THE RIGHT TO EMERGENCY CARE IN HEALTH SYSTEMS IN KENYA

A CASE STUDY OF LAIKIPIA AND NYANDARUA COUNTIES
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## CONTENTS

<table>
<thead>
<tr>
<th>Definition of Terms</th>
<th>iv</th>
</tr>
</thead>
<tbody>
<tr>
<td>List of Abbreviations</td>
<td>v</td>
</tr>
<tr>
<td>Acknowledgements</td>
<td>1</td>
</tr>
<tr>
<td>Abstract</td>
<td>2</td>
</tr>
</tbody>
</table>

### CHAPTER 1

**1.1 Introduction**
- 1.2 Emergency health care in Africa: A Synopsis
- 1.3 Human rights and emergency health care
- 1.4 The problem
- 1.5 Purpose
  - 1.5.1 Specific objectives
- 1.6 Research questions

### LITERATURE REVIEW

- 2.1 Emergency healthcare
- 2.2 Types of emergencies
- 2.3 Information on emergency healthcare
  - 2.3.1 Information for the health worker.
  - 2.3.2 Information to the patients.
- 2.4 Access to Healthcare
- 2.5 Quality of healthcare
- 2.6 Value of quality emergency medical services
- 2.7 Challenges to delivery of emergency medical services
- 2.8 Possible way forward

### METHODOLOGY

- 3.1 Introduction
- 3.2 Study Approach
- 3.3 Study Design
- 3.4 Target Population and Sampling
- 3.5 Sampling procedure and sample size
  - 3.5.1 Laikipia County
  - 3.5.2 Nyandarua County
CHAPTER 4

DATA ANALYSIS AND FINDINGS 26
4.1 Respondent Profile 26
4.2 Types of Health Care Emergencies 26
   4.2.1 Types of Health Care Emergencies in Nyandarua County 27
   4.2.2 Types of Health Care Emergencies in Laikipia County 28
   4.2.3 Causes of health care Emergencies in Nyandarua and Laikipia Counties 29
4.3 Available health care facilities, information and services 30
   4.3.1 Available health care facilities in Laikipia County 30
   4.3.2 Available health care facilities in the Nyandarua County 31
   4.3.3 Organization of health facilities 32
   4.3.4 Available health information in Laikipia and Nyandarua County 33
   4.3.5 Available Emergency health care services 33
4.4 Access to Emergency health care 34
   4.4.1 Financial Accessibility in Laikipia County 34
   4.4.2 Financial Accessibility in Nyandarua financial accessibility 34
   4.4.3 Service Accessibility in Laikipia County 35
   4.4.4 Service Accessibility in Nyandarua County 35
   4.4.5 Physical Accessibility to Hospitals in Laikipia County 35
   4.4.6 Physical Accessibility to Hospitals in Nyandarua County 36
   4.4.7 Access and Availability of health services 37
4.5 Quality of Emergency Health Care 37
   4.5.1 Patient centered services in Laikipia County 37
   4.5.3 Timeliness of service in Laikipia County 38
   4.5.4 Timeliness of service in Nyandarua County 39
   4.5.5 Efficiency of Service in Laikipia County 39
4.5.6 Efficiency of Service in Nyandarua County 39
4.5.7 Patient Safety in Laikipia County 40
4.5.8 Patient Safety in Nyandarua County 41
4.5.9 Effectiveness of service in Laikipia and Nyandarua Counties 42
4.6 Budget and planning for emergency in Laikipia County 42
4.6.1 Budget and planning for emergency in Nyandarua County 42
4.7 Payment modalities for emergencies in Laikipia and Nyandarua County 43
4.7.1 Barriers to Emergency health Care in Laikipia County 43
4.7.2 Barriers to Emergency health Care in Nyandarua County 44
4.8 State of Emergency Care
4.8.1 State of Emergency Preparedness in the hospitals in Laikipia and Nyandarua Counties. 45
4.8.2 State of Emergency Preparedness in the public hospitals in Laikipia and Nyandarua Counties. 46
4.8.3 State of Emergency Preparedness in the private hospitals in Laikipia and Nyandarua Counties. 47

DISCUSSION, CONCLUSION AND RECOMMENDATIONS 49
5.1 Discussion 49
5.2 Conclusions 52
5.3 Recommendations 53
5.3.1 Access 53
5.3.2 Quality of Care. 55

Table 3.1: Summary of data collection tools and Respondents reached 24
Table 4.1: Summary of types of emergencies in Nyandarua County 28
Table 4.2: Summary of types of emergencies in Laikipia County 29
Table 4.4 Emergency Preparedness in the hospitals in the two counties. 45
Table 4.5 Emergency preparedness of public facilities. 46
Table 4.6 Emergency Preparedness in the private hospitals. 47
Table 4.7 Emergency Preparedness in the public vs private hospitals in the counties. 48

REFERENCES 56
## Definition of Terms

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Care</td>
<td>Same as emergency care</td>
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<td>Emergency Medicine</td>
<td>This is a field of specialty practice for which formal training prepares a candidate whose competence is officially standardized and regulated. The clinical focus of emergency medicine is emergency care, and some of its subspecialties focus on other portions of emergency services.</td>
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<td>Health systems</td>
<td>Defined to include all organizations, institutions, and resources whose initial purpose is to promote, restore, and/or maintain health.</td>
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<td>Universal Healthcare Coverage</td>
<td>Health coverage that ensures that everyone has access to needed promotive, preventive, curative and rehabilitative health services, of sufficient quality to be effective, while also ensuring that people do not suffer financial hardship when paying for these services.</td>
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</tbody>
</table>
## List of Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHVs</td>
<td>Community Health Volunteers.</td>
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<td>CIDP</td>
<td>County Integrated Development Plan.</td>
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<td>CT</td>
<td>Computer Tomography.</td>
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<td>EMS</td>
<td>Emergency Medical Services.</td>
</tr>
<tr>
<td>ENT</td>
<td>Ear Nose and Throat.</td>
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<tr>
<td>FBOs</td>
<td>Faith Based Organizations.</td>
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<tr>
<td>FGDs</td>
<td>Focus Group Discussions.</td>
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<td>FGM</td>
<td>Female Genital Mutilation.</td>
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<tr>
<td>HINARI</td>
<td>Health Inter-Network Access to Research Initiative.</td>
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<tr>
<td>ICU</td>
<td>Intensive Care Unit.</td>
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<tr>
<td>IOM</td>
<td>The Institute of Medicine.</td>
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<tr>
<td>KEPH</td>
<td>Kenya Essential Package for Health.</td>
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<tr>
<td>KES</td>
<td>Kenya Shillings.</td>
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<td>KHSSP</td>
<td>Kenya Health Sector Strategic &amp; Investment Plan.</td>
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<tr>
<td>KIIIs</td>
<td>Key Informant Interviews.</td>
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<td>KMs</td>
<td>Kilometres.</td>
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<tr>
<td>LMICs</td>
<td>Low and Middle Income Countries.</td>
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<td>MCA</td>
<td>Member of County Assembly.</td>
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<td>MRI</td>
<td>Magnetic Resonance Imaging.</td>
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<tr>
<td>NGO</td>
<td>Non-Governmental Organization.</td>
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<td>NHIF</td>
<td>National Hospital Insurance Fund.</td>
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</tbody>
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NTRH  Nanyuki Teaching and Referral Hospital.

PGH  Provincial General Hospital.

PWDs  People living with Disabilities.

SDGs  Sustainable Development Goals.

SOPs  Standard Operating Procedures.

TB  Tuberculosis.

WHO  World Health Organization.
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Babere Chacha¹, Peninah Mumbua², Caleb Mike Mulongo,³ Ruth Getobai Nchagwa⁴

Purpose

To document the nature and provision of emergency healthcare in private and public hospitals in both Laikipia and Nyandarua Counties in order to assess the nature, accessibility and quality of emergency healthcare in these counties.

Methods

The study was conducted over a period of three weeks and largely employed descriptive qualitative research design and partly quantitative research design as captured in the checklists of the key informants. The sample population was drawn from Laikipia and Nyandarua Counties through a combination of multi-phase purposive sampling and stratified sampling done at different levels involving eight facilities in both counties, four in each. There were 24 key informant Interviews (KIIs) conducted, eight checklists filled by some of the Key Informants, 96 focussed group discussants equally spread across both counties and 30 participants in the workshop held at the end of the study period. These samples included emergency health care providers both in the public and private sector, county governments, insurance providers, Community Health Volunteers (CHVs), leaders and community members as well as vulnerable groups such as women, people living with disabilities (PWDs), and the elderly.

Results

Various forms of emergency cases ranging from trauma relating to motor bike and motor vehicle accidents, to animal inflicted injuries followed by medical emergencies

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then obstetric emergencies rank high in both counties. There is a fair mix of public, faith-based and private health facilities in both counties. However, there are significant challenges to access drawn from physical, financial, cultural and service barriers. There is effort towards availing information on available care mainly by private entities as well as the government. This however, is not significantly targeted at emergency care alongside the challenges of illiteracy, language barrier and poverty that further compound communication in the studied population. There is comparable overall quality of care in both private and public facilities in both counties but with definite action needed to improve on the varied aspects of quality as espoused by the Institute of Medicine.

**Conclusions**

The right to access to quality emergency health care is a fundamental right across the globe. It is embedded in most of the legal provisions of both developing and Third World countries. The implementation and enforcement of the same seems to face significant barriers particularly in Africa. To enhance quality of emergency health care especially in the counties under this study, there is value in interrogating the entire system, with a focus on improving organization and management, work environment (e.g. staffing levels, workload, skill mix, resource availability, managerial support), team (e.g. leadership, communication), individual staff members (e.g. attitude, motivation, knowledge and skills) and tasks. Further, there is need for enabling legislations and policies from both national and county government levels to domesticate and enforce access to quality emergency healthcare as envisioned in the Constitution of Kenya 2010.
1.1 Introduction

Access to medical care in urgent or life threatening conditions is a key expectation to many communities. As such, streamlining a health system’s responsiveness to people’s expectations leads to improved utilization of services and better outcomes (WHO, 2000). However, in a seminar paper titled “Blurred Lines: The Right to Emergency Medical Treatment”, Saunders argued that emergency medical care has been represented as a negative right within the Kenyan Constitution (Sounders, 2014). He argues that perception of the cost of emergency care and lack of prioritization within the health system structure are the two most commonly reported barriers to accessing emergency treatment. Saunders therefore, concludes that due to this lack of understanding, many Kenyans in dire need of timely treatment avoid private hospitals; awareness creation was therefore critical to full realization of the right to emergency medical treatment. Public participation and policy creation should work simultaneously to help people understand their right to emergency medical treatment and ultimately save their life.

Universal access to healthcare is provided for in many national constitutions around the world, explicitly stating that everyone has the right to have access to health care services, including reproductive health care. Further, the right to health in general is guaranteed in various international and regional human rights instruments. Article 25(1) of the Universal Declaration of Human Rights states in part that Everyone has the right to a standard of living adequate for the health and well-being of himself and his family, including...
food, clothing, housing and medical care and necessary social services. The declaration is applicable to all human beings, regardless of nationality, or legal status, and is to be applied without discrimination.

Article 12 of the International Covenant on Economic, Social and Cultural Rights (ICESR) recognises the right of everyone to the enjoyment of the highest standard of physical and mental health.

Thus the Constitution of Kenya, gives clarity to the relationship of International law in the Kenyan legal system, for “domestication” and incorporation of international law into the Kenya legal system by the specific provisions of Article 2(5) and 2(6) which affirms the position of international law as part of domestic law and a decisive role to be played by Parliament with regard to the Executive’s conduct in incorporating international law into Kenya through ratification of treaties (KNCHR, 2011).

On the other hand, some of the international human rights treaties that guarantees general rights as well as rights to sexual and reproductive health includes conventions such as: World Medical Association Declaration of Geneva, under which newly admitted medical practitioners and dentists pledge themselves “to the service of humanity”, to practice their profession “with conscience and dignity”, to make the health of their patients the “first consideration”, to “honor the noble traditions of the medical profession” and to “maintain utmost respect for human life”. The International Code of Medical Ethics, 1949 which amplifies the Declaration of Geneva, provides that a doctor’s practice should not be influenced by motives of personal profit. Further, the Code provides that, in relation to patients, a physician has the duty to “give emergency care as a humanitarian duty unless he/she is assured that others are willing and able to give such care.”(Ibid).

For our purpose here, the Constitution of Kenya (2010) guarantees the right to the highest attainable standard of health including reproductive health. In particular, Article 43(1) (a), 43(2) and 43(3) provides that no one shall be denied emergency medical treatment and that the state shall provide social security to persons who are unable to support themselves and their dependents. This therefore obligates Kenya to work towards progressively fulfilling this right. Although the Constitution has assigned the larger portion of delivery of health services to Counties, the exception being the National Referral Services and Policy. Implying that counties should bear overall responsibilities for coordinating delivery and monitoring of health services toward the fulfillment of right to ‘the highest attainable standard of health’, this is yet to be achieved.

