Mission	83.3252	Medium
14179	Nandi Hills DH	72.9062	Medium
14192	Ainamoi HC	62.4875	Medium
14194	Akemo Nursing Home	66.6537	Medium
14224	Bahati DH	62.4875	Medium
14230	Baraka maternity Home	77.0725	Medium
14265	Bondeni Maternity	81.2387	Medium
14301	Cheborowa HC	74.9862	Medium
14319	Chemogodany Hosp	79.1587	Medium
14330	Chepareria Sub DH	52.0755	Medium
14429	Baraka Med Clinic	58.3212	Medium
14432	Chepchoina Disp	62.4937	Medium
14438	Chepkemel HC	66.6568	Medium

14494	Fatima Maternity hosp	87.4912	Medium
14510	Gilgil Sub DH	72.9062	Medium
14609	Kabartonjo DH	64.5737	Medium
14701	Kapenguria DH	72.9062	Medium
14734	Kaplamai HC	43.7362	Low
14741	Kaplong Hosp	60.4075	Medium
14753	Kapsara DH	68.7337	Medium
14767	Kapsowas AIC hospital	74.9925	Medium
14776	Kaptarakwa Sub DH	58.3212	Medium
14792	Kaptumo Sub DH	35.4132	Low
14831	Kericho DH	66.6634	Medium
14890	XXXXXXXXX	52.0754	Medium
14949	Kitale Nursing Home	60.4075	Medium
14960	Kobujoi Mission HC	49.9887	Medium
15081	Lopiding SuB dh	47.9087	Low
15114	Maji Tamu HC	41.6562	Low
15167	Medihill hosp	79.1587	Medium
15181	Meteitei Sub DH	58.3212	Medium
15185	Mile 46 HC	52.0752	Medium
15208	Mois Bridge catholic	64.5737	Medium
15212	Molo DH	70.8234	Medium
15250	Mulemi maternity	47.9087	Low
15288	Nakuru PGH	70.8232	Medium
15351	Ngong Sub DH	52.0752	Medium
15353	Ngubereti HC	60.4075	Medium
15357	Njoro PCEA Disp	45.8225	Low
15358	Njoro HC	70.8137	Medium
15375	Nyonjoro	43.7425	Low
15423	Ololulunga DH	43.7425	Low
15466	Polyclinic hosp	85.4053	Medium
15498	Roret Sub DH	56.2412	Medium
15502	Rumuruti DH	64.5737	Medium
15508	Saboti Sub DH	49.9887	Medium
15564	Sigor Sub DH-West Pokot	45.8225	Low

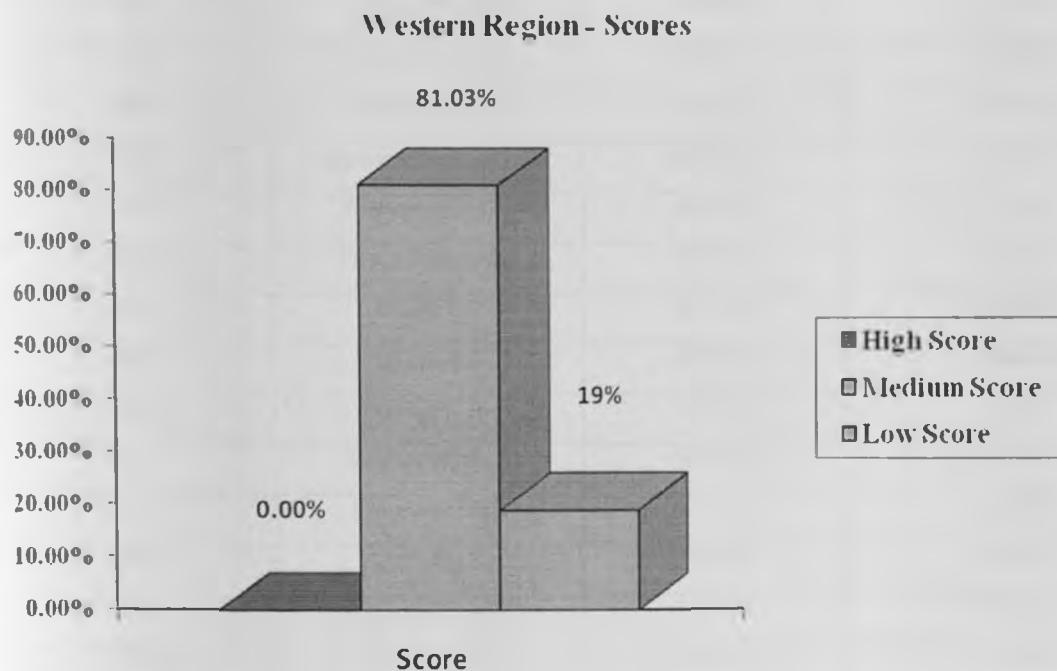
15565	Sibor Sub DH - Bomet	52.0753	Medium
15657	St Mathews Maternity	52.0753	Medium
15678	Subukia HC	66.6537	Medium
15738	Tot Sub DH	58.3212	Medium
15740	Transmara medi care	47.9087	Low
15761	Unilever Central	70.8262	Medium
15764	Vlley Hosp	45.8162	Low
15768	Wamba HC	52.0753	Medium
15788	Ziwa Sub DH	68.7337	Medium
16337	Lelmolok Nursing home	62.4875	Medium
16724	Hope nursing home	49.9887	Medium

WESTERN REGION

A total of fifty four facilities were assessed in Western region. 1 County referral hospital, 16 District Hospitals, 9 Sub District Hospitals, 9 Hospitals, 9 Health Centers, 5 dispensaries, 5 clinic/Dispensaries and 5 nursing/maternity homes. None of the facilities in the region attained a high score while 84.91 % (n=41) facilities attained a medium score, 15.09 % (n=8) had a low score.

The facilities that scored the highest medium scores are kakamega PGH and the Port Victoria Hospital.

Graph 6 : Breakdown of scores– Western Region



Region	High Score	Medium Score	Low Score
Western	0% (n=0)	84.91%(n=41)	15.09%(n=8)

Table 7: Breakdown of scores– Region

MFL Code	Facility name	Score	Score Classification
15791	Ahamdiya Hosp	68.7337	Medium
15795	Alupe Sub DH	66.6623	Medium
15799	Amukura Mission	54.1553	Medium
15808	Bokoli Hosp	66.6475	Medium
15817	Bukaya HC	64.5737	Medium
15828	Bungoma DII	87.4852	Medium
15833	Buishiri HC	56.2352	Medium
15834	Busia DII	87.4912	Medium
15835	Busibwabo disp	47.9087	Low
15836	Butere DH	79.1587	Medium
15842	Carol Afandi Clinic	70.8232	Medium
15847	Chavogere Mission	41.6562	Low
15859	Chombeli HC	52.0718	Medium

