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Performance Audit Report of the Auditor-General on Delivery of Health Care Services to Spinal Injury Patients

National Spinal Injury Referral Hospital

Ministry of Health

January 2015

Forward by the Auditor-General

I am pleased to publish and publicize this audit report that examines the delivery of health care services to spinal injury patients by the National Spinal Injury Referral Hospital. My Office carried out the audit under the mandate conferred to me by the Public Audit Act, 2003. Section 29(1) of the Act mandates me to assess the economy, efficiency and effectiveness with which the Government, a state corporation or local authority uses its resources.

Performance audits together with financial and continuous audits form the three-pillar audit assurance framework that I have established to give focus to the varied and wide scope of audit work done by my Office. The framework is intended to provide high-level of assurance to stakeholders that public resources are not only disbursed, recorded and accounted for in the correct manner, but also that their use results in beneficial outcomes in the lives of Kenyans. Therefore, the main goal of our performance audits is to promote effective use of public resources and delivery to Kenyans of public services of outstanding quality.

The report shall be tabled in Parliament in accordance with Article 229(7) of the Constitution. I have submitted the original copy of the report to the Speaker of the National Assembly to table in Parliament. In addition, I have remitted copies of the report to the Medical Superintendent National Spinal Injury Hospital, the Cabinet Secretary for Health and to the Principal Secretary for Health.

EDWARD R.O. OUKO, CBS

AUDITOR-GENERAL

10 April 2015

List of Abbreviations

AFROSAI-E	-	Africa Organization of the Supreme Audit Institutions
AG	-	Auditor-General
CT	-	Computerized Tomography
HAO	-	Hospital Administrative Officer
HMC	-	Health Management Fund
HMSF	-	Hospital Management Services Fund
GoK	-	Government of Kenya
HDU	-	High Dependency Unit
HoD	-	Head of Department
ICU	-	Intensive Care Unit
INTOSAI	-	International Organization of the Supreme Audit Institutions
ISSAIs	-	International Standard for Supreme Audit Institutions
KEMSA	-	Kenya Medical Supplies Authority
KNH	-	Kenyatta National Hospital
MDG	-	Millennium Development Goals
MoMS	-	Ministry of Medical Services
MRI	-	Magnetic Resonance Imaging
MS	-	Medical Superintendent
NHSSP	-	National Health Sector Strategic Plan
NSIH	-	National Spinal Injury Referral Hospital
OAG	-	Office of the Auditor General
RTA	-	Road Traffic Accident
SCI	-	Spinal Cord Injury
VFM	-	Value for Money
WHO	-	World Health Organization

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EXECUTIVE SUMMARY

Introduction

1. Spinal injuries occur when the spinal cord is subjected to severe stress. The spinal cord relays messages between the brain and the rest of the body and is therefore one of the most critical of organs. When the brain is unable to communicate with the lower body, devastating health effects on victims, including physical paralysis result. In Kenya the major cause of spinal injuries is road traffic accidents. However, the majority of spinal injury victims do not receive appropriate medical care because the public health care system does not sufficiently provide for their treatment and care.

Importance of Services Provided by the National Spinal Injury Hospital

2. The Auditor-General authorized the audit after having taken into account the fact that the National Spinal Injury Referral Hospital (NSIH) is the only public hospital in Kenya that provides specialized health care services to spinal injury victims. Therefore, the capacity of the Hospital to deliver efficient and effective services to its patients is a matter of interest to Parliament and the Executive as well as to the citizens themselves. Spinal cord injuries are also often devastating to the health of victims and are often permanent and irreversible. Therefore public health care systems established to serve spinal injury victims should provide timely and effective services.

Objective of the Audit

3. The objective of the audit was to assess whether the NSIH had sufficient capacity to deliver specialized health care services to spinal injury patients. In particular, the audit assessed whether the NSIH had sufficient mandate, skilled personnel, equipment's, facilities and management systems required to support delivery of services to spinal injury patients.

What We Examined

4. In view of its objective, the audit examined the operational capacity of the Hospital in five key areas namely; sufficiency of its mandate, equipment's and facilities, medical supplies and personnel; and adequacy of the NSIH's financial management systems.

Limitations of Scope

5. However, we did not obtain all the data on patients treated at the NSIH as well as all the financial information requested. This included the budgets and actual revenue collections for the periods 2008/09, 2009/10 and 2010/11. The information provided was incomplete, and therefore no conclusion could be arrived at. Others limitations included complete information on claims submitted to NHIF and billings of patients discharged from the hospital between the period 2008 to 2012. Therefore the scope of the audit was constrained to that extent.

Findings of the Audit

6. The audit revealed that the NSIH lacks an appropriate mandate to attend to spinal injury patients in time; has a shortage or altogether lacks various cadres of specialized personnel to treat critical aspects of its patients' illnesses; and lacks appropriate equipment and other vital facilities to deliver specialized health care services effectively. In addition, the Hospital's financial management system hinders it from managing its scarce resources in an optimal manner:

The mandate of the Hospital precludes it from providing immediate help to spinal injury victims

7. The audit revealed that the majority of spinal victims do not access specialized services at the NSIH fast enough because its mandate precludes it from admitting patients directly. It only treats patients referred by non-specialist healthcare institutions. An analysis of data on a sample of 77 patients admitted to the NSIH between 2008 and 2012 indicate that only 31% were taken to the NSIH directly and 69% of patients were referral cases from other health care facilities. Some were referred to the NSIH for specialized treatment more than one year after sustaining injuries. The non-specialized hospitals that they were first admitted into lack specialists, skills, facilities and equipment to treat serious injuries and as a result, the patients received little or no specialized treatment.

8. Delay in accessing specialized health care complicates the medical condition of patients and may even result in unfavorable terminal outcomes including death. For example, out of 148 patients who applied for admission to the NSIH between 2008 and 2012, 25 or 17% died before admission and 55 or 37% had contracted various illnesses by the time they were admitted. Further, delay in accessing specialized treatment reduces chances that patients will recover their bodily functions. Indeed the majority of patients at the NSIH suffer from severe paralysis. Out of 148 patients admitted at the NSIH between 2008 and 2012, 135 or 91% had suffered severe physical paralysis.

9. Doctors at the NSIH attributed the loss of physical body functions among some admitted patients to lack of proper pre-hospital or emergency care. Doctors are of the opinion that spinal injury conditions get aggravated at accident scenes because members of the public who assist the victims often have insufficient knowledge and skills on the safe way to handle the victims. According to the experts, if handled well, spinal injury victims would have up to 70% chances of recovering their full bodily functions.

The Hospital Lacks Sufficient Medical Equipment, Skilled Personnel and Facilities that it requires to deliver its Services Effectively

10. The NSIH does not possess sufficient physical facilities, equipment, and specialized personnel to deliver on its mandate. For example, it lacks Computerized Tomography (CT) or Magnetic Resonance Imaging (MRI) equipment to perform detailed evaluations of patients and instead uses Plain Radiograph, which may not detect all internal injuries suffered by patients. Doctors at the NSIH affirmed that assessment of spinal cord injuries using X-rays of the spine may result in treatment failure and prolonged periods of immobilization or illness. The NSIH further lacks an Intensive Care Unit (ICU) or High Dependence Unit (HDU) for attending to very ill patients and critical theatre equipment for conducting surgical operations and delicate medical procedures such as stabilizing the spine.

11. The NSIH is challenged in terms of limited resources for the experts. For example, plastic surgeons to attend to patients' bedsores, neuro-surgeons to conduct surgical operations of the spinal cord, neurologists for the management of nerves, orthopedics for bone related cases, urologists and general surgeons. It has only nine physiotherapists out of the required 20 while the ratio of nurses to patients is 2:1 against the recommended ratio of 3:1 for specialized healthcare services. Further, the nurses are trained to provide general patient care and thus lack specialized skills that are required to manage spinal injury patients.

12. Notwithstanding that these cadres of experts are few in Kenya, their severe shortage at the NSIH may be attributed to the decision of the Ministry of Health to categorize the Hospital as a District Hospital (Level IV) in the National Healthcare Service Delivery System. Due to its lowly status, not much consideration has been given for the specialized skills needed for delivery of the services over which the NSIH is responsible.

13. The NSIH lacks sufficient room for patients as it can accommodate only 30 patients at a time. As a result, there's always a long waiting list of patients, some admitted in non-specialized hospitals and others waiting at home. At the time of the audit, the waiting list had between 150-200 patients. Records on the patients indicated that while the majority waited for about three months, others waited for up to two years, before they were admitted to the NSIH. Evidence indicated that, as they wait for their turn at the NSIH, some of the patients eventually die, while others suffer new illnesses.

Weaknesses in the NSIH`s revenue management system hamper optimal management of its resources

14. Poor management of the NSIH's resources limits its capacity to deliver services effectively. For example, during the four-year period under review, the NSIH did not meet its revenue targets. In 2011/12, the NSIH collected only 64% of its budgeted revenue totaling to Kshs.13,654,289. The main cause of the recurring under-collections was failure or delay by the National Hospital Insurance Fund (NHIF) to reimburse the NSIH all the expenses incurred by patients.

15. There was no documented evidence showing action taken by the NSIH's management to follow-up on claims due from NHIF. NHIF only caters for patients admitted at the NSIH for six months or less. For instance, in 2011/12 only 60% of the patients stayed at the NSIH for less than six months. As a result, the NSIH lost revenue on 40% of its patients who were admitted for longer periods. Records that we examined revealed that, the NHIF did not reimburse the NSIH a total of Kshs. 2.69 million claimed in regard to such patients during the period under review.

16. Lack of proper systems for billing and settling patients' bills, and the granting of waivers to poor patients unable to pay for services provided also constraints the capacity of NSIH to meet its revenue targets. Evidence showed that NSIH`s management has not established objective criteria for determining how the beneficiaries of such waivers would be determined.

17. The NSIH lacks a proper management information and financial system that appropriately captures, records and stores patient and financial records in a complete and integrated manner. As a result, accurate and timely information is not readily available to management for decision-making and control of operations related to

delivery of services and management of the NSIH's resources. This in turn constrains the quality of services that the NSIH offers its patients.

18. Due to the NSIH's status as a District Hospital, it is expected to receive all its drugs and other non-pharmaceutical requirements from the Kenya Medical Supplies Authority (KEMSA) under a Special Drawing Rights (SDRs) arrangement administered by the KEMSA. Supplies made by KEMSA are offset against rights allocated to the NSIH by the Ministry of Health in each financial year. However, the NSIH's SDRs are never fully utilized in any given year because KEMSA does not supply most of the drugs and other medical supplies the NSIH orders. In addition, some of the drugs that the NSIH requires are not included in KEMSA's "Essential Drugs List" from which KEMSA makes its supplies, or are often out of stock. In the period under review, the NSIH received only one third (33%) of the total value of orders placed with the KEMSA.

19. Whenever KEMSA is unable to supply the NSIH with drugs and other supplies, the NSIH sources from the open market. However a sample of purchases that the audit team examined revealed that market prices paid by the NSIH were between 37% and 215% higher than those charged by KEMSA. The sample revealed that the NSIH incurred losses totaling to Kshs.425,282 after buying supplies in the open market. This happened even as the NSIH's SDR's with KEMSA remained unutilized. During the 2012/2013 financial year, the SDRs had accumulated to approximately Kshs. 16 million.

Conclusions

20. The National Spinal Injury Referral Hospital lacks sufficient capacity to deliver specialized services to spinal injury patients. Its constrained capacity mainly results from its dysfunctional status. Because of its status as a referral facility, the NSIH does not attend to patients immediately after they sustain injuries. On the other hand, its categorization as a District Hospital (Level IV) in the National Health Care Service Delivery System means that its resource entitlements are far much less than its responsibilities demand. As a result, the NSIH is unable to procure or maintain the facilities, equipments and specialized personnel it requires to deliver its specialized mandate. In addition to these externally-induced challenges, weaknesses in the NSIH's management information and financial systems hamper efficient delivery of services and effective management of resources.

Recommendations

21. In view of the findings, the Ministry of Health and the management of the National Spinal Injury Hospital may take the following actions to facilitate the NSIH deliver services to spinal injury patients more effectively

    To enable the NSIH operate at a level equal to its assigned status as a national referral hospital and ensure efficient and effective delivery of specialized healthcare services that spinal injury patients require;

    i) The Ministry of Health should consider reclassifying the NSIH from a District Hospital to an appropriate category and provide it with the financial resources it requires to execute its mandate effectively.

To enable the NSIH access the specialist human resources it needs to attain its mandate

ii) The Ministry of Health should sponsor local and international training programmes for medical experts in fields relevant to the NSIH's mandate.

To improve access to specialized healthcare for spinal injury patients

iii) The Ministry of Health should partner with county governments to establish hospitals that cater for spinal injury patients in major Hospitals country-wide.

iv) The Ministry of Health should lead in creating awareness among members of the public on how to handle accident victims.

To ensure that the NSIH meets its revenue collection targets, the NSIH's administrators should ensure that:

v) The Hospital fee refund claims are submitted timely to the National Hospital Insurance Fund (NHIF).

vi) The resources available to the NSIH are managed in an efficient manner.

To improve on the hospital's Management Information and Financial Systems for efficient service delivery

vii) NSIH management should implement an intergrated management information system that could allow effective capturing, recording, processing and sharing of data for timely and reliable information for decision making.

To ensure that the NSIH has sufficient and proper medical drugs and supplies.

viii) The Ministry of Health should ensure that Special Drawing Rights (SDRs) owed to the NSIH by KEMSA are honoured.

To avoid loss of revenue through claims not honored by NHIF,

ix) The NSIH management through the Management Committee should seek special consideration for patients who stay in the NSIH for more than 180 days given the special circumtances of the patients' condition and treatment.

To improve pre-hospitalization care for spinary injury victims

x) The Ministry of Health should partner with other public agencies to create public awareness on how to handle accident victims.

xi) The Ministry of Health should establish emergency service facilities for road accident victims along major roads and highways.

DETAILED REPORT

Chapter 1

Background to the Audit

Introduction

1.1 This audit report contains the findings of a performance audit on delivery of health care services to spinal injury patients by the National Spinal Injury Referral Hospital. The audit was conducted as mandated under Section 29 of the Public Audit Act, 2003 and a report prepared to be tabled in Parliament as outlined under Article 229(7) of the Constitution and Section 31 of the Public Audit Act, 2003.

Spinal Injuries and their Effects

1.2 The spinal cord is one of the most critical parts of the human body. Its main function is to relay messages between the brain and the rest of the body. It is protected by the vertebral column and is very delicate. In the event that physical trauma is exacted on the vertebral column, it exacts pressure on the spine and may injure or fragment the spinal cord. Damage to the spinal cord constrains the capacity of the brain to influence bodily functions below the level of the injury.

1.3 In the event that the spinal cord is cut completely, a person sustains permanent disability from the point the cut occurred. If it is partially cut, the patient develops weakness in the limbs and loses ability to walk. Spinal-injury victims either become quadriplegic or paraplegic. Quadriplegics are paralyzed from the neck down (including arms and legs), whereas paraplegics suffer paralysis from the waist down.

