

# KENYATTA NATIONAL HOSPITAL

## MASTER PLAN

JULY 1989

# Resources for Child Health Project

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## REACH



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**KENYATTA NATIONAL HOSPITAL**

**MASTER PLAN**

July 1989

by

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The REACH/KNH Study Team owes many thanks to many people and organisations. A study such as the one we have carried out would not have been successful without such cooperation, consultation, and logistical support. REACH Project expresses great appreciation to KNH Board Chairmen Nick Muriuki and KNH Director Naftali Agata, who provided valuable assistance to Team representatives. The efforts responsible for the fine cooperation and support we have had from numerous individuals and organisations. Their commitment has assured the successful completion of the Team's work.

Several health services delivery institutions cooperated with the Team in sharing data and permitting staff and patient interviews. Our thanks go to M. P. Shah Hospital, Nairobi Hospital, Westlands Cottage Hospital, Mater Misericordiae Hospital, and Crescent Medical Services. Particular thanks go to Aga Khan Hospital. The College of Health Sciences, College of Health Professions, and Kenya Medical Research Institute also cooperated with interviews.

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## PREFACE

A Presidential Order of April 1987 made Kenyatta National Hospital (KNH) a State Corporation, governed by a Board of Directors. The Board asked the United States Agency for International Development (USAID) for assistance in identifying steps to improve management and efficiency and in considering cost-sharing for selected services. USAID called on its Resources for Child Health (REACH) Project to meet the request.

REACH organised a team of experts from Kenya and the United States to carry out the study. The goal of the assignment was: to provide the Board with practical recommendations to improve the effectiveness and efficiency of delivered services to better achieve the mission of the Hospitals in the health system of Kenya. The Team's work began on the 9th of November, 1987, and ended on 26th of February 1988.

An interim report which provides preliminary recommendations was presented to the KNH Board on January 22, 1988. The Board discussed these recommendations and reached a consensus with the Team regarding the basic set of recommendations that would be addressed in the final report as an action plan for reform. The action plan that was completed was presented to the KNH Board on February 26, 1988 included the evidence and findings of the Study Team and provided options to the recommendations accepted by the Board from the interim report. The options were analysed for strengths and weaknesses and the tools for implementation were identified. The present document constitutes the KNH Boards Master Plan. It is the product of the Board's discussions and decisions which resulted from the team's final report and the Board's Plan of Action for Reform. The scope of work for the team, its interpretation, and the methodology used are described in Appendix A of this document.

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## I. INTRODUCTION

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## **I. INTRODUCTION**

### **BACKGROUND**

Kenyatta National Hospital (KNH), originally called Native Civil Hospital, was built in 1901 with about 45 beds. Extensions were made in 1939, 1951 and 1953 increasing the bed capacity to 600. It was renamed King George VI Hospital in 1951. In 1957 the Infectious Disease Hospital was constructed with 234 beds and in 1965 the British Military Hospital at Kabete was taken over as the Orthopaedic Unit and later a Dental Wing was added. The hospital was renamed Kenyatta National Hospital in 1964.

After Independence, it was decided to make Kenyatta National Hospital a National Teaching Hospital and an expansion programme was started. This was done in three phases which included the Hospital proper, the Clinical Science blocks, Medical Students Hostels and the Hospital Service blocks. Further, a Ward Tower block was completed and put to use in 1981. This brought the Hospital's bed capacity to 1928. Being a National Teaching Hospital, the mission of the Hospital was envisioned to perform three broad functions:

- Serve as a National Referral Hospital
- Provide facilities for teaching
- Provide facilities for research.

KNH has experienced numerous environmental, management and efficiency problems which have in turn hindered the fulfillment of these objectives.

### **ESTABLISHMENT OF KENYATTA NATIONAL HOSPITAL BOARD**

A presidential Order of April 1987 made Kenyatta National Hospital a state corporation. The Board has 11 members with the Hospital Director as its Secretary and is responsible for the administration, management and development of KNH. Under the Board, the hospital was established to perform the following functions:

- Receive patients on referral from other hospitals or institutions within or outside Kenya for specialised Health Care
- Provide facilities for Medical Education for the University of Nairobi and for research either directly or through other cooperating health institutions
- Provide facilities for education and training in nursing and other health and allied professions
- Participate, as a National Referral Hospital, in the National Health Planning.

Immediately after its establishment, the Board, concerned with the deteriorating services at the hospital, set out to identify steps necessary to improve the management and efficiency of services. The improvements were deemed mandatory if the institution was to fulfill its mission as stipulated in the Presidential Order.

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## KENYATTA NATIONAL HOSPITAL STUDY

A study, funded by the USAID, was organised to look into KNH's management and efficiency with a specific objective of providing the Board with practical recommendations to improve the effectiveness and efficiency of delivered services to better achieve the hospital's mission in the health system of Kenya.

This exercise was carried out by a team of Kenyans and Americans between 9th November 1987 and 26th February 1988. On completion of the study, a report was prepared and submitted for adaption and implementation. The Board held various discussions and finally a consensus was reached on the plan of action for reform.

## HOW TO READ THIS BLUEPRINT

This document is the Board's plan for planning. It outlines expectations and outcomes of the implementation of options, and indicates how the options are to be integrated into the ongoing management of Kenyatta National Hospital. It is an iterative process that is enhanced through evaluation and feedback. The purpose of the evaluation is to learn whether implementation of the option is achieving the desired results, or whether adjustments are necessary. Feedback is the mechanism whereby the information is collected for evaluation.

The Master Plan is structured in six chapters:

- Resources and capabilities available at KNH
- Organisational structure/environmental factors
- Resource management
- Efficiency
- Funding for KNH services
- Timeframe for Master Plan implementation

Each chapter outlines the expected outcomes and implementation steps of the options approved by the Board. Where information was available estimated costs were included. The timeframe for plan implementation shows interrelationships, decision points and estimated implementation time for each option.

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## **II. RESOURCES AND CAPABILITIES AVAILABLE AT KNH**

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## II. RESOURCES AND CAPABILITIES AVAILABLE AT KNH

To place the Kenyatta National Hospital (KNH) Board's "Master Plan" in context it is important to comprehend the Hospital's magnitude. This chapter provides such an overview through a delineation of the resources and capabilities available at KNH. This overview is based on information obtained from hospital records for calendar year 1987. The remainder of this chapter is organised into the following four subsections:

- Scope of Services
- Capacity and Utilisation
- Staff Resources
- Budget Allocations

### SCOPE OF SERVICES

KNH is both the tertiary referral hospital within the Kenyan Health Delivery System as well as a teaching hospital for the training of students enrolled at the College of Health Sciences at the University of Nairobi and the Medical Training College. Exhibit II-1 shows the scope of clinical services, and specialty and training programs available at KNH. The breadth of clinical responsibilities reflects the hospital's mission as well as the clinical expertise and equipment resources available. KNH facilitates both undergraduate and post graduate training and is the largest teaching site in the Republic.

### CAPACITY AND UTILISATION

In 1987 KNH provided 483,466 patient days of care and admitted 60,707 patients (see Exhibit II-2). The Hospital maintained 1,662 beds during the period and had an overall occupancy rate of 79.7 percent. Surgical care was the most significant component of the inpatient services that were provided. A number of units in 1987 had occupancy rates that exceed their full bed complement.

Exhibit II-3 shows that KNH provided 573,532 outpatient visits in 1987. The majority of these visits occurred in the general outpatient clinic which includes casualty. The complement of outpatient services and training for doctors, nurses and other health professionals is almost identical to that provided in the inpatient setting.

### STAFF RESOURCES

KNH through its Ministry of Health employed 3,722 individuals in 1987 (see Exhibit II-4). The composition of the staff is as follows: 54.6 percent (2,030 individuals) are technical personnel while 45.4 percent (1,692 individuals) are non-technical. The largest single component within the KNH staff was missing.

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## BUDGET ALLOCATIONS

Gross operating expenditures for KNH for 1987/88 were calculated at approximately Kenya pounds 12,055,300. The annual budget of KNH is approved by the Ministry of Health and ultimately the Treasury. The largest single expenditure item as shown in Exhibit II-5 was personnel expenses. In 1987 expenditures were partially offset by the collection of fees totaling approximately Kenya pounds 516,300. The cost of treatment per patient day was approximately Kenya pounds 23.

Exhibit II-1  
SCOPE OF CLINICAL SERVICES AND TRAINING PROGRAMMES AT KNH—1987

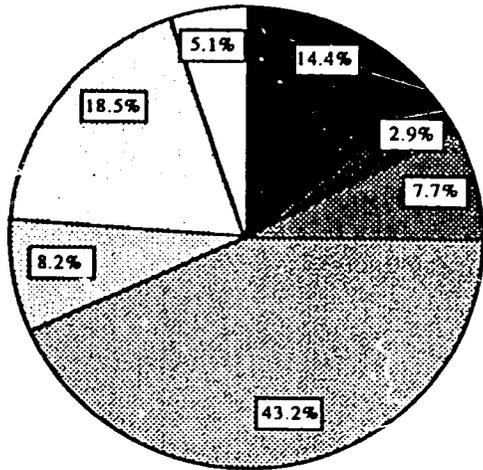
CLINICAL CAPABILITIES	SPECIALTY PROGRAMMES	TRAINING PROGRAMMES
<p><b>Clinical Services</b></p> <ul style="list-style-type: none"> <li>Medicine</li> <li>Dermatology</li> <li>Psychiatry</li> <li>General Surgery</li> <li>Neurosurgery</li> <li>Cardiothoracic Surgery</li> <li>Plastic Surgery</li> <li>Obstetrics/Gynaecology</li> <li>Ophthalmology</li> <li>Ear, Nose &amp; Throat</li> <li>Orthopedic Surgery</li> <li>Dental Surgery</li> <li>Urology</li> <li>Anaesthesia</li> <li>Paediatrics</li> <li>Radiotherapy</li> </ul> <p><b>Diagnostic Services</b></p> <ul style="list-style-type: none"> <li>Radiology</li> <li>Laboratory</li> </ul> <p><b>Ancillary Services</b></p> <ul style="list-style-type: none"> <li>Physiotherapy</li> <li>Occupational Therapy</li> </ul>	<ul style="list-style-type: none"> <li>Renal Dialysis</li> <li>Critical/Intensive Care</li> <li>Infectious Disease</li> <li>Burns</li> <li>Family Planning</li> <li>Speech Therapy</li> <li>Cardiology</li> </ul>	<p><b>College of Health Sciences</b></p> <ul style="list-style-type: none"> <li>Medicine</li> <li>Surgery</li> <li>Orthopaedic Surgery</li> <li>Pharmacy</li> <li>Dentistry</li> <li>Obstetrics/Gynaecology</li> <li>Paediatrics</li> <li>Medical Physiology</li> <li>Human Anatomy</li> <li>Biochemistry</li> <li>Human Pathology</li> <li>Medical Microbiology</li> <li>Diagnostic Radiology</li> <li>Community Health</li> <li>Advanced Nursing</li> </ul> <p><b>Medical Training College</b></p> <ul style="list-style-type: none"> <li>Nursing</li> <li>Clinical Medicine</li> <li>Environmental Health</li> <li>Medical Laboratory Technology</li> <li>Physical Medicine</li> <li>Occupational Therapy</li> <li>Pharmacy</li> <li>Radiology</li> <li>Education Development and Research</li> </ul>

SOURCE: KNH RECORDS

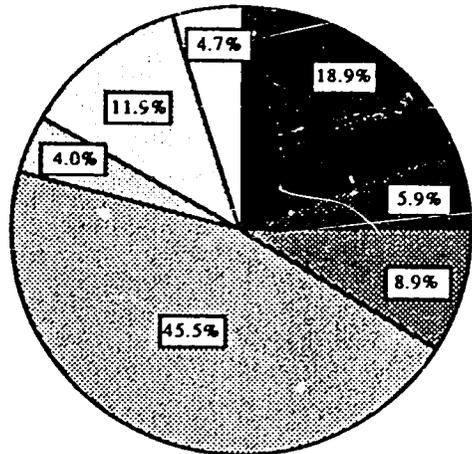
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INPATIENT CAPACITY AND UTILIZATION AT KNH BY SPECIALTY/UNIT--1987