15860	Chwele HC	60.4012	Medium
15861	Chwele Friends	49.9887	Low
15862	Coptic Nursing home	81.2387	Medium
15864	Dreamland MC hc	58.3212	Medium
15871	elgonview Med College	60.4012	Medium
15876	Emuhaya Sub DH	47.9087	Low
15884	Esishiru Maternity	68.7432	Low
15894	Hamisi HC	56.2412	Medium
15899	Iguhu DH	60.4075	Medium
15902	Ingotse Disp	37.4945	Low
15913	Kaimosi Mission	70.8262	Medium
15915	Kakamega PGH	87.4912	Medium
15935	Khasoko HC	54.1425	Medium
15939	Khuyangu Sub DH	77.0725	Medium
15950	Kimilili DH	68.7275	Medium
15955	KongOni HC	68.7432	Medium
15961	Likuyani Sub DH	85.4052	Medium
15965	Lugulu Friends Mission	74.9925	Medium
15969	Lumakanda DH	72.9062	Medium
15996	Malava dh	74.9925	Medium
15999	Manyala Sub DH	77.0725	Medium
16007	Matunda Nursing home	60.4075	Medium
16008	Nmatunda Sub DH	68.7423	Medium
16010	Matuma Sub DH	56.2412	Medium
16012	Mbale rural health trainign centre	68.7423	Medium
16025	mt Elgon DH	60.4075	Medium
16030	Mukumu Hosp	70.8262	Medium
16037	Mumias Sub DH	64.5737	Medium
16058	Mwihila Mission Hosp	58.3212	Medium
16073	Holy Family Nagina	58.3275	Medium
16078	Navokholo Sub DH	47.9087	Low
16091	Port Victoria Hosp	87.4912	Medium
16107	Shibwe Sub DH	64.5737	Medium

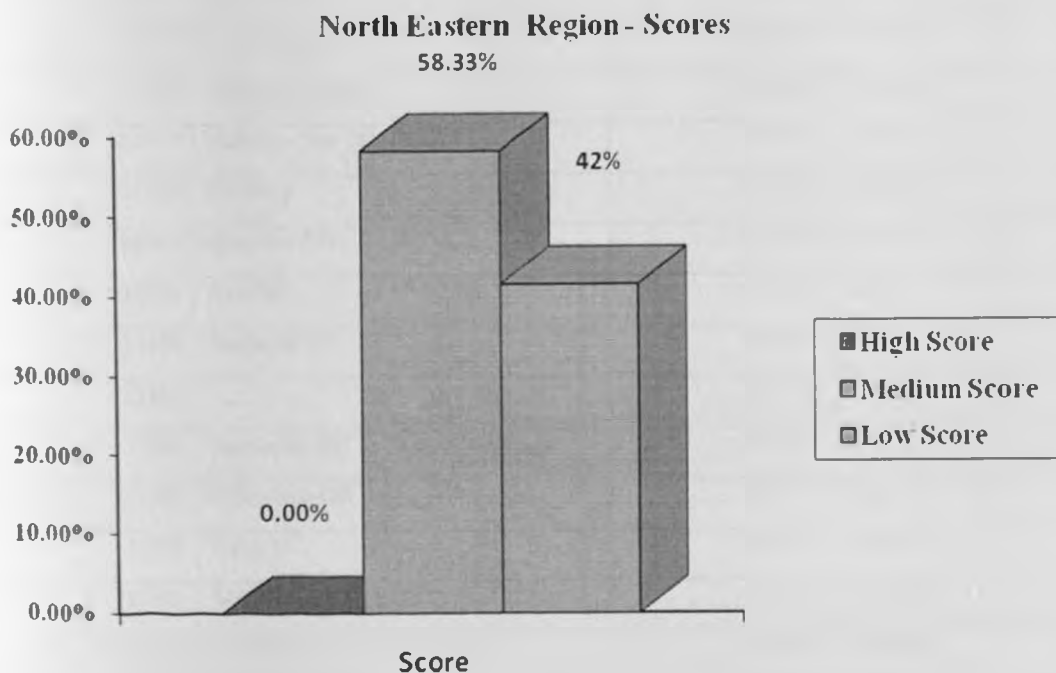
16128	Sio port DH	54.1552	Medium
16130	Sirisia Hosp	60.4075	Medium
16141	St Marys mumias	83.3187	Medium
16143	St Pauline Nursing Home	29.1575	Low
16149	Tanaka Nursing Home	70.8262	Medium
16150	Teso DH	68.7423	Medium
16161	Webuye Hosp	74.9862	Medium

4.7 NORTH EASTERN REGION

A total of thirty six facilities were assessed in North Eastern region. 1 County referral hospital, 10 District Hospitals, 8 Sub District Hospitals, 3 Hospitals, 4 Health Centers, 6 clinic/Dispensaries and 4 nursing/maternity homes. None of the facilities in the region attained a high score while 58.33 % (n=21) facilities attained a medium score, 41.67 %(n=8) had a low score.

The highest scoring facility in this region is Dadaab Sub District Hospital, which attained a higher score than Garissa PGH. Lafey Sub District Hospital did not have a delivery bed

Graph 7: Breakdown of scores– North Eastern Region



Region	High Score	Medium Score	Low Score
North Eastern	0% (n=0)	58.33%(n=21)	41.67%(n=8)

Table 8: Breakdown of scores– North Eastern Region

MFL Code	Facility Name	Facility Score	Score Classification
13287	Ai siha Nursing Home	52.0753	Medium
13298	Balambala Sub DH	62.4875	Medium
13300	Banisa HC	47.90875	Low
13306	Biyamadhow HC	43.7425	Low
13307	Blue Light nursing home	56.2412	Medium
13312	Buna Sub DH	47.9087	Low
13314	Bure DH	62.4875	Medium
13316	Dadaab Sub DH	83.3252	Medium
13318	Dagahaley Hospital	62.4937	Medium
13335	Elwak DH	43.7425	Low
13339	Bura DH	64.5737	Medium
13346	Garisa PGH	77.0756	Medium
13352	Griftu DH	56.2412	Medium
13357	Habaiswen DH	52.0752	Medium
13359	Hagadera Hosp	74.9925	Medium
13365	Hulugho Sub DH	22.9112	Low
13368	Ifo Hosp	68.7423	Medium
13369	Iftin Sub DH	64.5737	Medium
13370	Ijara HC	31.2437	Low
13378	Kamuthe HC	43.7425	Low
13380		52.0753	Medium
13384	Korondile HC	35.4143	Low
13392	Lafey Sub DH	39.5765	Low
13398	Liboi HC	64.5737	Medium
13402	Mandera DH	68.7443	Medium
13403	Mandera Medicare	52.0754	Medium
13406	Ijara Dh	66.6654	Medium

13411	Modogashe DH	43.7425	Low
13419	Plaza Nursing Home	47.9087	Low
13423	RHAMU Sub DH	47.9025	Low
13428	Sabuli HC	39.5762	Low
13433	Sankuri HC	72.9321	Medium
13435	Sarif HC	31.2437	Low
13445	Takaba DH	54.1552	Medium
13452	Wajir DH	62.4935	Medium
13455	Waragud HC	35.4133	Low

4.8 EASTERN REGION

A total of fifty seven facilities were assessed in the Eastern region. 1 County referral hospital, 12 District Hospitals, 10 Sub District Hospitals, 10 Hospitals, 11 Health Centers, 5 clinic/Dispensaries and 8 nursing/maternity homes. None of the facilities in the region attained a high score while 78.95 % (n=45) facilities attained a medium score, 21.05 % (n=12) had a low score.