1.4 The health-care services that spinal injury victims require include clinical treatment, physiotherapy, occupational therapy, nursing and surgery.

The Main Cause of Spinal Injuries in Kenya

1.5 Spinal disorders mainly occur as a result of accidents and occasionally through disease. In Kenya, the major cause of the injuries is road traffic accidents which contribute approximately 65% of the cases reported. Data issued by the Police Department indicate that over 50,000 Kenyans are injured every year in road accidents. Over 15,000 of them suffer spinal injuries of varying degree.

The National Spinal-injury Referral Hospital

1.6 The National Spinal Injury Referral Hospital is the only public hospital that offers specialized healthcare services to persons with spinal injuries in Kenya. The core business of the NSIH is to rehabilitate spinal injury patients referred from public and private institutions from the country and even neighboring countries. The buildings that

house the Hospital were initially a private home built in 1944 but the owners latter converted them into a rehabilitation center for injured World War II soldiers. The center was donated to the Government in 1963 upon which it was put under the management of Kenyatta National Hospital. In the year 2000, the Ministry of Health allowed the center to operate as a semi-autonomous hospital with its own management committee.

1.7 Although labeled as a referral hospital, administratively, it is categorized as a District Hospital (Level-IV) in the National Health Care Service Delivery System developed by the Ministry of Health.

Motivation for the Audit

1.8 The Auditor-General authorized the audit after having considered the following factors:

i. The NSIH is the only public hospital that provides specialized health care services to spinal injury victims in Kenya. Therefore, the capacity of the NSIH to deliver efficient and effective services to its patients is a matter of national importance. Further, Parliament and the Executive and other health sector stakeholders would be interested in obtaining independent information on how well the NSIH delivers efficient and effective services to spinal injury patients.

ii. Spinal injuries are often devastating to the health of victims and may result in varying degrees of paralysis which are often permanent and irreversible in nature. In Kenya, the injuries mainly result from road traffic accidents which account for 65% of the cases. Therefore, the risk of Kenyans sustaining spinal injuries is real given the high number of road accidents in the country. Thus, our review of systems established to provide services to spinal injury victims was necessary.

iii. Spinal injuries require very urgent specialized medical attention to prevent severe or terminal outcomes on health of victims. However, many patients are reported to wait for long periods before they are admitted at the NSIH.

iv. The capacity of the NSIH to provide services to its patients has been questioned on various occasions. The nature and variety of facilities at the NSIH have remained the same since independence in 1963 in spite of the large increase in the national population and number of accident victims.

Chapter 2

Design of the Audit

Objective of the Audit

2.1 The objective of the audit was to assess whether the National Spinal Injury Hospital had sufficient capacity to deliver specialized health care services to spinal injury patients. In particular, the audit assessed whether the NSIH had the necessary mandate, skilled personnel, equipment, facilities as well as information and financial management system that supports delivery of health care services to spinal injury patients.

Scope of the audit and limitations

2.2 The focus of the audit was on the mandate, skills set, equipment, physical facilities and management system of the NSIH. The audit did not however examine the quality or appropriateness of the treatment or rehabilitation processes applied by the NSIH in treating its patients but rather focused on the adequacy of systems in place for delivery of services to spinal injury patients.

2.3 The operations of the NSIH for the period July 2008 to March 2013 were examined. However, the we did not obtain all the data on patients treated at the NSIH as well as all the financial information requested for. This included the budgets and actual revenue collections for the periods 2008/09, 2009/10 and 2010/11 where the information provided was incomplete therefore no conclusion could be arrived at. Others included complete information on claims submitted to NHIF and billings of patients discharged from the hospital between the period 2008 to 2012. Therefore the scope of the audit was constrained to that extent.

Audit Criteria

2.4 We assessed the performance of the NSIH against criteria drawn from its operational mandate, service charter and budgets, World Health Organization (WHO) Standards, the NHIF Service Charter, cost-sharing regulations established by the Ministry of Health and recommended practices in the management of spinal injury patients. The specific criteria are cited in the findings of the audit in Chapter 4 of this report.

Methods Used to Gather Audit Evidence

2.5 We conducted the audit in accordance with International Standards of Supreme Audit Institutions (ISSAI's) issued by the International Organizations of Supreme Audit Institutions and audit policies and procedures established by the Office of the Auditor-General.

2.6 Data and information was mainly collected through interviews, documentary reviews and physical observations. The data was corroborated through reviews of various research studies carried out on the subject of spinal injury. Details are highlighted in **Appendix 1** of this report.

Chapter 3

Description of the Audit Area

Mandate and Role of the National Spinal Injury Hospital

3.1 The NSIH is a referral hospital that provides specialized healthcare services to persons with spinal injuries. It is the only public hospital in Kenya dedicated to treating and rehabilitating spinal injury patients. The NSIH receives patients referred from private and public institutions in the whole of the republic and the neighboring countries as well. Since 2003, the management opened an outpatient department that offers general healthcare services with a view to serve more Kenyans and generate additional revenue for the Hospital's operations.

3.2 Data maintained by the NSIH indicated that it attends to an average of 205 spinal injury patients (inpatients) and 6,812 outpatients annually:

Table 1: Patient Statistics

Year	Outpatient	Spinal injury/Inpatient	Total	Spinal injury patient as a % of total patients
2009	4,807	270	5,077	5%
2010	7,369	188	7,557	2%
2011	10,174	211	10,385	2%
2012	4,897	152	5,049	3%
Total	**27,247**	**821**	**28,068**	**3%**
Average	**6,812**	**205**	**7,017**	

Source: OAG Analysis of NSIH Data

3.3 The mission of NSIH is to provide specialized spinal health care services aimed at maximizing the residual neurological (mental) and bodily (physical) functions of victims and prevent further harm to their health.

3.4 The vision of the NSIH is to develop into a center of excellence and a model Spinal Care Unit for patient care, teaching and research nationally and in the East and Central African Region.

Organization of the Hospital

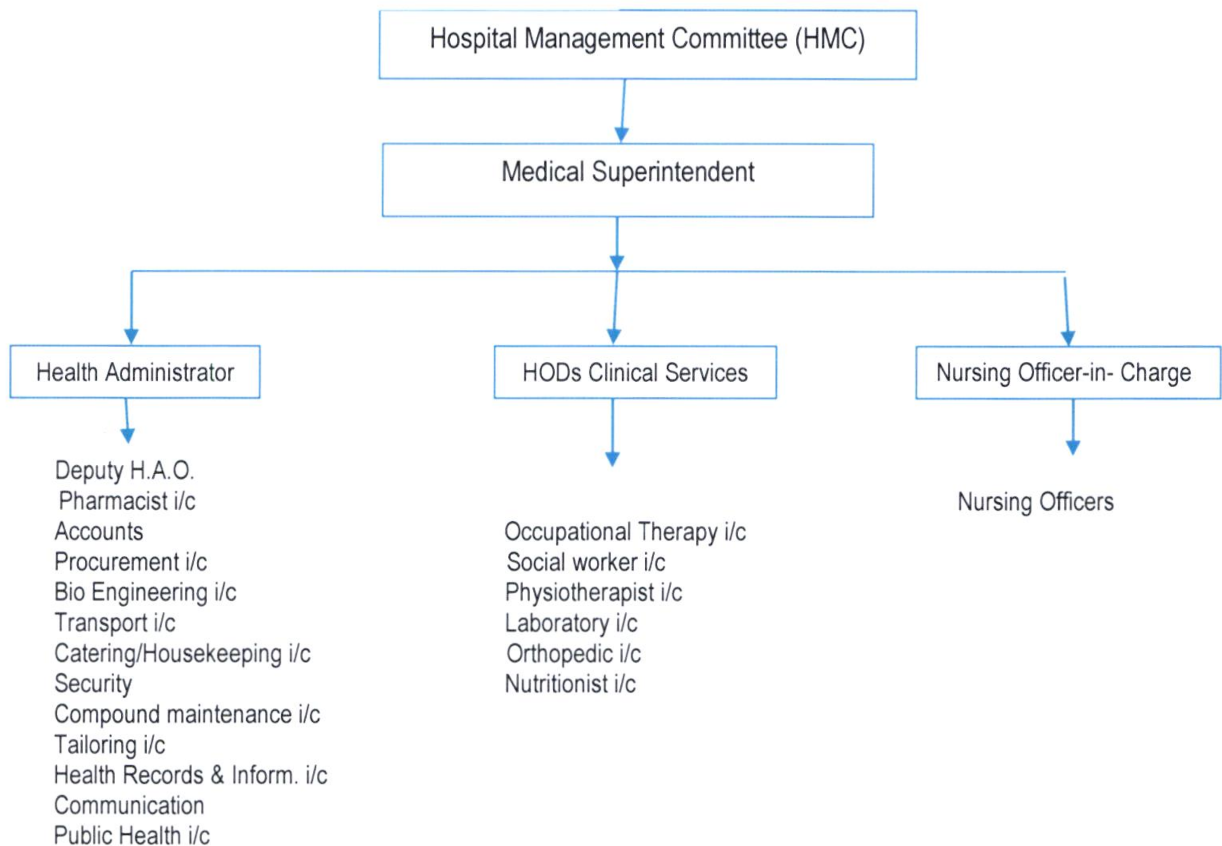
3.5 The Hospital operations are supervised by a Management committee made up of the following members:

i. The District Commissioner (Westlands);
ii. Representative (Kilimani Ward);
iii. Provincial Director of Medical Services – PDMS (Nairobi) and ;

iv. Appointees by the Minister of Health. These include a qualified medical practitioner (Doctor) from Nairobi Hospital and the Chairman of the Friends of the National Spinal Injury Referral `Hospital an organization that has supported the Hospital with resources for several years.
v. Medical Superintendent.

3.6 The management team is led by a Medical Superintendent. Under the Medical Superintendent is the Health Administrative Officer (HAO), Heads of Departments (HODs) responsible for clinical services and the Nursing Officer-in-charge. The Health Administrator oversees administrative duties including accounts, procurement, catering, records and public health. The Nursing Officer-in-charge is responsible for admissions and nursing care for patients.

Figure 1: Organizational Structure



Nature of Health Services Provided by the Hospital

3.7 The clinical services that the NSIH provides to patients include occupational therapy, social work, physiotherapy and orthopedic. In addition, the NSIH runs a pharmacy that sells drugs to its patients.

Outpatient Services

3.8 The outpatient department attends to patients who suffer from general ailments. It operates special clinics for the patients. The clinics conduct orthopedic, diabetic and disability assessments. Reports on disability assessments are forwarded to the Ministry of Health for action.

Inpatient Services

3.9 Inpatient services are offered to spinal-injury patients only. The services offered by the NSIH are physiotherapy, occupational therapy, nursing and, surgical care. Physiotherapy seeks to revive lost functions of the body or limbs through nerve or muscle stimulation, heat therapy, ultrasound and wax therapies among other means. Occupational therapists train patients on daily living activities which include bowel and bladder management, exercise to increase muscle strength, joint movement to balance muscle tone and bring back sensory touch and counseling on social relations among other advice.

Process for Admitting Patients into the Hospital

3.10 Patients are referred to the NSIH from other public hospitals and are only admitted when a bed become available. Before admission, each patient pays cash deposit and in addition submits a National Health Insurance Fund (NHIF) Card. Once admitted, the patient is assigned the appropriate rehabilitation programme or undergoes surgery or other treatment, as necessary. The admission process is illustrated in **Appendix 2.**

Functions of Various Departments of the Hospital

3.11 The functions of the Departments of the Hospital are highlighted below:

i. Occupational Therapy Department: The role of the Department is to train patients on how to recover the use of their constrained physical abilities. Training sessions include basic functions such as feeding, bathing and dressing. Doctors treating patients admitted at the Hospital refer them to the Department as need arises. The nature of therapy sessions depends on the patient's condition. After going through occupational therapy, the patients are monitored and finally resettled.

ii. Physiotherapy Department: Physiotherapy is a rehabilitation process that seeks to recover lost bodily functions by use of various methods such as nerve or muscle stimulation, heat, ultrasound or and wax therapies or similar means. The exercises are meant to relieve pain, strengthen weak or rigid body muscles and restore joint movement. The Hospital provides the services to both inpatients and outpatients. The physiotherapist first has to assess the patient's condition after which he recommends the kind of therapy the patient may require. The treatment process is illustrated in **Appendix 3** of this report.

iii. The Social Work Department: The Department provides social economic and psychosocial support to the patients mainly through counseling. Patients are counselled to acknowledge new bodily and health conditions and how to face new challenges that they face. Social workers also educate patients about their rights and often go further to advocate for their rights. In addition, the workers may teach select family members how to live with the patients at home. The social workers also assess the patients' need for waivers of hospital fees.

iv. The Orthopedic Department: The role of the orthopedic unit is to assess patients, and fit and fabricate physical accessories (prosthetics and orthotics) that they may need to use in their new condition. Orthotics support weak body parts including the limbs while prosthetics are substitutes for outer body parts. The unit manufactures orthotics only. Dependence on the accessories varies depending on patient's condition. According to NSIH management, 90% of spinal injury patients require leg support to avoid contraction. The unit also fits wheel chairs for patients. The orthopedic treatment process is shown at **Appendix 4** of this report.

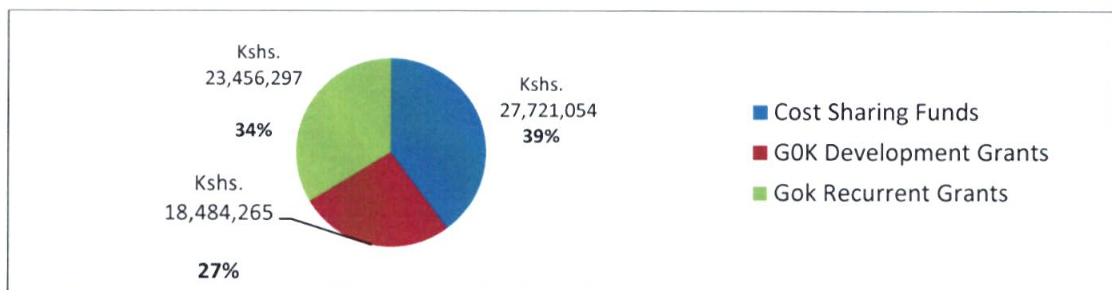
v. The Pharmacy Department: The Department stores and dispenses drugs to the inpatients and outpatients. The drugs are mainly received from KEMSA while some are bought by the NSIH from the open market. The Ministry of Health allocates money to KEMSA for supply of drugs and other medical supplies to the NSIH under a Special Drawing Rights (SDR) system. SDRs are money equivalents that the Ministry of Health budgets for each public hospital in each financial year. Supplies made by KEMSA are offset against the rights which represent the value of budgets available for use by the respective public health-care institutions.

Sources of Funding to the Hospital

3.12 The operations of the NSIH are financed through funds from the Government, donors and from fees raised under the cost-sharing programme. Under the programme patients pay susbsidized fees for the services they receive.The Government remits recurrent funds to the NSIH through the Hospital Services Management Fund. The funds mainly finance the recurrent operations of the NSIH.