1987



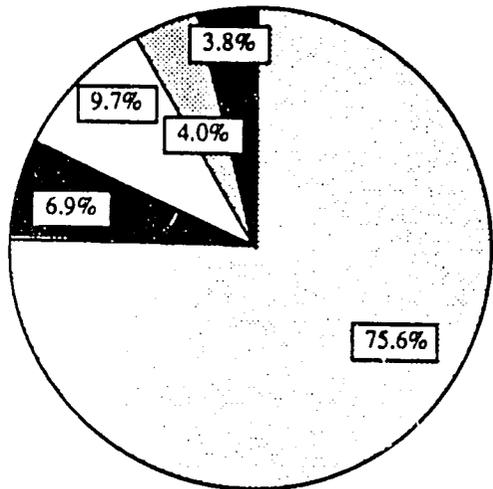
Total Beds=1,662



Total Patient Days=483,466

Specialty/Unit		Number of Beds	Admissions	Patient Days	Average Length of Stay (Days)	Occupancy Rate
General Medicine	Adult Medical	240	5,571	91,516	16.4	104.5%
Observation	Adult Observation	48	3,316	28,751	8.7	164.1
General Surgery	Adult Surgical	128	3,877	43,145	11.1	92.3
Specialty Surgery	Neurosurgery	39	286	10,476	36.6	73.6
	Cardiothoracic Surgery	35	249	1,193	4.8	9.3
	Orthopaedic Surgery	166	1,951	63,158	32.4	104.2
	Plastic Surgery	39	353	13,111	37.1	92.1
	Obstetrics/Gynaecology	283	31,452	85,578	2.7	82.8
	Gynaecological Oncology	16	86	2,201	25.6	37.7
	Ophthalmology	26	542	12,208	22.5	128.6
	Ophthalmology/Dental	36	580	9,626	16.6	73.3
	Ear, Nose & Throat (E.N.T.)	40	491	10,213	20.8	70.0
E.N.T./Dental	38	449	12,314	27.4	88.8	
Trauma	Major Accident	60	243	2,449	10.1	11.2
	Burns	25	173	4,166	24.1	45.7
	Spinal Injury	30	32	10,064	314.5	91.9
	Intensive Care	22	440	2,729	6.2	34.0
Paediatric	Paediatrics	223	977	1,193	1.2	1.5
	Paediatric Emergency	54	8,813	46,421	5.3	235.5
	Paediatric Oncology	30	125	10,043	80.3	91.7
Other	Radiotherapy	56	475	15,066	31.7	73.7
	Amenity	28	226	7,845	34.7	76.8
TOTAL		1,662	60,707	483,466	8.0	79.7%

Exhibit II-3  
 OUPATIENT VISITS AT KNH BY CLINIC/SPECIALTY—1987

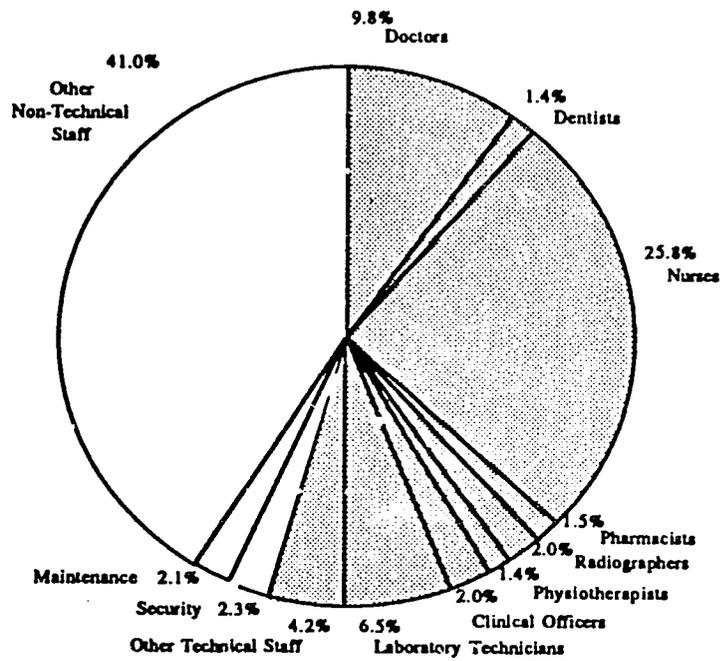


Total Visits: 573,532

CLINIC	SPECIALITY	VISITS
General	Adult	48,138
	Pædiatric	54,496
	Ophthalmology	28,574
	Ear, Nose & Throat	16,231
	Casualty	163,386
	Dental	122,695
Medical	General Medicine	16,142
	Neurology	3,230
	Dermatology	6,579
	Cardiac	2,780
	Psychiatry	3,575
	Diabetes	4,730
	Chest	2,459
Surgical	General Surgery	9,435
	Ear, Nose & Throat	8,877
	Thyroid	673
	Cardio-thorack Surgery	1,081
	Neurosurgery	2,473
	Urology	2,053
	Orthopædic Surgery	26,803
	Liver	1,214
	Renal	3,203
Pædiatric	Medicine	3,643
	Neurology	3,556
	Hæmatology	4,340
	Dermatology	1,714
	Psychiatry	382
	Surgery	4,594
	Cardiac	2,155
	Chest	2,380
Gynæcology	General	8,126
	Ante-Natal	12,778
	Post Natal	1,037
TOTAL		573,532

Source: KNH Records

KNH STAFF DISTRIBUTION BY CATEGORY--1987



Total Staff=3,722

LEGEND:

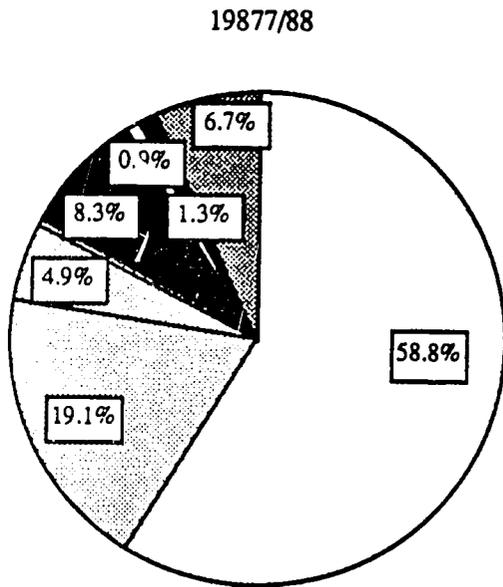
- Technical Staff
- Non-Technical Staff

Source: KNH Records

STAFF COMPOSITION

Technical		Non-Technical	
Category	Number	Category	Number
Medical Specialists/Consultants	22	Hospital Secretaries and Staff	21
Registrars and Medical Officers	341	Personnel Officers and Assistants	6
Dental Officers	51	Accountants and Assistants	9
Registered Nurses	457	Clerical Officers	188
Enrolled Nurses	502	Medical Records Officers and Technicians	51
Pharmacists	20	Supplies Officers and Storemen	29
Pharmacy Technologists	37	Mortuary Superintendent and Attendants	17
Radiographers	52	Caterer, Housekeepers and Cooks	33
Radiographic Film Processors	22	Telephone Exchange Staff	22
Physiotherapists	52	Artisans	61
Occupational Therapists	29	Boiler Staff	12
Clinical Officers	75	Secretaries and Typists	32
Orthopaedic Technologists	12	Chaplain	1
Plaster Technicians	35	Security Staff	86
Laboratory Technologists	80	Maintenance/Engineering Staff	79
Laboratory Technicians	161	Subordinate Staff	<u>1,045</u>
Biochemists	2	Subtotal	1,692
Speech Therapists	1		
Public Health Officers	3		
Public Health Technicians	15		
ECG Technologists	4		
Nutritionists	8		
Nutrition Field Workers	25		
Medical Social Workers	8		
Dental Technologists	<u>16</u>		
Subtotal	2,030		

Exhibit II-5  
KNH BUDGET—1987/88



Total Expenditures: 12,055,300

	ITEM	KENYAN POUNDS
<b>EXPENDITURES</b>		
Personnel	Personal Emoluments	5,815,600
	Gratuity and Pension Contribution	475,000
	House and Personal Allowances	732,500
	Passage and Leave Expenses	63,000
Medical Supplies	Supplies/Materials	306,500
	Drugs and Dressings	2,000,000
Food	Patients	530,000
	Doctors and Nurses	63,000
Utilities	Electricity, Water and Conservancy	1,000,000
Maintenance	Plant, Machinery and Equipment	105,700
Asset Acquisition	Plant and Equipment	158,500
General & Administrative	Transport Operation Expenses	60,000
	Travel and Accommodation	35,000
	Communication	124,000
	Senior Staff Canteen	12,000
	Non-Medical Supplies	283,000
	Library	500
	Advertising and Publicity	3,000
	Rates and Rents	250,000
	Professional Services	1,000
	Staff Development and Seminars	23,000
Miscellaneous	14,000	
	<b>SUBTOTAL</b>	<b>12,055,300</b>
<b>APPROPRIATIONS</b>		
	Boarding and Hospital Fees	174,500
	Diagnostic Service Fees	32,500
	Other	309,300
	<b>SUBTOTAL</b>	<b>516,300</b>
	<b>NET EXPENDITURE</b>	<b>11,539,000</b>

Source: KNH Records

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### **III. ORGANIZATIONAL STRUCTURE / ENVIRONMENTAL FACTORS**

### **III. ORGANIZATIONAL STRUCTURE/ENVIRONMENTAL FACTORS**

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KNH's efficiency and effectiveness within the Kenyan health care system is influenced, in part, by a variety of internal and external structural factors. Internal Structure is provided by an organisation structure that delineates authority, responsibility and accountability. Planning provides an internal structure for the future taking external elements into account. The planning process results in specified goals, a timeframe for achieving these goals, and the coordination of activities to carry out the goals. Without sound planning, a hospital will lack a framework in which it can efficiently operate.

The external framework in which KNH must operate is composed of a number of environmental elements. The three discussed in this chapter are KNH's role and mission in the Kenya health delivery network, some of the procedures used to help it carry out this role, and its communication with other components of the health system.

In sum, the topics covered in this chapter are:

- Organisation Structure
- Planning Office
- Management and Administrative Information
- Mission Clarity
- Referral Protocols and Procedures
- Internal and External Communication

Each topic is separately summarized in the text that follows.

# ORGANISATION STRUCTURE

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*The organisation structure will decentralize authority and responsibility to four line managers in charge of key KNH functions: Clinical Services, Finance, Personnel, and Administrative Services.*

## Timeframe

*Start:* the Board should meet to review the proposed organisation structure against existing personnel resources and determine the extent of promotions and additional hiring needs. They should determine the need for phased implementation and, if needed, strategies and steps for this. Communicate proposed changes to hospital management.

*Duration of Initial Steps:* one month to develop position descriptions and promotion criteria. Three months after this to recruit and hire for the major staff and line positions, as needed. Six months to recruit and hire for department manager positions, as needed.

*Iterative Review:* through regular senior management meetings, the Director and the Heads of key functions will be able to assess the appropriateness of the implemented organization structure. Any chronic problems possibly stemming from the organisation structure being ill-suited to the Hospital's functions should be presented to the Board for discussion. The Board will then formulate needed modifications.

## Resources

*Personnel:* one or several high level and medium level managers will have to be added, depending on judgments made by the Board.

*Financial:* there may be substantial salary costs resulting from hiring new personnel or promoting internally. This however could be incurred incrementally over time.

## Dependence

*Interrelationship:* it is important that those on the department manager level and below completely understand the changes and are not adversely affected by them.

*External:* to some extent, the elements of all external working relationships that KNH has with other organisations, such as MIC, CHS, and KEMRI, will be determined by KNH's internal structure.

## Impact

*Short-term:* low—it will take some time to hire new personnel and write job descriptions.

*Medium-term:* medium—it will take time for new and promoted personnel to feel comfortable in their jobs and for obsolete working relationships to be replaced, but staff will be able to notice changes.

*Long-term:* high—hospital management will be strengthened as spans of control will be realistic; decision-making will be expedited as decisions will be made by those closest to the problems/situation; Director's time will be freed up for activities that only he can perform.

## Donor Support

Not needed.

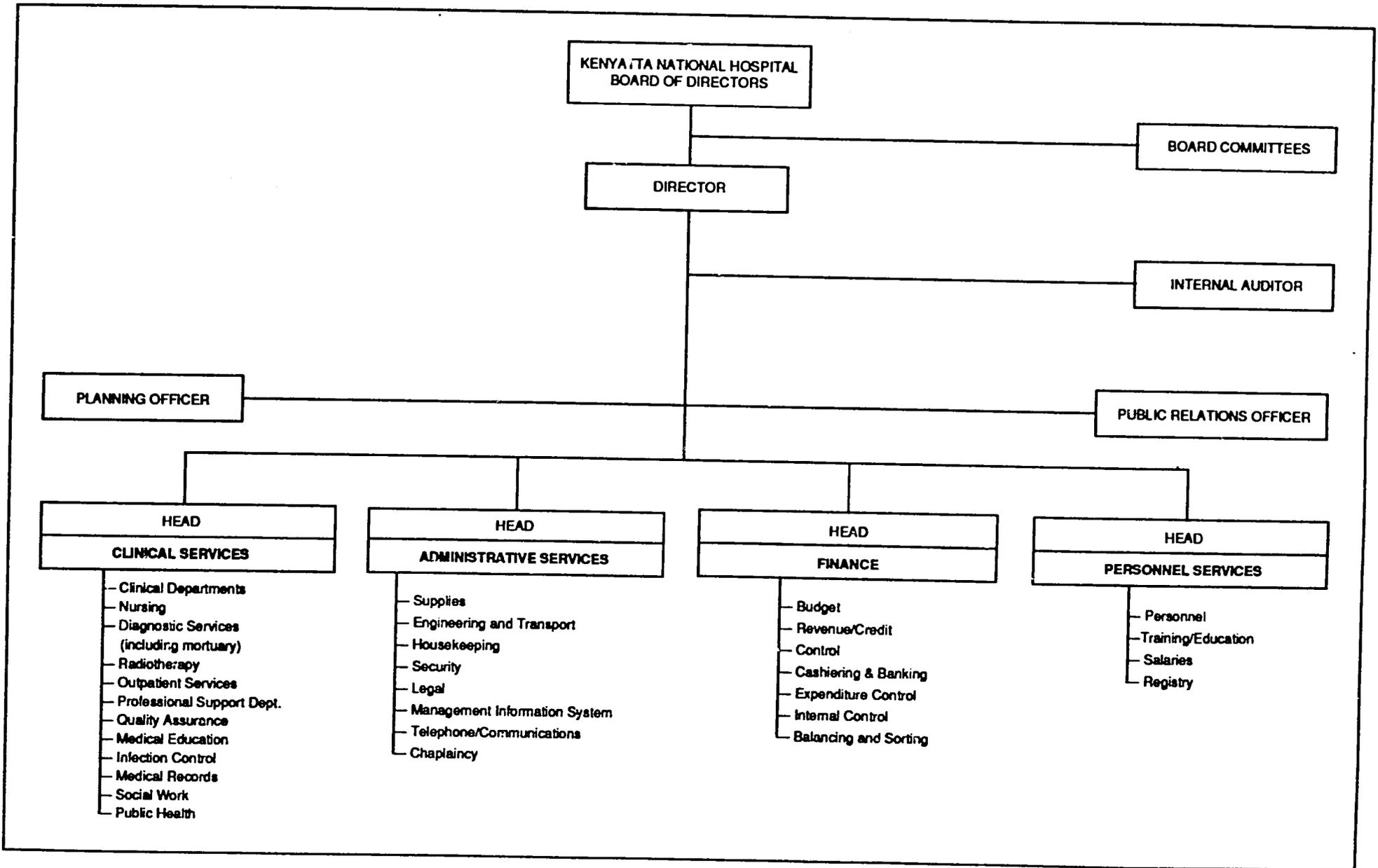
## Responsibility

The Heads primarily responsible for organising department managers, Director will be primarily responsible for organising the Heads of key functions and staff positions, and the Board will have oversight responsibility for all.