The highest scoring facility in this region is Embu PGH. This facility did not score a high score, but scored a medium score of 70.

Four facilities in the region reported to be working with skilled attendants to provide emergency home deliveries, these are

- St Orsola Mission Hospital
- Pepo la Tumaini Dispensary
- Kivaa Health Centre
- Kianjakoma SUB DH

This region had the most number of facilities where home deliveries by community midwives were reported to the link facilities. Chuka DH received 14 deliveries reported by community midwives, Karau HC received 149 deliveries reported by the community midwives while Kianjakoma SUB DH received 20 deliveries reported by community midwives.

Graph 8: Breakdown of scores– Eastern Region

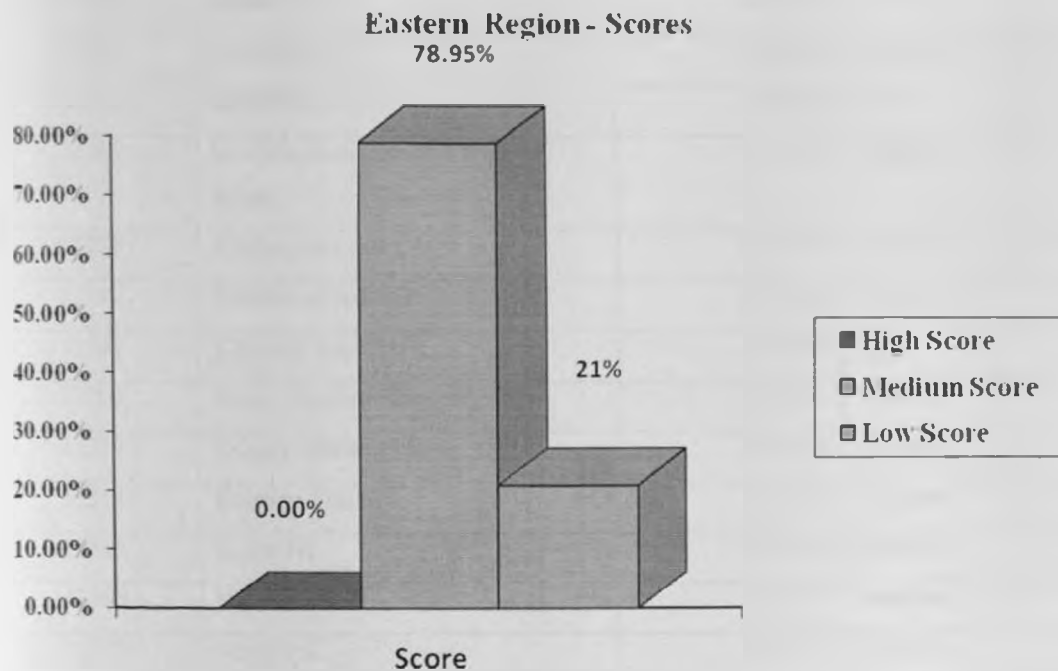


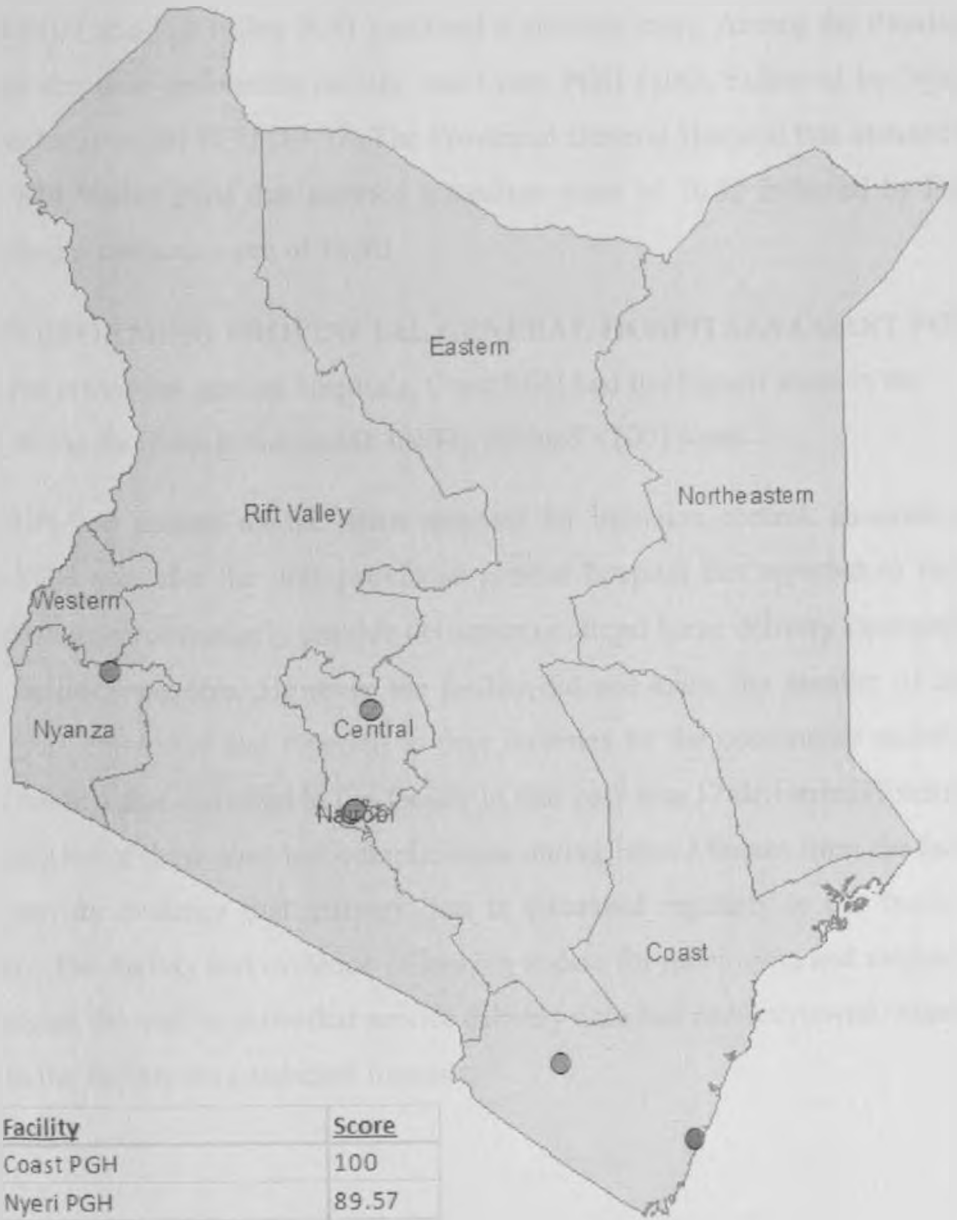
Table 9: Breakdown of scores– Eastern Region