In fact, the draft Kenya Health Sector Strategic & Investment Plan (KHSSP) of July 2012 – June 2018 proposes a three-pronged framework for overall health sector leadership, such as partnership, governance and stewardship– which taken together should address the health
agenda towards the fulfillment of the right to health (Ndavi, 2009). But the question is, what will define Kenya’s health care system in devolved county government especially the provisions of emergency health care? Many Kenyans hoped devolution would address the persistent regional disparities in the distribution of health services and inequality in resource allocations. Yet, some counties are relatively disadvantaged and will take a little more time to build their capacity and ability to use devolved resources well. But the fact that planning is supposed to take place at the county level means that the expectation is that counties will prioritize and address local needs.

The social pillar of the Vision 2030 too and a number of policy documents provide a framework for the attainment of quality emergency health care for all. Further, there are various regulatory frameworks that seek to streamline pricing, quality and competitiveness of health services. These include pricing and conduct guidelines from the oversight bodies such as the Kenya Medical Practitioners and Dentists’ Board (Kenya Medical Practitioners’ and Dentists’ Board, 2012) (Kenya Medical Practitioners’ and Dentists’ Board, 2016), Clinical Officers’ Council, National Nurses Association of Kenya (National Nurses Association of Kenya, 2008), the Ministry of Health *inter alia*.

Whereas there is an elaborate legal and regulatory framework governing licensing of health institutions and practitioners, and the quality of services they provide (Government of Kenya, 2017), Constitution of Kenya Cap 253, Cap 257 and Cap 260, a lot still needs to be done to address affordability, accessibility, quality and availability of emergency medical services (Wesson et al., 2015)

**Anatomy of care: emergency health care or emergency medical treatment?**

In July of 2017, the Health Act No. 21 of 2017 came into operation. Section 7, the Act postulates the right to emergency treatment. It *inter alia* reads:

Every person has the right to emergency medical treatment. ... For the purposes of this section, emergency medical treatment shall include pre-hospital care; stabilizing the health status of the individual; or arranging for referral in cases where the health provider of first call
does not have facilities or capability to stabilize the health status of the victim. .. Any medical institution that fails to provide emergency medical treatment while having ability to do so commits an offence and is liable upon conviction to a fine not exceeding three million shillings (Kenya Gazette June, 2017).

This pronunciation came as a fulfillment of the completion of the clauses previously missing in the holistic operation of the emergency health-care system in Kenya.

There is currently no accepted definition of emergency health care, owing to the multitude of factors that must be taken into account. For instance, this Health Act, 2017 defines “emergency treatment” as necessary immediate health care that must be administered to prevent death or worsening of a medical situation (Kenya Gazette, ibid). It however opens up to many possibilities and further definitions. The Current South African definition of a medical emergency can be found in the Medical Schemes Act 1998 (Act No. 131 of 1998) as:

..the sudden and, at the time, unexpected onset of a health condition that requires immediate medical or surgical treatment, where failure to provide medical or surgical treatment would result in serious impairment to bodily functions or serious dysfunction of a bodily organ or part, or would place the person’s life in serious jeopardy... (SADH, 2017).

Van der Walt defines a health emergency, as a ‘dramatic, sudden situation or event which is of a passing nature in terms of time. There is some suddenness and at times even an element of unexpectedness in the concept “emergency medical treatment”.’(Van der Walt, 2005). In 2008, the American College of Emergency Physicians statement defined Emergency Medical care as…. specialty dedicated to the diagnosis and treatment of unforeseen illness or injury…. disposition of any patient requiring expeditious medical, surgical, or psychiatric

THE RIGHT TO EMERGENCY CARE IN HEALTH SYSTEMS IN KENYA: A CASE STUDY OF LAIKIPIA AND NYANDARUA COUNTIES
care. ..in an urgent care clinic, in an emergency medical response vehicle, or at a disaster site (Marshal, 2013).

World Health Organization (WHO) inter alia defines this terminology as “acute care” and therefore, highlights the fragmentation of service delivery that results from not adopting the proposed definition. WHO looks further into this to include the potential contribution of acute care to integrated health systems designed to reduce all-cause morbidity and mortality as well as the development of acute care that leaders, researchers and health workers, who are the people responsible for maintaining strong national health systems, should consider taking.

To achieve full understanding of this in Kenya, we examine the normative organograms or operationalization maxims within the Ministry of Health and how that ensures the coordination of the central government and county governments in health as a devolved service under the fourth schedule of the Constitution of Kenya. This is intended to ensure all hospitals in the counties are well equipped to cater for all medical services including emergency services, so as to reduce the burden on the national referral hospitals. Crucial to full implementation, is now the Health Act of 2017, which criminalizes the denial of emergency health services by all health care providers, which is necessary step in the protection of the right to health care services enjoyed by all Kenyans under the bill of rights.

Although health care providers need money to be able to run their day to day activities and for their continuity, there need to be consideration for patients requiring emergency medical help as their constitutional rights on right to life and this is further amplified under Article 26 of the Constitution of Kenya 2010 and on the bill of rights of which the first is the right to life and therefore, right to health care services including emergency medical services override their interests of monetary consideration. Further, every person has the right to lodge a case in court if a right or fundamental freedom in the Bill of Rights is denied, violated or threatened.

In essence, therefore, Kenyans would then acquire medical insurance from the many medical insurance providers including the National Hospital Insurance Funds (NHIF) which is affordable, to ensure that the insurance companies cover all their medical costs and where additional funds are required they are easily accessed or it can be easy to convince the health care providers of them being fully paid very soon, thus accessing treatment as urgently as possible. The government and county governments are organized in a cordially working relationship to ensure access to health care services to all parts of the country including the rural areas as Laikipia and Nyandarua counties which forms a basis of our study.
1.2 Emergency health care in Africa: A Synopsis

Not long ago, Kenya rose to be categorized as a middle-income country—this is so despite the fact that 50% of the population living below the poverty line (Wachira, 2011). Major diseases such as HIV/AIDS disproportionately affects the country’s mortality and morbidity. Although its prevalence is higher than the regional average of 6.3% for people ages 15–49 years and is much lower than other sub-Saharan African countries. In addition to HIV/AIDS, tuberculosis, malaria, and diarrheal diseases are major killers in Kenya. According to Wachira, the burden of communicable diseases is high, with malaria as the leading cause of morbidity (30%), followed by respiratory diseases (24.5%). Malaria prevalence is 14%, and HIV prevalence is 7.4%, with a higher rate in women (8.5%) compared to men (5.6%). The non-communicable disease burden is also on the rise with diabetes prevalence at 3.3%, a threefold increase over the last 10 years (Ibid). Mental health issues and road traffic injuries are also on the rise. Thirteen percent of school-age children aged 13–15 years are active cigarette smokers. These put Kenya in the company of other middle-income countries predicted by the World Health Organization (WHO) to face the “double hump” burden of communicable and chronic disease over the next several decades.

According to the Limburg Principles, progressive realization does not imply that the state can defer indefinitely, efforts for the full realization of the right. On the contrary, state parties are to “move as expeditiously as possible towards the full realization of the right” and are required to take immediate steps to provide minimum core entitlements. The obligation to respect the right, obliges the State to refrain from denying or limiting access to health care services to anyone. These should be available to all on a non-discriminatory basis. The obligation to protect includes inter alia, adopting legislation and other measures to ensure equal access to health care facilities provided by third parties; to ensure that privatization does not constitute a threat to the availability, acceptability and quality of services provided; and to control the marketing of medicines by third parties.

The obligation to promote requires the State to disseminate appropriate information; foster research and support people to make informed choices. The obligation to fulfill requires that the State facilitates and implements legislative and other measures in recognition of the right to health and adopts a national health policy with detailed plans on how to realize the right. The State is also obliged to provide the right for people in disaster situations or in dire need when an individual or group is unable, for reasons beyond their control, to realize that right themselves with the means at their disposal (UN, 2000). Barriers to emergency care implementation in the region include limited documentation of the acute disease burden, a

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5 See for example, General Comment No 3 par 10; General Comment No 15 par 37-38; Limburg Principles par 25-28; Maastricht Guidelines par 9-10. See also CESCR General Comment No 14 The Right to the Highest Attainable Standard of Health UN doc E/C12/2000/4 (2000) par 43-47.
lack of consensus on regionally appropriate metrics to facilitate impact evaluation, and the lack of coordinated advocacy for acute disease prevention and emergency care.

Despite such challenges, interest in creating dedicated acute care facilities and emergency training programs is rapidly expanding in Africa. Kobusingye, Hyder and Bishai in their seminal address, identified four foundational challenges to integrating emergency care into health systems in sub-Saharan Africa: One, the burden of acute disease in sub-Saharan Africa is severely under-documented. Some data exist on the distribution of inpatient diagnoses in the region, but the actual range of acute presentations to health facilities is largely unknown. Studies that compare police, hospital, and insurance records with other sources in low-income countries, for example, suggest that as few as 1 in 10 injuries may be documented in official counts (Razzak, 1998; Lu, 1998; Ameratunga, 2006; WHO, 2012).

Secondly, health-care facilities often lack an integrated approach to triage, resuscitation, and stabilization of acutely ill patients. Even at a single small district hospital, acutely ill patients may be cared for by several different departments, depending on age, pregnancy status, and specific disease states. This vertical approach means that there is rarely a dedicated acute intake area staffed with nonrotating personnel who can be trained in resuscitation and stabilization. Essential components of acute and emergency care have not been determined, and there is no consensus on how to define success.

Thirdly, to date, there has been no systematic analysis of the acute care delivery systems most appropriate to these varied contexts. While there are scattered examples of successful interventions, little is known about what makes these programs effective or how others might replicate their success. Impact is often quantified by the number of providers trained, rather than by any measure that incorporates quality or performance assessment. Finally, there is no current advocacy plan for placing emergency care on the global health agenda.

Finally, despite the essential role of early resuscitation and stabilization in averting morbidity and mortality, emergency care is conspicuously absent from discussions of global health priority initiatives (such as the Millennium Development Goals, Sustainable Development Goals and UN consensus statements) and large-scale global health funding strategies.

1.3 Human rights and emergency health care

As already indicated, the Kenya’s Constitution is replete with values and rights that include the advancement of individual welfare, protection of the well-being, as well as enhancement of human dignity. The preamble, for instance, sets up Kenya as a country that is committed to “nurturing and protecting the wellbeing of the individual”, and the enhancement of human rights. Moreover, human dignity occupies a central place; it not only forms part of the
it is also a core value in the whole human rights framework in the Constitution, not to mention that is also set out as a right on its own, by dint of article 28, which provides that, every person has “inherent dignity and the right to have that dignity respected and protected.” Anne Hughes tells us that “the dignity of the person refers to the special status given to all individuals by virtue of being human (Hughes, 2014). It must mean that the “humanity” of an individual must be respected and protected. It would be “inhuman” to abandon a suffering patient, to the extent of death, on account of anticipated pecuniary loss that will be occasioned by any intervention geared to saving life, even if it is the barest minimum. Humanity implies a value laden conceptualization of an individual.

1.4 The problem

Kenya faces a disproportionate burden of acute injuries and illness, yet few clinical facilities are configured to take an integrated approach especially to resuscitation and stabilization (Burke et al., 2014). This signals greater barriers to emergency care implementation in the region include limited documentation of the acute disease burden, a lack of consensus on regionally appropriate metrics to facilitate impact evaluation, and the lack of coordinated advocacy for acute disease prevention and emergency care.

On the other hand, the burden of health problems, disease, hunger, starvation, and death lies heaviest to the most vulnerable groups who are least able to afford medical treatment and preventive measures, and whose governments have the least capacity to meet these urgent needs. In that case, then emergency care is an important component of any health system. Unfortunately, it is however, ignored or not taken seriously in this country.

Although normative provisions on health abound in international legal instruments, realizing, protecting, enforcing and promoting the right to health both in ordinary times and in emergencies, it has proved exceedingly complex. This work therefore, sought to assess the availability and quality of facility-based emergency medical care in both private and the government health care system at county level in Nyandarua and Laikipia counties.

1.5 Purpose

To establish the level of access to and quality of emergency health care services in Laikipia and Nyandarua counties as a human right.
1.5.1 Specific objectives

1. To establish the various types of health emergencies in Laikipia and Nyandarua counties.

2. To establish the available emergency health care facilities, information and services in Laikipia and Nyandarua counties.

3. To establish the level of access to emergency healthcare services in Laikipia and Nyandarua counties.

4. To establish the quality of available emergency health care services in Laikipia and Nyandarua counties.

5. To identify barriers faced when trying to access essential emergency services in Laikipia and Nyandarua counties.

1.6 Research questions

🔍 What are the various types of common health emergencies in Laikipia and Nyandarua counties?

🔍 What emergency health care facilities, information and services are available in Laikipia and Nyandarua counties?

🔍 How accessible are emergency healthcare services in Laikipia and Nyandarua counties?

🔍 What is the quality of emergency health care services available in Laikipia and Nyandarua counties?