## Implementation Steps

- Assess relative skills of those who will be given additional management responsibilities, determine extent of new hires and promotions.
- Develop position descriptions and promotion criteria for all senior and middle management positions.
- Determine the need for phased implementation of the organisation structure and the associated required strategies and iterative steps.
- Implement the new structure communicating changes to all hospital staff and doctors.

# KENYATTA NATIONAL HOSPITAL ORGANIZATION STRUCTURE



# PLANNING OFFICE

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*Establish a dedicated planning function with an independent role and responsibilities.*

*Identify information requirements for the hospital.*

*Prepare a 3 - 5 year hospital plan.*

*Develop a marketing function to assess the needs of patients and appropriateness of hospital services.*

## Timeframe

*Start:* the Board should immediately appoint a permanent planning committee.

### *Duration of initial steps:*

(a) It will take two months for either the Planning Officer or both the Planning Officer and the Director to staff the Planning Office. (b) The first tasks of the newly staffed office will be to identify information requirements for the Hospital and prepare the Hospital plan. These tasks are inter-related: the initial hospital plan will specify additional Hospital information requirements and methods of collection and/or compilation. Once systems are in place, the information generated will actually be incorporated into revised versions of the Plan. (For example, the Planning Office may determine that it needs to develop a reporting format for types of surgical procedures performed to distribute to the relevant managers and senior managers. The managers might then use this information to budget for capital equipment for theatres. This capital equipment budget with utilisation back-up would then be included in the five year plan. (c) Development of a marketing function would begin after the Planning Office is up and running, probably 1 - 2 years.

*Interactive:* the Planning Committee will be responsible for regularly reviewing the plan and making periodic revisions/additions. the planning office will review information received for adequacy and appropriateness.

## Resources

*Personnel:* the Planning Committee will have to meet approximately once a month. The Planning Office will require a full-time officer and a full-time secretary, and possibly one full-time Assistant to the Officer.

*Financial:* if the Planning Officer is hired internally and his new salary is higher than his old one, the cost will be for this difference in salary plus the full salaries of the Secretary and Assistant. There will also be start-up costs for equipping the Planning Office (desks, typewriter, supplies, etc.)

## Dependence

*Interrèlationship:* Planning Office must work closely with all hospital departments, especially when defining information requirements; must liaise with Finance Department when doing financial planning. Many of the Board's decisions on the future of the Hospital will directly affect the work done in the Planning Office.

*External:* when a marketing function is established, the office will need to gather market data from outside sources. It will also be carrying out discussions and negotiations with insurers and employers.

## Impact

*Short-term:* low—all hospital managers will be required to assess their information needs, together with the Planning Office. Although the benefits of streamlined information flows won't be felt until later on, the process of assessment will begin to make managers conscious of their requirements and the areas in need of improvement.

*Medium-term:* medium—improved information systems will begin to increase efficiency of hospital management; a hospital wide planning process will promote the much needed feeling of working as a team to achieve a common goal.

*Long-term:* high—adhesion to a well thought out and well documented plan will provide strong direction for the Hospital, avoid the wasting of resources, and ensure that the Hospital is meeting the needs of its patients.

## Donor Support

Not needed.

## Responsibility

Director will be responsible for establishing the Planning Committee. The Planning Officer will be responsible for all activities of the Planning Office.

## PLANNING OFFICE

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*(Continued)*

### **Implementation Steps**

- The Board should appoint a permanent Planning Committee comprised of Board members and Hospital management.
- The Planning Committee should establish the objectives and goals of the planning function, delineating the relationship between itself and the Planning Office and develop a departmental budget.
- The Planning Committee should recruit and hire a Planning Officer.
- The Planning Officer should hire required staff and prepare a "Plan for Planning" that is developed with input from all Hospital department/activities.

# MANAGEMENT AND ADMINISTRATIVE INFORMATION

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*Identify information and information flow necessary for decisionmaking, and implement the collection procedures.*

*Ensure that the information is accurate, adequate, and timely, and eliminate extraneous information.*

## **Timeframe**

*Start:* Heads of key functions should immediately inform their managers that the Hospital is going to take steps to improve information systems, especially those supplying department manager information needs, and get department managers' input.

*Duration of Initial Steps:* the Information Committee should meet weekly for 1-2 months to identify the required information and develop the collection systems. The initial meeting should map out reasonable schedule in which several departments (preferably related departments) are covered in each meeting. It will take 2-3 months for the Heads to work with their managers and with each other to set up the systems.

*Iterative Review:* the Heads should review all information collection systems monthly for the first six months and twice yearly thereafter. They should make sure that the systems are not breaking down by reviewing the results of internal audits, adapt the systems to changing manager information needs, and guide the managers in the use of information.

## **Resources**

*Personnel:* information system assessments may reveal that additional clerical staff is needed to either collect information or compile already collected information. Elimination of unnecessary information collection may free up clerical staff's time. A high estimation of the net need of additional personnel is about 15 clerical personnel, or half of the departments getting one additional person.

*Financial:* ongoing costs of additional clerical staff. If a manager for Management Information Systems is hired, his salary would be added to ongoing costs.

## **Dependence**

*Interrelationship:* all activities will be departmentally integrated. They will also involve vertical integration as information flows up and down the organisation chart as well, up to the Board and down to Supervisors. Information assessment activities will be done in conjunction with the Planning Office. The Internal Audit Department will conduct regular audits.

*External:* eventually managers will establish KNH specific standards and benchmarks against which they will measure their performance. Initially, however, they may want to interact with their counterparts at other hospitals and collect indicators from other hospitals to use in their own information analyses.

## **Impact**

*Short-term:* low—the benefits of streamlined information systems will not be realised yet, although the process of assessing and setting up systems will have the positive side effect of strengthening communications between departments and encouraging teamwork.

*Medium-term:* high—improved information systems will increase hospital efficiency and save money; managers will become more aware of their department's core function and how it relates to the Hospital as a whole.

*Long-term:* high—improvements in efficiency will be ongoing because Hospital will always be adapting to changing needs; with adequate information, hospital planning will be a sophisticated and useful process; managers will greatly improve their managerial skills because they will learn how to use information to monitor performance and make decisions.

## **Donor Support**

Not needed.

## **Responsibility**

Department Managers, Heads of key functions, and Director.

## **Implementation Steps**

- Information Committee should identify and develop the needed information systems, focusing on the information needs of managers and supervisors, the Heads, the Director, and the Board.
- Directors and Heads will monitor the systems and guide managers in the use of information.

# MISSION CLARITY

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*Incorporate the activities conducted at IDH into KNH, turning the IDH facility over to either NCC or the PMO for Nairobi.*

## Timeframe

*Duration of Initial Steps:* six months for the Board to assess the physical space implications of the move, and to set up controls for cross infection rates and the spread of communicable diseases. Concurrently, the Board should be holding meetings with NCC, MOH, MIC, and CHP to discuss issues related to the moves and gain consensus. Within the first six months, the Board should also notify staff and the public of the impending changes. In the next three or four months (about ten months after start) the Board should have developed a task plan and timetable for implementation, and establish a Transfer Committee. The task plan and timetable should be communicated to the Planning Department.

*Iterative Review:* the Board should closely monitor implementation and activities in the first three to five years after start of implementation.

## Resources

*Personnel:* no staff will be needed for the Infectious Disease function within KNH, because IDH staff will be moved into KNH, and staff needed for the new services offered at the IDH facility will be funded by the MOH, but not out of KNH's budget. Additional staff will be needed, however, for enhancement of the Infection Control Department.

*Financial:* salaries for additional Infection Control staff. There will be substantial financial requirements for implementing the physical changes associated with the move: renovations, additional beds and equipment, if needed, and additional Infection Control equipment. Expenses will be incurred in actually moving equipment from IDH facility to KNH.

## Dependence

*Interrelationship:* all staff, patients, and the public should be aware of the move and the reasons for it. Staff should be aware of the importance of Infection Control Procedures after the move takes place. Staff at IDH will need to assimilate into the physical environment of KNH. The Planning Department should be well informed, so that it can incorporate all planned activities into the planning process.

*External:* there will be a high level of involvement from the MOH, CHS, MIC, NCC, and PMO Nairobi.

## Impact

*Short-term:* low—a planning process and then preparations for the move will be going on but there will be little impact on current operations at KNH and IDH.

*Medium-term:* high—although careful planning will help minimize disruptions at the time of the move, there will be a period of adjustment as IDH staff gets used to being at KNH, KNH staff gets used to having IDH staff on the premises, and patients become accustomed to not going to KNH for primary and secondary services.

*Long-term:* high—the Hospital will become strictly a tertiary care referral hospital. This will make more effective use of KNH's specialised professional staff. Elimination of primary and secondary care from the hospital will ease congestion and increase quality of care for tertiary care patients.

## Donor Support

May be required to pay for needed renovations, new equipment and moving expenses.

## Responsibility

The Board will have primary oversight responsibility for implementation. The Transfer Committee will be responsible for coordinating and executing the task plan.

# MISSION CLARITY

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*(continued)*

## **Implementation Steps**

- The Board should assess the physical space implications of the following:
  - Eliminating the delivery of primary and secondary care at the Hospital and relocating it to IDH.
  - Moving all the clinical and service activities currently provided at IDH to the Hospital.
- The Board should identify the facility, department and access modifications that would be necessary at the Hospital to control cross-infection rates and the spread of communicable diseases.
- The Board should meet with representatives from NCC, MOH, CHS, and MIC to discuss the practical feasibility and acceptability of this option and the likely operating entity (i.e., either NCC or PMO Nairobi).
- The Board should gain consensus among interested parties on this option, delineating specific requirements (e.g., modification of IDH for use as a general hospital), a task plan, and a timetable for implementation.
- The Board should establish a multi-organisational Transfer Committee responsible for coordinating and executing the task plan.
- The Board should notify employees, patients, and the public of the impending changes in facility use and administration, and its implication for the type and scope of care to be delivered at the Hospital.
- The Board should keep the Planning Office informed of all activities.

# REFERRAL PROTOCOLS AND PROCEDURES

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*Develop, communicate, and enforce referral protocols.*

## **Timeframe**

*Start:* the Director should immediately appoint a committee consisting of the top clinicians from the major clinical areas and several key managers.

*Duration of Initial Steps:* the committee should take approximately three months to carry out its duties, described below in the Implementation Steps. The Board will take an additional two months to communicate the admissions procedures and criteria to the entities listed in the Implementation Steps.

*Iterative Review:* periodic audits will have to be held to ensure that the protocols and procedures are being adhered to.

## **Resources**

*Personnel:* physicians, nurses, and Admissions staff will have to devote some of their time to adhering to the protocols. Addition of one or two clerical staff to handle any additional paper work may be a possibility.

*Financial:* none.

## **Dependence**

*Interrelationships:* internal audit will have to periodically review Medical Records to make sure protocols are being adhered to; the Director will have to monitor.

*External:* a good working relationship with other hospitals and NCC is imperative; a key element of success will be whether those on the other end of the referral (private physicians, private clinics, other hospitals, and the NCC) adhere to the protocols as well.

## **Impact**

*Short-term:* low—it will take some time to develop the protocols and once they are established it will take a while before everyone becomes familiar with them and follows them.

*Medium-term:* medium—KNH staff will follow the procedures as soon as they are established, but it will take several months of enforcement to get other health care providers to break old habits and start following them.

*Long-term:* high—once the procedures are running smoothly on both the KNH's side and the side of those who are referring, the Hospital will begin to achieve its stated mission of being the country's tertiary referral hospital. Congestion and queues in the hospital will decrease, and the hospital will be more effectively using the high level skills and expertise of its professionals.

## **Donor Support**

Not needed.

## **Responsibility**

The committee is responsible for establishing the protocols. All Hospital staff connected with the Admissions process are responsible for following them. The Board and Public Relations Office are responsible for communicating the protocols with concerned outside entities. The Internal Audit Department will be responsible for periodic audits. Responsibility for enforcement rests with the Hospital Director and Board.