3.13 The NSIH collected gross revenue amounting to Kshs. 69.6 million between 2008/2009 and 2011/2012 financial years, as summarized in the figure 2 below. Cost-sharing revenue was the major source of funding to the hospital having contributed 39% of the total revenue followed by recurrent funds (grants) from the Government at 34%. Development grants from the Government represented 27% of the total revenue received by the NSIH during the four year period.

Figure 2: Sources of Funds for the Hospital



Source: OAG analysis of NSIH records

3.14 An additonal significant source of funds to the NSIH is donations by well wishers. The major donor is a group of philianthropists referred to as the "Friends of the Spinal Injury Hospital" who work under a private trust named

the National Spinal-injury Trust. Formed in 2006, the group's main objective is to improve the welfare of spinal injury patients admitted at the NSIH.

3.15 The group has asssisted the NSIH in may ways. It has built additional wards at a cost of Kshs.75 million, refurbished the main hospital building and bought a new generator and switch-gear at a cost of Kshs.2 million. Further, the group built a new physiotherapy wing and hydrotherapy pool through funds donated by a donor, the Merali Foundation. Also, a long-condemned building was rebuilt through a grant made to the NSIH by the the Safaricom Foundation. In addition, the Safaricom Foundation granted the Hospital an additional Kshs 4.2 million to build a new medical laboratory.

3.16 Further, the group has for several years provided the NSIH with medical supplies. These have included adult diapers for the patients, food supplements and school fees for children of discharged patients. At the time of the audit, the group had initiated a project to supply NSIH with orthopaedic beds as the Hospital has never had any.

Chapter 4

Findings of the Audit

The capacity of the NSIH to provide spinal injury patients with efficient and effective health-care services is highly constrained

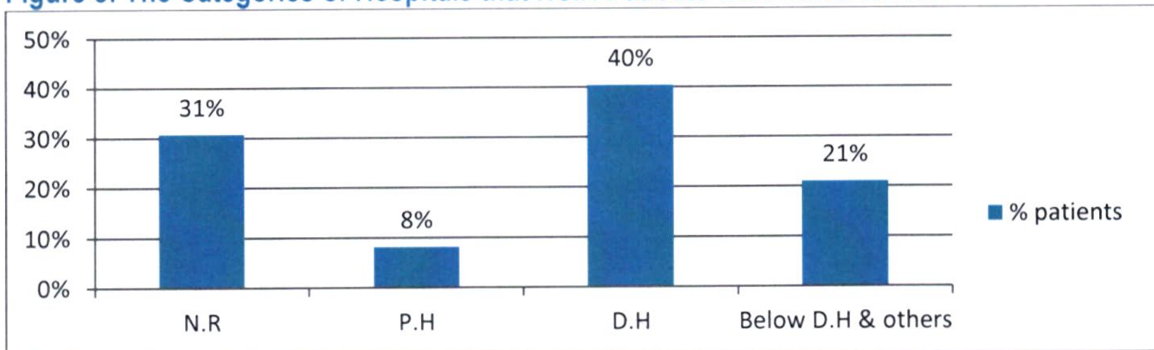
4.1 Audit evidence gathered revealed that the NSIH's mandate and administrative status constrains its ability to meet the needs of spinal injury patients. In addition, the NSIH lacks sufficient skilled personnel, equipment and other vital facilities it requires to serve its patients. Further, the NSIH has not established a proper management information and financial system that would support efficient delivery of services to patients and ensure effective management of its resources. These findings are discussed in detail in the remainder of this Chapter.

Lack of an appropriate mandate delays patients' access the Hospital

4.2 Spinal injury victims should receive specialized treatment as soon as they get injured if the risk of further damage to the spine is to be minimized. However, the audit revealed that patients encounter delays in accessing treatment at the NSIH because it is designated as a referral hospital and may not therefore receive patients directly from accident scenes. Therefore, the victims are first taken to non-specialist hospitals, mainly District and Provincial Hospitals, who thereafter refer them to the NSIH.

4.3 Analysis of data on a sample of 77 patients admitted to the NSIH between 2008 and 2012 indicated that 48% of the patients were first taken to District and Provincial Hospitals immediately after they sustained their injuries. 21% were taken to lower level institutions including health centers and private clinics. Only 31% were taken to the National Referral Hospital directly. Therefore, 69% of the victims were first admitted to ordinary health-care institutions before they were referred to the NSIH for specialized treatment as shown in Figure 3.

Figure 3: The Categories of Hospitals that NSIH Patients were taken to First



Source: OAG analysis of NSIH data

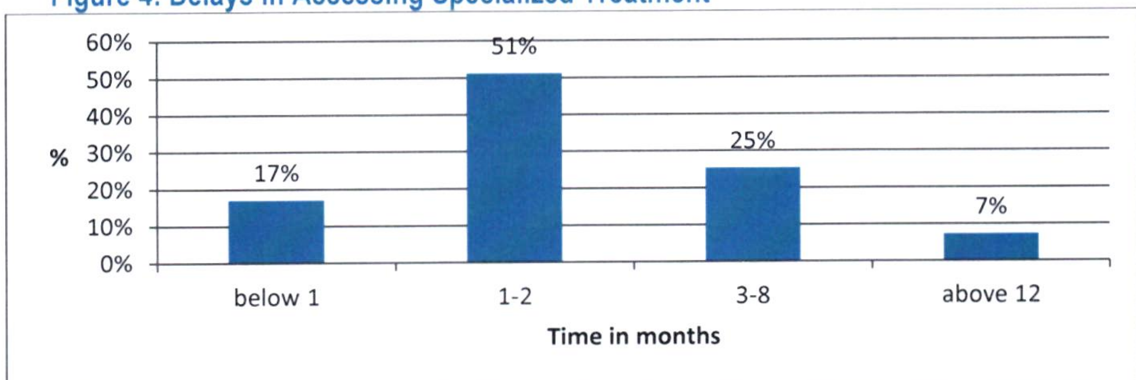
N.R-National Referral hospitals, P.H –Provincial hospitals, D.H –District hospitals

Records for a batch of 77 patients admitted at the hospital between 2008 and 2012 shows that 69% of the patients were first admitted to ordinary health care institutions immediately after injury

4.4 Patients admitted to these Hospitals wait for long before they are referred to the NSIH for specialized treatment. Our analysis of sample of 41 patients admitted at the NSIH during the period 2008 -2012 indicated that only 7(17%) of the patients were referred to the NSIH within one month of sustaining injury. The majority (51%) were referred in between one and two months after sustaining injuries as shown in Figure 4.

4.5 According to the Kenya Essential Package for Health (KEPH) document prepared by the Ministry of Health, Provincial and District Hospitals are mandated to undertake curative and rehabilitative activities only. They have no mandate to deliver specialized services. Therefore, they may normally not be allocated specialized personnel, facilities and equipment's to deal with spinal injuries. Thus, patients admitted into these Hospitals receive little or no specialized treatment as they wait to be transferred to the NSIH.

Figure 4: Delays in Accessing Specialized Treatment



Source: OAG analysis of NSIH data

83% of the 41 patients took more than 1 month before they were admitted to NSIH

4.6 Due to the lack of proper treatment and care in the general hospitals, chances that the patients would recover their health are minimal, if any. By the time they finally arrive at the NSIH, most of them would have

developed permanent disability and secondary ailments. Common among the latter are bedsores and urinary tract infections. Our analysis of data on patients referred to the NSIH indicated that out of 148 patients who applied for admission at the NSIH between 2008- 2012, 25 died while 55 others contracted secondary ailments during the waiting period.

Delays faced by Spinal Injury Patients in Accessing Treatment

Felistas is paraplegic after the bus she was travelling in was involved in an accident and rolled several times on the road to Mombasa from Nairobi. She was pulled out of the debris by good Samaritans put in a pickup truck which took her to Mariakani Hospital near Mombasa. She was shortly after transferred to the Coast General Hospital from Mariakani. A scan at the Hospital revealed that she had suffered a broken spine, broken ribs and internal bleeding. The patient did not receive all the services she required at Coast General Hospital and her family thus decided to transfer her to a private Hospital where she was admitted for two weeks and underwent a major surgical operation.

She was discharged and advised to hire a physiotherapist to help her at home but she could not afford the Kshs. 1500 per day fee that the physiotherapist asked from her. Further, she could not afford to buy the equipment required. She stayed at home for four months before she was admitted at the National Spinal Injury Hospital. After her admission she was put on the Hospital's rehabilitation programme but she had first to get treatment for her bedsores which developed at Coast General Hospital and worsened at home.

4.7 Delay in accessing specialized treatment harms the health of the patients more and also increases their anxiety and distress. The delays also reduce chances that the patients would recover most of their bodily functions. Medical staff that we interviewed asserted that the delays largely explain the high number of severely paralyzed patients at the NSIH. For example, out of the 148 admitted between 2008-2012, 135 or 91% developed permanent disability and were either paraplegic (paralysis from waist down) or quadriplegic (paralysis from the neck down).

Casey Marenge - Vulnerability to Spinal Injury and life experiences.

Casy Mathenge was going to attend her classes in a college in Nairobi when she was hit by a car. She was rushed to hospital by good Samaritans and was immediately taken to the intensive care unit where several tests, including x-rays were conducted on her.

After lying in the hospital bed for six weeks, her family and friends raised funds for her treatment abroad and she left for Cape Town, South Africa months later. It is in South Africa that she was informed of the extent of her injury. She had suffered a severe injury on her spinal cord and was quadriplegic. After two surgeries and two weeks in the Intensive Care Unit she began her rehabilitation process.

Casey Marenge - Vulnerability to Spinal Injury and life experiences (cont'd)

Her day-to-day activities included physiotherapy to strengthen her muscles and occupational therapy where she learnt to use voice activation software to perform all computer functions using her voice. She was also counselled to help her cope with the trauma and with her new physical disability.

Her return home was an enormous challenge, living in a house that was not easily accessible to a person with disabilities; members of her family had to carry her up and down the house every day. Casey's mother had, in addition to taking care of her, to become her physiotherapist as the family could not afford to hire a professional. Due to the very large number of patients awaiting admission at the NSIH, she experienced great difficulty in booking physiotherapy sessions at the Hospital.

4.8 Doctors at the NSIH attributed the high level of paralysis to lack of proper pre-hospital or emergency care for accident victims. The injuries may be aggravated if rescuers fail to handle victims well at accident scenes. Ideally an ambulance should reach the victim as fast as possible for paramedics to provide first-aid, and carry out clinical assessment to identify possible cases of spinal injury. The patient should thereafter be immobilized totally and rushed to the right hospital for tests before undergoing surgery to decompress the spine. In Kenya this procedure is rarely followed due to lack of proper emergency care facilities.

The Hospital lacks sufficient medical equipment, skilled personnel and other facilities that it requires to deliver its services effectively

4.9 Any specialized hospital would require sufficient numbers of specialists to execute its mandate. It would also require specialized equipment and other facilities including bed space in addition to drugs and medical supplies. However, the NSIH is short of these resources. It lacks important equipment's and infrastructure and does not have sufficient numbers of specialized skills and drugs, as we highlight below:

(a) The NSIH is short of specialized medical equipments it requires to serve its patients.

4.10 Detailed evaluation of suspected spinal injuries calls for application of advanced radiological imaging techniques such as Computerized Tomographics (CT) - scan and Magnetic Resonance Imaging (MRI) that allow doctors to see through injured internal body parts. The technologies assess the extent of damage suffered by the vertebral column and the spinal cord and evaluate the condition of the spinal cord.

4.11 Important as these equipments may be for treatment of spinal injury patients, the NSIH has none. The NSIH instead uses plain radiographs which may fail to detect fractures, especially facet fractures. Therefore, the risk of doctors not arriving at the correct diagnosis of the extent of damage suffered by patients is high under the circumstances. As a consequence the healing process may delay or fail altogether. Indeed research conducted on spinal injuries in the developing world, diagnosis of spinal injuries using X-rays of the spine

has high chances of failure of treatment, may cause prolonged periods of immobilization and more seriously increases chances of negative outcomes, including deaths, of patients.

4.12 The NSIH not only lacks equipment but also has no intensive-care-unit to provide services to severely injured patients. Further, it does not have a well-equipped operating theatre for spinal (surgical) operations and stabilization of the spine. Therefore, even if the NSIH was to admit patients directly from accident scenes, it would not be able to offer them the care they would require. As discussed previously in this report, the ideal situation would be for the NSIH to receive patients directly from accident scenes. This would allow proper diagnosis of patients, offer the right treatment and thus better their chances of recovery. Further, most of the NSIH's infrastructure are decades-old (some more than 60 years old) and are therefore outdated.

The Plight of Spinal injury patients in Kenya

Zack Kimotho is well known in Kenya for the 'Bring Back Zack 'Campaign. He is a good example of the unfortunate way people suddenly suffer spinal injury and the traumatizing effects that follow and the many challenges that range from poor handling, miss-diagnosis to lack of specialized treatment. His case is detailed below:

In January 2004, Zack Kimotho was attacked by robbers who shot him in the right shoulder. The bullet sliced through his back, hit his vertebrae column and blasted bone slivers into his spinal cord. But the doctors did not know all that at the time. They simply plucked out the bullet and sent him to another hospital on the back of a pickup truck. His spinal cord was compressed, jarred and damaged even further. For months, he was paralyzed from the neck down. The incident left him distraught and to the extent that he contemplated suicide.

He is yet to recover due to the lack of appropriate rehabilitation – a perfect example of many in similar conditions. According to Zack, that there are 50,000- 75,000 persons living with spinal injuries in Kenya with 15,000 new cases recorded annually. Sadly, they post high death rates due to the lack of appropriate treatment and rehabilitation. The figures are however considered to be conservative due to lack of accurate records. The cost of travelling, treatment and rehabilitation at the nearest facility in South Africa is about Kshs 10 million (US$ 117,000), a cost too high for most Kenyans.

The Plight of Spinal injury patients in Kenya (cont'd)

It is for this reason that Zack has taken it upon himself to mobilize Kenyans to contribute money for the construction of a rehabilitation centre for spinal injury patients. Through the project dubbed "Bring Zack Back Home "members of public were urged to donate towards construction of a rehabilitation center for spinal cord injury victims to prevent Zack Kimotho, who is paralyzed from the waist down from having to travel all the way to South Africa riding on his wheelchair to get physical therapy from at a specialized rehabilitation center. The facility provides rehabilitation, counseling, vital social care and support, as well as advocacy in raising awareness on spinal injuries in the society. In addition, it will undertake community outreach and home visits, as well as set up economic activity that will empower the residents, he added. The centre is currently under construction and once completed, it will be the first and only spinal injury rehabilitation center in eastern and central Africa.

At the moment, the absence of such a facility compels patients to travel abroad for rehabilitation services that cost an average of nine million Kenya shillings, with South Africa and Egypt being the only destinations with such facilities in Africa.

4.13 The NSIH is unable to buy new equipment and facilities because it lacks funds for investment. The Ministry of Health regards the NSIH as a District Hospital (Level IV) in the National Healthcare Service Delivery System. Therefore, the budgetary entitlements of the NSIH are similar to those of a District Hospital even though it is labeled as, and carries out, the responsibilities of a National Referral Hospital. No consideration is taken of the NSIH's special needs for equipment and other resources.