🔍 What are the barriers to accessing essential health care emergency services in Laikipia and Nyandarua counties?
Chapter 02

2.1 Emergency healthcare

Emergency healthcare refers to the inpatient and outpatient hospital care necessary to prevent the death or serious impairment of health to the recipient (The George Washington University).

2.2 Types of emergencies

The emergency cases include trauma, obstetric cases and complications as well as some presentations of medical conditions (communicable and non-communicable).

Trauma or traumatic injury means severe damage of tissue that meets the following criteria (Law Writer, 2002):

a) It increases significant risk of either loss of life, loss of a limb, significant permanent disfigurement or significant permanent disability.

b) It arises from either of the following:

- Blunt or penetrating injury.
- Exposure to electromagnetic, electric, chemical or radioactive energy.
- Drowning, suffocation or strangulation.
- Extremes of temperature.
Emergencies that arise from medical conditions may include, but not limited, to the following (Collier, 2013):

- Cardiovascular emergencies such as cardiac arrest, acute coronary syndromes, pulmonary embolism etc.
- Respiratory emergencies such as respiratory arrest, asthma, spontaneous pneumothorax inter alia.
- Gastrointestinal emergencies such as bleeding varices, bleeding and perforated ulcers.
- Diabetic and endocrine emergencies such as hypoglycemia (low blood sugar), Diabetic Ketoacidosis and Coma.
- Anaphylaxis and acute allergic reactions.
- Neurologic emergencies such as Status Epilepticus and acute strokes.
- Acute infectious diseases such as malaria, infective endocarditis, meningitis inter alia.
- Renal emergencies such as acute kidney failure, electrolyte imbalances such as hyperkalemia (elevated levels of Potassium as a consequence of kidney disease).
- Drug over dosages and acute poisoning.
- Sickle cell crises.
- Acute psychiatric emergencies e.g. suicidal tendencies with severe depression, violent tendencies with psychotic and mood disorders inter alia.

Obstetric emergencies include ectopic pregnancies, abruption of the placenta, placenta previa (low lying placenta prone to bleeding), post-partum hemorrhage (excessive bleeding after delivery), amniotic fluid embolus, uterine inversion, Fetal distress, Still births and Intrauterine fetal demise and some infections to the placental bed (Geoffrey Chamberlain, Philip Steer, 1999).
2.3 Information on emergency healthcare

2.3.1 Information for the health worker.

Access to health information has the significant benefit of affording the health workers confidence in clinical decision making, improves practical skills and attitude to care (Musoke, 2000) (Holloway, Lee, & Mcconey, 2009) and reduces professional isolation (Pakenham-Walsh N; Bukachi F, 2009).

Pakenham-Walsh et al argue that there is gross lack of knowledge and information amongst all cadres of healthcare professionals in Kenya with an attendant consequence of poor practice and suboptimal patient care resulting in high mortality and morbidity rates (Pakenham-Walsh N; Bukachi F, 2009). Access to information still remains a challenge to many providers mainly due to the high cost of reliable internet, computer hardware as well as accessories, access to stable sources of power (Aronson, 2004), usability of available material due to lack of clarity as well as discrepancies between recommendations and practice, and lack of training of the providers on how to use the material available (Pakenham-Walsh N; Bukachi F, 2009; Edejer, 2000).

The World Health Organization in collaboration with publishing partners developed the Health InterNetwork Access to Research Initiative (HINARI) to offer health and medical institutions in the low income countries free online access to a library of published work with a view to improving access to health information (Aronson, 2004).

2.3.2 Information to the patients.

The Institute of Medicine (IOM) recognizes shared knowledge and free flow of information as a key component to healthcare redesign for the twenty first century (Institute of Medicine, 2001; Lansky, 2005). Available information must be patient friendly in terms of the format of presentation as well as in content and where possible, tailored to patients’ medical needs (Jones, 2003).

Many patients lack basic reading skills hence inadequate health literacy becomes a barrier to understanding their management (Mark V. Williams; Ruth M. Parker; David W. Baker; Ninah S. Parikh; Kathryn Pitkin; Wendy C. Coates; Joanne R. Nurss, 1995). Low levels of literacy among the patients was also associated with shame hence (Nina S. Parikh; Ruth M. Parker; Joanne R. Nurss; David W. Baker; Mark V. Williams, 1999). With the advent of the digital age, social media has become a key platform through which the patients find health information, support through relevant online fora and communicate with their health providers (Chretien & Kind, 2013).
2.4 Access to Healthcare

Access has often been defined as the use of health care, qualified by need for care. While most authors do recognize the influence of characteristics of users as well as characteristics of providers on access, many put more emphasis on characteristics of health care resources that influence the utilization of services, acting as a mediating factor between the ability to produce services and their consumption (Donabedian, 1973).

Penchansky is amongst those that more explicitly conceptualized access in terms of the fit between characteristics of providers and health services, and characteristics and expectations of clients (Penchansky R, Thomas WJ, 1981). Here, access may be conceived as the interface between potential users and health care resources, and would be influenced by characteristics of those who supply as well as those who utilize the services (Jean-Frederic Levesque, Mark F Harris and Grant Russell, 2013).


Access can be viewed as the possibility to identify healthcare needs, to seek healthcare services, to reach the healthcare resources, to obtain or use health care services, and to actually be offered services appropriate to the needs for care. The populations must then possess the ability to perceive the need for care, ability to seek for care, ability to reach the points of care, ability to pay for the care, and ability to engage in care utilization (Jean-Frederic Levesque, Mark F Harris and Grant Russell, 2013).

Thus access measured in terms of utilization is dependent on the affordability, physical accessibility and acceptability of services and not merely adequacy of supply (Martin Gulliford, Jose Figueroa-Munoz, Myfanwy Morgan, David Hughes, Barry Gibson, Roger Beech, Meryl Hudson, 2002).

According to General Comment No. 14 on the right to the highest standard of health, the Committee explains accessibility to mean that health facilities, goods and services have to be accessible to everyone without discrimination. It extrapolates on four dimensions of accessibility: n-discrimination; physical accessibility; economic accessibility (affordability) and information accessibility.
2.5 Quality of healthcare

Healthcare quality can be defined as the degree to which health care services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge. Healthcare quality must encompass effectiveness, efficiency, equity, patient centeredness, safety and timeliness of service delivery (Rockville, 2012).

When applied to Emergency Medical Services (EMS), the Institute of Medicine (IOM) concepts on quality care therefore entail a system design with a specific arrangement of personnel, facilities, and equipment that functions to ensure not only effective and coordinated delivery of health care services under emergency conditions but also high quality appropriate care. Adherence to this would help mitigate against untoward outcomes related to antecedent care such as death, disease, disability, discomfort, dissatisfaction & destitution. (Sayed & J, 2012).

Quality, according to General Comment No. 14 means that ‘health facilities, goods and services must also be scientifically and medically appropriate and of good quality’. This encompasses skilled medical personnel, scientifically approved and unexpired drugs and hospital equipment, safe and potable water, and adequate sanitation (General Comment, Para. 12).

2.6 Value of quality emergency medical services

Obermeyer et al (2015) found that emergency facilities in LMICs serve a large, young patient population with high levels of critical illnesses and mortality implying that emergency healthcare should be a global health priority. Further, the cost–benefit ratio for improvements in emergency healthcare was likely to be highly favorable, given the high volume of patients for whom high-quality care could be the difference between life and death. (Obermeyer, Abujamer, & Makar, 2015)

Ensuring an adequate and efficient health workforce is of the utmost importance to ensure a strong health system and a quick response to new outbreaks (Shoman, Karafillakis, & Rawaf, 2017).

2.7 Challenges to delivery of emergency medical services

The IOM noted some key challenges to delivery systems in Emergency healthcare including poor coordination, disparities in response times, lack of readiness for disasters, limited
evidence base for most practices, divided professional identity amongst providers and uncertain quality care. (Institute of Medicine, 2007).

Several authors point out that the financial barriers (such as the lack of insurance and out-of-pocket payments) are the most important causes of not seeking emergency healthcare when needed (Luk Cannoodt, Charles Mock, Maurice Bucagu, 2012). This is often the case not only in low-income countries (Mock et al., 2001; Spangenberg and Mock, 2006) but also in high-income countries.

Even where emergency healthcare is delivered free of charge, barriers do exist. These barriers may be caused by intrinsic characteristics of the patients (and/or their social environment), the geographic environment they live in, the lack of healthcare resources (drugs, equipment, healthcare personnel, etc.) and the inefficiencies of the healthcare system that prevent adequate emergency services without undue delays (Luk Cannoodt, Charles Mock, Maurice Bucagu, 2012).

Derose et al, (2011) further classify the barriers as system factors, individual factors and environmental factors. The system factors include provider supply and behavior, waiting times, cultural competency, advocacy and financial assistance. Individual factors include health beliefs, ability to pay, health literacy, health behavior, social network and trust in providers. Environmental factors include social, cultural, economic and physical/geographic factors (Kathryn Pitkin Derose, Carole Roan Gresenz and Jeanne S. Ringel, 2011).

While seeking to understand the emergency healthcare needs and barriers faced when trying to access care in Kenya, Broccoli et al (2015) found that socioeconomic and cultural factors play a major role both in seeking and reaching emergency healthcare. (Broccoli, Calvello, Skog, Wachira, & Wallis, 2015).

Burke et al (2014) while examining emergency and urgent care capacity in a resource-limited setting in western Kenya and found that no lower level facilities and 30% of higher level facilities reported having a defined, organized approach to trauma. (Burke et al., 2014).

While assessing perceptions of formal and informal district-level trauma systems in Kenya, Wesson et al (2015) emphasized the lack of hospital infrastructure, the need to develop prehospital care systems and strengthen hospital trauma care services. (Wesson et al., 2015).

### 2.8 Possible way forward

Access to emergency healthcare in Kenya could be improved by encouraging recognition and initial treatment of emergent illness in the community, strengthening the pre-hospital care system, improving emergency healthcare delivery at health facilities and creating new
policies at a national level (Broccoli, Calvello, Skog, Wachira, & Wallis, 2015)

Burke et al (2014) noted that there are great opportunities for a universally deployed basic emergency healthcare package, an advanced emergency healthcare package and facility designation scheme, and a reliable pre-hospital care transportation and communications system in resource-limited settings.(Burke et al., 2014).

In Kenya, facility designation schemes for emergency healthcare packages may be fashioned in line with the Kenya Essential Package for Health (KEPH) classification of health facilities. The Kenya Essential Package for Health (KEPH) defines the levels of care in Kenya: level 1 for community-administered care and levels 2–6 for healthcare facilities. Levels 2, 3, 4, 5 and 6 represent dispensaries and clinics, health centres, primary hospitals, secondary hospitals and tertiary hospitals, respectively.(Luoma, Doherty, & Muchiri, 2010)

World Health Organization (WHO) has developed a series of resource tables for essential trauma care that detail the human and physical resources that should be in place to assure optimal care of the injured patient at the range of health facilities throughout the world(WHO, ISS, & IATSIC, 2004). The facilities under study will be assessed in part using the yardstick set out in the WHO resource tables.

Further, the study shall assess the quality of the services rendered at the study centres in keeping with the IOM dimensions of healthcare quality including effectiveness, efficiency, equity, patient centeredness, safety and timeliness of service delivery. (Rockville, 2012)
3.1 Introduction

This section of the report entails a summary of the methodology used in the research. It entails the study approach, study design, target population and sampling methods employed in the different counties. Also covered in this section are aspects of the research instruments used in data collection, analysis and quality assurance; ethical considerations; and challenges encountered during the research.

3.2 Study Approach

The study is qualitative in nature and was meant to collect in depth information on the right to emergency care in Laikipia and Nyandarua Counties. The study was premised on the criteria set out in the Manual on Human Rights Education\(^6\) which recognizes four areas in evaluation of the right to health namely; availability, accessibility, acceptability and quality. Each area was broken down and widely interrogated to bring out the situation of emergency health care in both counties.

3.3 Study Design

The study employed a descriptive qualitative research design that leverages on a triangulation methodological framework to generate

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qualitative data. The design gave the structure of the study and dictated the data collection methods and sampling procedures to be used in the study. The descriptive qualitative survey design helped in describing the situation of health care and in particular emergency care in the two counties.

3.4 Target Population and Sampling

The target population for a study is the entire set of units for which the survey data are to be used to make inferences. In the case of this study the target population included stakeholders in the delivery and uptake of emergency health care. They included emergency health care providers both in the public and private sector, county governments and insurance providers, Community Health Volunteers (CHVs), Community leaders and community members. According to the third Sustainable Development Goal\(^7\) promotion of healthy lives and wellbeing is for all at all ages. The adopted target population encompassed men and women at all ages and it was inclusive of vulnerable groups such as women, people living with Disabilities (PWDs), and the elderly.

3.5 Sampling procedure and sample size

A combination of multi-phase purposive sampling and stratified sampling was done at different levels. The sub-counties in the two counties were identified and then particular wards were picked. Purposive sampling was done at the sub-county level to pick on wards which are highly accessible in relation to distance from Laikipia University and physical accessibility due to infrastructure, security and general logistics in both counties.