MFL Code	Facility	Score	Score Classification
11968	Cheera Disp	47.9056	Low
11970	Chogoria PCEA Hosp	62.4937	Medium
11972	Chuka Cottage Hosp	70.8231	Medium
11973	Chuka DH	74.9925	Medium
11976	Consolata Hospital Nkubu	70.8262	Medium
11988	Donyo Sabuk Nursing Home	64.5768	Medium
12004	Embu PGH	72.9062	Medium
12018	Suleiman Farooq Memorial Centre	35.4131	Low
12029	Garbatulla DH	68.7431	Medium
12080	Ikutha HC	41.6593	Low
12114	Joykim Nursing Home	62.4906	Medium
12145		27.0806	Low
12147	Kalawa HC	43.7456	Medium
12174	Kangeta HC	72.9093	Medium
12181	Kanyakine DH	70.8262	Medium

12184	Kanyangi Sub DH	52.0753	Medium
12198	Karau HC	43.7456	Medium
12230	Kathiani DH	70.8231	Medium
12242	Katse HC	41.6625	Low
12266	Kawiria Maternity and Nursing home	64.5768	Medium
12279	Kianjakoma Sub DH	62.4937	Medium
12282	Kibirichia Sub DH	60.4106	Medium
12291	Kibwezi Sub DH	47.9118	Low
12306	Kioko Mission Hosp	68.7431	Medium
12313	Kilome Nursing Home	49.9918	Medium
12314	Kilungu Sub DH	60.4106	Medium
12365	Kitise HC	58.3243	Medium
12366	Kitui DH	62.4937	Medium
12375	Kivaa HC	52.0752	Medium
12414	Kyethiani HC	47.9118	Low
12420	Kyuso DH	54.1581	Medium
12445	Magutuni DH	60.4106	Medium
12472	Marsarbit DH	49.9952	Medium
12483	Mathuki HC	31.2468	Low
12488	Matuu DH	64.5768	Medium
12492	Maua Methodist Church	79.1587	Medium
12499	Mbenuu HC	49.9918	Medium
12500	Mbeu Sub DH	47.9118	Low
12516	Meru DH	74.9925	Medium
12523	Migwanui Sub DH	64.5768	Medium
12525	Mikinduri Sub DH	72.9093	Medium
12526	Mikumbune Sub DH	52.0781	Medium
12527	Milimani Nursing Home	62.4937	Medium
12545	Moyale Nursing Home	70.8262	Medium
12589	Muthambi HC	68.7431	Medium
12604	MUTOMO Nission Hosp	70.8262	Medium
12606	Mutuati Nursing Home	37.4931	Low
12641	Neema Hospital	68.7431	Medium

Nuu Sub DH	52.0781	Medium
Nyambene DH	74.9925	Medium
Pepo la tumaini Disp	39.5793	Low
Ruiru Catholic HC	52.0781	Medium
St Lukes Cottage Hosp	49.9952	Medium
St Orsola Mission Hosp	74.9925	Medium
Syumile Dispensary	39.5793	Low
Tigania Hospital	70.8262	Medium
Mbeere DH	83.3252	Medium

Best Performing Facilities



<u>Region</u>	<u>Facility</u>	<u>Score</u>
Coast	Coast PGH	100
Central	Nyeri PGH	89.57
Nyanza	Nyanza PGH	91.65
Central	Tumutumu Mission Hospital	91.65
Nairobi	Nairobi Hospital	93.73
Nairobi	Aga Khan Hospital	89.57
Nairobi	Kenyatta National Hospital	89.57
Coast	Moi DH Vol	91.65

According to the table above, the only National Referral hospital that was assessed in the study was the Kenyatta National hospital which attained a high score (89.57). Provincial General hospitals had 3 facilities that attained a high score (Nyeri PGH, Coast PGH and Nyanza PGH). The rest of the Provincial general hospitals (Garissa PGH, Embu PGH, Kakamega PGH and Rift valley PGH) attained a medium score. Among the Provincial General hospitals the best performing facility was Coast PGH (100), Followed by Nyanza PGH (91.65) and lastly Nyeri PGH (89.57). The Provincial General Hospital that attained the least score was Rift Valley PGH that attained a medium score of 70.82 followed by Embu PGH which attained a medium score of 72.90.

4.10 BEST PERFORMING PROVINCIAL GENERAL HOSPITALS COAST PGH

Among the provincial general hospitals, Coast PGH had the highest score in the country among all the facilities in Kenya, the facility attained (100) score

Coast PGH had present all the items assessed for infection control, structure and process. Coast PGH was also the only provincial general hospital that reported to have a skilled attendants/midwives routinely provide deliveries or attend home delivery emergencies as part of the facility's services. However the facility did not know the number of home deliveries that were conducted and reported to their facilities by the community midwives. The number of women that delivered in the facility in that year was 17 deliveries. (Excluding cesarean sections) Out of these none had complications during labor. Minutes from the facility were seen to provide evidence that delivery data is discussed regularly in the facility to inform decisions. The facility had evidence of looking at data for monitoring and evaluation- there were charts on the wall to show that service delivery data had been reviewed. Maternal death reviews in the facility are conducted monthly.

Coast PGH scores

Structure items	Item present	Score
Soap	Yes	Full Score
Running water	Yes	Full Score
Hand Disinfectant	Yes	Full Score
Covered bin	Yes	Full Score
Sharps	Yes	Full Score
Latex gloves	Yes	Full Score
Disinfectant	Yes	Full Score
Process items		
Auditory privacy	Yes	Full Score
Delivery bed	Yes	Full Score
Provider on site 24 hrs ?	Yes	Full Score
Meetings to discuss delivery statistics	Yes	Full Score
Macintosh for the delivery bed	Yes	Full Score
Examination light score	Yes	Full Score
Maternal guidelines score	Yes	Full Score
Normal Delivery guidelines score	Yes	Full Score
Obstetric care guidelines score	Yes	Full Score
Paediatric partograph	Yes	Full Score
Blank partograph	Yes	Full Score

NYANZA PGH

Nyanza PGH was the second best performing provincial general hospital, with the only item missing for infection control in the delivery unit was the disinfecting solution. 3551 women delivered during the past year in this facility with 409 having registered as having complications. Evidence of minutes where statistics for delivery as discussed was seen, and there was evidence of using data for M&E by minutes and reports-however there were no wall charts. However this facility had no home deliveries reported by the community

midwives to the hospital. Unlike the Coast PGH, the skilled attendants in the hospital do not perform home emergency deliveries.