# REFERRAL PROTOCOLS AND PROCEDURES

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*(Continued)*

## **Implementation Steps**

- The Board will authorize the Hospital Director of KNH to appoint a Committee consisting of top physicians from the major clinical divisions (Division Chairmen) and selected managers.
  - The Committee's terms of reference will be to:
    - Establish clear and firm protocols (criteria) and procedures for referral to the Hospital.
    - Develop an indicative implementation plan and implementation steps which will include various deadlines for which categories of unreferred patients will no longer be seen at the Hospital.
    - Develop necessary mechanisms and procedures to enforce the protocols. The mechanisms should allow access to critical groups of patients who require the skills, expertise and equipment that is available at the Hospital.
  - The Committee should establish guidelines, time tables, and milestones for both the short and long term steps and actions in the implementation plan.
  - The Committee's report on the above issues should be presented to the Board for approval within three months after the commencement of their work which should begin immediately after the submission of the Team's report.
- The Board will then develop a plan to communicate the criteria and procedures for referral to the Hospital and submit copies to:
    - The Ministry of Health Headquarters
    - Provincial and District Hospitals
    - MOH Nairobi City Commission
    - Private practitioners--both doctors and institutions
    - Church Hospitals
    - The general public.

# INTERNAL AND EXTERNAL COMMUNICATION

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*Create a Public Relations Office as a staff function to the Director.*

## **Timeframe**

*Start:* the Director should form a committee which will include the Head of Personnel to define and create the Public Relations Office.

*Duration of Initial Steps:* it will take one month for the committee to define the functions and responsibilities of the office and to determine the terms and conditions of the Public Relations Officer, and an additional month to recruit and hire the officer and staff. After this, it will take the officer and the committee one more month to develop a method which will monitor the effectiveness of the office.

*Iterative Review:* the Public Relations Officer should periodically monitor the effectiveness of internal and external communications using both informal means and the established monitoring mechanism and provide reports for the Director and Board.

## **Resources**

*Personnel:* at a minimum, implementation will require one Public Relations Officer and an assistant/secretary.

*Financial:* salary for the above personnel. Start-up costs related to setting up the office, such as furniture, equipment, and supplies. Ongoing costs will be salary for the above personnel and costs for media communications and internal and external newsletters.

## **Impact**

*Short-term:* low—while the office is getting set up Hospital-communications will not yet be improved.

*Medium-term:* medium—improved communications will begin to have an effect.

*Long-term:* high—Hospital's image will be vastly improved; patients will be more comfortable and satisfied as they will have a greater knowledge of hospital services and functions; quality of care will improve; cooperation between departments will be improved; other external relationships will be improved because the Hospital will have a specified office responsible for nurturing them; communications between Hospital professionals and professionals in other hospitals will be facilitated, resulting in a broadening of influence and status boost for KNH.

## **Donor Support**

Not needed.

## **Responsibility**

Responsibility for setting up the office rests with the committee. Responsibility for setting up a monitoring mechanism rests with the committee and the Public Relations Officer.

## **Implementation Steps**

The Director will designate a small committee. The committee will define the functions and responsibilities of the Public Relations function, and the terms and conditions of the Public Relations Officer. The PR Officer will be recruited and hired. The PR Officer and/or committee, will develop a means to monitor the effectiveness of internal and external communications.

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#### **IV. RESOURCE MANAGEMENT**

## **IV. RESOURCE MANAGEMENT**

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In order to maximize quality and quantity of care delivered, a hospital must utilize its limited resources in the most efficient manner possible. Hospitals draw upon three major groups of resources: financial, personnel, and physical; and must establish detailed and effective systems to manage these resources.

The problems of unplanned and increasing costs, absence of appropriate planning, inadequate funds to meet needs, and lack of financial accountability are grouped under the heading of Financial Management. Financial management is the process of establishing control and accountability over assets and transactions. It requires careful financial planning and strict enforcement of financial guidelines. The development of financial management process requires planning for the management of financial operations, establishing data to monitor trends to assist in the forecasting of resource needs, and designing control and accountability guidelines. KNH must take control over its financial affairs as it develops into a self-sufficient parastatal corporation. Recommended options in the area of financial management are:

- Financial Management and Operations
- Budgets and Expenditures
- Internal Accounting Controls.

Personnel are among a hospital's most valuable resources. It is the quality of the doctors, nurses, technical and non-technical staff that--to a large extent--determines the quality of the hospital. Moreover, how personnel are used has an important effect on efficiency. Numerous problems associated with shortages of supplies, inoperable equipment, misuse of the referral system, and excessive demand have produced low morale and motivation among staff. Recommended options in the area of personnel resource management are:

- Doctor Incentives
- Personnel Office
- Staff Roles and Responsibilities
- Incentives in the Mortuary.

## **IV. RESOURCE MANAGEMENT**

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**(continued)**

Physical resource management refers to the management of resources that are neither personnel nor financial. This includes for example equipment, supplies, and drugs. Some of KNH's more urgent problems of inadequate maintenance, shortages of supplies, and ineffective procurement relate to physical resource management. The Team developed options in the following areas for addressing problems in physical resource management:

- Management of Supplies
- Supply Procurement System
- Standardisation of Equipment Purchases
- Preventative Maintenance.

Each topic is separately summarised in the text that follows.

# FINANCIAL MANAGEMENT

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Create a post of Head Treasurer (Head of Finance) to be responsible for financial operations and management in the hospital.

## Timeframe

*Start:* the Director should define a job/position description and begin the search and interview process immediately. The candidates should be screened by the Director and the Chairman of the Board.

*Duration:* the development of a job/position description should take no longer than 30 days. The goal of the screening and interviewing process should be to hire and employ a Head of Finance within 90 days.

## Resources

*Personnel:* the Director will be required to spend 4 hours per week.

*Financial:* annual salaries for one full-time Treasurer, one full-time Secretary, and one full-time Accountant, and two full-time clerical personnel.

## Dependence

*Interrelationship:* improvements in the financial operations of the hospital depends on accounting and fiscal controls.

*External:* none.

## Impact

*Short-term:* medium—the improvements in financial controls will be helpful in maintaining funds for operations.

*Medium-term:* high—financial controls will lead to fiscal strength.

*Long-term:* high—fiscal strength will provide sound budget and financial operations.

## Donor Support

Not needed.

## Responsibility

The Board will ensure that financial operations are performed appropriately. The responsibility for implementing the financial policies of the governing board relative to the control and effective utilisation of the physical and financial resources of the hospital will reside with the Director. The responsibilities for safeguarding the assets of the hospital, supervising the receipt and disbursement of cash, and ensuring that the operation is adequately financed should be given to the Treasurer (Head of Finance).

## Implementation Steps

- Define a financial statement of purpose and strategy that establishes the basic financial direction of the hospital
- Create the position of Treasurer (Head of Finance) with the following functions:
  - Establish, coordinate and maintain, through authorised management, an integrated plan for the control of financial operations
  - Measure performance against approved operating plans and standards, and report and interpret the results of operations to all levels of management
  - Interpret and report on the effect of external issues on the attainment of the objectives of the hospital
  - Provide protection for the assets of the hospital.

# BUDGET AND EXPENDITURE

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*Decentralise responsibility and authority for recurrent budget and expenditure estimates only to the Heads of key functions.*

## Timeframe

*Start:* within thirty days of the employment of the Treasurer.

*Duration:* the duration of the budget process will continue through the submission of the Programme Review and Forward Budget for fiscal year 1989/90.

## Resources

*Personnel:* annually, two FTE Accountants and one FTE Secretary will be required to support the budget function.

*Financial:* internal salaries for the above personnel.

## Dependence

*Interrelationship:* support and cooperation of senior management and department managers. Planning office should assist in the development of operating statistics, forecasted utilisation, estimated work loads, and resource requirements.

*External:* none.

## Impact

*Short-term:* low—development and implementation of the program will require several months.

*Medium-term:* medium—performance measures will monitor each department's actual results to standard requirements.

*Long-term:* high—implementation of performance measures for all departments will result in saving.

## Donor Support

Not needed.

## Responsibility

Treasurer/Head of Finance

## Implementation Steps

- Budget planning—development of hospital objectives and priorities, identification of factors and trends which affect operations and costs, and preparation of the preliminary budget
- Departmental forecasting—general estimates of future volume will be refined to provide specific workload estimates necessary to develop the details of the operating plan and to calculate resource requirements
- Revenue and expense conversion—conversion of management's detailed resource specification into actual shilling needs
- Review, modify and publish—generation of the revenue, expense and capital budgets. The output of this process is the input of the hospital's budget.

## Footnote:

*FTE = Full Time Equivalent*

# INTERNAL ACCOUNTING CONTROLS

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*Develop and implement an internal control programme under the direction and control of the Director and the Board.*

## **Timeframe**

*Start:* within thirty days of the employment of the Treasurer.

*Duration:* will continue through fiscal year 1989/90.

## **Resources**

*Personnel:* annually, one FTE Internal Auditor, one FTE Accountant.

*Financial:* internal salaries for the above personnel and twelve person months (est. Ksh 400,000) of a local consultant to develop the chart of accounts and accounting controls.

## **Dependence**

*Interrelationship:* assistance in identification of financial accounts within the Accounting Department.

*External:* expertise in chart of account and related internal accounting control development will be required from local accountants or consultants.

## **Impact**

*Short-term:* low—will require six or more months to document and implement chart of accounts and accounting controls.

*Medium-term:* high—once the programme is implemented each accounting transaction will be monitored to ensure it was executed in accordance with management's general authorisation, and was properly recorded. The loss of shillings to waste, theft, or mismanagement will be reduced.

*Long-term:* high—same as for medium-term.

## **Donor Support**

May request funds for external consultant.

## **Responsibility**

Treasurer

## **Implementation Steps**

- Define the purpose, authority, responsibility, and policies and procedures of the internal auditing area
- Determine the operational reliability and integrity of financial and operating information and the means to identify, measure, classify, and report such information
- Establish a procedure to ensure compliance with hospital policies, plans, procedures, laws and regulations which have a significant impact on operations
- Verify existence of hospital assets and establish a procedure to review the means to safeguard these assets
- Establish a procedure to appraise the economy and efficiency with which resources are employed
- Establish a procedure to review operations to ascertain whether results are consistent with established objectives and goals
- Develop a system for examining and evaluating information, communicating results and follow-up

# DOCTOR INCENTIVES

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1. Improve the status of the Hospital's consultant/specialists by complementing dual facility/clinical appointments with the University of Nairobi College of Health Sciences with "teaching allowances" for KNH doctors.

## Timeframe

*Start:* (a) At the time that KNH doctors become employees of the Board or (b) At the beginning of the next fiscal year.

*Duration:* NA.

## Resources

*Personnel:* none.

*Financial:* difference between "clinical allowances" per professional and "teaching allowances" and number of house doctors.

## Dependence

*Interrelationship:* must wait until doctors become Board employees, (then may need to wait until next fiscal year to have sufficient financial resources.) May need to announce before implementation in order to give house doctors incentive to stay with the Hospital as they become employees.

*External:* must coordinate "clinical" and "teaching allowances" with CHS to keep incentives equal.

## Impact

*Short-term:* high—will immediately raise morale of KNH doctors, show that Board wants to keep the best doctors at the Hospital.

*Medium-term:* medium—keeping the best doctors at the Hospital will depend on other factors as well, such as the faculty practice plan and the availability of supplies and functioning equipment.

*Long-term:* medium—same as for medium-term.

## Donor Support

Not needed.

## Responsibility

Treasurer/Head of Finance.

## Implementation Steps

- Learn about the system used by CHS to determine "clinical allowances" for medical professors.
- Adapt the CHS system to equalise compensation to KNH doctors through some source of "teaching allowances".
- Make an agreement with CHS for a method for coordinating changes in the "allowances".
- Examine the Hospital's financial situation to determine when the increase in compensation would be feasible to implement (as soon as the house doctors become employees or next fiscal year).
- Announce the new compensation policy.

# DOCTOR INCENTIVES

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2. *Establish a consultant/specialist/institutional private Practice Plan that would allow for the (private) practice of medicine within the Hospital.*

## Timeframe

*Start:* (a) Immediate preparation of a paper to allow the Board to borrow money to renovate the tenth floor of the Tower Block for use as a private wing; (b) Renovate to begin as soon as funds are obtained; (c) Study of what form the Plan should begin in next six months; (d) Beginning of private practise of about twelve months.

*Duration:* (a) Borrowing paper: one month; (b) Renovation: two months to obtain and select tenders, four months to complete work; (c) Study of Plan form: two months; (d) Actual private practise: indefinite.

## Resources

*Personnel:* (a) Existing Executive Director's staff—1 person-month FTE; (b) Renovation—building contractors; (c) Staff of Planning office—1 person-month FTE, 1 person-month Practice Plan Officer, 1.5 person-months FTE external consultant; (d) 1 FTE Practise Plan Officer and 1 FTE secretary

*Financial:* (a) None; (b) Consultant (est Ksh 50,000) study for KNH staff member (est Ksh 72,000); (c) Salaries of Practise Plan Officer and Secretary.

## Dependence

*Interrelationship:* must have well-functioning laboratory and equipment for private practise to use; must have accounting system and internal controls in place to bill private practises for use of Hospital clinical and support services; KNH doctors must adopt a code of conduct with respect to treatment of private and non-private patients within the Hospital.