(b) The room and bed capacity of the Hospital falls below its requirements

4.14 The main Hospital building was initially a private home but was converted into a health-care centre by its owners who thereafter donated it to the government for use as a facility for spinal injury patients. The building could only hold 30 hospital beds and very little modifications were made after the Government acquired it. It has remained a 30- bed capacity facility from inception in 1944 in spite the increase in the national population from about seven (7) to forty million and the rise in the number of patients requiring it services. Further, the beds used at the NSIH are not appropriate for spinal injury patients. In the absence of appropriate beds provision of services to the patients may increase the susceptibility to develop bedsores or make worse those they may have had at time of admission.

4.15 It was only recently in the year 2011 that the bed-capacity rose to 40 after the hospital's benefactors who included The Friends of the Spinal Injury Hospital renovated it. However, the additional capacity had at the time of the audit not been put to use due to lack of funds to buy the ten orthopedic beds that the new building was designed to accommodate.

4.16 Due to the limited admission space (both room and beds) at the hospital, patients wait for long before they are admitted at the NSIH. Available data shows that at any one time, NSIH has a waiting list of about 150-200 patients, some in various public hospitals and others at home. Analysis of a sample of 71 patients revealed that only 28 (39%) of the patients were admitted within a month of booking. Approximately 17 (24%) were admitted after a month, 8 (12%) after two months and 18 (25%) after three months. Instances of patients waiting for up to two years before gaining admission at NSIH have been reported. The table below shows the lengths of waiting times noted from examining a sample of patient admission files:

Table 2: Time Lapse from Booking to Admission of Patients to NSIH

Delay in Admission(Months)	No. of Patients	%
Patients admitted in less than 1 month of booking	28	**39%**
Patients admitted after a month	17	**24%**
Patients admitted after 2 months	8	**12%**
Patients admitted after 3 months and above	18	**25%**
Total	71	100%

Source:OAG analysis of NSIH data

61% of the patients waited for more than a month after applying for admission to the NSIH

4.17 As they wait to be admitted at the NSIH, the patients may develop permanent disability, some may die while others resign to fate and waste away slowly in their homes before they eventually succumb to their injuries and secondary ailments. For example, 148 patients booked for admission at the NSIH between 2008 and 2012, 25 (17%) died while waiting to be admitted and 55 (37%) contracted various complications.

4.18 Those who finally get admitted at the NSIH mainly receive physiotherapy and occupational therapy to better manage their paralysis since most would already have suffered permanent physical impairment. Also patients admitted to the NSIH with secondary ailments take much longer in the Hospital since the ailments have to be attended to first before the physiotherapy treatment begins.

(c) The Hospital does not have sufficient numbers of specialized medical personnel

4.19 Rehabilitation of spinal-injury patients is a multi-disciplinary function that requires a team of specialists with varied skills and experience in managing the effects of spinal injuries. A typical spinal injury hospital would require the services of medical doctors, urologists, orthopedic surgeons and neuro-surgeons in addition to physiotherapists, occupational therapists and psychologists.

4.20 Although, the NSIH has 70% of its approved staff establishment in position, it lacks sufficient numbers of specialized personnel. These include neuro-surgeons to conduct surgical operations of the spinal cord, neurologists for the management of nerve complications, orthopedic specialists for bone related ailments, urologists to deal with urinal complications that often affect spinal injury patients and general and plastic surgeons. The latter are the fewest in the NSIH. Patients stay up to three months waiting to be attended to by a plastic surgeon.

4.21 The NSIH has only nine physiotherapists out of the 20 required for the average number of patients catered for at any one time. Similarly only 60 nurses are in position against 90 required. The ratio of nurses to patients is 2:1 against the recommended ratio of 3:1 for speciliazed healthcare services. Further, the nursing staffs are trained only in general nursing care and have not received specialized training on care of spinal injury patients. Physiotherapy and occupational therapy staff are also too few to serve the large number patients well. Table 3 shows the gaps in some of the medical staff requirements. The details of the staffing gaps are shown in **Appendix 5** of this report.

Table 3: NSIH Staff Requirements

Category of staff	Number Expected	Number Available	Staffing Gap	Staffing Gap (%)
Consultants	5	2	3	60%
Medical officers	6	4	2	33%
Nursing officers	70	63	7	10%
Pharmacists	2	1	1	50%
Pharm. Technologist	2	1	1	50%
Lab. Technologist	4	3	1	25%
Radiographers	4	2	2	50%
Physiotherapists	20	9	11	55%
Occupational Therapists	5	4	1	20%
Health Records & Information Officers	4	3	1	25%

Source: OAG Analysis of NSIH Staff Establishment

4.22 Lack of a definitive mandate is one of the main reasons why the NSIH does not have sufficient numbers of specialist medical personnel. Although labeled as a referral/specialist healthcare institution, the NSIH is categorized as a District Hospital in the National Healthcare Service Delivery System and is not considered as one that requires doctors with specialized skills.

4.23 Even with the right mandate, the NSIH would still find it difficult to meet its specialized staff needs. Health-care training institutions in Kenya have not established training programmes for spinal-injury healthcare including handling of post injury trauma.

4.24 NSIH mainly receives funding from the Ministry of Health through the Health Management Services Fund. The allocations fall under the Recurrent Vote meant for hospital operations, and the Development Vote grants meant for capital expenditure. They are calculated using criteria that takes into account hospital workload, bed-capacity, poverty levels of the local area and whether the institution is prone to dealing with health-care emergencies such as road accidents, among other factors. The criteria does not however consider the institution's specific needs.

The Friends of the National Spinal Injury Hospital

The Charitable Trust 'Friends of the National Spinal Injury Hospital' came into being when a group of well-wishers met at the Hospital in February 2006 and formed a Committee of eight people, four men and four women. The Committee thereafter registered the "National Spinal Injury Trust", to oversee its activities. The objective of the group was to offer assistance to patients at the Hospital .Given that the hospital building was originally a private house that was not designed to serve as a hospital, the group prioritized the transformation of the structure with a view to improve the living conditions of the patients and provide means for more effective delivery of services to them. An architectural plan was drawn and contract documents prepared and the friends then set to raise funds to finance the refurbishment work.

An architect friend agreed to provide his professional services for free and drew up the plans and prepared contract documents for the employment of a contractor. The friends then set to raise funds to finance the refurbishment works. A total of Kshs. 75 million was raised. In addition, some private companies gave donations in kind including building materials such as floor tiles and electrical installations.

A new physiotherapy wing and hydrotherapy pool were built by funds donated to the Trust by the Merali Foundation. The long-condemned laboratory/workshop/laundry building was demolished and rebuilt using a grant from the Safaricom Foundation. The Foundation has recently given further grants totaling to Kshs. 4.2 million for laboratory equipment. In addition, the main hospital block was refurbished to create proper wards. A switchgear building was built and a new generator costing Kshs. 2 million as well as energy saving *jikos* to reduce the high cost of bottled gas used by the Hospital installed. In addition to these infrastructural projects the Foundation provides the Hospital with recurrent assistance in form of supplies of consumables, food supplements and assistance with school fees for discharged patients.

All the finances are controlled directly by the Friends. The activities of the Friends are coordinated with the management through regular monthly meetings. The group has identified the main challenge faced by the hospital as being of a financial nature. Its budget does not cover some basic requirements. The Friends provide additional sources of funds for the physiotherapy department and the laboratory. In addition to helping improve the facilities at the Hospital, the group visits the patients at the Hospital regularly. They hope to raise funds for purchase of proper orthopedic beds as the Hospital has none.

The members of the Foundation are of the opinion that there is much room for improvement in the provision of healthcare to spinal injury patients in Kenya and in particular by the providing similar facilities in other locations in the country. By building and equipping spinal injury treatment facilities in other locations, the Government would greatly improve the healthcare system for spinal injury patients

4.25 In addition, funds received from the Ministry of Health, the NSIH benefits from the cost-sharing programme as it is allowed to charge fees (at subsidized rates) on its patients. However, the collections are not sufficient since some of the patients are poor and are therefore unable to pay the charges. Further, capital grants to the NSIH from the Government are rare. Over the period under review the Ministry of Health disbursed to the NSIH a grant valued at Kshs. 18 million for purchase of medical equipment.

4.26 Therefore, the NSIH lacks sufficient funds to cater for its needs and has to rely on donations from the well-wishers such as the Friends of the National Spinal Injury Hospital.

Weaknesses in the Hospital's revenue management system hamper optimal management of the NSIH's Resources

We also examined the system used by the Hospital to collect and account for revenue derived from fees charged on patients. Our findings are highlighted below:

Revenue Targets are rarely met.

4.27 The NSIH operations are financed through fee collections from patients and grants from the Government. While the NSIH has no control over the grants received from the Government, it could improve revenue collection from cost-sharing funds by establishing effective operational systems and ensuring that the information and financial management systems function as intended. The NSIH has however not done so and as a result, it has not achieved its revenue targets. For example, analysis of the budgeted and actual revenue collections for the financial year 2011/12 revealed that the NSIH collected a total of Kshs. 8.68 million or 64% of the targeted revenue of Kshs.13.65 million resulting in a shortfall of Kshs.4.97 million or 36% of the target for the year.

4.28 Audit evidence gathered pointed to the following factors as causes for the revenue shortfalls are;

(i). delay in of reimbursement claims by NHIF,

(ii). rejection of some claims by the NHIF, or

(iii). failure by the Hospital to submit all eligible claims to the NHIF for refund

(a) There are frequent delays in reimbursement of NHIF claims

4.29 Majority of patients admitted at the NSIH depend on the National Hospital Insurance Fund (NHIF) for payment of their hospital bills. Reimbursement claims by the NHIF are therefore the major source of revenue for the NSIH. Whereas the service charter of the NHIF declares that the Fund would reimburse any claim within 21 days of its lodgment, a review of the process at the NSIH revealed that there were prolonged delays in payment of claims lodged with the NHIF.

4.30 The NSIH's records revealed that there were long delays before the NHIF paid claims submitted by the NSIH. Out of 149 claims totaling Kshs.13.13 million submitted between 2008 and 2012, the NHIF paid only six (6) valued at Kshs. 0.586 million (4%) within the 21-day waiting time period as shown in the following Table.

Table 4: Time Taken by the NHIF to Reimburse Claims Lodged by NSIH

Period(Months)	No. of claims	% age	Value of the claims(Kshs)
Claims Paid within 21 days	6	4%	586,350
Claims Paid after 1 Month	31	21%	2,522,450
Claims Paid after 2 Mmonth	25	17%	2,114,250
Claims Paid after 3 Months	30	20%	1,833,380
Claims Paid after 4 Months	39	26%	3,820,300
Claims Paid Between 5 & 9 Months	18	12%	2,261,950
	149	**100%**	**13,138,680**

Source: OAG Analysis of NSIH Data
58% of the claims take more than 3 months before they are reimbursed

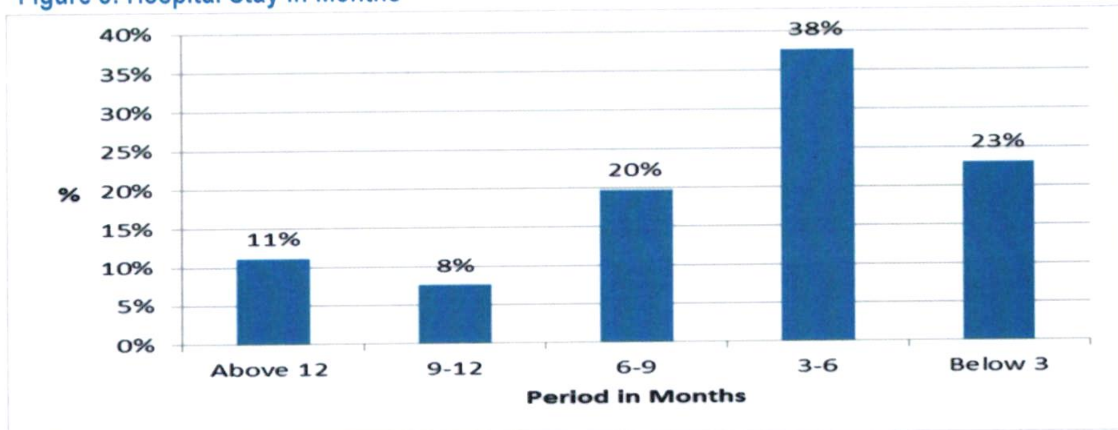
4.31 Further, NSIH records indicated that during the period under review the NHIF claims contributed to approximately 42% of revenue that the Hospital had budgeted to collect. Therefore, delays in receipt of reimbursements from the NHIF affect funding for services to the extent and time that the claims remain unpaid. Delays in reimbursement were attributed to the long processes of claims approval and the fact that most of the NSIH claims are huge due to long hospital stay and have to be confirmed by the NHIF before payment. There was however no evidence of action taken by the NSIH's management to follow-up on the claims.

(b) The NHIF does not honor all claims submitted by the Hospital

4.32 The NSIH requires all patients seeking admission to be registered with the NHIF. It is therefore expected that upon discharge from the NSIH, the NHIF would pay their costs. According to the NHIF Act, 1998, the NHIF only pays for patient's hospitalization for up to a maximum of 180 days (6 months) per year at the rate of Kshs.1,100 per day. However, at least 40% of patients remain in admission wards for more than six months.

4.33 Analysis of the NSIH admission and discharge records revealed that out of 117 patients discharged from the Hospital between the 2008/9 and 2011/12 financial years, 11% had been admitted for more than one year, 29% for more than six months while 60% stayed for less than six months. This means that claims made by the NSIH for the number of days in excess of the qualifying 180 days (six months) that 40% of its patients spent at the NSIH were ineligible for reimbursement by the NHIF. Records obtained from the NSIH show that the balance outstanding from failure by NHIF to pay claims over 180 days totaled to Kshs. 2,692,800.

Figure 5: Hospital Stay in Months



Source:OAG analysis of NSIH data

About 40% 'of the 117 patients spent more than 180(6 months) in the Hospital

4.34 For example, out of a sample of 42 claims reviewed for the audit, only nine (22%) were reimbursed for all the days that the respective patients stayed in the NSIH. The remainder 33 or 78% were only partially reimbursed. Given the minimum NHIF daily re-imbursement rate of Kshs.1,100, NSIH lost a total Ksh.4.37 million on the days that the NHIF failed to reimburse costs incurred by the 33 patients.

4.35 The NHIF occasionally rejects claims filed by the NSIH for other reasons. The NSIH depicts these as 'returned claims' in its books. Records available for audit revealed claims totalling to Kshs.1,074,600 had been rejected this way during the period under review. The circumstances surrounding each of the claims are summarized in the following sidebox :

The National Health Insurance Fund Does Not Accept all Hospital Fee Refund Claims Submitted by the NSIH

Returned claims

These were claims amounting to Kshs 520,300 returned without payment by the NHIF for various reasons. Included was a claim of Kshs.386, 100 for one patient who had been in the Hospital for 351 days. However, no action was taken by the management of the Hospital to follow-up on the matter even though the patient was discharged in June 2010 two years before the audit.