3.5.1 Laikipia County

Laikipia County has three known sub-counties which also double up as constituencies. They are Laikipia North, Laikipia East and Laikipia West as per the Laikipia County Integrated Development Plan (CIDP)\(^8\). Purposive sampling was done at the sub-county level to identify two sub counties which are easier to access without endangering the lives of the researchers. The sampled sub counties are Laikipia West and Laikipia East. Purposive sampling was done to identify areas which have the main sub-county hospitals such as Rumuruti, Nanyuki and Nyahururu. The hospital superintendent/administrator and a doctor or nurse where purposively selected to give adequate in depth information on emergency health care in the County.

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Purposive sampling was also done to identify the main private hospitals within the county. Purposive sampling was also done further to identify communities for FGD discussions within the hospital catchment areas. Stratified sampling was done to ensure that a stratified sample of Focus Group participants are men and women of all ages, including People with Disabilities (PWDs) and the elderly where possible.

3.5.2 Nyandarua County

According to the Nyandarua County Integrated Development Plan (CIDP)\(^9\) the county is divided into five sub counties (constituencies), namely Kinangop, Kipipiri, Ol’kalou, Ol’joroOrok and Ndaragwa. The county has four urban centres; Mairo-inya, Engineer, Njambini, and Ol’kalou where the major hospitals are located. Two of the sub-counties were purposively sampled based on logistical access and the presence of level four hospitals in the County and their equivalent private hospitals. The two level four public health facilities in the county, one mission hospital, and one level three health facility were sampled. The hospital superintendent / administrators and a doctor or nurse were sampled. Purposive sampling was also done further to identify communities for FGD discussions within the hospital catchment areas. Stratified sampling was done to ensure a stratified sample of Focus Group participants of men and women of all ages, including People with Disabilities (PWDs) and the elderly where possible. Chiefs were purposively sampled as Key informant leaders.

Stakeholders in the health sector in both Laikipia and Nyandarua Counties were invited for an initial workshop meeting. They included the Ministry of Health officials, county government health staff, medical staff from both private and public hospitals, Insurance providers, community leaders and Community Health Volunteers (CHVs). Further, an exit validation workshop was held to which stakeholders from both counties were invited and their feedback incorporated in the final report.

3.6 Research Instruments

The study employed three major tools in collecting in depth qualitative data. The tools used include Focus Group Discussion (FGDs) guides, Key Informant Interview guide and a workshop guide. A checklist was also used to collect quantitative data on the state of emergency preparedness in hospitals in Laikipia and Nyandarua counties.

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3.6.1 Focus Group Discussions

Focus Group Discussions (FGDs) of 8-12 participants were carried out to collect qualitative data. The FGD participants were purposively selected from the catchment areas of the sampled hospitals to represent age diversity, gender, ethnicity and other special characteristics according to the different areas. The FGD tool was used to collect in-depth emergency health care information from the community members who have access to the nearby hospital facilities. A male and female FGD were done in every sampled sub county and information checked to confirm information saturation.

3.6.2 Key Informant Interviews

Key Informant Interviews (KIIs) were carried out with county health officials, Sub County Medical officers of Health, health facility administrators, doctors, nurses and community leaders such as chiefs and religious leaders. KIIs targeted individuals who are experts and also well versed with the state of emergency health care within the counties. In total the 24 Key Informants were reached and a break down is in table 3.1 below.

3.6.3 Data Collection Workshop

A data collection workshop with diverse stakeholders in the provision of emergency health care in both Laikipia and Nyandarua County was convened in Nyahururu town. The workshop participants included health service providers in public and private sectors, insurance service providers such as National Health Insurance Fund (NHIF), community leaders such as Chiefs, religious leaders, peace leaders and Community Health Volunteers. It also included administrators from both the county Governments and the National Government. Through the Workshop qualitative data on availability, accessibility, acceptance, and quality of emergency care services in Laikipia and Nyandarua Counties was collected. Further information on the strengths, weaknesses, opportunities and threats of emergency health care was collected as well as recommendation on improving emergency health care in both Laikipia and Nyandarua County .Various adult leaning methodologies were used during the workshop including group discussions, lecture and case studies to gather information. In total 30 participants were reached.

3.6.4 Checklist

A checklist was administered to capture the situation of emergency care services in the two counties including such aspects as number of ambulances available, number of trained
emergency service providers in each county, specialized care units, number of medical trainees in the county for sustainability etc. Overall, the checklist was meant to gather quantitative data on the level of emergency preparedness.

Table 3.1: Summary of data collection tools and Respondents reached

<table>
<thead>
<tr>
<th>Sub-County</th>
<th>KII</th>
<th>FGDS Participants</th>
<th>Checklists</th>
<th>Workshop Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laikipia West</td>
<td>6</td>
<td>24</td>
<td>2</td>
<td>30</td>
</tr>
<tr>
<td>Laikipia East</td>
<td>6</td>
<td>24</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Ol’kalou</td>
<td>6</td>
<td>24</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Kinangop</td>
<td>6</td>
<td>24</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>24</td>
<td>96</td>
<td>8</td>
<td>30</td>
</tr>
</tbody>
</table>

3.7 Data Analysis

There are several methods which are used to analyze qualitative data generated through FGDs and KIIs and Workshops. The data collected was analyzed using NVIVO 11 and content analysis. The data was categorized according to the different emerging issues in relation to the research objectives. Focus Group Discussions and KIIs were also audio recorded and transcribed for precision in analysis so that there is no data which is left out. The Participatory workshop held with pertinent stakeholders in the delivery and uptake of emergency health care in both Laikipia and Nyandarua was well documented and data gathered also analyzed according to the different thematic areas which also reflect the research objectives. Quantitative data arising from the checklists were analyzed using SPSS and summarized in means and percentages.

3.8 Limitations of the Study

The study is mainly limited to Laikipia and Nyandarua counties. The other limitation is that some parts of Laikipia County in particular Laikipia North sub-county has had intercommunity protracted conflict with a hostile infrastructure hence it was not sampled though traces of information about the state of emergency care were picked through the FGDs, KIIs and workshop. However caution was taken to reach out to similar groups of all ages residing in non-conflict areas such as Rumuruti.

Language barrier was a limitation but it was mitigated by the fact that the data collection tools had been translated to Kiswahili and by the use of data collectors who understand the local language.
3.9 Research Ethics

Participation in the study was voluntary and based on informed consent. Study participants were provided with information on the study and its approach, their role, benefits of their participation (both directly and indirectly) and finally signed consent was obtained from each respondent willingly. The participant's right to anonymity and confidentiality was given due attention. During the data collection phase, study participants were assured of the confidentiality of all data collected from them and further that the data would be used exclusively for the right to emergency medical care study.
4.1 Respondent Profile

The study entailed interviewing 24 Key informants who are County health officers, sub county medical officers, Hospital administrators, clinical officers, nurses, community leaders and chiefs. The eight FGDs had participation of stratified community members across age, sex, social status and background. In total 96 community members were interviewed as FGD participants. The Workshop had 30 participants drawn from the National and County Government, insurance providers, public and private health providers, community leaders and Community Health Providers. The medical officers, clinical officers and nurses were from eight health facilities namely Nanyuki Teaching and referral Hospital (NTRH), Nyahururu county referral hospital, Nanyuki Cottage Hospital and Charity Medical Hospital in Laikipia County; J.M. Kariuki Hospital in Ol’kalou, North Kinangop Catholic Hospital, Engineer county Hospital and Ol’Bado Dispensary in Nyandarua County.

4.2 Types of Health Care Emergencies

This section looks at the different types of health care emergencies experienced in both Nyandara and Laikipia County. The emergencies are grouped under three broad categories; trauma related emergencies, medical related emergencies and obstetric emergencies. The causes of emergencies are also tackled in this section.
4.2.1 Types of Health Care Emergencies in Nyandarua County

Trauma related emergencies were reported in Nyandarua County. They involve road accidents with most of them being motor bike accidents commonly known as “boda boda”. Community members alluded to the problem being as a result of inadequate training and understanding of road signage.

Vehicle accidents were common and there are also known black spots especially when it rains and the roads are slippery in areas such as Mumbi, Ol'kalou town and Soinanga. Physical injury due to domestic violence was also reported with results ranging from death, burns and stabbing. There were two cases of Domestic violence reported by male respondents in Ol'kalou where by in different incidences a woman was stabbed and she died while the other case a woman was burnt with hot water by the husband and had to be dashed to hospital for emergency health care. Other burns were as result of fire accidents due to the wooden houses catching fire.

Other traumatic emergencies include electrocution, drowning, injuries afflicted by mobs especially for thieves, suicide cases and violence afflicted injuries by robbers, individuals. Children around St. Josephs Primary School in Ol'kalou suffer from cuts due to a nearby dump site where alcohol broken bottles are dumped. Dog bite cases were also reported. Rape/defilement cases have also been reported in the county with a case in point where by a woman was raped early in 2017.

Medical Emergencies have also been experienced and cases of people collapsing as a result of high blood pressure, low blood pressure, diabetes and stroke being recorded. An example is of a woman who collapsed due to low blood pressure and had to be taken to hospital by use of a wheel barrow because of cost constraints.

A male respondent reported the following medical emergency case. “A pregnant woman who was hit by stroke was taken to Engineer hospital by a friend, the hospital had no capacity to take care of her, and hence she was referred to Nakuru Provincial General Hospital. The family lacked the required resources hence she remained in Engineer District Hospital and later on discharged. The community, the MCA and deputy governor mobilized resources and took her to Ol'kalou hospital but it was too late she passed on. If she was taken care of immediately she had the stroke she would have survived.”
Other medical emergencies include Acute Respiratory diseases aggravated by the cold weather in Ol’kalou were reported such as Asthmatic attacks and pneumonia. Cases of drug overdose with people who abuse drugs. Alcoholism cases at times become emergencies especially for people taking a common alcoholic brand known as “yokozuna”. Epileptic fits are also experienced but they are not many. Obstetric emergencies related to child birth are also experienced in the county. A Summary of types of emergencies in Nyandarua County follows below on table 4.1

Table 4.1: Summary of types of emergencies in Nyandarua County

<table>
<thead>
<tr>
<th>Trauma</th>
<th>Medical</th>
<th>Obstetric</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road traffic accidents (by cars )</td>
<td>Sudden collapse</td>
<td>Child delivery</td>
</tr>
<tr>
<td>Motor bike accidents</td>
<td>Hypotension and hypertension</td>
<td></td>
</tr>
<tr>
<td>Physical injury due to domestic violence</td>
<td>Stroke</td>
<td></td>
</tr>
<tr>
<td>Drowning</td>
<td>Pneumonia</td>
<td></td>
</tr>
<tr>
<td>Burns</td>
<td>Asthma attack</td>
<td></td>
</tr>
<tr>
<td>Electrocut</td>
<td>Overdose on drugs</td>
<td></td>
</tr>
<tr>
<td>Mob justice afflicted injuries</td>
<td>Alcoholism (yokozuna) and</td>
<td></td>
</tr>
<tr>
<td>Suicide cases</td>
<td>drug abuse (drug overdose)</td>
<td></td>
</tr>
<tr>
<td>Violence afflicted injuries by robbers, individuals e.g. stabbing, Traumatic cuts</td>
<td>Epileptic fits</td>
<td></td>
</tr>
<tr>
<td>Dog bites</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rape cases</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.2.2 Types of Health Care Emergencies in Laikipia County

Both Nyandarua County and Laikipia County almost share medical emergencies but there are certain unique emergencies which are experienced in Laikipia County. Armed conflicts amongst communities fighting over pasture are a common occurrence and as a result there are emergencies related to this kind of attacks. Such emergencies include gunshot wounds and other injuries. Bandit attacks are also experienced in parts of this county like some areas in Rumuruti. A case in point is that of a mother who was being rushed to hospital to deliver on a motorbike and was shot by bandits just a few days before the study in Rumuruti. There are cases of elephant and wild animals’ attacks causing injuries on the victims and even death.

Female respondents in Rumuruti reported that earlier in the year a boy was killed by an
elephant on his way from school while another boy was mauled by wild dogs and died on his way to hospital. A summary of Emergency cases in Laikipia County is captured in table 4.2.