*External:* must prepare legal and political ground; reaction of private hospitals who are competitors of KNH for doctor's private practises.

## Impact

*Short-term:* low—will take twelve months to put in place, will have some effect on doctor's morale to know that the system is coming.

*Medium-term:* high—will keep the best doctors at KNH enabling the Hospital to fulfill its mission.

*Long-term:* high—same as medium-term.

## Donor Support

To lend funds for renovation of tenth floor.

To pay for consultant and study tour.

## Responsibility

Planning Office.

## Implementation Steps

- Borrow needed funds for renovation.
- Tender for renovation.
- Conduct renovation work.
- Hire consultant to work with Planning Office to study form of Plan.
- Begin (one month) study form of Plan, including making a study tour to another country which has experience with a similar arrangement; at the end of one month have a job description ready to use in recruiting a Practise Plan Officer.
- Recruit a Practise Plan Officer.
- Complete study of form of Plan with Practise Plan Officer.
- Assign development of a doctor's code of conduct with respect to the Plan to the medical staff.
- Assure that the new accounting system and internal controls include the provisions necessary to bill private practices for office rents and use of clinical (e.g., laboratory, radiology, physical therapy, theatres) and support (e.g., laundry, catering) services.

# PERSONNEL OFFICE

---

*Strengthen the Personnel Office to perform the personnel function more effectively.*

## Timeframe

*Start:* recruitment of Head of Personnel should begin within three months; the development of the personnel function should begin immediately thereafter.

*Duration:* recruitment of Head of Personnel should be accomplished in four months; the development of the personnel function (including assistance with the writing of job descriptions, setting up systems for maintaining personnel files, setting up staff appraisal and performance reviews, structuring hiring, disciplining, and dismissing employees, and developing staff training programs) should take one year from the time the Head of Personnel is hired.

## Resources

*Personnel:* the Director must develop a job description for the Head of Personnel for approval by the Board of Establishment Committee; the Director and Committee must interview candidates; the Head of Personnel position will be created at a higher grade than current staff, other staff for the new Personnel Office may come from existing staff.

*Financial:* cost of at least one higher-grade position (Head of Personnel).

## Dependence

*Interrelationship:* the development of the Personnel Office must precede the writing of job descriptions.

*External:* none.

## Impact

*Short-term:* low—will show Hospital staff that Board is taking control over personnel, will facilitate job-description writing, but will have little direct effect on day-to-day operations in short term.

*Medium-term:* medium—will allow Board and management to begin to gain control over quality (hiring, training) and performance (compensation, promotion, and discipline) of staff.

*Long-term:* high—will allow Board and management to have maximum control over quality and performance of staff, the Hospital's most important resource.

## Donor Support

Not needed.

## Responsibility

Director's responsibility to coordinate recruitment of Head of Personnel, then the Head's responsibility to develop Office.

## Implementation Steps

- Write job descriptions for Head of Personnel position (Director).
- Approve job description (Board Committee).
- Interview candidates for Head of Personnel (Director and Committee).
- Select Head of Personnel (Director and Committee).
- Assist in writing of job descriptions of middle managers (Head of Personnel).
- Prepare a plan for the development of the personnel function (Head of Personnel).
- Implement the plan for development (Head of Personnel).

# STAFF ROLES AND RESPONSIBILITIES

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*Develop a schedule of duties for senior and middle managers and use job evaluation for other Hospital employee positions.*

## Timeframe

*Start:* in nine months, four months after the hiring of the Head of Personnel.

*Duration:* one year to complete schedules of duties for senior and middle managers and institute the use of job evaluations for all other employees; following this stage, schedules of duties may be written for other employees.

## Resources

*Personnel:* the Head of Personnel will coordinate and facilitate the process of writing schedules of duties at both the senior and middle levels of management. Consultants may be hired to assist. The senior managers and the Director will form a committee to write their own schedules. Each senior manager will work with the middle managers reporting to him or her to write their schedule of duties. The middle and lower managers will apply job evaluations to all other positions.

*Financial:* the cost of hiring consultants (est Ksh 36,000 per month local, est Ksh 200,000 per month international).

## Dependence

*Interrelationships:*

Depends on having the organisation structure in place and having a Head of Personnel and the senior managers in their positions.

Accurate assessment of information needs (who needs it, in what form, with what frequency) depends on schedule of duties.

*External:* none.

## Impact

*Short-term:* low—initially will change behavior little, though it may raise morale by indicating that management is interested in what employees do.

*Medium-term:* medium—as employees begin to be evaluated on their performance against the schedules their performance will improve, especially if information flows meet needs and incentive and discipline systems are in place.

*Long-term:* high—when use of schedules for evaluation, reward, and discipline becomes routine and is complemented by information flows, staff performance will peak.

## Donor Support

May be sought for hiring consultants.

## Responsibilities

Head of Personnel.

## Implementation Steps

- Once the organisation structure is set and the senior managers are in position, a committee of the senior managers and the Director should meet to develop schedules of duties for the senior managers' positions. These schedules should be based on the job descriptions approved by the Board for use in recruiting the senior managers. The committee will be guided and assisted by the Head of Personnel.
- The Head of Personnel, possibly assisted by a consultant, will develop draft guidelines for writing schedules of duty. This draft will be submitted to the committee of senior managers. Once adopted by the committee it will be used to guide the committee in writing schedules of duties for the senior managers' positions.
- The Head of Personnel, again possibly assisted by a consultant, will design an instrument to be used to collect information about the functions of middle managers. This information will be used along with the guidelines by the senior managers to work with the middle managers reporting to them to write schedules of duties. They will be assisted by the Head of Personnel.
- The Head of Personnel will develop guidelines for the use of job evaluations for all other personnel.
- Middle- and lower-level managers will use job evaluations for other employees.

# INCENTIVES IN THE MORTUARY

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*To improve positive and negative incentives for mortuary workers.  
To expand and improve mortuary facilities.  
To institute fees for mortuary services.*

## Timeframe

*Start:* as soon as possible.

*Duration:* one month to develop incentives for mortuary workers and institute a fee system; one year to complete expansion and improvement of facilities.

## Resources

*Personnel:* a member of the Director's staff will be needed to develop and put in place the incentives and fees systems; the same staff member will take charge of the expansion and improvement of facilities.

*Financial:* the expansion and improvement of facilities (est Ksh 900,000-1,800,000).

## Dependence

*Interrelationship:* none.

*External:* expansion and improvement of facilities may depend on outside funding.

## Impact

*Short-term:* high—current abuses by mortuary employees and shortage of appropriate facilities are harming the Hospital's reputation; doing something would be a highly visible step showing the public that the Board is serious about change—intolerance of abuses by mortuary personnel would show that the Board is concerned with public welfare and discipline of staff, while the institution of fees would demonstrate that the Board intends to make improvements in partnership with the public.

*Medium-term:* medium—the conditions in the mortuary would lose visibility as personnel routinely do the job expected of them and other changes gain the limelight.

*Long-term:* low—good mortuary performance becomes truly routine.

## Donor Support

Could be sought for help with expansion and improvement.

## Responsibility

Assigned by the Director to someone in his office; ultimate responsibility rests with the Director.

## Implementation Steps

- Refine the fee structure developed, but not yet implemented, for the mortuary, including provisions for mortuary attendants to share in the earnings as an incentive to performance.
- Examine and enhance if necessary the disciplinary procedures for Hospital employees abusing their positions by accepting or soliciting tips for services they are supposed to provide.
- Announce to the public and staff the new fees and the determination to end abuses by staff in the mortuary.
- Enforce strictly sanctions against staff for abuses.
- Examine service statistics for the mortuary to determine the needed capacity.
- Arrange funding (through borrowing, Government allocations, or donor support) for expansion and improvements needed to meet demand.
- Let tenders for the repair of existing equipment and the expansion of capacity to meet demand.

# MANAGEMENT OF SUPPLIES

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*Responsibility for inventory control and reordering of hospital supplies will be with the Supplies Department.*

## Timeframe

*Start:* the Supplies Department will begin immediately to gather information about department supply needs. Quantities utilised will be recorded and trends will be determined.

*Duration:* the gathering of information to estimate supply needs will require three months; the inventory of supply items in stock will require two months; the implementation of inventory controls will require three months.

## Resources

*Personnel:* annually, two full-time personnel to gather data for determining user supply needs and four full-time personnel to inventory the stock and develop utilisation estimates for user departments. A local consultant for six person months to develop an inventory and stock control programme.

*Financial:* internal salary for the above staff. A local consultant for six person months (est. Ksh 200,000).

## Dependence

*Interrelationship:* the Planning Office will assist in developing utilisation estimates. User departments will provide actual utilisation needs.

*External:* none.

## Impact

*Short-term:* low—program will require several months to develop.

*Medium-term:* low—same as short-term.

*Long-term:* high—the program will control stock, allow the hospital to maintain a sufficient level of supplies and reduce the shillings invested in stock.

## Donor Support

Not needed.

## Responsibility

The Chief Supplies Officer will be responsible for developing procedures for inventory control, inventory ordering, and supply requisition and distribution.

## Implementation Steps

- Establish policies and procedure guidelines for the maintenance and control of hospital supplies.
- Determine stock inventory counts.
- Determine stock utilisation.
- Develop supply requisition system for authorisation and processing of order.
- Determine minimum inventory requirements based on user needs.
- Develop inventory controls for receipt, stocking, distribution, and ordering of supplies.
- Develop supply distribution system for standard supply items.

# SUPPLY PROCUREMENT SYSTEM

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*Streamline the procurement system*

## Timeframe

*Start:* Director, Head of Key Functions and Chief Supplies Officer should immediately begin to draft procedures that will provide improved access to tender by major reputable suppliers and improve evaluation and contractual arrangements.

*Duration:* process will be constantly upgraded and revised.

## Resources

*Personnel:* Chief Supplies Officer and one full-time staff assistant to prepare procedures and guidelines. Director and the Heads to review procedures and guidelines.

*Financial:* annual internal salaries for above personnel.

## Dependence

*Interrelationship:* cooperation between supply, administration and accounting departments to effectively implement, monitor and enforce procedures and guidelines.

*External:* coordination with major suppliers and other vendors to ensure impartiality of procurement system and to enhance price competitiveness.

## Impact

*Short-term:* low—will require several months to prepare procedures and guidelines and to inform vendors.

*Medium-term:* high—once the procedures are in place the procurement process will be shortened and vendors that can supply the product will be contracted.

*Long-term:* high—same as medium-term with the process enhancing the hospital's opportunities for volume discounts from vendors.

## Donor Support

None

## Responsibility

Director and Chief Supplies Officer.

## Implementation Steps

- Revise and enforce guidelines for confidentiality of tender information and vendor sources.
- Estimate utilisation of major supply items and plan ordering sufficient quantity to avoid inconveniencing suppliers and enhance the opportunities for volume discounts.
- Develop guidelines for all major suppliers of goods/services to receive notification of proposed hospital tendering.
- Develop evaluation criteria to avoid inordinate weighing of price variations.
- Develop procedures for tenders to be opened in public to demonstrate the impartiality of the hospital's procurement system and to enhance the price competitiveness of suppliers.
- Develop guidelines to expedite the tender process from notification of award to signing of contract to be completed within two weeks.

# STANDARDISATION OF EQUIPMENT PURCHASES

*Remain an independent purchaser of equipment, but attempt to improve purchases by assessing spares availability, training an in-house maintenance crew, and reviewing the abilities of local suppliers to provide service prior to purchasing equipment.*

## Timeframe

*Start:* an inventory should be completed immediately of equipment replacements and repairs. The spares required for each piece of equipment should be catalogued and equipment that is necessary for operations should be repaired immediately.

*Duration:* the equipment procurement, repair and maintenance process will be ongoing.

## Resources

*Personnel:* annually, one bio-medical and one general maintenance employee will be required to inventory equipment and spares.

*Financial:* estimated equipment requirements are as follows (costs are in Kenyan Pounds):

• Bio-medical Workshop	348,400
• Diagnostic Laboratory	290,000
• Radiotherapy	124,000
• Intensive Care Unit	247,000
• Operating Theatres	156,000
• Renal Unit	281,000
• Wards & Clinics	484,000
• Physiotherapy	66,200
• Cardiology	107,000
• X-Ray	1,200,000
• Dental	105,000
• Laundry	400,000
• S.P.U.	100,000
• Microbiology Autoclaves	60,000
• TSSU Autoclaves	75,000
• I.D.H. Boiler	75,000
• I.D.H. Generator	75,000
• Electric Cookers	15,000
• Circuit Breakers	15,000
• Theatre Emergency Lighting	70,000
• General Workshop Equip.	33,000
• IDH Kitchen Equipment	10,000
• Renal Unit Medical Gases	75,000
• Piped Oxygen IDH	10,000
• Doctors Mess Kitchen Equip.	15,000
• E.E.G. Machines (2)	74,000
• Information System	650,000
<b>TOTAL</b>	<b>5,217,600</b>

## Dependence

*Interrelationship:* must determine the sequence of procurement of equipment with department and hospital needs, then may have to wait until sufficient financial resources are available for procurement.

*External:* must negotiate with suppliers and vendors to receive most favorable arrangements.

## Impact

*Short-term:* high—will immediately raise morale of employees, show that Board wants to keep equipment in working order.