NYERI PGH

Nyeri PGH was the third best performing hospital among the provincial hospitals. Normal delivery guidelines scores were reported and not seen, and the unit lacked a covered bin. Skilled workers do not perform emergency home deliveries. There was evidence of monitoring and evaluation through the hospital minutes.

Reasons why Embu and Rift Valley PGH had the lowest scores were:

Both facilities lacked all the normal delivery guidelines. Obstetric Care guidelines were missing in Embu PGH while the Rift valley PGH reported to have them but these were not seen. Pediatric guidelines were reported to be there at the Rift Valley PGH but were not seen. Embu PGH did not have these guidelines. Both facilities did not have a pediatric Partographs. Rift Valley PGH did not even have a blank partograph for mothers during delivery; however Embu PGH had the blank partograph present. Rift valley PGH stated that discussion of delivery data to inform decisions is not done at the facility. None of the facilities bins in the delivery room were covered to prevent infection control. Embu PGH reported to have disinfectant in the delivery room but this was not present during the interview.

Table 10: Scores per facility type

Facility Code	Facility type	High Score	Medium Score	Low Score
1	National Referral hospital	1 Facility	0 Facilities	0 Facilities
2	Provincial Hospital	3 facilities	4 facilities	0 Facilities
3	District Hospital	2 Facilities	63 Facilities	6 Facilities
4	Sub District Hospital	0 Facilities	49 Facilities	13 Facilities
5	Other Hospital	3 Facilities	82 Facilities	7 Facilities
6	Health Centre	0 facilities	58 facilities	12 facilities
9	Maternity	0 Facilities	33 Facilities	8 Facilities

4.11 BEST PERFORMING DISTRICT HOSPITALS

The best performing District hospitals in the country that also attained high scores were also in the Coast province – these are Mariakani DH and Moi DH Voi.

Dadaab SUB DH which attained a medium score of 83.33 also performed the best in the north Eastern region. This hospital scored better than the Garissa PGH.

The lowest performing District hospitals in the country are shown in the table below.

Table 11: Worst performing District and Sub District hospitals

<i>MFL Code</i>	<i>Region</i>	<i>Facility</i>	<i>Score (LOW)</i>
10916	Central	Olkalau SUB DH	39.57935
11104	Central	Tigoni DH	45.82875
12291	Eastern	Kibwezi SUB DH	47.911875
12500	Eastern	Mbeu SUB DH	47.911875
13312	North Eastern	Buna SUB DH	47.90875
13335	North Eastern	Elwak DH	43.7425
13365	North Eastern	Hulugho Sub DH	22.91
13392	North Eastern	Lafey Sub DH	39.57625
13411	North Eastern	Modogashe DH	43.74
13423	North Eastern	RHAMU Sub DH	47.90
13673	Nyanza	Kenyenya SubDH	39.57
13714	Nyanza	Kombewa DH	47.90875
13798	Nyanza	Mbita DH	41.65625
14792	Rift Valley	Kaptumo Sub DH	35.41
15081	Rift Valley	Lopiding SuB dh	47.90
15423	Rift Valley	Ololulunga DH	43.7425
15564	Rift Valley	Sigor Sub DH-West Pokot	45.82
15876	Western	Emuhaya Sub DH	47.90
16078	Western	Navokholo Sub DH	47.90

Some of the missing items that caused the low scores in the district hospitals were:

Tigoni DH – which is a facility close to Nairobi did not have soap or hand disinfectant in the delivery room for infection control. Auditory privacy was lacking in the delivery room. Discussion of delivery data to inform decisions was not happening in the facility. Examination light for delivery was missing, all relevant guidelines were also missing, and pediatric Partograph was missing.

Kombewa DH

This facility lacked both soap and disinfectants in the delivery room. All the relevant guidelines were missing and discussion of delivery statistics was not happening in the facility. Kombewa SUB DH had just been raised from a health centre to a Sub DH during the study year, this may explain the low scores for the facility.

Mbita DH

This facility lacked soap and disinfectant during the study. Bins lacked a cover to avoid infection control. There was lack of auditory /visual privacy in the delivery room. All relevant guidelines were lacking except the obstetric guidelines were available. Paediatric partographs were missing.

Modogashe DH

The facility lacked running water, hand disinfectants and general disinfectants, there was no macintosh covering any surface, there was no examination light, all guidelines and partographs were missing.

4.12 BEST PERFORMING HOSPITALS

The best performing hospitals that attained high scores were TumuTumu PCEA hospital in Central, The Aga Khan Nairobi and the Nairobi Hospital.

4.13 WORST PERFORMING HOSPITALS

Some of the worst performing hospitals that attained a low score were Kiembeni Community Hospital in Coast, Suleiman Farooq Memorial centre in Eastern, Gatembe

Hospital in Nyanza, Oleje Memorial hospital in Nyanza, Transmara Medi Care in Nyanza, Valley Hospital Rift valley and St.Pauline nursing home in Western.

4.14 BEST PERFORMING HEALTH CENTERS

The best performing health centers in the country were the vipingo rural demonstration centre in coast and Kirima health centre in Central region

4.15 FACILITY TYPE BY SCORE-ALL FACILITIES

The tables below show a breakdown of all facilities by their type (National, Provincial, District, Hospital and Health Centre) and their respective scores.

Table 12: Breakdown by facility type–All District Hospitals

Level 3 Hospital	Region	High Score	Medium Score	Low Score
Karatina DH	Central			
Kiambu DH	Central			
Maragua DH	Central			
Murang'a DH	Central			
Thika Level 5	Central			
Tigoni DH	Central			
Hola DH	Coast			
Kwale DH	Coast			
Lamu DH	Coast			
Malindi DH	Coast			
Mariakani DH	Coast			
Moi DH Voi	Coast			
Msambweni DH	Coast			
Ngao DH	Coast			
Wesu DH	Coast			
Chuka DH	Eastern			
Garbatulla DH	Eastern			
Kanyakine DH	Eastern			
Kathiani DH				
Kitui DH	Eastern			
Kyuso DH	Eastern			

Magutuni DH	Eastern			
Marsarbit DH	Eastern			
Matuu DH	Eastern			
Meru DH	Eastern			
Nyambene DH	Eastern			
Mbeere DH	Eastern			
Bure DH	North Eastern			
Etwak DH	North Eastern			
Bura DH	North Eastern			
Griftu DH	North Eastern			
Habaiswen DH	North Eastern			
Mandera DH	North Eastern			
Ijara Dh	North Eastern			
Modogashe DH	North Eastern			
Takaba DH	North Eastern			
Wajir DH	North Eastern			
Masaba DH	Nyanza			
Kisii Hosp- Level 5	Nyanza			
Kombewa DH	Nyanza			
Kuria DH	Nyanza			
Rachuonyo DH	Nyanza			
Nandi Hills DH	RiftValley			
Bahati DH	RiftValley			
Chepchoina Disp	RiftValley			
Kabartonjo DH	RiftValley			
Kapenguria DH	RiftValley			
Kapsara DH	RiftValley			
Kericho DH	RiftValley			
Molo DH	RiftValley			
Ololulunga DH	RiftValley			
Rumuruti DH	RiftValley			
Wamba HC	RiftValley			
Bokoli Hosp	Western			
Bungoma DH	Western			