Claims rejected without explanation

Records obtained from the Hospital revealed that the Fund rejected some claims but did not provide any reason. A notable example was a claim valued at Kshs.237,500 lodged by the Hospital with the Fund on 13 August 2008. The Fund's Service Charter, requires claimants to re-submit rejected claims within 30 days. However, at the time of the audit, (March 2012) the Hospital had not yet followed-up on the claim almost four years after it was rejected. There were no proper systems for recording NHIF claims and therefore the audit team was unable to establish whether there were similar other rejected claims returned to the Hospital by the Fund
outstanding for long.

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Claims under investigation

4.36 The following table shows other examples of revenue loss by the NSIH through claims that were not honoured by the NHIF. In only five claims submitted to the NHIF, the NSIH recovered Kshs. 544,000 or 65% of the total sum of Kshs. 847,000 claimed thus forfeiting the balance amounting to Kshs. 303,000.

Table 5: Examples of Claims Only Paid in Part by the NHIF

Claim no.	NHIF No.	Patient Days	Amount claimed	Patient's days paid	Amount paid	Diff(Amt claim-Amt paid
201106026	3002604	180	198,000	116	127,600	70,400
201106025	0793585	180	198,000	116	127,600	70,400
201105021	3007313	200	220,000	138	151,800	68,200
201103018	0518283	118	129,800	60	66,000	63,800
20110402	3089380	92	101,200	65	71,000	30,200
Totals			**847,000**		**544,000**	**303,000**

Source: OAG Analysis of NSIH Records.

4.37 The Hospital administration attributed the long admission stays to ailments that patients develop as they wait at home or in non-specilized Hospitals for admission space to become available at the NSIH. Upon admission, their secondary ailments are the first to be attended to. These often take long to heal with the result that the patients stay at the Hospital for long. NSIH has however no recourse for recovery of costs incurred on patients whose stays exceed the number of days refundable by the NHIF. It meets the difference from it own budget since most of its patients have limited capacity to work and earn to pay the debts they owe it.

(c) Weaknesses in the system used to charge and account for Hospital fees results in leakage of revenue

4.38 Review of patient discharge records revealed that the NSIH at times fails to bill patients or account for the fees. Other than the discharge summary which indicates the date of admission and discharge of patients, billings of patients upon discharge are not highlighted in the patient files nor does the NSIH maintain separate records of debts owed by patients. Further the patients' files do not show how the patients eventually pay their debts- whether by cash payment or through refund of claims from the NHIF or any other means.

4.39 As a result of the flaws in the information and financial management system, we could not ascertain the amount billed or payments made by 51 patients discharged from the Hospital between the years 2008 and 2012. There were no records to show whether any claims related to the patients had been lodged with the NHIF, or whether how, if at all, their outstanding bills were paid to the Hospital.

4.40 Therefore, we could not confirm whether the NSIH eventually received the outstanding sums from the patients. However, given the minimum NHIF reibmursement rate of kshs.1,100 per day, the NSIH may have lost a total of Kshs. 6,706,700 due from a batch of 51 patients discharged from the hospital between 2008 and 2012.

(d) The Hospital does not submit all claims to the NHIF for reimbursement

4.41 Further, the NSIH has not documented its procedures including timelines for submission of claims to the NHIF. We noted that a claim valued at Kshs 325,700 for a patient who was discharged in May 2011 was prepared two months latter in July 2011 but was not submitted to NHIF for reimbursement. Thus, delays by the Hospital administration in submitting claims to the NHIF also contributed to the NSIH's poor financial condition.

4.42 Further, the Service Charter of the NHIF requires healthcare institutions to submit claims within 90 days from the date of discharge of patients. However, the NSIH does not submit its claims in a timely manner. Analysis of a sample data indicated that some of the claims were submitted 19 months after discharge of the respective patients and others between five and eleven months. Out of a sample of 63 claims examined by the team, 18 or 29% were lodged after 90 days while, six or 10 % took three months.

4.43 Overall, the NSIH has not established a proper system for handling NHIF claims. Thus, we could not ascertain the total amount of money the NSIH is likely to have lost through rejected or returned claims as well as those not submitted to the Fund.

(e) The Hospital losses revenue by granting waivers to poor patients unable to pay for its services

4.44 Occassionally, the NSIH grants waivers to poor patients unable to pay hospital fees. Financial data made available for audit indicated that between April 2010 and August 2012, the Hospital waived fees totalling Ksh. 296,685 made up of Kshs.154,950 due from inpatients and Kshs.141,735 from outpatients. However, the adminstration has not formulated criteria defining who among its patients should be granted fee waivers. Thus it was not possible for us to establish whether the waivers were granted to deserving patients and whether the waivers in record were all that were granted over the period under review.

(f) The Hospital's Management Information and Financial System hampers provision of efficient services

4.45 We further established that the NSIH lacks a proper management information and financial system that captures, records and stores patients and financial records in a complete and integrated manner. As a result, key data and information including patients' statistics are not stored in a manner that allows their use by management for decision making. For instance, data on patients is not integrated with the financial records and therefore the billing of patients may not be accurate or could leave some revenue unaccounted for. The system does not capture the right billing information and other adminstrative and operational information accuratley or in whole.

The Kenya Medical Supplies Authority (KEMSA) does not supply the Hospital with all the Drugs and Non-Pharmaceutical Items it requires

4.46 The Ministry of Health classifies the NSIH as a District Hospital (Level IV) under the National Healthcare Service Delivery System. Therefore, NSIH is expected to receive all its drugs and non-pharmaceutical requirements from the Kenya Medical Supplies Authority (KEMSA) under the SDRs system. Under this system, the Ministry of Health allocates the drawing rights to each hospital depending on its workload and other pre-determined criteria.

4.47 The Ministry of Health disburses funds to KEMSA to buy and distribute drugs to all public hospitals but purchases non-pharmaceuticals for distribution by KEMSA. The hospitals are required to refer to the Essential Drug List that contains all the drugs stocked by KEMSA. However, the NSIH does not use most of its SDRs because KEMSA perenially fails to deliver drugs and non-pharmaceuticals ordered by the NSIH. Analysis of orders made by the NSIH against the deliveries for the 2009/10- 2011/12 financial years revealed that out of the total quantitiy of drugs ordered from KEMSA valued at kshs.8,206,321, only requsisitions worth kshs. 2,697,930 (33% of the total value) were delivered to the NSIH.

4.48 In addition, most of the essential drugs required by the NSIH are not listed in the Essential Drugs List that KEMSA uses to buy medical supplies for all public hospitals. We were informed that KEMSA, does not

consult the NSIH on it drug supply needs before it prepares the Essential Drugs List in each financial year. Even drugs in the List that the NSIH patients use, are occasionally out of stock at the KEMSA's stores.

4.49 KEMSA is also expected to supply the NSIH with non-pharmaceutical items under the special drawing rights arrangement. The items include bandages, catheters, gauze rolls, urine bags and many others. However, KEMSA only supplies the items after long intervals and so stocks frequently run out at the Hospital. For example, our analysis of orders and deliveries for the period between July 2011 and April 2012 revealed that some of the items were out-of-stock for periods of up ten months. The main reason cited for KEMSA's failure to supply the NSIH with most of the essential non-pharmaceuticals was that the Ministry of Health, which procures the items, often fails to supply them in time for distribution by KEMSA.

4.50 Due to KEMSA's failure to supply sufficent drugs and non-pharmaceutical items to the NSIH, the Hospital is compelled to buy its supplies from the open market not withstanding its constrained financial position. This occurs, even as its allocations for SDRs with KEMSA remain unused. The Hospital had at the time of the audit accumulated over 15 million SDRs.

4.51 Our analysis of the total rights allocated to the NSIH between the 2010/11 and 2011/12 financial years showed that out of the sum of Kshs. 2.65 million allocated for drugs during 2010/2011, only drugs worth Kshs. 1.62 million (61% of the total value) were supplied to the Hospital against the rights. Thus, a total of Kshs. 1.02 million representing 39% of the rights remained unused during the period.

4.52 Similary, out of Kshs. 6.2 million allocated to the NSIH in 2011/2012, only drugs worth Kshs. 1.17 million were supplied while a total of Kshs. 5.10 million or 81% of the allocation for the period was not spent. Therefore, out of the total rights amounting to Kshs. 8.9 million allocated to the NSIH for the two years, only Kshs. 2.80 million (31%) were fulfilled by KEMSA with the balance of Kshs. 6.13 million or 69% untilized.

4.53 For the non-pharmeauticals, out of rights allocated totalling Kshs. 3.32 millon for 2010/2011, the items supplied were worths Kshs. 1.40 million only. Therefore, the balance of rights amounting to Kshs. 1.91 million (58%) were not utilized. Under similar circumstances, only a few items worth Kshs. 0.595 million were supplied against an allocation of Kshs. 1.84 million while a total of Kshs. 1.24 million or 68% of the rights allocated for 2011/2012 remained unused.

4.54 Thus, out of the SDRs totalliing to Kshs 5.16 million allocated to the NSIH for non-pharmaceuticals for the two years, the items supplied were worth Kshs. 2 million (39%) only against the rights while the balance of Kshs. 3.16 million remained unutilized. If the NSIH has not spent all it rights at the end of any one financial year, the unspent amount is carried forward to subsequent financial years. The Hospital had accumulated unused SDRs totalling to Kshs. 16 million as at September 2012.

4.55 However, even as the NSIH accumulates drawing right balances, it spends approximately Kshs. 3 million of its own resources annually to procure drugs and non-pharmaceuticals. Its procurement records indicated that during the 2011/2012 financial year, for example, the NSIH spent Kshs.101,675 in procurement of drugs and Kshs. 1,625,860 in purchase of non-pharmaceutical items. The total of these purchases was equivalent to 28% of its average annual revenue from Hospital fees.

4.56 Further, the cost at which the NSIH obtains medicines and non-pharmaceutical items from the open market is much higher than the prices charged by KEMSA. Our analysis of the market prices indicated that in some instances the NSIH paid higher by between 37% and 215% than what it would have paid by buying the items from KEMSA.

4.57 Examples of items include the Gauze Roll 1.5 supplied by KEMSA at a unit cost of Kshs. 780 while the NSIH obtains the same item at prices ranging from Kshs. 1,450, to Kshs. 1,900 in the open market. Similarly KEMSA supplies a packet of Clean Gloves at the unit price of Kshs.210 but the NSIH obtains the same item at a unit cost of Kshs. 400 when it buys from the market. More examples of the variations are as shown in the following Table:

Table 6: Comparison of Prices paid by the NSIH on Supplies from KEMSA and Market Prices

Comparison of KEMSA and Open Market Prices for Non Pharmaceuticals							
LPO Date	LPO No.	Item		Market Price	KEMSA PRICE	Differenc e	Difference
			Batch Size	Unit price Ksh.	Unit price KSH.	KSH.	%
5/30/2011	1275905	Gauze Roll 1.5kg	rolls	1,450	780	**670**	**86%**
5/30/2011	1275907	Suction Catheter size 16	pkts	20	9	**11**	**122%**
5/30/2011	1275907	Suction Catheter size 18	pkts	20	9	**11**	**122%**
5/30/2011	1275908	Surgical blades S No. 23	pkts	210	81	**129**	**160%**
9/22/2011	1275943	Clean Gloves Medium	pkts	400	210	**190**	**91%**
9/22/2011	1275944	Gauze Roll 1.5 kg	roll	1,900	780	**1,120**	**143%**
9/22/2011	1275944	Sanitary Pads	pcs	70	51	**19**	**37%**
9/22/2011	1275944	Gauze Roll Bandage 6x4 Yds	pcs	135	43	**92**	**215%**
9/22/2011	1275944	Urine Bags	pcs	15	11	**4**	**39%**
9/22/2011	1275945	Surgical Blades Size23	pkts	250	81	**169**	**210%**
10/27/2011	1275950	Satures Nylon No. 3	doz	300	114	**186**	**163%**
12/6/2011	1622013	Clean Gloves Medium	pkts	430	210	**220**	**105%**
12/6/2011	1622013	Nylon No. 1 Cutting Needle	doz	260	114	**146**	**128%**
12/6/2011	1622013	Nylon No. 3/0	doz	260	114	**146**	**128%**
12/6/2011	1622015	Gauze Roll 1.5kgs	rolls	1,880	780	**1,100**	**141%**

Source: OAG analysis of NSIH data

4.58 As the table shows, NSIH pays very high prices for many of the supplies that it buys from the open market as a result of failure by KEMSA to supply it's essentail needs. A sample of items reviewed revealed that the NSIH incurred a total of Kshs.768,400 during the year 2011/12 on items which would have costed Kshs. 343,118 had they been supplied by KEMSA. Thus had KEMSA fulfilled its responsibility to the NSIH, the additional costs totalling to Kshs. 425,282 would have been saved or used to buy many other medical items the Hospital requires to run its operations.

Chapter 5

Conclusions

5.1 The National Spinal Injury Referral Hospital (NSIH) lacks sufficient capacity to deliver specialized services required by spinal injury patients in Kenya.

5.2 The NSIH does not have an appropriate mandate to attend to patients immediately after they sustain spinal injuries. As a result, spinal injury victims are first taken to local hospitals before they are finally referred to the NSIH. This delays their access to specialized treatment and prolongs their pain and suffering. Further, the delays increase chances that the injuries suffered would worsen and the patients would develop secondary ailments. Many die while awaiting admission at the NSIH.

5.3 NSIH lacks sufficient infrastructure for admission of the large number of patients that need its services. It's capacity to admit patients is limited to only 30 beds. It does not have critical equipments used in the treatment and rehabilitation of spinal injury patients. It has far fewer experts than needed to ensure sufficient health care. In addition, its management information and financial system is inefficient and does not therefore support effective decision-making and control for effective service delivery.

5.4 KEMSA does not supply the NSIH with sufficient quantities of drugs and other medical supplies. Some of the supplies needed by the NSIH are not included in the KEMSA's stock or are frequently out of stock at its stores.

5.5 NSIH's resource limitations stem from its classification as a Level IV health care institution in the National Health Care Service Delivery System. The classification implies that the NSIH is regarded like any other District Hospital and its specialized nature hardly counts when determining its resource needs.

Chapter 6

Recommendations

6.1 In view of the findings and conclusions the Auditor-General proposes the following recommendations for implementation by the Accounting Officer, Ministry of Health, and the management of the National Spinal Injury Referral Hospital:

To enable the NSIH operate at a level equal to its assigned status as a national referral hospital and ensure efficient and effective delivery of specialized healthcare services that spinal injury patients require;

i) The Ministry of Health should consider reclassifying the NSIH from a District Hospital to an appropriate category and provide it with the financial resources it requires to execute its mandate effectively.

To enable the NSIH access the specialist human resources it needs to attain its mandate

ii) The Ministry of Health should sponsor local and international training programmes for medical experts in fields relevant to the NSIH's mandate.

To improve access to specialized healthcare for spinal injury patients

iii) The Ministry of Health should partner with county governments to establish hospitals that cater for spinal injury patients in major Hospitals country-wide.

iv) The Ministry of Health should lead in creating awareness among members of the public on how to handle accident victims.