*Medium-term:* high—equipment will begin to be installed and employees and doctors will utilise the equipment to better serve the hospital's patients.

*Long-term:* high—the hospital will have equipment that is in working order and will be able to maintain this equipment.

## Donor Support

Board should review the equipment list with donors and request procurement and financial assistance where available.

## Responsibility

Executive Director.

## Implementation Steps

- Establish guidelines for procurement of equipment and spares and policies for equipment donations.
- Develop procedures for purchasing equipment and requesting maintenance.
- Inventory the hospital's departmental capital equipment needs based on workload/utilisation and assess lifespan of existing equipment.
- Develop capital equipment inventory procedures and maintenance requirements for departmental equipment.

# PREVENTIVE MAINTENANCE

Complete all pending repairs concurrently or before embarking on a preventive maintenance programme.  
Develop and implement a programme of preventive maintenance.

## Timeframe

*Start:* immediately inventory equipment requiring repair and establish maintenance schedule.

*Duration:* the maintenance programme will require 18 months to complete and will be an annual programme for all equipment.

## Resources

*Personnel:* four FTE maintenance personnel will be required to inventory equipment and establish the maintenance schedule. Annual maintenance will require four additional maintenance personnel.

*Financial:* estimated building and equipment repairs are as follows (costs are in Kenyan Pounds):

### Equipment

• Diagnostic Laboratory	1,680
• X-Ray	96,000
• Radiotherapy	15,000
• Dental	50,000
• Renal Unit	63,000
• Physiotherapy	6,900
• Wards & Clinics	41,000
• Theatres	17,000
• Medical Gases System	15,000
<b>SUBTOTAL</b>	<b>305,580</b>

### Plant

• Hot water system	50,000
• Maternity theatre air conditioner	35,000
• Cold water storage tanks	12,500
• Kitchen equipment	15,000
• Autoclaves	100,000
• Laundry	10,000
<b>SUBTOTAL</b>	<b>227,500</b>

### Buildings

• Redecorations	500,000
• Roof repairs & Pitching	350,000
• Tower block sanitary	25,000
• Estates Drainage	10,000
• Burglar proofing	15,000
• Roads	100,000
<b>SUBTOTAL</b>	<b>1,000,000</b>

### New Building

• Biomedical Engineering	20,000
• Private Practive Wing	200,000
• Post graduate housing	4,100,000
<b>TOTAL</b>	<b>5,633,080</b>

## Dependence

*Interrelationship:* must determine the schedule for building and equipment repair considering department and hospital needs, then may have to wait until sufficient financial resources are available for procurement.

*External:* must negotiate with suppliers and vendors to receive most favorable arrangements.

## Impact

*Short-term:* high—will immediately raise morale of employees, show that the Board wants to keep building and equipment in working order.

*Medium-term:* high—building and equipment will be repaired and employees and doctors will utilise the equipment to better serve the hospital's patients.

*Long-term:* high—the hospital will have buildings that can facilitate patient needs and equipment that is in working order and will be able to maintain this equipment.

## Donor Support

Board should review the building and equipment repair list with donors and request procurement and financial assistance where available.

## Responsibility

Biomedical and Maintenance Engineering Officer.

## Implementation Steps

- Establish guidelines for building and equipment maintenance and stocking of spare parts.
- Develop procedures for requesting building and equipment maintenance.
- Inventory the hospital's departmental capital equipment needs based on workload/utilisation and assess lifespan of existing equipment.
- Develop building and capital equipment inventory procedures and maintenance requirements for departmental equipment.
- Establish procedure guidelines and criteria for in-service maintenance training.
- Develop guidelines for servicing equipment through vendors/dealers when inhouse expertise is not available.

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## V. EFFICIENCY

## V. EFFICIENCY

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Efficiency may be improved administratively by making better use of personnel and physical resources. In both cases the demand for services should guide allocations. Once overall allocations are made, the scheduling of staff, facilities, and equipment should follow demand to assure efficiency. Applications of this principle to the development of staffing norms and utilisation of the theatre follow.

Clinical efficiency measures the quality and quantity of clinical services produced, against the resources consumed. The more quickly inpatients and outpatients can be moved through a hospital, while maintaining quality standards, the fewer resources are consumed and the more patients the hospital may serve. Efficiency in terms of quality is produced when patients consistently receive treatment that meets medical standards. However, quality control may produce resource savings, as well. Higher-quality care uses more effective medicines and procedures that have demonstrated efficacy and shortened steps.

To provide the best possible health services, KNH must get the most out of the limited resources available to it. Many of the recommended options for action that are discussed under the management and cost sharing areas of the study will improve efficiency. In this section specific recommendations are made on options for improving administration and clinical efficiency. Areas addressed in this chapter that currently reflect clinical and administrative inefficiencies include:

- Staffing Norms
- Capacity in Theatres
- Admissions Department
- Quality Assurance
- Diversion of Inappropriate Demand
- Reduction in excessive or inappropriate use of investigative and therapeutic procedures
- Reduction in average length of stay
- Meal service to mothers accompanying hospitalised children.

Each topic is separately summarised in the text that follows.

# STAFFING NORMS

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*Under take a review of staffing needs and establish staffing norms for all departments, wards and cadres. Where applicable, use the norms prepared by MOH and tested in three district hospitals.*

## Timeframe

*Start:* the Planning Office will begin immediately to gather information about the staffing norms already established in Kenya; within six months the Planning Office will begin to compare existing staffing patterns to those specified by the existing norms; within six months (once demand information begins to be produced by the information function) areas of the hospital where no staffing norms exist will study workloads to establish norms; the norms will be used to allocate personnel for the fiscal year beginning 1st July 1989.

*Duration of Initial Steps:* the gathering of information about existing staffing norms will take two months; the comparison of existing staffing with the norms will take two months; the development of new norms will take three months; the allocation of personnel using the new norms will take two months.

*Iterative Review:* staffing norms set in the first year should be reviewed in six months, then annually.

## Resources

*Personnel:* one-half month FTE in the planning function will be required to gather information about the existing staffing norms; one-half FTE in the planning function will be needed for two months to study existing staffing at KNH to the norms; two FTE in the planning function will be needed for three months, possibly supplemented by a consultant, to work with other departments to use workloads to set initial norms; two FTE in the planning function will be needed for two months to allocate personnel for the next fiscal year; one FTE in the planning function will be needed indefinitely to monitor staffing.

*Financial:* internal salaries for 11.5 FTE person months in the planning function and perhaps two person months of a consultant (est. Ksh 100,000) will be needed in the first year to set up the initial staffing norms; one FTE in the planning function will be needed thereafter.

## Dependence

*Interrelationship:* the full application of the staffing norms will depend on the availability of demand information; the application of the norms to personnel allocations for the fiscal year beginning 1st July 1989 may depend on budget availability (if additional personnel are required)

or the terms and conditions of service of staff (if reductions in staff are required).

*External:* the Kenya Medical Association, other hospitals, or other bodies may have established norms which could be used by KNH.

## Impact

*Short-term:* low—the first year will be spent getting a system set up.

*Medium-term:* high—staffing tied to demand will lower costs and improve quality.

*Long-term:* high—costs will be minimised and quality at its highest.

## Donor Support

May be sought for consultant, if required.

## Responsibility

The Planning Officer will be responsible for assigning staff to the development of norms; the department heads will be responsible for cooperating with the personnel from the planning function in establishing departmental norms; those responsible for deployment of personnel will be responsible for deployment corresponding to demand.

## Implementation Steps

- Gather all existing information on staffing norms used or proposed in Kenya, such as The Kenya Nursing Project 1976-1978, MOH, staffing norms used in the private hospitals, and any tests of staffing norms.
- Review current staffing of all departments and wards.
- Compare current staffing to existing norms, decide appropriate norms for KNH.
- Study workloads in departments and wards where there are no existing norms to establish norms.
- Use norms and demand information to adjust staffing in all units.
- Make deployment of personnel within units a criterion for evaluation of performance.

# CAPACITY IN THEATRES

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*Give priority to supplies and blood needed for surgery, to reduce cancellations and postponements.  
Discipline surgeons who do not appear for scheduled operations and who do not have legitimate excuses.  
Repair the equipment in the theatres, giving priority to that needed to put them into service.  
Allocate theatre time among specialties according to demand.  
Expand human and physical capacity if all the above steps have been taken and there is still excess demand.*

## Timeframe

*Start:* priority to supplies and blood needed for surgery will begin immediately; a theatre users' committee will be strengthened immediately to set up a system to monitor utilisation and wait lists; the system will be in place in two months; assessment of the equipment repair needs will begin immediately; repair may begin in one month; evaluation of the capacity constraints will be done after twelve months.

*Duration of initial steps:* the development of a monitoring system will take two months; assessment of repairs needed will take one month; the repairs will take six months to complete; the evaluation of capacity will take one month.

*Iterative review:* the monitoring system will produce reports monthly; capacity will be reviewed annually.

## Resources

*Personnel:* one representative of each of the surgical specialties and a representative of the nurses who use the operating theatres will make up the committee of users which will spend five days over two months to develop the monitoring system; one-half FTE will be responsible for operating the monitoring system; the committee will meet for two hours monthly to discuss, approve and direct action based on the monitoring report; one FTE for one month will prepare the report evaluating capacity constraints; the committee will hold two extra sessions to direct, discuss, and approve the capacity report; one FTE from maintenance will be needed for one month to assess repair needs; staff or outside repair personnel will be needed to carry out the repairs.

*Financial:* internal salaries for seven FTE person months will be needed in the first year and six FTE person months thereafter for the monitoring function; one FTE of maintenance staff for the assessment and a quantity to be determined by the assessment to perform the repairs, plus parts.

## Dependence

*Interrelationship:* improvement in the supplies and blood supply systems depends on general improvement in supplies.

*External:* none.

## Impact

*Short-term:* medium—any improvement in this high-visibility area will be helpful to KNH's image.

*Medium-term:* high—surgery is an area where KNH can show its excellence and the system will be in place to assure efficiency and high quality.

*Long-term:* high—continued excellence.

## Donor Support

May be needed for parts to repair equipment and for eventual expansion of capacity.

## Responsibility

The Head of Clinical Services will be responsible for calling together the theatre's users' committee; the Planning Officer will be responsible for assigning staff to monitor theatre use; the Maintenance Department will be responsible for assigning staff to assess and make needed repairs.

## Implementation Steps

- The Head of Clinical Services will name the theatre users' committee.
- The committee will develop guidelines to produce more realistic daily theatre schedules.
- The committee will work with the monitor to develop a monthly reporting system based on theatre logs, the matron's notes, and wait lists from the wards.
- The committee will meet monthly to discuss and approve the monitoring reports. Surgeries not completed as scheduled will be investigated and problems will be rectified. Theatre time will be reallocated according to demand.
- The monitor will prepare a report at the end of the year to evaluate whether additional staff or physical facilities are needed to meet demand. The committee will direct the monitor, and discuss and approve the report.

# ADMISSIONS DEPARTMENT

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*Strengthen the admissions function to provide centralised control and coordination of admissions and discharges. Study whether admissions should be totally centralised or partially decentralised. Establish criteria for admissions and to strengthen the tracking system and screening procedures in each of the wards and clinics.*

## Timeframe

*Start:* development of admissions criteria will begin immediately; the senior manager under whom admissions falls will initiate study of the degree of centralisation within one month of starting work at that post; the recommendations of the study will be implemented to strengthen admissions three months from the beginning of the study.

*Duration of Initial Steps:* development of admissions criteria will take one month; the study of centralisation will take two months; the time to implement the study recommendations will be determined by the study.

*Iterative review:* the success of the new admissions process in reducing ALOS will be reviewed and procedures revised after twelve months and each year thereafter.

## Resources

*Personnel:* clinical staff will form committees by speciality to determine admissions criteria; the senior manager under whom falls admissions will work 10 percent time with one FTE staff member for two months to carry out the study; additional personnel (number to be determined by the study) will be needed by the admissions department.

### *Financial:*

Implementation: internal salary for above personnel.

Operating: cost of additional personnel in admissions department.

## Dependence

*Interrelationships:* Senior Manager must be in place to initiate study; information system must work to be able to evaluate performance of admissions in reducing ALOS.

*External:* none.

## Impact

*Short-term:* medium—centralization of admissions will allow patients to be located easily and will begin to affect ALOS.

*Medium-term:* high—as system takes hold ALOS, hence costs, will be reduced dramatically.

*Long-term:* medium—system will routinely keep ALOS near minimum.

## Donor Support:

Not needed.

## Responsibility

Head of Clinical Services who will be responsible for study and subsequent implementation; clinical divisions will be responsible for developing admissions criteria.

## Implementation Steps

- Assign to clinical divisions the task of developing admissions criteria.
- Study advantages and disadvantages of centralisation of admissions, including how admissions are managed by private hospitals, how to centralise patient location information, discharge planning, and information flows needed to monitor bed availability, theatre schedules, and ALOS.
- Implement study results.

# QUALITY ASSURANCE

---

*Make it a policy to have formal criteria and procedures for evaluation of clinical services for the purpose of quality assurance.*

*Enhance the practise of routine mortality reviews where they already exist and establish them where they do not exist. Encourage publishing of protocols for treatment where appropriate.*

## Timeframe

*Start:* representatives of each of the clinical divisions should begin immediately to set up formal procedures for regular quality of care reviews/mortality reviews.

*Duration of Initial Steps:* it will take two months for the clinical divisions to formalise the process of quality reviews.