Busia DH	Western			
Butere DH	Western			
Chwele HC	Western			
Emuhaya Sub DH	Western			
Hamisi HC	Western			
Iguhu DH	Western			
Kimilili DH	Western			
Lumakanda DH	Western			
Malava dh	Western			
mt Elgon DH	Western			
Port Victoria Hosp	Western			
Sirisia Hosp	Western			
Teso DH	Western			
Webuye Hosp	Western			
Mbagathi DH	Nairobi			

Table 13: Breakdown by score-All Sub District Hospitals

FacilityName	Region	High	Medium	Low
Kirinyaga SubDH	Central			
Kihara SubDH	Central			
Kimbimbi SDH	Central			
Mukurweini SDH	Central			
Muriranjias SDH	Central			
Olkalau SDH	Central			
Othaya SDH	Central			
Jibana SDH	Eastern			
Kanyangi Sub DH	Eastern			
Kianjakoma Sub DH	Eastern			
Kibirichia Sub DH	Eastern			
Kibwezi Sub DH	Eastern			
Kilungu Sub DH	Eastern			
Mbeu Sub DH	Eastern			
Migwanui Sub DH	Eastern			

Mikinduri Sub DH	Eastern			
Mikumbune Sub DH	Eastern			
Nuu Sub DH	North Eastern			
Balambala Sub DH	North Eastern			
Buna Sub DH	North Eastern			
Dadaab Sub DH	North Eastern			
Hulugho Sub DH	North Eastern			
Iftin Sub DH	North Eastern			
Lafey Sub DH	North Eastern			
RHAMU Sub DH	North Eastern			
Ambira Sub District Hospital	Nyanza			
Awendo Sub DH	Nyanza			
Got A gulu Sub DH	Nyanza			
Ibeno Sub DH	Nyanza			
Kabondo Sub DH	Nyanza			
Kenyenya SubDH	Nyanza			
Malcalder sub DH	Nyanza			
Marani DH	Nyanza			
Masogo Sub DH	Nyanza			
Mbita DH	Nyanza			
Ndhiwa Sub DH	Nyanza			
Ntimaru Sub DH	Nyanza			
Nyamache Sub DH	Nyanza			
Nyamusi Sub DH	Nyanza			
Yala Sub DH	Nyanza			
Gilgil Sub DH	RiftValley			
Kaptarakwa Sub DH	RiftValley			
Kaptumo Sub DH	RiftValley			
Lopiding SuB dh	RiftValley			
Meteitei Sub DH	RiftValley			
Ngong Sub DH	RiftValley			
Saboti Sub DH	RiftValley			
Sibor Sub DH - Bomet	RiftValley			

Tot Sub DH	Western			
Ziwa Sub DH	Western			
Alupe Sub DH	Western			
Khuyangu Sub DH	Western			
Likuyani Sub DH	Western			
Manyala Sub DH	Western			
Nmatunda Sub DH	Western			
Matuma Sub DH	Western			
Mumias Sub DH	Western			
Navokholo Sub DH	Western			
Shibwe Sub DH	Western			
Kayole II Sub DH	Nairobi			

Table 14: Breakdown of facilities Score by HOSPITAL

Facility Name	Region	High	Medium	Low
Charity Medical Centre	Central			
Githumu Hsp	Central			
Immac Heart of Mary Hosp	Central			
Jamii Hosp	Central			
Kanaan Med Centre	Central			
Kijabe aic hsp	Central			
Kikuyu (PCEA) hosp	Central			
Kirwara SDH	Central			
St. Mulumba MH	Central			
Mwea Medical Ctr	Central			
Mwea mMission Our Lady	Central			
Naidu Hosp	Central			
Nazareth Hosp	Central			
North Kinangop Cath Hosp	Central			
Nyahururu Priv Hosp	Central			
Sinai Mat and Med Ctr	Central			
Thika Nursing Home	Central			
Tumu Tumum PCEA Hosp	Central			

Jocham Hosp	Coast		
Kiembeni Community	Coast		
	Coast		
Marie Stopes NAURSING Home	Coast		
Mary Immac Cottage Hosp	Coast		
Mewa Hosp	Coast		
Mombasa Hosp	Coast		
Pandya memorial hsp	Coast		
Sayidah family hosp	Coast		
St Lukes kaloleni	Coast		
Star Hosp	Coast		
Chogoria PCEA Hosp	Eastern		
Chuka Cottage Hosp	Eastern		
Consolata Hospital Nkubu	Eastern		
Suleiman Farooq Memorial Centre	Eastern		
Kioko Mission Hosp	Eastern		
Maua Methodist Church	Eastern		
MUTOMO Nission Hosp	Eastern		
St Lukes Cottage Hosp	Eastern		
St Orsola Mission Hosp	Eastern		
Tigania Hospital	Eastern		
Dagahaley Hospital	North Eastern		
Hagadera Hosp	North Eastern		
Ifo Hosp	North Eastern		
Aga Khan	Nyanza		
Bosongo Hosp	Nyanza		
Getembe Hosp	Nyanza		
Inuka Hosp & maternity home	Nyanza		
Nightingale Med Centre	Nyanza		
Nyamira maternity	Nyanza		
Nyangena Hosp	Nyanza		
Oleje memorial	Nyanza		
St Camillas Mission	Nyanza		
st Monica Hosp	Nyanza		

AIC IITEIN Mission	RiftValley		
Akemo Nursing Home	RiftValley		
Chemogodany Hosp	RiftValley		
Chepkemel HC	RiftValley		
Kaplong Hosp	RiftValley		
Kapsowas AIC hospital	RiftValley		
	RiftValley		
Kitale Nursing Home	RiftValley		
Medihill hosp	RiftValley		
Polyclinic hosp	RiftValley		
ST MARYS Naivasha	RiftValley		
Transmara medi care	RiftValley		
Unilever Central	RiftValley		
Valley Hosp	RiftValley		
Ahamdiya Hosp	Western		
Kaimosi Mission	Western		
Lugulu Friends Mission	Western		
Mukumu Hosp	Western		
Mwihila Mission Hosp	Western		
Holy Family Nagina	Western		
Sio port DH	Western		
St Marys mumias	Western		
St Pauline Nursing Home	Western		
Aga khan Hospital	Nairobi		
Avenue Hospital	Nairobi		
Jamaa mission	Nairobi		
Langata hosp	Nairobi		
MARIAKANI Cottage Hospital	Nairobi		
Mathare North HC	Nairobi		
Melchezedek hosp	Nairobi		
Metropolotan Hospital	Nairobi		
MP Shan Westlands	Nairobi		
Nairobi Hosp	Nairobi		
Nairobi West Hosp	Nairobi		