To ensure that the NSIH meets its revenue collection targets, the NSIH's administrators should ensure that:

v) The Hospital fee refund claims are submitted timely to the National Hospital Insurance Fund (NHIF).

vi) The resources available to the NSIH are managed in an efficient manner.

To improve on the hospital's Management Information and Financial Systems for efficient service delivery

vii) NSIH management should implement an intergrated management information system that could allow effective capturing, recording, processing and sharing of data for timely and reliable information for decision making.

To ensure that the NSIH has sufficient and proper medical drugs and supplies.

viii) The Ministry of Health should ensure that Special Drawing Rights (SDRs) owed to the NSIH by KEMSA are honoured.

To avoid loss of revenue through claims not honored by NHIF,

ix) The NSIH management through the Management Committee should seek special consideration for patients who stay in the NSIH for more than 180 days given the special circumtances of the patients' condition and treatment.

To improve pre-hospitalization care for spinary injury victims

x) The Ministry of Health should partner with other public agencies to create public awareness on how to handle accident victims.

xi) The Ministry of Health should establish emergency service facilities for road accident victims along major roads and highways.

Appendices

Appendix 1: Methods Used to Collect and Analyze Data

To ascertain the adequacy of the NSIH's mandate to deliver the required specialized services, we interviewed the NSIH management and the officials of the Ministry of Health and reviewed relevant documents. The mandate of the NSIH was assessed against the required specialized services.

To understand the nature of specialized healthcare services needed by spinal injury patients, we interviewed doctors at the Hospital and reviewed various documents on the subject including, various research studies carried out on spinal injury.

To ascertain whether patients at the NSIH receive the required treatment at the appropriate time, we interviewed the NSIH administrators on the admission process, reviewed, booking and admission records. We compared the booking against the admission dates and the dates the patients sustained the injuries and when they were referred to the NSIH. However data on admissions at the Hospital for the entire four-year period under review was not made available for audit and therefore the analysis and findings of the audit are based on the available data.

To assess the capacity of the Hospital to offer specialized healthcare services to its patients, we considered the sufficiency of its equipments, skilled personnel and other facilities against needs stated by the managers and medical staff.We interviewed the hospital's administrators, doctors and nurses and reviewed relevant documents. We compared the resources the Hospital indicated it required with equipments, specialized skills and other facilities it had at the time of the audit.

To understand the general administration and how the hospital manages its resources, we interviewed the NSIH administrator and reviewed hospital budgets, revenue collection, patient discharge and billings records, and supply of drugs by KEMSA. We compared budgets with revenue collected; patients discharge records against billings and supply of drugs by KEMSA against the hospital requirements. We targeted the whole population of the Hospital's financial data for the period 2008-2012 but most of the records were not made available for audit. Therefore, our audit findings are derived from the available data.

The key persons interviewed for the audit are listed below:

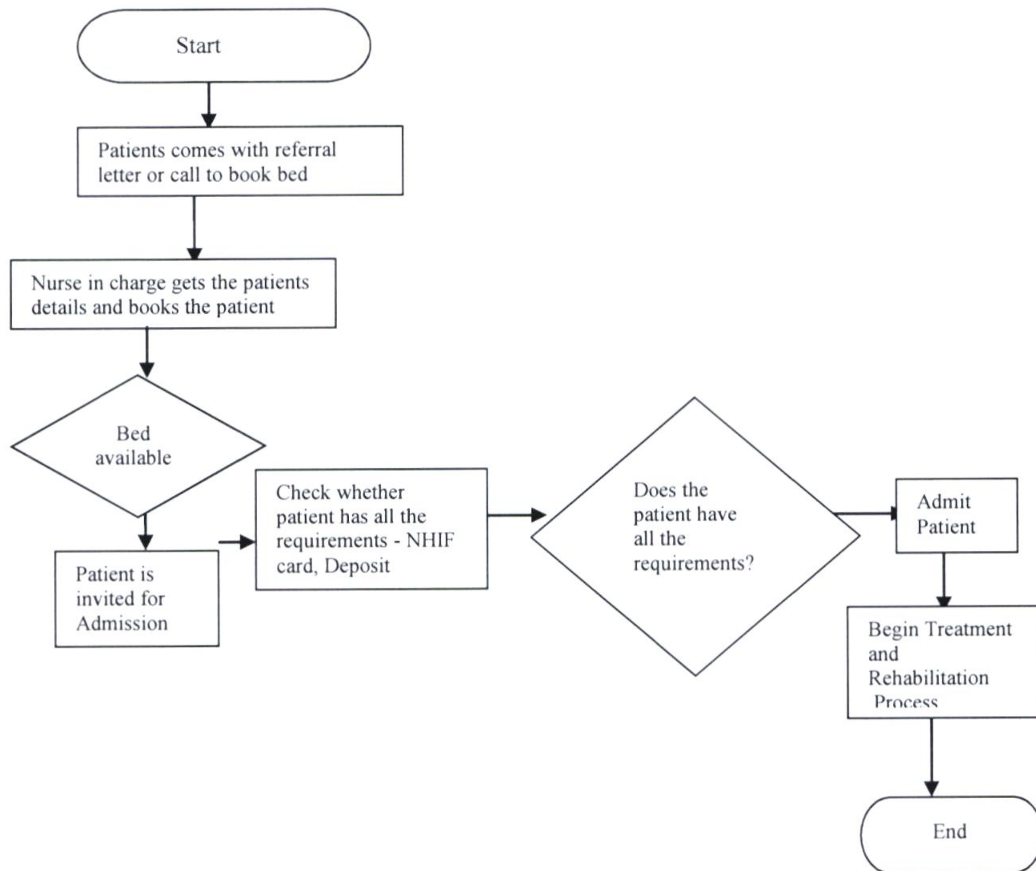
- The Medical Superintendent- To understand the mandate of the NSIH
- The Senior Medical Officer - To obtain detailed knowledge on spinal injuries, the diagnosis, treatment and management of patients.
- The Hospital's Administrative Officer- To understand the operational systems of the NSIH
- The Senior Nursing Officer –To understand the process of booking, admission, treatment and discharge of patients.
- The Pharmacist –To understand how NSIH receives drugs from KEMSA.
- The Occupational Therapist- To understand the role played by the occupational therapy department in rehabilitation of spinal injury patients.
- The Physiotherapist- To understand the role played by the physiotherapy department in rehabilitating patients, the nature of equipments it requires and uses and challenges faced by the department.
- The Orthopedic Technician-To understand the role played by the orthopedic unit and challenges faced by the department

We reviewed the following documents among others:

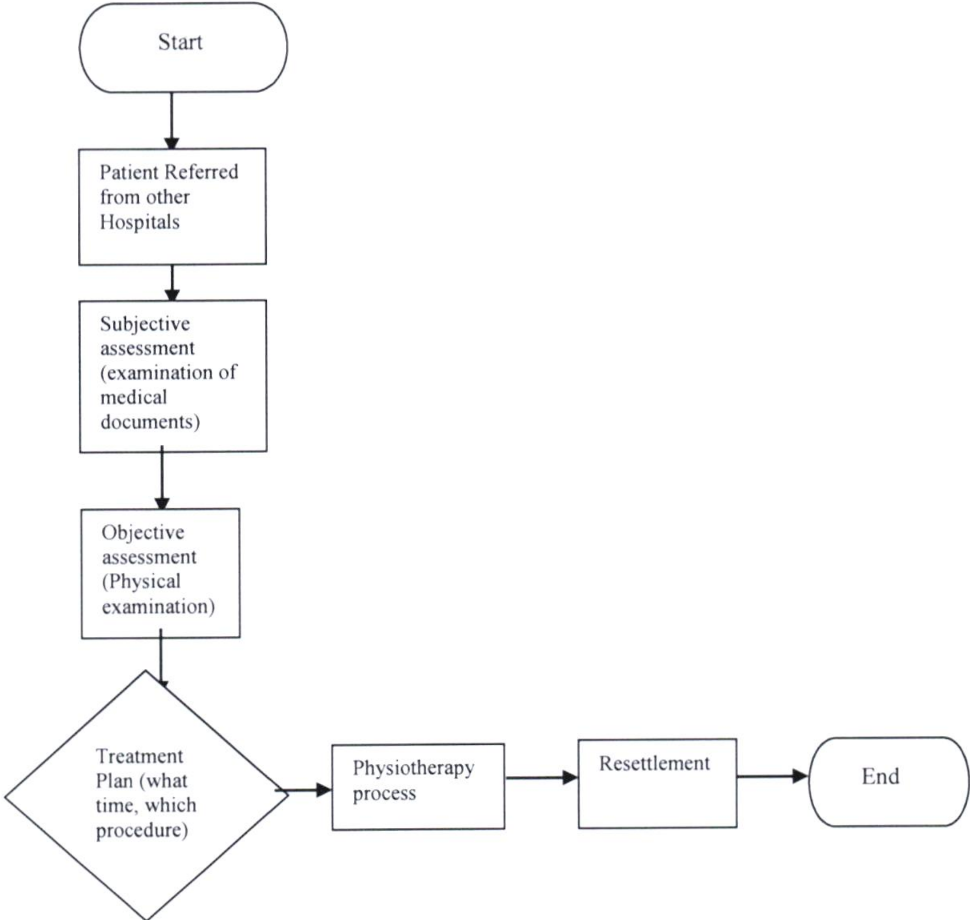
- Statistical Records on Patients Treated –To understand the NSIH work load.
- The Annual Operation Plans- To understand the operations of the NSIH.
- The Service Charter - To know the standard times and cost of procedures at the NSIH.
- The Approved Budgets -To analyze the NSIH's revenue and expenditures.
- The Cash book and related records - To analyze the NSIH`s revenue and expenditures.
- The Hospital Investment Plan - To find out the NSIH's current condition and future plans.
- NHIF Reimbursement Schedules - To find out the level and timing of NHIF reimbursements.
- Procurement Documents -To find out which drugs the NSIH buys from suppliers other than KEMSA and the cost of the drugs.

To secure the validity of the findings and conclusions of the audit, the data samples and batches studied were chosen in a judgmental manner that ensured sufficient data sets and adequate representation in records examined.

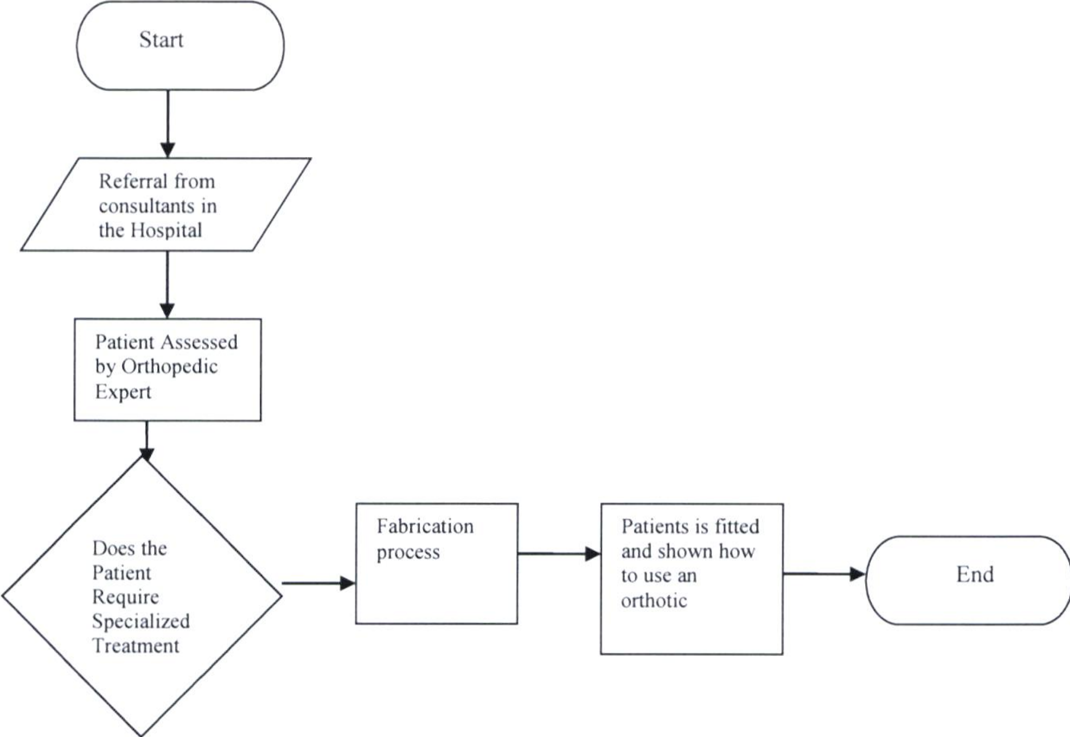
Appendix 2: The NSIH Patient Admission Process



Appendix 3: Physiotherapy Treatment Process



Appendix 4: Orthopedic Treatment Process



Appendix 5: Medical Personnel at the National Spinal Injury Hospital

		Number Expected	Number Available	Gap / Surplus
1	Consultants	5	2	3
2	Medical officers	6	4	2
3	Clinical Officer (Spec)	1	1	0
4	Clinical Officers (Gen.)	2	2	0
5	Nursing officers (KRCHNs)	70	47	23
6	KECHNs	0	16	0
7	Public Health Officers	3	3	0
8	Pharmacists	2	1	1
9	Pharm. Technologist	2	1	1
10	Lab. Technologist	4	3	1
11	Orthopedic technologists	2	2	0
12	Nutritionists	2	2	0
13	Radiographers	4	2	2
14	Physiotherapists	20	9	11
15	Occupational Therapists	5	4	1
16	Plaster Technicians	4	4	0
17	Health Records & Information Officers	4	3	1
18	Social health workers	4	4	0
19	Medical engineering technologist	3	4	1

Appendix 6: NSIH's Management Response to the report

Audit Findings	Hospital Remarks/ Recommendations	Remarks by the Office of the Auditor General
Lack of an appropriate mandate delays patients access to the hospital		
Para 4.2 Patients delay in accessing treatment at the NSIH because it is designated as referral hospital and cannot therefore receive patients directly from the accident scene.	• The NSIH is not in a position to receive patients directly from the scene of accident but it is in communication with former PGH and District hospitals through phone calls when a bed/beds are available for admission. • NSIH staff visit county hospitals to select patients who will be admitted in the hospital of which some don't know about the NSIH • The NSIH can admit patients directly from the accident scene depending on the stability. The hospital has no step down facilities e.g. ICU and HDU and cannot handle co-morbidity of abdomen and chest hence patients must be admitted to other hospitals with such facilities before been referred to NSIRH. The NSIH has however forwarded a list of medical equipment to the Ministry of Health for purchase so that it will be able to admit patients directly from the scene of accident.	The management agrees with our findings that the hospital is not able to admit patient directly from the scene of the accident given its nature and lack of critical equipment.
Para 4.3 Analysis of data on a sample of 77 patients admitted in the NSIH between 2008 and 2012 indicated that only 31% of the patients were admitted directly from the scene of accident	This is due to the following reasons: • The NSIH has a bed capacity of 30 and could not accommodate all the patients that needed to be admitted. Patients' had to book first and wait for beds to be available to be admitted. • The NSIH has no HDU and ICU equipment to cater for patients who need the services.	The management agrees with our findings that the hospital did not admit all the patients that needed it services due to limitation in bed capacity, lack of HDU and ICU equipment.
Para 4.4 Patients admitted to other hospitals stay for long before they are referred to	• The NSIH had a waiting list of between 100 to 50 patients waiting to be admitted to NSIRH, this was because the patients'	The NSIH agrees to our findings and attributes the problem to the long NSIH stay which according