**Table 4.2: Summary of types of emergencies in Laikipia County**

<table>
<thead>
<tr>
<th>Trauma</th>
<th>Medical</th>
<th>Obstetric</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor bike accidents</td>
<td>Sudden Collapse due to low blood sugar,</td>
<td>Child delivery</td>
</tr>
<tr>
<td>Motor vehicle accidents</td>
<td>starvation</td>
<td>Miscarriages</td>
</tr>
<tr>
<td>Drowning</td>
<td>Pneumonia</td>
<td></td>
</tr>
<tr>
<td>Armed conflict injuries due to fight for pasture.</td>
<td>Malaria</td>
<td></td>
</tr>
<tr>
<td>Bandit attacks</td>
<td>Water borne diseases</td>
<td></td>
</tr>
<tr>
<td>Children inserting objects in their nose and interfering with</td>
<td>Hysteria amongst primary school</td>
<td></td>
</tr>
<tr>
<td>breathing.</td>
<td>children of class 6-8</td>
<td></td>
</tr>
<tr>
<td>Rape/defilement cases and exposure to HIV/Aids</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Injuries caused by wild life attacks such as elephants and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>wild dogs.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Burns</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gunshot wounds</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.2.3 Causes of health care Emergencies in Nyandarua and Laikipia Counties

The causality of the various emergencies was interrogated by the workshop team of stakeholders within the health sector in both Nyandarua and Laikipia Counties. The workshop team agreed that some of the causes of emergencies in the two counties are political and involve politicians inciting one community against each other. Environmental causes include the encroachment of wild life land by human beings. The available wild life land is not well fenced off or secured, hence elephants, wild dogs and snakes stray and attack people on their farms.

Scarce resources especially land for pasture and water has fueled conflict and emergencies in this area as people attack each other for the same. Poor drainage exacerbates flash floods and drowning as an emergency in the two counties. Natural calamities like drought in Laikipia County have led to human conflict as people struggle over the scarce resources such as grazing land, food, water inter alia and as a result created more emergencies. Poor living conditions including the habitation in wooden houses has led to constant fires and diseases.
related to poor habitation and sanitation such as respiratory tract and diarrheal diseases.

Some of the Social and cultural causes entail retrogressive religious beliefs with some of the local denominations e.g. the Akorino not going to hospital until normal health care cases progress to emergencies due to complications. Due to the increased unemployment rates in the country and the two counties, people result to all manner of activities in order to earn a living such as the “boda boda” transport which is leading in terms of accident emergencies. High cost of living, inflation and scarce resources have contributed to some of the health care emergencies inflicted during burglary and physical injuries as people compete for scarce resources e.g. land and pasture. Poor law enforcement by police especially on traffic rules has also caused more accidents.

Reckless driving is a major cause of the many road related emergencies in the two counties. Negligence by medical staff increases the risks of normal medical conditions becoming emergency conditions.

4.3 Available health care facilities, information and services

This section includes the available health care facilities where the different county residents seek medical care. It also looks at the available emergency information and services in both Laikipia and Nyandarua Counties.

4.3.1 Available health care facilities in Laikipia County

According to the Laikipia County Integrated Plan\(^\text{10}\) health is provided by the Government, privately owned facilities, Faith Based Organizations and partners and donors as well as other well-wishers. The County has five hospitals with two of them being county hospitals that is, Nanyuki Teaching and Referral Hospital (NTRH) and Nyahururu District Hospital and 3 sub –county hospitals that is Doldol, Kimanjio and Rumuruti. The County also has 8 public health centres and 54 public dispensaries. In addition, there are 3 private hospitals, 1 nursing home; 1 private health centre, 6 private dispensaries and 33 private clinics. The doctor-population ratio stands at 1:12,500 while the nurse-population ratio is 1:1,000 which falls short of the WHO doctor-population ratio recommendation of 1: 1000 (Joint Learning Initiative, 2004; Geo, 2016). Provision of health care in the whole world is curtailed by the unavailability of adequate health personnel.

Health services in the County are primarily provided by the County Government. Other actors in the provision of health services include the National government, Faith Based Organizations

(FBO) and privately owned facilities. The County Government remains the main source of health financing. Other actors in health financing include the National Government, NGOs, donors through national donor funded programs, and to a smaller extent, well-wishers.

While the County has some level of health facilities it was noted that the County residents seek emergency health care not just in the hospitals but even from individuals such as herbalists, midwives, witch doctors, self-medication, over the counter medication and even faith healers. A summary of the various health facilities/individuals providing emergency health care is given below as table 4.3

### 4.3.2 Available health care facilities in the Nyandarua County

Nyandarua County infrastructure comprises of 2 public level 4 hospitals that is Ol’kalou Level 4 Hospital and Engineer Level 4 hospital, 7 level 3 hospitals, 32 level 2 health care facilities and 50 private clinics. The Doctor Population ratio is 1: 155,188 while the Nurse Population ratio is 1: 2150\(^\text{11}\) (Nyandarua CIDP, 2013). The County residents seek medical care in all the health facilities in this county. The number of Doctors in the health facilities in this county is grossly low as WHO recommends a Doctor Population ratio of 1: 1000 (JLI, 2004 & Geo, 2016).

Focus group discussants also cited use of emergency health care services given by herbalists especially the Maasai medicine men. They also do self-medication and they cited the use of black jack commonly known as “Wanjiru wa rurie” to stop bleeding in case of cuts. Some residents do faith healing by seeking prayers from spiritual leaders e.g. pastors. Some churches like Church of God commonly known in the local Kikuyu dialect as “Kanitha wa Ngai” do not seek medical treatment. Referrals are also made to neighboring Counties’ hospitals such as Nakuru Provincial General Hospital and AIC Kijabe Hospital. A summary of health care facilities and individual(s) or support points is displayed in Table 4.3 below.

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Table 4.3: Available health facilities/ health care support in Laikipia and Nyandarua Counties

<table>
<thead>
<tr>
<th>LAIKIPIA</th>
<th>NYANDARUA</th>
</tr>
</thead>
<tbody>
<tr>
<td>County referral hospital</td>
<td>Public level 4 hospitals</td>
</tr>
<tr>
<td>Private Hospitals/clinics</td>
<td>Private hospitals/clinics</td>
</tr>
<tr>
<td>Dispensaries</td>
<td>Dispensaries</td>
</tr>
<tr>
<td>Health centers</td>
<td>Health centers</td>
</tr>
<tr>
<td>Self-medication</td>
<td>Faith based hospitals</td>
</tr>
<tr>
<td>Pharmacies</td>
<td>Self-Medication</td>
</tr>
<tr>
<td>Witch doctors</td>
<td>Pharmacies</td>
</tr>
<tr>
<td>Herbalists</td>
<td>Herbalists</td>
</tr>
<tr>
<td>Faith healers</td>
<td>Faith healing</td>
</tr>
<tr>
<td>Midwives</td>
<td>Midwives</td>
</tr>
<tr>
<td>Mobile clinics</td>
<td>Mobile clinics</td>
</tr>
<tr>
<td>Community Health Volunteers</td>
<td>Community Health Volunteers</td>
</tr>
</tbody>
</table>

4.3.3 Organization of health facilities

The Kenya Health Policy (2012) and KHSSP (2012) have health care subdivide into six levels fitted in four tiers of care (Community, primary care, County referral and national referral). The lowest tier encompasses community health units which cover every 5000. Populations. Primary care units include both level II health facilities which are dispensaries and clinics and level III which are Health Centres. Level II facilities should be established to cover every 10,000 persons on average, translating to an average of 30 dispensary Patient visits per day for persons within the catchment area. They can be used to administer emergency medical care as well as curative, preventive, or health promotion activities. Level III facilities should exist for every 30,000 persons so as to allow for at least 4 deliveries per day.

Tier 3 is primary referral hospitals and includes level IV and Level V that is primary care hospitals and secondary care hospitals. These are hospitals managed by the County Government. A population of 100,000 is targeted for each Primary Level hospital. Level IV facilities provide a more comprehensive package to patients than the primary care. They should also be able to provide emergency surgery. In addition to the comprehensive medical package Level V facilities also provide internship services for medical staff, research and serve as training centres for paramedical staff. Level V hospitals should target 1 Million persons and can usually be shared by a number of counties. The tertiary referral facilities focus on highly specialized services, and serve a cross County population of approximately 5,000,000 persons.
The projected population of Laikipia County stands at 479,072 by 2017 (Laikipia County CIDP, 2013) hence it requires around 95 Level 1 units, 48 Level 11 medical units, 16 Level III units, 5 level IV units in order to meet the medical needs of the population. The estimated Nyandarua County Population in 2017 is 722,498 and as a result the required Level I facilities are 144, 72 Level II facilities, 24 level III facilities, 7 level IV facilities.

4.3.4 Available health information in Laikipia and Nyandarua County

Laikipia County has a presence of NGOs working in the county. The NGOs help in creating awareness on certain health issues. Both Counties have Churches and faith based Organizations involved in awareness creation. Some churches have health committees which invite health professionals to give health talks. Health information is also disseminated during Chiefs Barazas. Information on HIV/AIDS and TB is also displayed in hospitals. During medical camps and community outreaches information is also given. Community Health Volunteers (CHVs), resident pharmacists, nurses and Doctors also provide information when available. Information is also transmitted through electronic, print and social media.

4.3.5 Available Emergency health care services

The types of emergency health care services available in Laikipia County are limited to different facilities. Nyahururu District hospital has a theatre and is able to offer basic maternity related services. However the theatre is not adequately equipped to deal with certain emergency cases and they have to be referred to Nakuru Provincial General Hospital (PGH), North Kinangop Catholic Hospital and AIC Kijabe Hospital among others.

At the NTRH they provide the first Aid services to stabilize the patients. They also provide Services to control bleeding, blood transfusion, referral services to other hospitals like AIC Kijabe, Nakuru PGH, Kenyatta National Hospital (KNH), and North Kinangop Catholic Hospital. They are able to carry out caesarian deliveries among other theatre operations. They also provide X-ray services and ambulance services. The Nanyuki cottage hospital has a radiology department that conducts services such as Ultra Scan and X-ray services. They also have a ready and well equipped theatre.

Laikipia County lacks MRI Services, a renal unit and Intensive Care Unit (ICU) services. Patients are referred to Nyeri or Nairobi county hospitals. There is only one CT Scan in the county.

Some of the emergency health care services provided in JM Kariuki, Engineer level 4 Hospital and North Kinangop Catholic Mission Hospital of Nyandarua County include X-ray services,
Ultra sounds, and Plaster department for fractures, Referrals, First aid, Surgery, Ambulance services and inpatient services.

4.4 Access to Emergency health care

This section looks at access to emergency health care in both Laikipia and Nyandarua Counties. Access is at different levels: financial accessibility, Service accessibility, physical accessibility and transport accessibility.

4.4.1 Financial Accessibility in Laikipia County

Public hospitals in the county are not accessible since one is supposed to pay first before getting any services. Private hospitals also charge consultation fee in addition to other services received which one needs to pay upfront. The Consultation fee in some private hospitals is up to KES 3000 which is way above what a common citizen can afford. County residents in Rumuruti felt that it was way above what they can afford. Certain services like X-rays, laboratory tests and operations are too expensive. In some cases, patients are referred to Nakuru Provincial General Hospital (PGH) like in cases of rape for post rape care at the Gender Based Violence Recovery centre but it becomes expensive to travel since they cannot afford transport costs hence they don't go. This puts the life of the victim at risk of contracting HIV/AIDS, becoming pregnant or even contracting sexually transmitted diseases. The ambulances are also expensive and patients have to pay up to KES 10000 during referrals. The dispensaries are free and one can get medical care though they are also far from most people and they lack necessary prescription medicine.

4.4.2 Financial Accessibility in Nyandarua financial accessibility

The residents of Nyandarua County felt that they lack financial access to both emergency and general health care services even in public hospitals. The fact that they have to pay first for them to access a service limits them. During emergency cases one has to fuel the ambulance and the cost is pegged on the distance to be covered making it hard to access emergency health care. Lack of prescribed medication and certain health services like X-Rays and referrals to buy in private pharmacies and Clinics respectively makes emergency health care more inaccessible. A challenge with NHIF mode of payment makes it hard for patients to access certain services at J.M Hospital since NHIF staff only operate on 8.00 am - 5.00 pm schedule hence patients have to pay cash after 5.00 pm which at times is not possible.
4.4.3 Service Accessibility in Laikipia County

In some areas of Laikipia County like Rumuruti FGD discussants reported that certain services like X-rays are not offered and accident patients with fractures are only given first aid then referred to AIC Kijabe or Nyahururu District Hospital. They also don’t have a theatre. Scanning services are also not available in most of the hospitals. They also lack a mortuary and they result to traditional home preservation of bodies before burial which could be dangerous to their health. There are no blood banks and in case somebody is to donate blood, they are referred to Nakuru PGH. Discussants also felt that the services in public hospitals are slow and lengthy and one can wait even for three hours before they are attended to. Admission procedures are also quite long in public hospitals and medical cases can easily escalate to become an emergency as patients wait on the queues.

Participants felt that private hospitals such as Unison Medical Centre and Huruma Hospital are more equipped and hence offer the best service. The doctors are available based on need in the private hospitals. The challenge is that the majority of the people cannot afford to pay for services in private Hospitals.

4.4.4 Service Accessibility in Nyandarua County

The medical personnel including doctors, clinical officer’s and lab technologists are in shortage and hence there are certain services patients do not access get in case you have an emergency at night. The respondents cited one of the hospitals where lab services are not available at night. There is a general lack of equipment and machines to offer certain services e.g. X-rays and scanning machines. They lack specialists like dentists, ophthalmologists, surgeons among others and hence patients are referred to private clinics which are very expensive. The County has six ambulances but only two are functional and accessibility requires paying for them before use. Cases which require surgery are usually referred to JM Kariuki hospital in Ol’kalou and orthopedic cases are referred to Kijabe Hospital. Cases requiring Caesarean Section are mostly referred to the Private hospitals in Nyahururu town.