Nairobi Womens hops	Nairobi			
Pumwani Maternity Hos	Nairobi			
Radent Hosp	Nairobi			
St John Hospital	Nairobi			
Umoja Hospital	Nairobi			
Victory Hospital	Nairobi			

Table 15: Breakdown of score by HEALTHCENTRE

Facility Name	Region	High	Medium	Low
Endarasha Rural HC	Central			
Gichiche HC	Central			
Kandara Health Centre	Central			
Karuri HC	Central			
Immac Heart Hosp	Central			
Nzarariga HC	Central			
Ngoliba HC	Central			
Ngorongo HC	Central			
Wamagana HC	Central			
Kasigau rdch	Coast			
Kisimani HC	Coast			
Kiunga HC	Coast			
Marafa HC	Coast			
Rabai Rural heath demonstration ctre	Coast			
Sagala HC	Coast			
Shimba Hills HC	Coast			
Vipingo rural demonstration centre	Coast			
Ikutha HC	Eastern			
Kalawa HC	Eastern			
Kangeta HC	Eastern			
Karau HC	Eastern			

Katse HC	Eastern			
Kitise HC	Eastern			
Kivaa HC	Eastern			
Mathuki HC	Eastern			
Mbenuu HC	Eastern			
Muthambi HC	Eastern			
Ruiru Catholic HC	Eastern			
Ijara HC	NorthEastern			
Korondile HC	NorthEastern			
Liboi HC	NorthEastern			
Sabuli HC	NorthEastern			
Asumbi HC	Nyanza			
Eronge HC	Nyanza			
isana Maternity and Nursing	Nyanza			
Komotobo Mission HC	Nyanza			
St Elizabeth Lwak Mission	Nyanza			
Muhuru HC	Nyanza			
Ndere HC	Nyanza			
Ozango HC	Nyanza			
Ogra HC	Nyanza			
Sena HC	Nyanza			
Tingiwangi HC	Nyanza			
Vema HC	Nyanza			
Ainamoi HC	RiftValley			
Cheborowa HC	RiftValley			
Chepareria Sub DH	RiftValley			
Kaplamai HC	RiftValley			
Kobujoi Mission HC	RiftValley			
Maji Tamu HC	RiftValley			

Mile 46 HC	RiftValley			
Mois Bridge catholic	RiftValley			
Ngubereti HC	RiftValley			
Njoro HC	RiftValley			
Roret Sub DH	RiftValley			
Sigor Sub DH-West Pokot	RiftValley			
Subukia HC	RiftValley			
Amukura Mission	Western			
Bukaya HC	Western			
Buishiri HC	Western			
Chavogere Mission	Western			
Chombeli HC	Western			
Dreamland MC hc	Western			
Khasoko HC	Western			
KongOni HC	Western			
Mbale rural healt trainign centre	Western			
St Catherines HC	Nairobi			
St Francis HC	Nairobi			
St lukes Cona HC	Nairobi			
Westlands HC	Nairobi			

4.16 COMMUNITY COMPONENT OF THE KSPA STUDY

The Community Component of the 2010 KSPA collected information from CHWs about their own activities, and from mothers of young children about their experiences with the use of health care services. Given the government emphasis on the community level in health services and concerns that maternal health was not improving more rapidly, the National Coordinating Agency for Population and Development (NCAPD) included a community component in the 2010 Kenya Service Provision Assessment (2010 KSPA). The NCAPD sought the following information to complement the rest of the SPA data: (1) data

on the work of community health workers, including their perspectives on their own situations and their own performance, and (2) data on how clients consider the health services offered by the health care system.

In particular, the 2010 KSPA community component sought the perspectives of mothers of young children on the services they use regularly. Women gain experience with health services when they bring their children to a facility for preventive medicine or treatment of an illness, and when they attend antenatal clinics, use maternities for delivery, or request family planning services. Through focus group discussions the 2010 KSPA community component collected the views of groups of women on how well they are being served by facility staff. The KSPA community component—interviews with CHWs and group discussions with mothers—is called qualitative because it sought to elicit local perceptions about health services, it allowed respondents to determine what was most relevant, and it sought descriptions of activities, or narratives, to understand how health services are delivered in Kenya today.

1.17 GROUP DISCUSSIONS WITH MOTHERS

The KSPA teams organized group discussions with mothers of children less than two years old who lived in the catchment areas of health care facilities that were part of the KSPA sample. Each group was composed of 8 to 12 women, who gathered to discuss issues related to health services locally available, their own use of health services for themselves and their children, and their use of family planning. The women discussed the services that are performed well, those that are performed poorly, and their experiences with the use of child health services and services for pregnant women.

This study summarizes the main findings of the delivery sections from the interviews with community health workers and from the group discussions held with women with small children throughout the eight provinces of Kenya. The overall goals of this community component, as well as of this chapter, are to consider why women are not delivering in facilities, given that most facilities attained a medium score.

The table below shows a summary of scripts received from the NCAPD for purposes of the analysis

Region	Number of FGD scripts
Central	4 Scripts
Nairobi	2 scripts
Eastern South	2 scripts
Eastern North	2 scripts
Western	5 scripts
Nyanza	2 scripts
Rift Valley	5 scripts
Coast	2 scripts
North Eastern	2 scripts
Total Scripts	26 scripts

4.18 FINDINGS

According to the findings, The Community health workers understand the importance of delivering in a facility, which shows that there is knowledge in the community on the importance of delivering in the facility. Respondents talked about how and where they went to give birth—at home or in a health facility—and how they thought about delivering at home versus delivering in a facility. They were also asked about the costs of delivering in each place. Factors influencing the choice of place of delivery included their experience in previous deliveries, the cost of the service, the distance to the health facility, and the general environment and reception by the service providers in the maternities compared with the care offered by traditional birth attendants. The groups included women who used only health facilities for delivery, women who had delivered only at home, and women who had delivered both at home and in hospital.

The reasons the CHWs gave why delivery at the facility was important according to the CHWs were: In case of emergencies the baby and mother can be saved, the baby can be prevented from HIV if the mother is HIV Positive, proximity of the facility, availability of an ambulance, medicine is in plenty, hospital delivery takes care of premature babies, in hospitals the doctors can do a cesarean section in case of a delay. The extract below is from CHWs attached to a health facility in Rift valley region

-Why do you prefer to deliver in a health facility?"

Respondent6: prefers health centre because they perform lab tests and early diagnosis of an illness

Respondent8: Prefers health centre because they can give you an IV Fluid In case of prolonged labor

Respondent 9: prefers health centre because they can identify a problem and advice you to come back

Respondent 5: prefers health centre in case of retained placenta, they attend your faster.

Respondent2: Prefers health centre because you are assured of getting the baby because they know what to do in cases of a complication.

Not all women who would prefer to deliver at the health facility actually do so, however. If transport is not available at the right moment; the baby arrives earlier than expected, or other Circumstances keep a woman from travelling to a facility, she will give birth at home attended by a TBA.