	NSRIH, only 7% were admitted within one month	NSIH stay ranged from four months to seven months hence it took long for a bed to be available. • The NSIH has currently improved by shortening the hospital stay from four months to two months in average.	to the NSIH has currently reduced from four to two months.
	Para 4.5 The Ministry of Health has different mandates for different hospitals, depending on the hospital category. When spinal injury patients are admitted to these hospitals they receive little or no specialized treatment as they await to be referred to the NSIH	• Spinal injury patients admitted in lower level hospitals are given minimal care as they await referral to the NSIH thus the need for on job training so that they do not get complications as they await admission to NSIH. • NSIH offers specialized rehabilitation program to the patients upon admission.	The NSIH agrees to our findings that patient receive minimal or no treatment when admitted to lower level hospitals
	Para 4.6 Lack of proper treatment and care in the general hospital hence patients develop bedsores and urinary tract infections	Complication of spinal cord injuries range from depression to bedsores. A patient may need surgery within two weeks or can die of co-morbidity; also there are psychosocial issues involved. NSIH proposes • Training of the general hospital personnel on how to care for spinal injury patients. • Creating awareness of the spinal injuries, and • Putting more funds in the management of spine patients.	The NSIH agrees to our findings and proposes measures to be taken including: trainings, creating awareness and more funding for management of Spinal Injury Patients.
	Para 4.6 Patients died while others contracted secondary ailments as they awaited admission.	After relatives have booked patients for admission at the NSIH, it takes more than a month for a bed to be available. Patients may die or develop other ailments. Most patients die due to bedsores or depression as a result of lack of treatment and professional counseling. The NSIH recommends the following: • Training of relatives or caregivers of spinal injury patients on how to manage bedsores as the patients await admission to NSIH. • Posting on its website basic methods on how to give care to spinal injury patients.	The NSIH agree to our findings and recommend several other measures including training of relatives or caregivers on how to manage bed scores as the patients await admission and creating public awareness through the hospital website on how to care for spinal injury patients.

	Para 4.7 Delay in accessing specialized treatment harms the health of the patients and also increases anxiety and distress.	• Literature shows that only 50% of patients can be saved and only if they have incomplete injury. The NSIH recommends establishment of a 90 bed hospital. The NSIH is developing a proposal that will enable acquisition of modern equipment and space to accommodate more patients. The proposal will include a helipad to be used in cases where patients are to be airlifted from the accident scene to the hospital for treatment to reduce delay.	The NSIH management alludes to the seriousness of delays in accessing the specialized treatment and recommends measures to address the delays including air lifting of the spinal injury patients for specialized treatment without delays.
	Para 4.8 Lack of proper pre-hospital or emergency care for accident victims.	• Ministry of Health has a department of creating awareness to the public and NSIH gives it contribution to the department on how to create awareness.	
The NSIH lacks sufficient medical equipments, skilled personnel and other facilities that it requires to deliver its services effectively **a)** The NSIH is short of specialized medical equipment it requires to serve it's patient			
	Para 4.10 NSIH does not have a CT scan and MRI to evaluate the condition of Spinal Cord	The NSIH does not have a CT scan and MRI. When patient need these facilities the NSIH outsource these services to KNH and private hospitals. • MOH plans to lease and do placement of medical equipment to the hospital, a request has been forwarded	The NSIH admits that it does not have a CT and MRI and therefore outsource the services.
	Para 4.10 NSIH uses plain radiograph to detected any fracture hence chance of failure of treatment and prolonged period of immobilization and serious chance of negative outcome including death of patients	NSIH uses plain x-ray in certain cases to give diagnosis, as well as the CT scan and MRI which these services are outsourced.	The NSIH admits to using plain radiograph in giving diagnosis which according to the doctors may in some cases fail to give accurate results.

	Para 4.12 NSIH lacks medical equipment like the HDU and ICU and a well-equipped operating theatre for Spinal Cord Surgical operation and stabilization of the spine • NSIH infrastructure is decades old and therefore outdated	• NSIH in 2008 was purely a rehabilitation hospital but it has been transforming to a fully-fledged hospital; It is in process of purchasing medical equipment toward achievement of the goal. The NSIH is in the process of developing a proposal of 90 bed capacity on five acres, this will include modern infrastructure and medical equipments.	The NSIH agrees to our audit finding on lack of critical medical equipments but it is in the process of acquiring them and modernizing the hospital infrastructure.
	Para 4.13 The NSIH is unable to buy new equipment due to lack of funds because it is regarded as a level four hence minimum budgetary allocation	During the audit the NSIH fund allocation was minimal but since it was gazetted as National Spinal Injury Referral Hospital-Ref Kenya Gazette VoL. CX V-No. 170 dated 6th December 2013 its 2013-2014 GoK funding has increased to Ksh 119 Million. .	The gazettement of the hospital came after the audit was concluded and although it has seen the funding of the hospital increase, it is not certain whether the issue of lack of equipment has been addressed adequately.
b)	**The room and bed capacity of the hospital falls below its requirement**		
	Para 4.14 NSIH bed capacity is 30 since its inception in 1944 despite the national population increase. Inappropriate beds leading to bedsores	• The NSIH has done major renovations and increased the bed capacity from 30 to 40 in 2011/2012. • The hospital has liaised with MOH to have a 90 bed capacity hospital.	The capacity has only increased from 30 since 1944 to only 40, sixty years later, an increase of only 10 bed which in quite insignificant given the increase in population and spinal injury cases since 1944.
	Para 4.15 The NSIH bed capacity rose to 40 in 2011. However, the additional capacity had at the time of the audit not been put to use due to lack of funds to buy orthopedic beds after renovation of the building.	• NSIH has forwarded the request for consideration by the Ministry of Health	Though NSIH has forwarded the request for beds to the ministry for consideration there is no evidence of any action taken by the Ministry.
	Para 4.16 Patients wait before being admitted due to lack of room and beds	The NSIH had a waiting list of between 100-50 patients during the period of the audit, but during 2013-2014 the booking list has gone down to 20 patients because of a volunteer plastic surgeons, improved rooms, improved physiotherapy equipment and trained nursing staff	The NSIH agrees that at the time of the audit, the hospital had a waiting list of 100- 50 patients.

	Para 4.17 As patients wait to be admitted, they resign to fate and waste away slowly leading to severe ailments and death	• The NSIH is in constant touch with the patients who have booked a place at NSIH and what is possible is done, in this case giving good customer and where possible counseling.	This does not change the facts that the patients wait for long before getting an admission to the NSIH during which time their condition deteriorate, some leading to death.
	Para 4.18 Patients take long before receiving physiotherapy and occupational therapy since ailments such as bedsores have to be addressed first.	• Patients who need physiotherapy despite having bedsores are given, passive physiotherapy. • Numbers of patients with bedsores has reduced.	The NSIH admits that patients in with bedsores are given passive physiotherapy.
c)	**The NSIH does not have sufficient number of specialized medical personnel**		
	Para. 4.19 Rehabilitation of spinal injury patients is a multi-disciplinary function that requires specialists.	The NSIH has shortage of staff but it expects the problems will be partly solved by introduction of Plastic surgeon programme in University of Nairobi. MOH is currently working at improving hospital service on staff deployment.	Appendix 7 indicates the deficiencies in staffing requirement but at the moment the problem still persist in the hospitals.
	Para. 4.20 NSIH lack specialized personnel	Refer to appendix 7 • Moi and Nairobi universities have started orthopedic Masters training and spine is soon starting a spine fellowship in Kenya.	Introduction of orthopedic Masters training in Moi and Nairobi and starting of a spine fellowship in Kenya is a welcomed move, but at the moment the NSIH is still lacking specialized skills.
	Para. 4.21 NSIH staffing gap; there is shortage of Physiotherapists, nurses, Occupational Therapists Nurses are not trained on spinal injury care	• the staffing gap has been forwarded to the PS-MOH for consideration • NSIH nurses were trained on spinal injury care through an exchange program with the India Spinal Injury Hospital NSIH recommends the following • MTCs to develop a course unit on how to take care of spinal injury patients • To enhance exchange program with India Spinal Injury Hospital and other	Though the staffing gaps have been forwarded to the Ministry, there no evidence of any action taken to remedy the situation by the ministry.

		leading institutions like the University of Nairobi.	
	Para. 4.22 NSIH lacks definitive mandate as a result, the hospital does not have sufficient number of specialists medical personnel.	• The NSIH has been given the mandate of a National Referral. • The Hospital GOK funding increased to Ksh 119 Million in 2013/2014.	The gazzetment came after the conclusion of the audit.
	Para. 4.23 Lack of Health care training program on Spinal Injury in Kenya.	• The issue of staff training is being addressed by development of training program that will assist NSIH.	The NSIH aggress that training on spinal injury has been an issue.
	Para. 4.24 NSIH receive funding from HMSF	• The NSIH is currently getting its recurrent funding from the GoK.	The audit issue was the criteria used in allocating funds which the response does not address.
	Para. 4.25 Cost-sharing fund not adequate. GoK funding is minimal for the purchase of medical equipment	• Most needy patients are waived and children under the age of five are exempted from payments. • The rest of the money is used to improve healthcare service.	The NSIH admits that one of the reasons for not collecting sufficient funds is granting of waivers.
	Para. 4.26 NSIH lacks sufficient funds to cater for its needs and has to rely on donations from well-wishers for example friends of the NSIH	• The NSIH has been receiving donations from various donors to improve the health care service • During FY 2013-2014 there has been increased funding hence the hospital will be able to meet its mandate	The NSIH agrees that it has been relying on donations to improve the healthcare services.
Weakness in the hospitals revenue management system hamper optimal management of the hospital's resources • **Revenue targets are rarely met**			
	Para. 4.26 NSIH not achieving its cost sharing revenue target	The NSIH did not achieve its revenue target because of the following reasons: i) During this period, the NSIH was doing major ward renovation hence it was operating at half capacity of 15 in-patients instead of 30 in-patients ii) There was delay in reimbursement of NHIF claims	The NSIH agrees to not achieving the revenue targets due to reasons as indicated in our report, though the hospital also claims it was operating at half capacity, a fact that was not provided during the audit.

		iii) There was inadequate supply of KEMSA hence most departments did not meet their revenue target because services that were targeted to be offered and charged were not given.	
	a.) There are frequent delays in reimbursement of NHIF claims		
	Para. 4.29 Prolonged delays in payment of claims lodged to NHIF	The NSIH has been experiencing prolonged delays. The following are reasons given by NHIF • Most of the NSIH claims are huge due to long hospital stay. These claims have to be confirmed by NHIF staff as genuine hence NHIF staff have to visit the hospital and audit patients files unlike smaller claims of three to seven days hospital stay which the NHIF don't do follow up • Long processes of claims approval hence delay in reimbursement to the hospital.	The NSIH confirms the delays and also provides the reasons for the delays though they were not provided at the time of the audit.
	Para. 4.30 Prolonged delays in reimbursement of claims; only 4% paid within 21 days as per NHIF service Charter	• The reasons for prolong delays are as explained above.	The NSIH agrees that there is prolonged delay in reimbursement of claims
	Para. 4.31 Delay in receipt of re-imbursement from NHIF affected funding for services	• The delay of the reimbursement challenged the funding of the service delivery	The NSIH admits that delay in receipt of re-imbursement affects funding for services
	b.) NHIF does not honor all claims submitted by the hospital		
	Para. 4.32 NHIF Act of 1998 allows for reimbursement of a maximum of 180 day patient hospitalization	• Most spinal Injury Patients are hospitalized for more than 180 days considering that they are referred to NSIH from other hospitals. The NSIH faces a challenge of requesting patients to pay for the days not covered by NHIF due to the following reasons:	The NSIH management agrees to our findings and also provides challenges it faces in requesting patients to pay for the days not covered by NHIF

		(i) Most of the patients were casual laborers from poor families hence neither them nor their relatives are in a position to pay the balance bills; the NSIH has in many occasions sought help from Friends of the hospital to support this patients, example in payment of their children fees or setting up of businesses after rehabilitation. (ii) Some of the patients for fear of been resettle at home keep promising the NSIH that their relatives are making arrangements to pay, as a result, they prolong their stay until the hospital waives them. (iii) Some patients are from poor backgrounds and are brought by well wishers who only pay for their NHIF card and disappear. (iv) Some patients are never visited by relatives during their stay at the NSIH ,some are rejected by their relatives upon resettlement; for example there is a patient who was rejected by his family because he had raped a minor before and running away from home then getting the accident which injured his spinal. From the reason given above it is impossible for the hospital bill to be paid in such cases; the above are only a few examples of challenges the NSIH faces once patients are admitted, most patients feel more secure being in the NSIH than at home with their families	
	Para. 4.33 The outstanding balance of Ksh 2,692,800, failed to be paid by NHIF because patients had a hospital stay of more than 180 days.	• The NHIF does not pay claims for patients for days above 180 as per the NHIF Act of 1998; as a result the hospital loses revenue considering that the patients have been offered services	The NSIH management agrees to our findings

		for the extra days.As a result, the hospital waives the patient off the bills	
	Para. 4.34 NSIH lost Ksh 4.37 Million on the claims that were partially reimbursed due to excess of 180 days.	• Some of the claims submitted to NHIF for reimbursement were not paid in full because of the balance of days the patients were remaining with i.e. 180. Noting that these patients had been admitted in other hospitals. NSIRH was reimbursed only for the few days remaining for that particular year for the patient. • As a result of the above, the NSIH had to waive patients off an amount of Ksh 4.37 Million as they were not in a position to pay the balance.	The NSIH management agrees to our findings.
	Para. 4.35 Rejects claims that were returned to the NSIH by NHIF	• NHIF claims are returned to the NSIH due to the following reasons: i) Some of the discharge summaries had different discharge date. This is because a patient could be discharged by a doctor on ward round on Monday but has to wait until Wednesday to be resettled home, because a patient is taken home by a rehabilitation team who accompany the patient for purposes of assessing the home environment and offering counseling to both the patient and their relatives on post rehabilitation adaptation, hence the delay in discharge, NHIF follows the doctor's notes when the patient was discharge and not the date the patient is resettled. ii) Some claims were made as one, not considering the government financial year which end on 30 June. So when doing the claims, they have to be split. Hence they were returned to be splited into two. This is because the new clerk officer did not know the procedure but it was rectified.	The NSIH management agrees to our audit findings.