4.4.5 Physical Accessibility to Hospitals in Laikipia County

Physical accessibility to medical facilities near the big towns like Nyahururu and Nanyuki is not a challenge since there are tarmacked roads and many medical facilities in such towns. However residents are at times referred to hospitals in Nyeri town and Nakuru which are far in order to access specialized medical care and services. Some of the residents in the vast Laikipia County face numerous challenges in accessing both medical and general health care. FGD discussants in Rumuruti reported that residents from places like Mutara and parts
of Sosian ward have to walk for over 50Km through bushes to access medical care since they lack a good road network and public transport services. The poor roads hinder accessibility and the situation is worse during rainy season when the roads are completely impassable. Similarly places like Lorora and Ngaremare have no public means. A place like Tindamara the nearest emergency health facility is Sosian which is about 20 kilometers away. From Ayam, the nearest facility is Rumuruti or Sipili which is 10 kilometers away. People are very far from medical services e.g. it is 70 KM from Muturia to Nanyuki hospitals.

The fact that physical accessibility to health facilities is a challenge can be explained by the fact that Laikipia County’s road network is 1,038.1Km of which over 80 percent are feeder roads. The bitumen surface in the county stands at 139.3Kms, covering mainly the Nyeri-Nanyuki, Nyeri-Nyahururu, and Nyahururu-Kinamba-Rumuruti roads. The gravel surface stands at 296.9Km and the earth surface at 601.9Km. The road network is generally poor and has a negative effect in relation to transport taken to hospital. 12

Private hospitals like Cottage have an ambulance available all the time so those who can afford have full time access. There is one ambulance in Rumuruti which is rarely used due to the poor road network and challenges of fuel and the requirement that people have to pay before use. The ambulances are available in towns but not in the villages.

County Residents walk the long distances through the bushes to hospitals within the county. Others use motor bikes and vehicles in areas where there is public transport. Patients in Laikipia North are carried on donkeys and wheelbarrows to access emergency medical care. Residents also improvise make shift stretchers to carry patients in need of emergency medical care. Patients are also carried on piggy backs during emergencies in areas where there are no roads.

### 4.4.6 Physical Accessibility to Hospitals in Nyandarua County

Government hospitals in areas like Engineer and Ol’kalou are easily accessible since there is a good tarmacked road joining that area. Residents of Miharati and wanjohi travel for over 14kms to reach medical facilities while those in some parts of Ndaragua travel for over 55kms. Patients are also referred to Nakuru PGH, St. Mary’s Mission hospital in Gilgil and others to JM Kariuki hospital in Ol’kalou. Generally the road network in the county is very poor and is worsened by the heavy rains received in the area making it difficult to deal with emergency issues hence patients have to be transported using improvised stretchers made of two poles and sacks in between since no vehicle can access the area. Physical

accessibility to hospitals plays a key role when it comes to medical emergencies given that for a patient in a life threatening situation to be helped he/she requires access to hospital in the shortest time possible. However, this is not the case in some of the areas in the two counties.

Means of transport in the county include motor bike transport, private vehicles such as taxis and neighbors. Some emergency cases involve the police been called upon and hence they use the police vehicle to transport or rescue the victims. Improvised stretchers are also made to transport patient to hospital. There is also use of Donkeys and wheelbarrows. The functional ambulances are only used during referrals and the remaining are always grounded.

4.4.7 Access and Availability of health services

According to the Kenya Health Sector Strategic Plan (KHSSP, 2012) to health services should be taken as close to the population as possible. Medical services should be within 5 Kilometers while public-health services should be within 2.5 KMs. It thus follows that the two counties do not meet these standards given that some of the people have to walk for over 50 KMs to access medical care.

Financial accessibility is a great hindrance to accessibility since whereas the services are available in certain locations the cost is not affordable to most people in both private and public hospitals. In order to boost financial access, the KNSSP 2012-2030 has put recommendations to remove fees at point of use for services such as maternity, primary care, HIV, TB, Malaria, Child health, as well as various voucher schemes especially when targeting the needy people in communities.

4.5 Quality of Emergency Health Care

Quality of emergency health care provided to residents of both counties was discussed within the different quality parameters; patient centered services, timeliness of service, efficiency of service, patient safety and effectiveness of services.

4.5.1 Patient centered services in Laikipia County

FGD discussants felt that private hospitals are more patient centered than public hospitals. Medical personnel in the private hospitals concurred with the same sentiments that they provide adequate support to their patients. They listen and carefully attend to their patients.

Key informants interviewed who are privy to the operations of the public hospitals in the county felt that patient centeredness does not happen in public hospitals due to the long
queues of patients waiting to be attended to and understaffing. There was a general complain of bad attitude towards patients by medical staff and general use of harsh words by nurses. Use of phones makes the situation worse as medical staff are stuck in lengthy conversations as patients wait. There is also lack of privacy when attending to patients and workshop participants felt that other staff and patients keep on walking in and out of the consultation rooms. Nyahururu Hospital staff said that in improving quality they have a customer care unit to ensure patients are treated well and solve any complains. They also carry out service delivery evaluations to ensure good services are rendered.

### 4.5.2 Patient centered services in Nyandarua County

In Nyandarua County Mission hospitals and private hospitals were lauded for offering patient centered services. North Kinangop Mission hospital provides a 24 hour surveillance for its admitted patients. Patients are listened to and attended to carefully. Complaints of older doctors and nurses in Public hospitals being arrogant and harsh were raised by both FGD and workshop discussants while younger doctors and nurses are good listeners and attend to the people very well. The casual non-medical staff in public hospitals are rude to patients. The medical personnel cite long queues and understaffing as points of frustration in offering patient centered services. It was also noted that often the patients highly esteem the hotel services (accommodation, customer relations inter alia) as a measure of quality with minimal focus on the actual medical services. There is need for the public facilities to also work at improving the said hotel services despite the fact that they may not be the core business of the facilities.

### 4.5.3 Timeliness of service in Laikipia County

Timeliness in service delivery varies for both private and public hospitals. Private hospitals are quick to attend to patients since there medical staff are always present. Public hospitals have service charters detailing the time taken to get a particular service offered but workshop participants agreed the service charters do not concur with service given. Focus Group discussants cited cases where by patients stay on the queues from 8.00am to 2.00 pm before being attended to. Emergency medical conditions are handled immediately in most of the hospitals. In some of the dispensaries there is only one medical staff that prescribes and dispenses the medication including injections hence it takes longer to treat all the patients. Emergency services are not centralized in some hospitals which results to time wastage in dealing with emergencies. Untrained paramedics also don’t offer the needed medical support during emergencies.
4.5.4 Timeliness of service in Nyandarua County

Private hospitals in the county were reported to be faster in service provision while government facilities are slow. North Kinangop mission hospital has a casualty department in the hospital that assists in attending to emergency victims in the fastest way possible. They also have a ready theatre for handling any emergencies in the fastest way possible.

The Government facilities’ medical personnel are reluctant to attend to patients and doctors are not readily available when called upon as per FGD participants. Patients queue for long as they wait to be treated even when some of the cases are emergencies in nature. Workshop discussants agreed that the service charters in most of the public hospitals don’t concur with the time spent in accessing a medical service. However KII participants interviewed in all the hospitals asserted that they give first priority to emergency cases. JM Kariuki hospital has a 24 hour operations schedule hence they can handle emergencies all the time.

4.5.5 Efficiency of Service in Laikipia County

Nyahururu District hospital has good signage. They also have a customer care desk to assist with any clarifications needed by patients while there. Students on attachment also give direction to patients. Rumuruti hospital is well ordered and has well labeled rooms. FGD participants felt that in Rumuruti hospital washrooms are far from the maternity ward which was a point of concern to the women who are the users of the maternity services.

At the Nanyuki Teaching and referral Hospital there is a customer care service section to help patients in case of any questions or complaints. There are signs on each and every door. There are arrows showing directions to different places within the facility. However NTRH services and different departments are located far from each other which at times pose a challenge to patients. At the cottage hospital there is a triage area for patients and a fully-fledged customer care unit. The Cottage hospital staff are working on streamlining the flow of service in order for patients to access services more easily. There are signposts at the gate showing directions.

4.5.6 Efficiency of Service in Nyandarua County

The Aljbado dispensary is well labeled making it easier for the patients. The cashiers do act as the receptionists or the pharmacists are used to triage patients in the facility. At the Engineer hospital there is a customer care desk and they support patients in case of any enquiries. Social workers and youths working as volunteers also direct patients. The North
Kinangop Mission hospital also has a customer care desk at the reception and ward areas that assist in giving directions. Security guards at the hospital gate also offer directions to patients. There is also use of Posters and banners within the hospital compound that give directions and finally the hospital has a receptions desk to receive patients.

At the JM Kariuki hospital there are signs on doors and arrows on walls showing patients where to go but due to renovations some have been erased. There are two people charged with directing patient flow at all times. FGD participants felt that Illiterate patients are disadvantaged since directions are provided in mostly in English and Kiswahili. The presence of staff who can guide the patients would be of great help too.

4.5.7 Patient Safety in Laikipia County

The Nyahururu District hospital has security personnel who ensure the compound is safe. There are also wheel chairs for patients who are not able to walk. The hospital is fitted with Fire extinguishers and alarm bells in some departments such as the psychiatrist department to ensure patient safety. The safety challenge is with congestion of beds which makes movement for patients a challenge and if not well supported they can be harmed. Sometimes patients use stretchers when there are no beds or even sit on the floor.

At the Rumuruti hospital FGD Participants and Key informants reported that there are no separate wards for patients; patients share beds and the same ward due to the limited number of beds at the facilities. Patients are not separated and there is only one ward and men and women plus children are all grouped together which means that patients safety is compromised. TB patients are put together with new born babies and this puts their lives in danger. There is no generator and sometimes doctors use torches during delivery. Doctors mostly stay in Nyahururu and when there is an emergency at night patients are received by nurses and other non-medical staff.

The Nanyuki Teaching and referral hospital Key informants reported that patient safety is guaranteed as construction within the premises is well inspected. Proper waste disposal is maintained for all kinds of waste including sharp objects. There is a maintenance department which ensures good fixing of electricity and any appliances which need repair.

The FGD participants said the public hospitals lacked patient safety. They are not comfortable when they are given certain services by medical students. The toilets within the hospitals are not safe and the language used on patients is harsh.

At the cottage hospital the facility is well guarded by security personnel at the hospital entrance to ensure patient safety. The hospital has a perimeter fence to enhance patient care.
safety. Safety for parents cannot be guaranteed outside the facility and for patients travelling from far distances like Doldol face security threats and attacks when travelling to hospitals to access medical care.

Bed sharing, neglect of patients in wards and poor drainage in hospitals were cited as some of the issues which make patients feel unsafe in hospitals within the county.

4.5.8 Patient Safety in Nyandarua County

The staff at JM Kariuki reported that there is patient safety as there are clean and dry non slippery floors and washrooms with casuals being employed to clean them. Patients are separated and those with infectious diseases also put in isolation. Patients do not share beds while on admission. The beds have rails to avoid patients falling off. There is open burning of garbage and an incinerator for maternity garbage. The patient is guaranteed safety from the time they get into the hospital until the time they get out.

North Kinangop Mission Hospital is WHO certified and accredited with proper safety measures in place. They have guidelines on safety procedures in the theatre and ward walls. There is practice of high level hygiene through proper dispose of gauzes and needles and cleaning of blood. The hospital offers awareness to patients on safety precautions and cleaning of their wounds. Physical security is offered by the presence of security guards who guard the hospital.

According to the respondents there is patient safety at Engineer Hospital. The hospital is cleaned well and there is no sharing of beds. In case there are excess patients they are referred to other hospitals like North Kinangop and Kijabe Hospital. Waste is well managed and disposed at the designated places. Patient safety at the Engineer hospital is observed. There is proper waste management and high standards of cleanliness are maintained.

Patient safety is compromised in the county when patients share beds even in the maternity wards. When children are admitted the children share beds and the mothers or guardians have to sit throughout the day and night. Cases of neglect of patients in the wards by medical staff were also reported as compromising on patient safety. Some of the hospital beds in the county lack metallic rails exposing patients to falls.

Lack of adequate protective gear for doctors like gloves exposes them to infectious diseases. Lack of privacy for patients due to sharing wards is another challenge. Some of the hospitals lack fences and adequate security. A case was reported in one of the Focus Group Discussions where a patient was poisoned while in the wards. Cases of Patients disappearing from wards show that there are patient security lapses within some of the county public hospitals.
4.5.9 Effectiveness of service in Laikipia and Nyandarua Counties

Most of the public hospitals have qualified staff who do thorough diagnosis before treating especially in cases relating to emergencies common in the county with good outcomes. In some cases patients are supposed to come back for review and follow up clinics but they fail due to cost challenges. Most of those treated in the health facilities eventually get well after treatment.