Other women expressed the preference of delivering with the services of a TBA. The most popular reason given for not delivering on the facility was for fear of the HIV test, which is a mandatory procedure for all women delivering at the facility. Lack of money for the hospital was also a big reason for lack of delivery in the facility. Ignorance, sometimes labor starts unexpectedly, lack of money to pay for the delivery charge at facility, many women prefer to go to the TBS because they massage you, "Sometimes some mothers do not know they are pregnant so when you go to hospital and the nurses found out they hurl insult at you", Midwives do not charge a lot of money compared to the hospitals, Negative attitude towards hospitals, Availability of midwives at home hinders women from going to a health facility. Some say that clinic or not, they will still give birth to healthy babies therefore it does not bother them, Some also said that giving birth in the hospital, they may have to go through stitching as a result of rupturing of the wound. Some say that clinic or not, they will still give birth to healthy babies therefore it does not bother them. Some of them prefer the midwives claiming that position of the child in the womb cannot be known in the hospital, Midwives know how to re position the child in the womb, they also prescribe very good traditional herbs that are good for the mother and child, some nurses beat patients(cited in

Bungoma). Midwives are good and they know how to reposition the baby in the womb. A facility was cited to have too many students in the facility therefore the mothers do not trust the services. The extract below shows the attitude of the community towards the students in one of the facilities

Respondent 3:-In some hospitals you find you are prescribed medicine of a different ailment than the one you are suffering from, which is not good.

:-Mmh

Respondent 3:-Even if those students are allowed, a doctor at least should be there (cuts short by R1)

Respondent 1:-Mostly it is wrong to use students in the theatres who are learning, because in most cases you find so many people crying there-after saying a certain object is left inside.

Respondent 1:-Mmh at times a piece of gauze is left inside or a pair of scissors (cuts short by R1)

Respondent 3:-Cotton wool

From the findings, the top reasons that women are not using Facilities are Costs of delivery and the good treatment the mothers get from the TBAs which appeals to them more than the facility health care workers.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 SUMMARY

According to the findings, most of the facilities in Kenya lie in the medium category. This means that most facilities have basic equipment and structures to provide delivery services. In Nairobi Region, None of the facilities in the region attained a low score. The Three hospitals that achieved high scores are the Aga Khan Hospital- a private facility, the Nairobi hospital, a private facility and Kenyatta National Hospital which is the national referral hospital. Pumwani maternity hospital, one of Kenya's biggest maternity hospitals scored a medium score of **60.4075**, which is a very low score for a facility of this capacity. Only one facility, bahati health centre in the region reported to be working with skilled attendants/community midwives to provide home emergencies only as part of the facility's services. In Central Region two facilities attained high scores and 80% of the facilities attained a medium score. Coast region performed relatively well with the Coast PGH attaining the highest score in the country. Two District hospitals in the region-Moi Voi DH and Mariakani DH attained High scores in the region. Coast PGH was also the only County hospital reported to have a skilled attendants/midwives routinely provide deliveries or attend home delivery emergencies as part of the facility's services. In Nyanza Region, only one facility attained a high score. 72.41 % (n=42) facilities attained a medium score, 25.86% (n=15) had a low score. Nyanza is one of the regions with the most facilities that scored low scores. Unfortunately, two district hospitals in the region scored low scores. None of the facilities in Nyanza were reported to have an active community facility linkage. In Rift Valley region, none of the facilities attained a high score. 81.03 % (n=47) facilities attained a medium score, 18.97 % (n=11) had a low score. The Rift valley PGH attained a medium score that was on the lower side. Bondeni Maternity attained the highest medium score and was the best performing in the region. It is alarming to note that several Sub District hospitals in the region that provide delivery services did not have a delivery bed. In Western Region, none of the facilities attained a high score while 84.91 % (n=41) facilities attained a medium score, 15.09 % (n=8) had a low score. The facilities that scored the highest medium scores are Kakamega PGH, Port Victoria Hospital, Bungoma DH and Busia DH. In North Eastern

Region, none of the facilities in the region attained a high score while 58.33%(n=21) facilities attained a medium score. 41.67%(n=8) had a low score. The highest scoring facility in this region was Dadaab Sub District Hospital, which attained a higher score than Garissa PGH. Lafey SUB District Hospital did not have a delivery bed. This region had the highest number of facilities attaining a low score. In Eastern Region, None of the facilities in the region attained a high score while 78.95 %(n=45) facilities attained a medium score, 21.05 %(n=12) had a low score. This region had the highest number of facilities that were reported to be working with traditional birth attendants to provide skilled home emergency delivery and home deliveries by community midwives reported to the link facilities.

5.2 CONCLUSION

Results from the findings support the conclusion that most facilities in Kenya have the basic requirements to provide Quality Care for mothers during delivery. However these Results imply that some Provincial and District Hospitals are performing very poorly. Provincial General Hospitals in Eastern, Rift Valley and North Eastern Regions should be upgraded to ensure that items to prevent Infection are adequate. These Three facilities should be supported by the Government to ensure their status is upgraded to ensure better Quality of Care. These results imply the need to intensify efforts in ensuring Best practices are shared among all Government and Private Health facilities; Facilities that attained High scores should be used as Best Examples for facilities that performed poorly. Similarly, there is a clear need for the Government to look into managerial reasons as to why some facilities have such poor scores. The Ministry of Health should move forward with regular Support Supervision and regular meetings with the Facility In charges to ensure that the Health Workforce understands the importance of maintain Quality care .

5.3 RECOMMENDATIONS

5.31 Policy and Programmes

In view of the above findings increased policy dialogues with policymakers and decision makers to come up with tailor-made interventions for specific regions as challenges may not be uniform in all regions. With the findings, there is a clear need for the Ministry of Health. in Collaboration with Stakeholders to be encouraged to continue with Close Supportive Supervision and Mentoring of Health Facilities. The Government needs to

improve the structure and process of delivery by implementing Practical Policies in order to improve the quality of maternal services. According to the community component, most women in the community still prefer to deliver with the assistance of traditional birth attendants. In order to strengthen the facility community linkages, the Government should ensure that the traditional midwives are trained and have strong linkages for referral to the facility. Behavior communication and change policies should be strengthened in order to raise awareness of the importance of HIV testing and PMTCT (Prevention of Mother to Child Counseling and Testing).

The Ministry of health should also investigate the reasons why some Provincial General hospitals are well equipped with adequate facilities to provide quality care while some are not. The Provincial General hospitals should also be involved in exchange programs in order to share best practices and other lessons learnt. The District hospitals that scored low scores should be investigated and support supervision performed at the facilities to ensure the status of the facilities are improved. Health care workers in the facilities should be motivated in order to improve their working conditions. This will prevent the health care workers from being over worked and hence mistreating the clients who come to deliver in the facility.

5.32 Further Research

The data from this study has helped identify areas of research for further study. The Community data that was collected from the study was scanty and more data needs to be collected from the community in order to further explore attitudes of mothers towards their Health Facilities. The KDHS data should also be linked with KSPA data in order to analyse outcomes on the Quality of care given in the Health Facilities.

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