	Returned claims	• The claim of Kshs 386,100 highlighted in the audit was returned to the NSIH to be splitted into two, but the NSIH was faced with constraints because the NHIF patient could not be found to sign the claim forms as he had been discharged and 30 days passed before the patient could get to sign NHIF claims. • One of the NSIH staff was sent to the patient home in Nakuru were he was resettle but was unable to get him because he had shifted hence there follow up to.	At the time of the audit, there was no evidence of any action taken by the management to follow on these claim which had been rejected in 2010, about two years before the audit.
	Claims rejected without explanation	• Some of the claims were rejected due to reasons given above, the claim mentioned on the audit report was rejected because the signature of the contributor differed with the one on the NHIF document, hence the NSIH was requested to make the patients counter sign again and since then he was discharged was difficult to get the patient.	As at the time of the audit, there no reasons against the claims to explain why there were rejected, and also there was no evidence of the action taken by the NSIH management or how it was following up on the claim.
	There was no proper system for recording NHIF claims	The NSIH has proper NHIF records, the following file contain all the documentation of patients who are admitted in the hospital 1.) NHIF contributor card and ID 2.) All the claims that are submitted to NHIF, their date recorded and rubber stamp from NHIF 3.) All the claims paid by NHIF 4.) NHIF hospital account on the NHIF website that shows all claims submitted and their status	
	Claims under investigation	• Most of the NSIH`s NHIF claims have to be investigated because they are huge amount it takes long to investigate. NSIH claims as NHIF staff have to come to the NSIH to confirm the patients details	

	Claim of Ksh 79,200 under investigation from 2009-2012	• The said patient was given a parole (allowed to go home for a few days, then came back to continue with rehabilitation). When the claim was made, the clerk did not consider the days the patient was on parole; the claim was calculated from the day of admission to the day of discharge. It was therefore not correct, this brought in observation by NHIF, they did not communicate to the hospital immediately, hence the delay. The hospital did not have NHIF hospital Account and therefore did not know the claim status	
	Para. 4.36 NSIH forfeited Ksh 303,300 to NHIF	• Some of the NHIF claims were not reimbursed as per the days the patients stayed in the hospital. The patients had few days remaining for NHIF coverage at the time of admission at NSIRH	
	Para. 4.37 NSIH has no recourse for recovery of costs incurred on patients who stays exceed the 180 days per year	• Majority of the patients are generally poor hence unable to pay the hospital bills balance, even if the hospital does the follow up after discharge. It was noted that 30% of the patients die on the first year after discharge.	The NSIH agrees to our findings.
	c.) Weakness in the system used to charge and account for NSIH fees results in leakage of revenue		
	Para. 4.38 NSIH at times fails to bill patients or account for their fee	• Each service that is offered by the hospital is recorded in the patient's file; upon discharge, the bill is calculated for the patient to pay either in cash, NHIF or the patient is waived. • The NSIH has streamlined this by ensuring all the charges are recorded	The audit issue was on records maintained in the patient's files. The NSIH indicates that it has streamlined billing by ensuring that all charges are recorded and services paid.

		and service paid for through the three methods mentioned above. • The ward has a discharge register that shows the date of patient discharge. • If the patient has paid in cash, a receipt number is recorded, if the patient is a NHIF contributor it is recorded and later confirmed if the claim has been paid, or the patient has been waived and approved by the Medical Superintendent, Health Administrative Officer or the Nursing Services Manager	
	Para. 4.39 Flaws in the information management not able to ascertain amount billed or paid	• The NSIH has a record on the amount a patient bill incurred. • The NSIH has streamlined this area hence having a ward register that shows the entire amount incurred by each patient and how the bill will be paid either through cash, NHIF or waiver. • The NSIH is in the process of purchase of an integrated information system to improve information management.	It is a welcomed move that the NSIH has now streamlined the area and it is in the process of purchasing an integrated information system to improve the information management in the hospital.
	Para. 4.40 Due to flaws in the information management we could not confirm the payment of Ksh 6,706,700 for 51 patients discharged from the hospital during the period 2008-2012		
	d.) The hospital does not submit all claims to the NHIF reimbursement		
	Para. 4.41 A claim of Ksh 325,700 prepared two months later was never submitted	• The said claim did not have the ID of the contributor as the patient lost his ID during the road accident; It was difficult to get ID after the patient was discharged.	The NSIH has provided reasons for failure to submit the claims.
	Para. 4.42 Delays of submitting claims	The NSIH was not able to submit NHIF claims immediately due to the following factors:	The NSIH agrees to the findings and provides reasons for failure to submit the claims but the main issue is lack of a proper system

		1.) Most of the patients were road accident victims who lost their IDs in the accidents. It was therefore difficult to lodge their claims to the NHIF. 2.) Some patients were un-corporative- they refused to submit their NHIF cards or ID for fear of being discharged from the NSIH; as most of them do not want to go back home, this hampered the claim process hence the delay 3.) In the period 2008-2010, the NSIH did not have clerical officer to follow up on the NHIF claims, there was shortage of personnel and claims were done manually. Currently the NSIH has a clerical officer assigned to NHIF to prepare claims and do follow-up of the claims. There has been great improvements : • There are only few return claims which are immediately rectified and re-submitted. • The clerical officer has proper records of in patients and ensures that patients produce their NHIF and ID before admission • Currently, all patients covered by NHIF are strictly requested to submit their documents before admission to avoid the above challenge	by the NSIH for handling NHIF claims.
	Para. 4.43 Lack of proper system of handling NHIF claims	The NSIH has streamlined the handling of NHIF. A clerical officer has been allocated this duty with an immediate supervision, the accountant and overall supervisor the Health Administrative Officer. Supervision is done by weekly inspection of NHIF records.	The NSIH states that it has taken action on the issue.
	e.) the hospital losses revenue by granting waiver to poor patients		
	Para. 4.44 Hospital does not have a criteria which patient to granted a waiver	• The hospital has a medical social work department which is in charge of assessing patients for the purpose of determining their ability to pay the	The audit issue was whether the hospital has a policy in place for granting the waiver and how the

		hospital bills. This ensures that only needy patients are waived • The hospital uses Facility Improvement Fund supervision manual to determine patient who deserves to be waived • Patient's history- is taken, close observation of social economic status of the patients and their relatives based on their occupation, number of children, means of transport and mode of dressing is used to waive the deserving patients. Most of the patients who get waived are; i.) Patients with chronic illness ii.) Patients who spend money traveling long distance to their homes iii.) Patients under police custody, refugees, children seeking medication away from home, street children.	waivers are approved and recorded.
	f.) The NSIH`s Management information System hampers provision of efficient service		
	Para. 4.45 NSIH lack complete and integrated patients information with financial records	The NSIH has challenges in this area due to inadequate finding but is currently in the process of purchasing the software which will integrate all the information generated in the hospital for management decision making and accurate capture of the information.	The NSIH agrees to the findings and is in the process of purchasing software that will integrate the information for accuracy and better decision making.
The KEMSA does not supply the NSIH with all the drugs and Non-Pharmaceuticals it requires			
	Para. 4.46 NSIH s supposed to receive pharmaceutical & non-pharm from Kenya Medical Supplies Authority (KEMSA) under the special drawing rights system	• KEMSA does not supply the NSIH with all the drugs and non-pharmaceuticals items the hospital requires. This system was there until this F/Y 2013-2014 where the hospital has been given funds to purchase it requirement from KEMSA or open market, hence no special drawing right system which was a push system	The NSIH agrees to our findings but also highlights on the new developments regarding supply of drugs by KEMSA.

	Para. 4.47 Failure by KEMSA to deliver drug requisite. 2009-2012 drug order worth Ksh.8,206,325 only Ksh.2,657,930 was delivered to the NSIH	KEMSA has not been fulfilling the NSIH`s order. The NSIH has a nursing officer in charge of the non-pharm and pharmacist in-charge of the drug who have been doing the follow-up for supply of hospital order	NSIH agrees to our findings.
	Para. 4.48 Most drug needed by the NSIH were missing on KEMSA Essential drug list	Most of the essential drugs needed by the NSIH were missing on the list of KEMSA, thus forcing the NSIH to purchase on the open market	The NSIH agrees to our findings.
	Para. 4.49 Supply of non-pharm under special drawing rights	• Most of the non-pharm that was needed by the NSIH e.g. gauze roll was out of stock from KEMSA, this forced the hospital to make emergency purchases as KEMSA promises to delivery were most of the time were not honored. The NSIH uses a lot of gauze roll for dressing patients on daily basis the stock out of which could lead to worsen patients wounds and hospital stay is prolonged.	The NSIH agrees to our findings.
	Para. 4.50 Failure by KEMSA to supply pharmaceutical and non-pharmaceutical	• This forced the NSIH to do emergency purchases hence constraining the financial status.	The NSIH agrees to our findings.
	Para. 4.51 Unused special drawing rights	The NSIH has unused drawing rights The NSIH has written to KEMSA requesting if the hospital could use these rights to draw supplies.	The NSIH agrees to our findings
	Para. 4.53 Non-pharm drawing rights worth Kshs 1.24 million for the 2011-2012 are unused	• The NSIH has requested for the unused drawing rights	The NSIH agrees to the audit findings.
	Para. 4.54 Accumulation of unused drawing rights. Drawing right totaling to Kshs 16 million	• The NSIH has requested for the unused drawing rights from KEMSA	The NSIH agrees to the audit findings.
	Para. 4.55 NSIH used cost sharing to purchase non-pharm to cover the shortfall of KEMSA	• The NSIH had to purchase the most essential pharmaceutical & non-pharm in	The NSIH agrees to the audit findings.

		order to offered service by use of cost sharing.	
	Para. 4.56 Purchasing of Pharm and non-pharm on the open market	• The NSIH has been purchasing on open market to meet its need	The NSIH agrees to the audit findings.
	Para. 4.57 Higher price for selected non-pharm	• The NSIH was not able to get good discount as KEMSA because KEMSA was in a position to bargain for a lower price because they purchased in bulky for the whole country or could get directly for the manufacture. • It worth noting some of the items supplied by KEMSA were not of the best quality, the hospital was in position to get good quality e.g. gauze roll supplied by KEMSA is of lower quality compared to the gauze roll bought by the hospital. • Emergency purchases of supplies from open market make it impossible to get the best prices. • Some of the town suppliers in town were not willing to do business with the government for fear to delay payment.	The NSIH agrees to the audit findings.
	Para. 4.58 NSIH purchasing of higher price compared to KEMSA	• NSIH did it market survey of items purchased at the time, those were the best price the NSIH could get. • If KEMSA had supplied the NSIH could have saved some funds.	The NSIH agrees to our findings.
	Recommendation		
	To enable the NSIH operate at a level equal to its assigned status as a national referral hospital and ensure efficient and effective delivery of specialized healthcare services that spinal injury patients require; i) The Ministry of Health should re-classify the NSIH from a District Hospital to an appropriate category and provide it with the financial resources it	• MOH has already gazetted the NSIH as Referral Hospital.	The NSIH was gazetted as a referral hospital in 2013. The office will assess the operation of the hospital during the follow-up audit to be conducted at a date agreed with the Ministry.

	requires to execute its mandate effectively.		
	To enable the NSIH access the specialist human resources it needs to attain its mandate ii) The Ministry should sponsor local and international training programmes for medical experts in fields relevant to the Hospital's mandate.	• The NSIH has established an exchange program with India Spinal Injury Hospital. • NSIH to proposal a course unit in MTC of how to take care of patient with spinal injury. • NSIH to set apart some funds to train staff hence capacity building	The Office will assess the implementation of the recommendations during the follow-up audit to be conducted at a date agreed with the NSIH
	To improve access to specialized health care for spinal injury patients iii) The Ministry of Health should partner with county governments to establish hospitals that cater for spinal injury patients in major Hospitals country-wide. iv) The Ministry of Health should lead in creating awareness among members of the public on how to handle accident victims.	MOH has department on disastrous preparedness which the hospital liaises with.	The Office will assess the implementation of the recommendations during the follow-up audit to be conducted at a date agreed with the Hospital
	To ensure that the NSIH meets its revenue collection targets, the Hospital's administrators should ensure that v) NSIH fee refund claims are submitted to the National Hospital Insurance Fund lodged in due time.	• A clerical officer has been deployed to NHIF to do a follow up of the claims • Strict supervision done and timeline set out as follows; (i). Claims to be prepared and submitted within the first week of patients discharge	The Office will assess the implementation of the recommendations during the follow-up audit to be conducted at a date agreed with the NSIH

	vi) Resources available to the NSIH are managed in an efficient manner	(ii). All patient under NHIF to produce the needed documentation before admission (iii). All patients to be properly billed and recorded to various registers (iv). Ward to keep patients discharge register • Avoid of any waste by close supervision by HODs • The hospital to strictly adhere to Public Procurement and Disposal Act and regulation.	
	To ensure that the NSIH has sufficient and proper medical drugs and supplies vii) The Ministry should ensure that Special Drawing Rights owed to the NSIH by KEMSA are honoured.	The request letter has been done to KEMSA to honour the drawing rights	The Office will assess the implementation of the recommendations during the follow-up audit to be conducted at a date agreed with the NSIH
	To avoid loss of revenue through claims not honored by NHIF, viii) The NSIH Management should seek special consideration for patients who stay in NSIH for more than 180 days given the special circumtances of the patients' condition and treatment.	The NSIH to liaise with director of Medical Services for NHIF consideration for the request.	The Office will assess the implementation of the recommendations during the follow-up audit to be conducted at a date agreed with the NSIH
	To improve pre-hospitalization care for spinary injury victims ix) The Ministry of Health should partner with other public agencies to create public awareness on how to handle accident victims. x) The Ministry should establish emergency service facilities for road accident victims along major roads and highways	MOH Department of disastrous preparedness and emergency has taken up the concern	The Office will assess the implementation of the recommendations during the follow-up audit to be conducted at a date agreed with the Hospital

Appendix 7: Medical Personnel at the NSIH as at April 2014

		Number expected	Number Available	Deficit
1	Consultants Doctors	5	2	3
2	Medical Officers	6	4	2
3	Clinical Officer(special)	1	1	0
4	Nursing Officers(KRCHNS)	70	47	23
5	KECHNS	50	16	34
6	Clinical Officers (general)	2	2	0
7	Public Health Officers	3	3	0
8	Pharmacists	2	1	1
9	Pharm Technologist	4	3	1
10	Lab Technologist	4	3	1
11	Orthopedic Technologist	2	2	0
12	Nutritionists	2	2	0
13	Radiographers	4	4	0
14	Physiotherapists	20	9	11
15	Occupational Therapists	5	4	1
16	Plaster Technicians	4	4	0
17	Health Record and information Officers	4	4	0
18	Social Health Worker	4	2	2
19	Medical Engineering Technologist	4	4	0
20	Procurement Officer	2	0	2
21	Procurement Assistant	2	1	1
22	Health Administrators	2	1	1
23	Health Admin Assistants	2	0	2
24	Store Keepers	2	0	2
25	Clerical Officers	10	5	5

26	Accountants	2	1	1
27	Accounts Assistants	3	0	3
28	Telephone Operators	2	2	0
29	Drivers	4	3	1
30	Cooks	5	1	4
31	Subordinate staff	5	4	1
32	Secretaries	4	0	4