*Iterative Review:* every year the division chairmen will review the review process to make any needed modifications.

## Resources

*Personnel:* a committee made up of representatives of each clinical specialty will have to work to develop the procedures; once the procedures are in place, review committees in each specialty (probably made up of consultants) will have to review cases on a regular basis (probably monthly); all doctors involved will participate in mortality reviews; some staff time of medical records and management information will be required to provide the review committees with needed files and summary information.

*Financial:* none required.

## Dependence

*Interrelationship:* the ultimate success of the quality assurance program in reaching the highest standards of care depends on KNH's doctors having the materials (e.g., drugs, dressings, equipment, diagnostics) with which to work. In addition, information flows (e.g., ALOS by clinical specialty, non-essential drug consumption rates) will assist review committees in identifying and subsequently correcting anomalies in treatment. The review committees simultaneously will be responsible for developing indicative standard ALOSs for use in steps to reduce ALOS and standard investigative and therapeutic procedures for use in reduction of use of excessive or inappropriate procedures (see below).

*External:* none.

## Impact

*Short-term:* medium—doctors will begin to be more concerned with quality of care; where mortality reviews have not been regularly held the improvement will be

greatest; quality will still be impeded by difficulties in supply and maintenance and by lack of information.

*Medium-term:* high—as supplies and maintenance improve, information systems come on line, and quality assurance program becomes regular quality of care will be near a peak.

*Long-term:* high—after several years of maintaining high quality standards KNH will have attained its desired status as a center of excellence.

## Donor Support

Not needed.

## Responsibility

Overall responsibility for the quality assurance program will rest with the Head of Clinical Services; responsibility for each clinical division's review procedures will rest with the division chairman; the Director will be responsible to see to it that the complementary steps of supplies, maintenance, and information systems improvements are taken.

## Implementation Steps

- The medical staff director will meet with the chairmen of the clinical divisions to set up guidelines for quality reviews.
- The chairmen of the clinical divisions will form committees to set up procedures for regular quality of care reviews.
- The committees will use the guidelines set out by the chairmen to make formal already existing procedures to evaluate quality or to set up new procedures where they do not exist.
- Where appropriate the committees may establish standard protocols for treatment based on those used in medical training by CHS.
- The committees will identify the information needs to carry out the quality reviews.
- Representatives of the committees will meet to designate an overall representative to coordinate with Medical Records the provision of needed information on a regular basis.

# REDUCTION IN EXCESSIVE OR INAPPROPRIATE USE OF INVESTIGATIVE AND THERAPEUTIC PROCEDURES

---

Ask clinical divisions to develop standard packages of investigative and therapeutic procedures used for the most common diagnoses.

Set up procedures to monitor the use of investigations and therapeutics.

Set up investigations and therapeutics ordering procedures that facilitate the ordering of standard packages.

## Timeframe

*Start:* the clinical divisions will develop the standard packages of investigations and therapeutics immediately, as a part of the development of quality assurance procedures; ordering procedures will be developed as soon as the standard packages are set; monitoring procedures will be developed early in the development of the information function which will take place between months three and twelve.

*Duration of Initial Steps:* development of the standard packages will take one month; development of ordering procedures will take one month; development of monitoring procedures will take one month.

*Iterative Review:* the clinical divisions will review the standard packages of investigations and therapeutics annually to update them; ordering and monitoring procedures will be modified to accommodate the changes made by the clinical divisions.

## Resources

*Personnel:* the clinical divisions will include development of the standard packages of investigations and therapeutics in the work of the quality assurance committees; one-half month FTE in the information function will be needed to set up the monitoring system, then one-half FTE will be required to monitor use of investigations; one-half month FTE will be required from each of the laboratory and radiology, and physical therapy to develop the ordering forms and procedures for investigations and therapeutics.

*Financial:* the salary of one-half FTE to monitor the use of investigations and therapeutics.

## Dependence

*Interrelationship:* packages of investigations and therapeutics to be developed by clinical divisions' quality assurance committees; monitoring start up will depend on start up of information function; doctors will be able to count on standard packages being performed when supplies and maintenance systems assure that reagents and film are present and equipment functions.

*External:* none.

## Impact

*Short-term:* low—doctors will become more conscious of standard investigations and therapeutics as packages are developed, ordering forms begin to be used, and quality assurance program begins to function, but monitoring system will only begin to operate and supplies and maintenance systems begin to improve.

*Medium-term:* high—important improvements in quality of care and reductions in costs resulting from the use of investigations and therapeutics are expected as all systems come into operation.

*Long-term:* medium—as all systems are in routine use only minor improvements in quality of care and in reduced costs can be expected.

## Donor Support

Not needed.

## Responsibility

The Head of Clinical Services will be responsible for the development of standard packages of investigations and therapeutics by the clinical divisions; the department heads of the investigations and therapeutic departments will be responsible for the development of the ordering forms and procedures; the Planning Officer will be responsible for setting up the monitoring system.

## Implementation Steps

- The Head of Clinical Services will make development of standard packages of investigative and therapeutic procedures for the most common diagnoses one of the tasks of the clinical divisions' quality assurance committees.
- Set up monitoring of investigations and therapeutics (including how to obtain the information and the format, to whom to send, and the frequency of reports) as one of the first functions to come on line in the information system.
- The departments providing investigations and therapeutics will develop, in consultation with representatives of the clinical divisions and the information function, ordering forms for investigations grouping the standard packages to facilitate their use by doctors.

# REDUCTION IN AVERAGE LENGTH OF STAY

---

*Ask the clinical divisions to develop indicative standard ALOS for groups of diagnostic categories. Monitor ALOS and communicate to clinical divisions significant deviations from the standards. Use the standard ALOSs in discharge planning in the admissions department.*

## Timeframe

*Start:* the clinical divisions will begin work on setting the indicative ALOS standards immediately, in conjunction with the work on quality assurance procedures; monitoring of ALOS will begin as soon as information systems are in place (within three to twelve months); use of ALOSs in discharge planning will begin with the initiation of discharge planning (within six to twelve months).

*Duration of Initial Steps:* setting indicative ALOS standards will take one month.

*Iterative Review:* clinical divisions will review the standard ALOSs annually; monitoring of ALOS will take place continuously, reports (showing performance against standards and citing anomalies) will be produced and distributed to clinical divisions no less than monthly; ALOSs used in discharge planning will be updated as they are modified by the clinical divisions.

## Resources

*Personnel:* the clinical divisions' quality assurance committees will be required to establish the indicative ALOS standards and to use actual ALOS performance information in monitoring quality; approximately one-half FTE person will be required to monitor ALOS in the Hospital's information function; the personnel to be determined in the discharge planning function of the admissions department will use the ALOSs in their work, but no additional personnel will be required by ALOS per se.

*Financial:* the salary of one-half FTE analyst in the information function.

## Dependence

*Interrelationship:* the indicative ALOSs will be developed by the quality assurance committees of the clinical divisions; monitoring of ALOS will depend on the establishment of the information function; discharge planning must be functional to use indicative ALOSs.

*External:* none.

## Impact

*Short-term:* low—doctors will become more conscious of ALOS as they are asked to develop indicative standards, but monitoring and use in discharge planning only just will be getting underway.

*Medium-term:* high—as monitoring and discharge planning are fully functional major reductions in ALOS will be achieved.

*Long-term:* medium—monitoring and discharge planning will become routine so that additional improvements in ALOS will be small.

## Donor Support

Not needed.

## Responsibility

The Head of Clinical Services will be responsible for the development of the indicative ALOS standards by the clinical divisions; the Planning Officer will be responsible for setting up the monitoring of ALOS; the Admissions Officer will be responsible for setting up the use of ALOS standards in discharge planning.

## Implementation Steps

- The Head of Clinical Services will make setting of indicative ALOS standards one of the tasks of the clinical divisions' quality assurance committees. The committees will communicate the standards to all doctors in their divisions.
- Set up monitoring of ALOS (including how to obtain the information and the format, to whom to send, and the frequency of reports) as one of the first functions to come on line in the information system.
- Use ALOS standards to guide planning. Set up procedures for modifications in ALOS standards to be communicated to discharge planning as they are made.

# MEAL SERVICE TO MOTHERS ACCOMPANYING HOSPITALISED CHILDREN

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*Ask the Paediatric Division to categorise which mothers should be admitted with their sick children. Enforce strictly admissions of mothers based on this categorisation.*

## **Timeframe**

*Start:* the Paediatric Division will begin immediately to categorize mothers for admission along with consideration of general admission criteria; enforcement of admissions of mothers based on the categorisation will begin in one month.

*Duration of Initial Steps:* the categorisation will take one month; the enforcement will be indefinite.

## **Resources**

*Personnel:* the members of the Paediatric Divisions will spend some time deciding the categorisation; the admissions department will use the categorisation as a part of its regular work.

*Financial:* none.

## **Dependence**

*Interrelationship:* categorisation will take place with development of admissions criteria.

*External:* none.

## **Impact**

*Short-term:* medium—will reduce costs and will indicate to staff and public that the Board intends to improve discipline.

*Medium-term:* high—will become regular practice of admissions.

*Long-term:* high—regular practice.

## **Donor Support**

None needed

## **Responsibility**

Chairman of the Paediatric Division will be responsible for having the categorisation developed; head of Admission Department will be responsible for the enforcement of the categorisation.

## **Implementation Steps**

- The Chairman of the Paediatric Division will make development of the categorisation of mothers accompanying children (breast-feeding mothers is suggested) one of the tasks of developing admissions criteria.
- The head of the Admissions Department will apply the categorisation to admissions of children and mothers.

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**VI. FUNDING FOR KNH SERVICES**

## **VI. FUNDING FOR KNH SERVICES**

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The strategies for generating revenues through prepayment plans or arrangements with insurers or employers may provide, over the longer term, stable sources of revenue for KNH. These strategies are not incompatible with the social welfare objectives of KNH or its perceived role as a referral institution. While such strategies cannot be implemented before management reforms are completed, they should be considered as part of KNH's strategic planning efforts.

The recommended options cover the following topics:

- Cost Sharing
- Strategies for Generating Revenue in Addition to Fees.

Each topic is separately summarised in the text that follows.

# COST SHARING

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*Set cost recovery policy and cost recovery goals.  
Prepare consumers for implementation of policy.  
Set policy and procedures for allocation of costs shared with CHS and MIC.*

## Timeframe

*Start:* the Planning Office should immediately begin to write the cost recovery policy, set goals, and design an exemption system; once this is completed, the finance office will begin work on strengthening the financial accounting and information systems to accommodate the different methods of fee collection and the Planning Office will set up a mechanism for coordinating fees with other public sector providers; preparation of consumers will begin once the cost recovery system is in place; development of cost allocation policy and procedures will begin once financial systems are operational.

*Duration of Initial Steps:* development and approval of the cost recovery policy, goals, and exemption system will take two months; development of financial monitoring systems and mechanisms for coordinating fees with other public sector providers will take three months; preparation of consumers will take two months; development of cost allocation policy and procedures will take one month.

*Iterative Review:* monitoring and evaluation of cost recovery performance will take place on a regular basis, as will evaluation of administrative aspects of the fee collection system.

## Resources

*Personnel:* One employee from the Planning Office and one from the financial office will have to work full-time on implementation. Operation will require a full-time administrator and some time of support staff in the Planning office, as well as several full-time accounting clerks, collection, and billing staff. The Director and Chairman of the Board will be required to review and approve policies and participate in strategy to inform consumers.

*Financial:* Cost of hiring consultants.

## Dependence

*Interrelationships:* Planning Office must be operational. Financial accounting and management information system must be working to assure monitoring and evaluation.

*External:* none.

## Impact

*Short-term:* medium—resistance to fees will be reduced through consumer awareness campaign. Cost recovery performance will increase through fee collection.

*Medium-term:* high—cost recovery performance will continue to improve as monitoring and evaluation activities reveal areas for improvement in the administration of the fee collection system and fee schedules are readjusted. Exemption policies will be redefined as well, closing loop-holes and ensuring that the cost of such policies is minimized without denying access to needy patients. Allocation of shared costs with CHS and MIC will increase cost recovery performance as well.

*Long-term:* high—same as medium-term.

## Donor Support

To pay for consultant services.

## Responsibility

The Planning Office will be responsible for development and review of policies, procedures, and fee schedules. Monitoring and evaluation of the cost sharing systems and cost recovery performance will be the responsibility of the financial office.

## **COST SHARING**

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*(continued)*

### **Implementation Steps**

- Set up a cost recovery policy in writing.
- Determine cost recovery goals (i.e. desired level of cost recovery) based on fee schedule.
- Set up monitoring and evaluation system, including the monitoring of costs of services, to be compared with charges.
- Evaluate administrative aspects of fee collection systems from efficiency and financial control viewpoints, on a regular basis.
- Design an exemption system to assure services for the poor, including the establishment of exemption qualification criteria and screening procedures.
- Set up a mechanism for coordinating fees with other Nairobi area public service providers, to assure that KNH charges fees that are the same or higher.
- Begin strategy for preparing consumers to accept payment of fees for health services by arranging for statements to be made by key politicians on the acceptability of the new charges.
- Issue a clarification bulletin to inform the population about the cost sharing charges.
- Set policy and procedures for allocation of costs shared with CHS and MIC.