The challenges experienced with effectiveness in the county entail some cases where there is misdiagnosis by the medical staff or when patients come back without recovery due to patients not taking drugs as prescribed by doctor. The perennial lack of medicine in public hospitals also affects efficiency. Some patients resort to herbal medicine if they don’t get the medicine prescribed in the hospitals.

4.6 Budget and planning for emergency in Laikipia County

The Laikipia County budgets for certain aspects of emergency health care but it still needs improvement. Key informants felt that the funding is inadequate since hospitals lack basics like drugs and patients have to purchase from private chemists. The county has bought ambulances to ferry patients to referral hospitals in case of emergencies but more ambulances and services are required. More machines like CT scan machines, dialysis machines, and MRI machines are needed. The county government could improve on infrastructure development, stocking of ambulance and personnel hiring so as to strengthen emergency health care provision. Budgeting needs to be based on the need of each medical facility for example provide incubators for premature births if that is the need.

4.6.1 Budget and planning for emergency in Nyandarua County

The county government does the planning and budgeting for health care emergencies like employment of more staffs and ambulances to handle emergency cases. The county assembly has a monetary budget for medical health care which is used to supplement the cost sharing system in government facilities and supply drugs and training for health personnel. However the budget is not adequate and as a result there are inadequate ambulances to be used in case of emergencies. The county budgets for emergency treatment also keep on fluctuating so that in one financial year emergency treatment is allocated enough money yet in another financial year it is not. Consistency should be maintained and also timely disbursement of finances maintained.
4.7 Payment modalities for emergencies in Laikipia and Nyandarua County

Certain emergency services are free in charge for example caesarean delivery. Emergency medical cases are paid for by the patients or their relatives. Those who have NHIF cards and any other insurance cards are paid for by the insurance providers. Corporate staff are paid for by their employers for example the Private Ranch owners. The emergency victims are treated first then they are asked to pay later. There are waiver committees in public hospitals who waive needy patients. Politicians also offer to offset hospital bills of their electorates. Funds drives commonly known as Harambees are also held to raise money to clear hospital bills. Private hospitals rarely give any financial waivers.

For some private hospitals in cases of emergency whereby the victim has no insurance or financial capacity, the hospital stabilizes the patient then refers him/her to NTRH or other public hospitals within the two counties.

4.7.1 Barriers to Emergency health Care in Laikipia County

In Rumuruti which is part of Laikipia County the biggest challenge is physical and transport accessibility of health care facilities. The hospitals are far from reach especially and in some cases patients cover over 53kms to get medical care in Sosian or travel to Rumuruti.

The health facilities are few and lack the required equipment, services, infrastructure and personnel. The road network is bad and hence it is very difficult to deal with emergencies. The transport issues are worse during the rainy season. Availability of ambulances to rescue emergency cases is another challenge. There are inadequate medical staff in the hospitals especially doctors to deal with medical emergencies.

Cultural reasons pose another challenge to access. The Maasai and Samburu culture does not believe in accessing medical care for maternity services. They only reach out to the hospital when it is on a severe stage or when the life of the mother or baby is in danger. There is also use of local herbs especially in Manyattas and the reason attributed to this is the long distance to the hospitals. Emergencies as a result of Cultural practices like FGM are rarely taken to hospital until it is too late. The culture of violence also increases emergencies and at the same time deters development in relation to health care.

Financial barrier in that people in the lower class cannot afford some emergency services in both the private and public hospitals. There is a decry that the KES 500 monthly contribution charged by NHIF is high and some people who used to contribute when monthly charges were KES 300 no longer contribute.
Inadequate information on emergencies and first aid measures in the general public also is a barrier. County Residents do not know numbers to call in case of an emergency. This is a problem experienced even by the elite and insurance cover holders. The services provided by insurance providers like NHIF are also not well known. NHIF has ambulance and flight rescue for a certain category of its members. Lack of political good will to support and develop certain areas of Laikipia County.

Whereas Laikipia County has a Law which defines health services in the County\(^\text{13}\) it does not explicitly talk about emergency medical care and the relevant systems. The health policy makers do not involve doctors or medical practitioners in budgeting or planning for health care emergencies hence the policies are not very effective.

### 4.7.2 Barriers to Emergency health Care in Nyandarua County

In Nyandarua County Financial barrier remains a major challenge in the access of emergency and medical health care. Charges like payment for services, purchase of medicine, fueling the ambulance are way beyond most low class patients. The NHIF card is deemed expensive at KES 500 per month and not available to many non-salaried people.

Shortage of medical staff in the health care facilities is a big challenge. It leads to frustration and strain on the few who are there. It also results in medical students handling serious emergencies. Negative attitude and rudeness by medical staff repels patients away depending on the type of emergency and social status. There is scarcity of ambulances within the county. There is inadequate and poor infrastructure including stalled buildings within the hospitals which derails delivery of emergency health care.

Nyandarua County also lacks referral hospitals hence patients are referred to neighboring counties for specialized care and also for access to certain emergency services. There is lack of basic emergency information in the general public for example on how to carry out first aid in cases of emergencies. There is general poor handling of patients by the public for example people use motorbikes in cases like spine attack or injuries leading to more harm. People are ignorant of emergency treatment as they care more for farming and business activities.

Religion barriers where by some churches restrict their believers from seeking medical attention in the hospital for example members of ‘Kanitha wa Ngai’ or Church of God in areas like Kaaga and members of Jehovah Witness who belief in praying for the sick and not accessing emergency health care in hospitals. Cultural barriers like cases where one is told maybe an emergency has occurred because he never paid dowry etc.

\(^{13}\)Laikipia County Assembly, (2014). Laikipia Health Services Act. Kenya Law
Poor roads to access hospitals are also a big challenge and can cause delay in reaching hospitals especially during the rainy season. Transport is costly as people are left to use either motor bike transport or public vehicles which are not available in all the areas.

Nyandarua County lacks a law to govern both health care services in general and emergency medical care.

### 4.8 State of Emergency Care

#### 4.8.1 State of Emergency Preparedness in the hospitals in Laikipia and Nyandarua Counties.

<table>
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<tr>
<th>Priority Area</th>
<th>County Averages</th>
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<tr>
<td>Human resources</td>
<td>50.00</td>
<td>66.67</td>
</tr>
<tr>
<td>Supply Management</td>
<td>83.33</td>
<td>91.67</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>696.67</strong></td>
<td><strong>712.78</strong></td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>77.41</strong></td>
<td><strong>79.20</strong></td>
</tr>
</tbody>
</table>

From the modified emergency preparedness checklist derived from WHO guidelines, Table 4.1, the following findings were noteworthy: Emergency preparedness in both counties was generally comparable with scores of 77.41% and 79.2% for Laikipia and Nyandarua respectively. Nyandarua County had better Initial preparedness (76.67%), Triage (88.89%), Human resource mix (66.67%) and Supplies management (91.67%) relative to Laikipia County. Further, Nyandarua county facilities need to significantly improve their Identification of personnel (41.67%).

Laikipia County had better Identification of personnel (58.33%), Security (100%), and Surge capacity (100%) relative to Nyandarua County. Further, Laikipia needs to work better at improving their initial preparedness (46.67%) as well as their human resource mix (50%). Both counties had comparable communication systems (91.67%) and Continuity of essential services (100%).
4.8.2 State of Emergency Preparedness in the public hospitals in Laikipia and Nyandarua Counties.

Table 4.5 Emergency preparedness of public facilities.

<table>
<thead>
<tr>
<th>Priority Area</th>
<th>Public Facility Scores (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LAIKIPIA</td>
</tr>
<tr>
<td>Initial Preparedness</td>
<td>60</td>
</tr>
<tr>
<td>Identification of authorized Personnel</td>
<td>75</td>
</tr>
<tr>
<td>Communication</td>
<td>87.5</td>
</tr>
<tr>
<td>Security</td>
<td>100</td>
</tr>
<tr>
<td>Triage</td>
<td>50</td>
</tr>
<tr>
<td>Surge Capacity</td>
<td>100</td>
</tr>
<tr>
<td>Continuity of Essential Services</td>
<td>100</td>
</tr>
<tr>
<td>Human resources</td>
<td>25</td>
</tr>
<tr>
<td>Supply Management</td>
<td>75</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>672.50</strong></td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>74.72</strong></td>
</tr>
</tbody>
</table>

Public hospitals in both counties had comparable communication systems (87.5%), surge capacity (100%) and continuity of essential services (100%).

Public hospitals in Laikipia County had better identification of personnel (75%) and security (100%) relative to Nyandarua County (50% and 75% respectively).

Public hospitals in Nyandarua county had better initial preparedness (75%), triage (83.33%), human resource mix (75%) and supply management (87.5%) relative to Laikipia county (60%, 50%, 25% & 75% respectively).

Public hospitals in Laikipia County had significantly poor scores in human resource mix (25%) and triage (50%) hence need to work better at improving the same.

On average, public hospitals in Nyandarua County were better prepared for emergency response (81.48%) compared to Laikipia County (74.72%).
4.8.3 State of Emergency Preparedness in the private hospitals in Laikipia and Nyandarua Counties.

Table 4.6 Emergency Preparedness in the private hospitals.

<table>
<thead>
<tr>
<th>Priority Area</th>
<th>Private Facility Scores (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LAIKIPIA</td>
</tr>
<tr>
<td>Initial Preparedness</td>
<td>20.00</td>
</tr>
<tr>
<td>Identification of authorized Personnel</td>
<td>25.00</td>
</tr>
<tr>
<td>Communication</td>
<td>100.00</td>
</tr>
<tr>
<td>Security</td>
<td>100.00</td>
</tr>
<tr>
<td>Triage</td>
<td>100.00</td>
</tr>
<tr>
<td>Surge Capacity</td>
<td>100.00</td>
</tr>
<tr>
<td>Continuity of Essential Services</td>
<td>100.00</td>
</tr>
<tr>
<td>Human resources</td>
<td>100.00</td>
</tr>
<tr>
<td>Supply Management</td>
<td>100.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>745.00</strong></td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>82.78</strong></td>
</tr>
</tbody>
</table>

Private hospitals in both counties were comparable in identification of personnel (25%), communication (100%), triage (100%), continuity of essential services (100%), and Supply management (100%).

Private hospitals in both counties had significantly poor scores in identification of its authorized personnel (25%) hence need to improve on the same as this helps efficiency of service delivery in the emergency setting.

Private hospitals in Laikipia County had better preparedness in security, surge capacity and human resources (all at 100%) relative to Nyandarua County (50%, 66.67% and 50% respectively. Private facilities in Nyandarua therefore need to improve of these stated aspects.

Private facilities in Nyandarua County were better at initial preparedness for emergencies (80%) relative to Laikipia (20%). Private facilities in Laikipia county needs to significantly improve on their initial preparedness given the low aggregate score.

In general, private facilities in Laikipia County appear to be better prepared for delivery of emergency care (82.78%) compared to those in Nyandarua County (74.63%).
Table 4.7 Emergency Preparedness in the public vs private hospitals in the counties.

<table>
<thead>
<tr>
<th>Priority Area</th>
<th>Facility Categories</th>
<th>Scores</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Private</td>
<td>Public</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initial Preparedness</td>
<td>50.00</td>
<td>67.50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identification of personnel</td>
<td>25.00</td>
<td>62.50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication</td>
<td>100.00</td>
<td>87.50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Security</td>
<td>75.00</td>
<td>87.50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Triage</td>
<td>100.00</td>
<td>66.67</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surge Capacity</td>
<td>83.33</td>
<td>100.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuity of Essential Services</td>
<td>100.00</td>
<td>100.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Human resources</td>
<td>75.00</td>
<td>50.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supply Management</td>
<td>100.00</td>
<td>81.25</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>708.33</td>
<td>702.92</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td>78.70</td>
<td>78.10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Public and private facilities in both counties had comparable scores in continuity of essential services at 100%.

Private facilities appear to be better prepared in terms of communication (100%), triage (100%), supply management (100%) and human resources (75%) relative to public facilities at 87.5%, 66.67%, 81.25% & 50% respectively. Public facilities in both counties need to significantly invest in improving these aspects to help improve their preparedness for emergency cases.

Public hospitals in both counties appear to be better at initial preparedness (67.5%), identification of personnel (62.5%), security (87.5%) and surge capacity (100%) relative to the private facilities sampled at 50%, 25%, 75% and 83.33% respectively. Private facilities need to improve on the said aspects with a significant emphasis on personnel identification and their initial preparedness.

On average, both public and private hospitals were comparable in emergency preparedness in the two counties with average scores of 78.1% and 78.7% respectively.
5.1 Discussion

Both International instruments and local legal frameworks make provisions for emergency medical treatment. The Constitution of Kenya Article 43(1) (a), 43(2) and 43(3) provides that no one shall be denied emergency medical treatment. According to this provision patients have a right to be given emergency medical treatment if that is what is needed. This study sought to establish the situation of emergency medical treatment in Laikipia and Nyandarua County as a human right by interrogating different objectives related to the level of access to and quality of emergency medical treatment.

The first objective of the study is to establish the different types of emergency health cases in Laikipia County and Nyandarua Counties. Traumatic accidents experienced include motor bike and motor vehicle accidents, drowning cases, armed conflict injuries, animal attack injuries caused by elephants, wild dogs etc., and rape/defilement cases. Medical emergencies such as sudden collapse due to blood sugar issues, hypertension, hypotension, stroke, asthmatic attacks, and overdose on drugs, epileptic fits and waterborne diseases are also experienced and lastly obstetric conditions related to child delivery and miscarriages. Residents of both counties have a general understanding of emergency medical conditions though more sensitization is required since most of the cases are
taken to hospital when it is too late. The Church of God followers do not take their members to hospital. The Maasai community rarely seeks emergency healthcare for child delivery cases and when they do so it is too late.

The second objective is to establish the available emergency health care facilities, information and services in Laikipia and Nyandarua counties. Availability of functioning health care facilities determines the level of access of emergency medical treatment. According to the Laikipia CIDP\textsuperscript{14} the County has five hospitals with two of them being county hospitals that is, Nanyuki and Nyahururu and 3 sub-county hospitals that is Doldol, Kimanjio and Rumuruti. The County also has 8 public health centres and 54 public dispensaries. In addition, there are 3 private hospitals, 1 nursing home; 1 private health centre, 6 private dispensaries and 33 private clinics. Nyandarua County health infrastructure comprises of 2 public level 4 hospitals, which is Ol’kalou Level 4 Hospital and Engineer Level 4 hospital, 7 level 3 hospitals, 32 level 2 health care facilities and 50 private clinics. In both Counties emergency medical treatment is also given by herbalists, Community Health Volunteers and self-medication. Nyandarua County lacks a Level 5 hospital though plans are underway to upgrade Ol’kalou Level 4 hospital to a level 5 hospital. It hence implies that complex emergency cases cannot be dealt with within the county.

Emergency health information in both counties is provided by both institutions and individual entities such as NGOs, religious groups, Chiefs, Doctors, resident pharmacists, nurses and CHVs. General health information on HIV/AIDS and TB is also displayed in hospitals. Information is also transmitted through electronic, print and social media. Laikipia County emergency medical treatment services include general inpatient and outpatient care, theatre services, Ultra scan and X-Ray services and radiology services. Nyandarua County services include X-ray services, Ultra sounds, Plaster services for fractures, Referrals, First aid, Surgery, Ambulance services and inpatient services. Both Laikipia County and Nyandarua County lack MRI Services, a renal unit and ICU services. Patients are referred to Nyeri, Nakuru or Nairobi. The doctor-population ratio stands at 1:12,500 while the nurse-population ratio is 1:1,000 in Laikipia County and the Doctor Population ratio is 1:155,188 while the Nurse Population ratio is 1:2150\textsuperscript{15} in Nyandarua County. There are also limitations in the number of Medical specialists like Dentists, Gynecologists and ENTs limiting the nature of emergency medical treatment cases dealt with in the counties.

The third objective is on Access to Emergency medical treatment which is at different levels that is, financial accessibility, physical accessibility and transport accessibility. Services in both public and private hospitals are accessed after payment. The charges in Private hospitals are way above common citizens which includes consultation fees over and above any other service offered. In cases where the services are not available in the hospitals referrals are


\textsuperscript{15}Nyandarua County, 2013. Nyandarua County Integrated Development Plan. Nyandarua County Government.
made which increase the cost of medical care. The general lack of prescribed medicine, lab and radiology services in most public hospitals increases the cost as patients are referred to purchase or access the services from either private or public hospitals within and outside the counties increasing the cost. Ambulance costs are also not affordable to common citizens yet they have to be paid before a patient is rushed to hospital for an emergency. Whereas NHIF covers some of the emergency medical costs it is deemed inaccessible to common citizens and it majorly caters for the employed citizens. The monthly NHIF Charges for NHIF are deemed high by non-working citizens hence they cannot access NHIF facilitated emergency treatment. Emergency cases taken to hospital by the police are treated free of charge.

There are a variety of emergency treatment services provided by both Laikipia and Nyandarua County hospitals. However cases requiring ICU, MRI and renal units are not accessible. There is general delay in delivery of services in public hospitals. Admission procedures are also lengthy in most public hospitals which can cause escalation of emergency conditions. Ambulance services are inadequate and in accessible to many. Specialized Doctors are also inadequate hence there are certain emergencies which cannot be dealt with in both counties.

Physical accessibility for people around the big towns in both counties is not a problem. However there are areas where hospitals are far and residents have to travel for over 50 KMs to access emergency healthcare. Transport access is a barrier is experienced in these counties as most of the roads are earth surface roads which are impassable during the rainy seasons. Residents carry patients on their backs or on improvised stretchers on surface roads along bushes to take them to hospital. Motorbike transport is widely used as ambulances cannot access some of the areas and they are neither adequate nor financially accessible.

The fourth objective is on establishing the quality of available emergency health care services in Laikipia and Nyandarua counties under the different parameters of patient centeredness, timeliness, efficiency, patient safety and effectiveness. Patient centeredness was generally lacking in Public hospitals but a key strength for private hospitals. In Public hospitals it was blamed on understaffing of hospitals. However cases of bad attitude use of abusive or harsh words by medical and non-medical staff towards patients were reported. All the hospitals sampled reported giving emergency medical treatment first priority and having 24 hour operations to adequately deal with emergency cases. Timeliness of services endangers emergency medical treatment as a delayed service can lead to more serious emergency cases. However admission processes in public hospitals are lengthy and medical staff are not readily available. Service charters do not match turn around service time. Efficiency of service is maintained by offering adequate signage in hospitals and maintaining a customer care desk. However in some hospitals signage is not adequate and departments offering certain emergency services are placed far from each other hence the need to centralize emergency services. Some medical facilities have patient safety as a challenge in providing emergency
treatment due to inadequate facilities like wards, beds, and doctor rooms etc. Children, women and men sharing wards are a safety challenge. Patients suffering from communicable diseases when put together with others can transmit the diseases to the rest and bring new emergency cases. Effectiveness of service is good though in some cases patients rarely go back to hospital citing cost challenges. There are a few cases of misdiagnosis of emergency ailments. Lack of prescribed drugs in public hospitals also affects effectiveness as some patients resort to herbal medicine if they don’t get subsidized drugs in hospitals.

The barriers to Emergency health Care in some parts of Laikipia County entail availability or physical accessibility of functioning health care facilities in some areas of Laikipia North and Laikipia West. The hospitals are far from reach and in some cases patients cover over 53kms to get medical care in Sosian or travel to Rumuruti. Nyandarua County lacks a referral hospital. The health facilities are few and lack the required equipment, services, infrastructure and personnel to deal with the population in both counties. Transport accessibility is a big barrier too since the road network is poor and it is worse during rainy season. Transport access is also a challenge in Nyandarua County. Financial barrier in that people in the lower class cannot afford some emergency services in both the private and public hospitals in Laikipia and Nyandarua Counties. Cultural and Religious issues in both counties pose a challenge.

Shortage of medical staff in the health care facilities in both counties resulting to frustration and strain on the few who are there. Inadequate information on emergencies and first aid measures in the general public also is a barrier including lack of emergency and ambulance hotlines.

The health ministries in both counties lack laws which govern emergency medical services yet health is a devolved function. They also lack substantial budgetary allocations for emergency medical services and systems. Health policy makers do not involve doctors or medical practitioners in budgeting or planning for health care emergencies hence the existing policies and acts on health services are not very effective. There is need for stakeholder involvement in the financial planning for healthcare in both counties and targeted funding for emergency services e.g. ring fencing a component of the budget for healthcare and a further component for emergency health care.

5.2 Conclusions

The right to access to quality emergency health care is a fundamental right across global, regional and national legal provisions. The implementation and enforcement of the same seems to face significant barriers particularly in developing states as seen in the two counties under review in this study in the devolved county systems in Kenya as relates to access and quality of emergency healthcare.
Trauma relating to motor bike and vehicular accidents, conflict and animal inflicted injuries rank high in both counties followed by the medical emergencies such as respiratory and cardiovascular cases then obstetric emergencies.

There is a fair mix of public, faith-based and private health facilities in both counties. However, there are significant challenges to access ranging from distance, transport means and networks, insecurity (mostly in Laikipia county due to animal and bandit attacks), cost constraints to accessing the services (mainly affecting the private facilities), shortages of skilled personnel in the public and private facilities, lack of basic commodities mainly in public facilities inter alia.

There is effort towards availing information on available care mainly by private entities as well as the government. This however is not significantly targeted at emergency care alongside the challenges of illiteracy, language barrier and poverty that further compound communication in the studied populations. Embracing technology in information dissemination to patients and providers may be a worthwhile venture save for the challenges of illiteracy and internet connectivity.

Cultural practices also play a role in scuttling access such as religious persuasions and cultural beliefs that prohibit utilization of formal/conventional medical care in both counties. Cultural biases stand out in Laikipia County among the pastoral communities whilst religious persuasions are significant in Nyandarua County.

Interestingly, there is comparable overall quality of care in both private and public facilities in both counties but with definite action needed to improve on the varied aspects of quality as espoused by the Institute of Medicine.

There is need for enabling legislature and policies from both national and county government levels to help enforce access to quality emergency healthcare as envisioned in the Constitution of Kenya 2010.

5.3 Recommendations

5.3.1 Access

a. Financial Access

User fees for services (prehospital and hospital) in both private and public facilities are a main hindrance to utilization of care in both counties. This is more significant in private facilities whose services are more expensive and are more equipped than in the public facilities in both counties.
Strengthening the health financing systems with a shift towards universal health coverage that is government financed would ensure that these services are easily accessible to all the clients. Advocacy for enrollment into National Health Insurance Fund (NHIF) would further ensure that more people can access the emergency healthcare at NHIF accredited facilities. Given the unpredictable nature of emergencies, NHIF services need to be integrated in the hospital systems and provided on a 24 hours -7 days basis.

b. Targeted Budgeting on Emergency care

Proper regulations to govern the implementation of the constitutional right to emergency healthcare need to be enforced so as to set direction on the services provided as well as financing of the same. These need to be done at both levels of government, National and County with specific budgeting on emergency care.

c. Service Access

Investment in healthcare services is key. Provision of key basic services at the facilities, particularly public facilities utilized by most people would help improve outcomes of emergency cases. These services noted to be critical yet absent in some facilities include imaging services (X-rays, Ultrasound services, CT Scanners), blood banks, theatres, nurseries for neonates and functional ambulance services.

Key human resource cadres that are required as a minimum for proper emergency healthcare include medical officers, general surgeons, anesthetists/anesthesiologists, obstetricians, physicians, pediatricians and nurses. Given the shortage of these staff, family physicians are a key consideration as they possess training in almost all of the key primary care specialties hence are cost effective to employ.

c. Physical Access

Improved road networks can help bolster access to care alongside a robust ambulance system in both counties.

Health education amongst communities, coupled with favorable patient experience while seeking care in both counties, are key to help reinforce sound health seeking behavior with a view to discouraging the avoidance of hospital care for varied social reasons.

Partnership with all stakeholders including community leaders, religious leaders, health providers, insurers, government and non-state agents are key in generating lasting all-inclusive discourse and solutions on health which would engender in better uptake and sustainability.
5.3. 2. Quality of Care.

a. Patient-centered care

There is need for a targeted focus on patient centered approach to care particularly in the public facilities in both counties. Empathy, etiquette, confidentiality and respect for patients by health providers whilst handling patients are paramount.

Having service audits and avenues for patients to channel their concerns as relates to the care are also key in enshrining patient centered care, as well as promoting accountability.

b. Timeliness

Public hospitals have significant delays in service delivery relative to private facilities mainly because of staff shortages and large patient volumes. Adequate staffing would help ensure timelines of service delivery.

c. Efficiency, Effectiveness and Patient Safety

Both public and private facilities in both counties have made effort to streamline the nature of their service delivery and flow of care hence enhancing efficiency.

Whereas both public and private hospitals in both counties have made effort at improving patient safety, there is need for infrastructural development in public facilities to help reduce bed sharing and its attendant risks as well as isolation for highly communicable diseases such as Tuberculosis.

To enhance quality of care, there is value in interrogating the entire system, with a focus on improving organization and management (e.g. Policies, Emergency Standard Operating Procedures), work environment (e.g. staffing levels, workload, skill mix, resource availability, managerial support), team (e.g. leadership, communication), individual staff members (e.g. attitude, motivation, knowledge and skills) and tasks (e.g. availability and use of SOPs) (Patrice L Spath, 2013)

Recommendations for further study

This study, while focusing on key aspects of quality, does not interrogate at depth equity in emergency care as an essential component of quality. We recommend inclusion of the same in future studies with a view to comprehensive review of the quality of emergency care afforded in our health system.
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