# STRATEGIES FOR GENERATING REVENUE IN ADDITION TO FEES

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*Seek contracts with employers and pursue arrangements with insurers or other pre-paid schemes.  
Earn revenue through office rents.*

## Timeframe

*Start:* once the KNH cost recovery policy through fee collection has been in operation for one year, the planning office should begin to plan for future contracts with employers and arrangements with insurers or other pre-paid schemes; after designing benefits packages and evaluating costs, the planning office should begin marketing contracts to employers, pursuing arrangements with insurers, and studying the feasibility of charging rents and other fees to doctors with private practices utilising Hospital offices and services; following feasibility study, the planning office should develop policies and procedures for charging rents and fees to private-practising doctors.

*Duration of Initial Steps:* design of benefits packages and cost analysis will take three months; marketing of contracts and other arrangements will take six months; feasibility study of charging rents and fees to doctors with private practices will take one month; development of policies and procedures will take one month.

*Iterative Review:* it will be essential to conduct regular cost and utilisation analysis for employer contracts and pre-paid arrangements.

## Resources

*Personnel:* One half FTE from the Planning Office to work on benefits design and marketing; one half FTE to perform cost analysis, feasibility study, and develop policies and procedures for administering doctor rent/fees strategy.

*Financial:* none.

## Dependence

*Interrelationships:* the success of these revenue generation schemes is dependent on the existence of an excellent system. Setting of rent/fees for private-practising doctors is dependent upon the establishment of a Private Practice Plan allowing for the private practice of medicine within the Hospital.

*External:* none.

## Impact

*Short-term:* low—some additional revenue will be generated through contracts and other arrangements, but because it is difficult to estimate costs and utilisation correctly, the Hospital should not expect to make profits right away. Doctors with private practices on the premises of the Hospital will become more aware of the cost of using sophisticated Hospital services and will reduce unnecessary consumption.

*Medium-term:* medium—consumption will have to be carefully monitored and fees recalculated on the basis of past consumption. With these readjustments, these revenue-generating services should become more profitable.

*Long-term:* medium—the Hospital should beware that as employers become more experienced with contracting for health care benefits for their employees, they will try to get better deals from the Hospital (more services at lower cost) by threatening to go to private hospitals.

## Donor Support

Not needed.

## Responsibility

Planning Office for development and review of policies and procedures and monitoring of costs and utilization.  
Financial office for billing and production of financial data.

# STRATEGIES FOR GENERATING REVENUE IN ADDITION TO FEES

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*(continued)*

## **Implementation Steps**

- Develop prototype benefits packages in different price ranges and for different size companies, to be offered to employers.
- Evaluate costs of providing these benefit packages, given historical and predicted morbidity and utilisation data, costs of inputs, and estimates of critical parameters such as inflation.
- Begin marketing to employers.
- Pursue arrangements with insurers or other prepayment schemes for groups such as cooperatives and employee organisations.
- Study feasibility of earning revenue through office rents or fees paid by Doctors for seeing private patients in offices on the Hospital premises, and for use of highly specialized diagnostic or treatment technology.
- Develop policies and procedures for implementing this strategy.

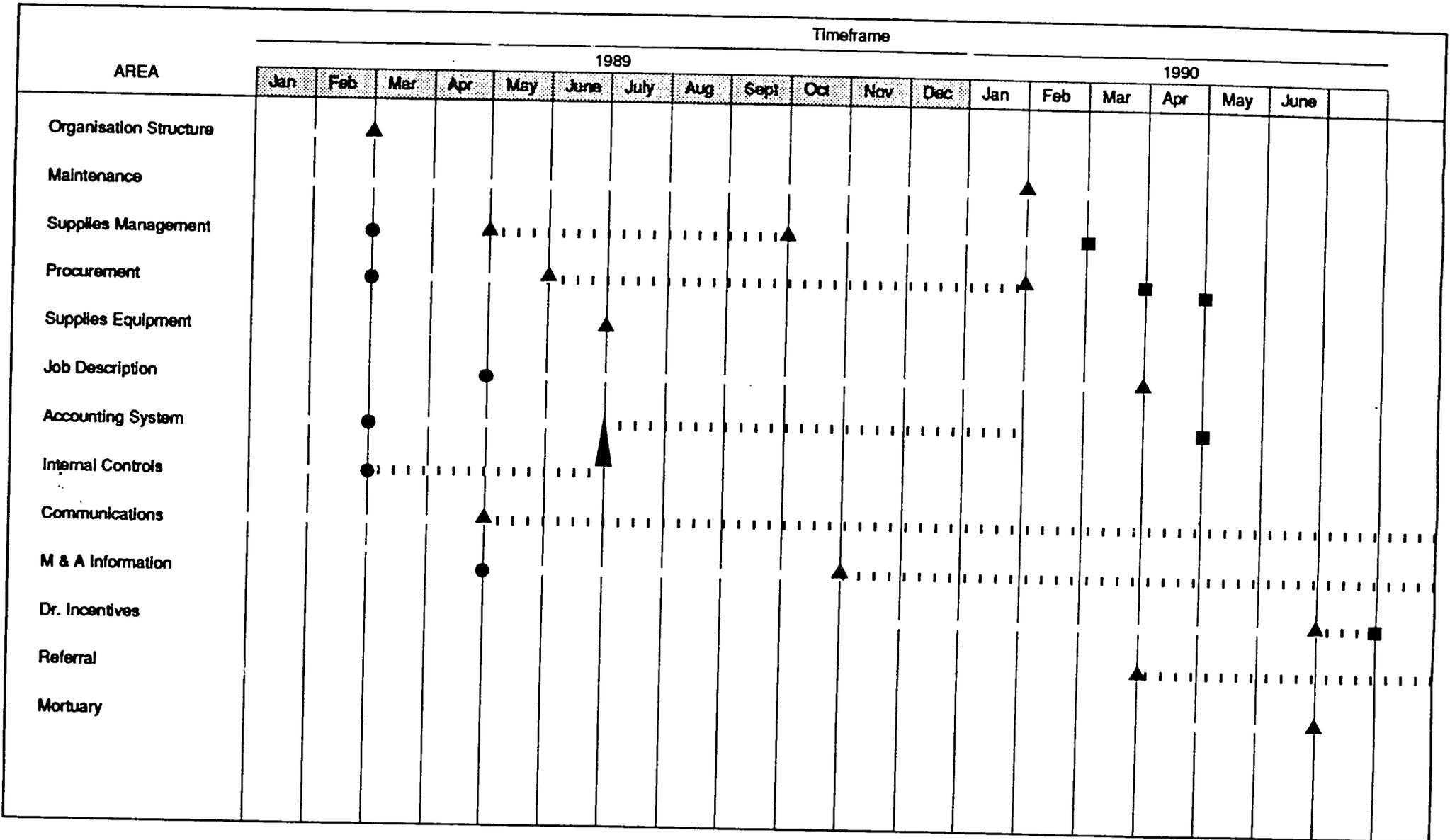
## **VII. TIMEFRAME FOR MASTER PLAN IMPLEMENTATION**

## **VII. TIMEFRAME FOR MASTER PLAN IMPLEMENTATION**

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Interrelationships, decision points, and implementation timeframe for each option are presented in the following chart.

# KENYATTA NATIONAL HOSPITAL BOARD GUIDE TO MASTER PLAN IMPLEMENTATION



- Interrelationship
- ▲ Decision Point
- Completion
- Review, On-going Observation Period
- Development/Implementation Cycle

**APPENDIX A**

## Kenyatta National Hospital Study

### Scope of Work

The Study Team was provided with a scope of work to guide its work. The workscope provided was sufficiently broad to allow for interpretation in the design and conduct of the study. The interpretation given to the workscope by the Team drove the methods used and the outputs. The Scope of Work was motivated by the change in management of the Hospital from the Ministry of Health (MOH) to the KNH Board. The Board was given the mandate and power to address the problems of organisational complexity, centralised management and inefficiency. An agenda for reform had begun to be defined before the study. It covered the areas of managerial, organisational, and administrative modalities to improve efficiency and consideration of cost-sharing programs to reduce net costs and improve efficiency, as well. Decentralisation of administration was cited as one of the avenues the Board wished to pursue in this regard. The scope of work built on this agenda.

The scope of work had three parts; 1) management-structure options; 2) efficiency improvements; and 3) fees (or cost sharing) for selected services. Study results in each of the three areas were to provide the Board with information for decision making. A brief summary of the scope of work treatment of each area follows.

The management-structure portion of the study was to identify management, organisational, and administrative options to improve efficiency at KNH. This included how units are managed and run; interrelationships among units; relations with MOH, the medical, nursing, and medical-technologist training institutions (CHS and CHP), and the medical research unit (KEMRI); and budgeting, staffing, personnel deployment, reporting, and information practices. It also was to analyse the mix of services actually offered by KNH versus the purpose stated in the Legal Notice creating the State Corporation.

The efficiency portion of the study was to evaluate actual efficiency in delivery of services to allow the prioritisation of efforts for improvement. This included identification of inputs used and their costs to produce a representative set of services and comparison of those costs within the hospital and with other hospitals. Output of this work was to be used to formulate recommendations on efficiency-improvement steps, such as changes in input mix, services offered, administrative and budgetary authority, non-medical procedures, administrative relationships with other institutions, and the referral system, as well as complementary actions needed elsewhere in the health system.

The cost-sharing portion of the study was to examine options for the application of fees for selected services. Its objectives were to demonstrate the revenue that would be raised from charging selected fees; to investigate possible efficiency improvements resulting from charging fees; and to examine the effect of fees on the costs borne by users of services.

## I. Scope of Work Interpretation

To interpret the workscope and render it operational, the Team took four steps: 1) preparation of a briefing paper; 2) problem identification; 3) problem classification; and 4) problem prioritisation. The preparation of the briefing paper allowed the Team's management specialists to get an overview of KNH's management problems to focus the study. The process of problem identification, classification, and prioritisation gave greater specificity to the broad terms of the scope of work.

The briefing paper was prepared based on information obtained by interviewing a cross-section of knowledgeable observers. These observers included KNH Director Dr. Naftali Agata; the managers of Aga Khan, M. P. Shah, and Nairobi Hospital; and Dr. David Sebina, the World Bank's regional health representative. The results of the interviews suggested four broad problem areas at KNH:

- o Scope of care provided was too broad
- o Absence of management tools for effective control of resources
- o Low staff morale
- o Ineffective financial control

These problem areas suggested the following objectives for the Study:

- o Delineation of success requirements for KNH to achieve its mission.
- o Identification of areas for productivity and efficiency improvements and the rational use of resources.
- o Definition of an organisational framework and management accountability and control systems to improve service delivery, quality of care, and cost effectiveness

The next three steps in interpretation of the scope of work, problem identification, classification, and prioritisation, were carried out during a week-long team planning retreat. The week of November 30 to December 5, 1987 was spent away from the Hospital, in Mombasa, to plan the study and to build the group into a cohesive unit.

Work began with the division of the Team into two groups to "brainstorm" on the problems faced by KNH in the areas of management and efficiency. The identified problems were classified and grouped to be able to address them manageably.

Once problems had been identified and classified, the team set priorities for its work. The volume and scope of the problems was more than could be handled given the Team's human and time resources (ten working weeks remained following the study planning week). The criteria used to set priorities and their weightings were:

1. Acuteness and magnitude of the consequences of the problem (3 points)
2. Ability to address the problem within the short time frame (ten working weeks) and with the expertise present on the Team (2 points)
3. Ability to develop practical tools for implementation of solutions (1 point)

The nine problem clusters fell into four levels of priority: four in the first group, one each in the second and third groups, and three in the fourth group:

First Priority:

- o Ineffective Clinical Control
- o Inadequate Financial Management
- o Lack of Information for Decision Making
- o Inadequate Physical Resource Management

Second Priority:

- o Inefficient Use of Personnel

Third Priority:

- o Absence of Appropriate Organisational Structure

Fourth Priority:

- o Lack of Mission Clarity
- o Inadequate Communication
- o Inadequate Staff Welfare Arrangements

The Team gave its greatest attention in terms of breadth and depth to the first and second priorities. The third and fourth priorities were not ignored, all were treated in some way by the study.

A presentation of the identified problems and the priority to be given to them was made to the study's clients, KNH Board Chairman Muriuki and Linda Lankenau of USAID. They were asked to comment on the priorities

set by the Team. Chairman Muriuki responded favourably to the priority ranking and added some points of emphasis. He underlined the importance of reaching practical, implementable recommendations to get things working at the Hospital and stressed his desire to make KNH an outstanding example for the health system of Kenya. Ms. Lankenau stated that the rest of the Government of Kenya (GOK) health system was looking for a reformed KNH to be a model.

## II. Methods

The Team followed a systematic approach to addressing the problems identified by the interpretation of the scope of work. In addition, the Team sought to build a consensus with the KNH Board throughout. Starting from the prioritised list of problem clusters, the Study followed a many-step process:

- o Hypothesis/Solution Development
- o Data-collection Instrument Development and Workplan Preparation
- o Testing and Revision of Instruments (Consensus Point)
- o Enumerator Training and Data Collection
- o Data Analysis
- o Development of Preliminary Recommendations
- o Testing Preliminary Recommendations (Consensus Point)
- o Option Development and Analysis of Strengths and Weaknesses
- o Implementation Steps

Consensus was built through the involvement of the Board and the Director throughout the study process. Dr. Agata worked with the Team on study planning; Mr. Muriuki endorsed problems and priorities; briefings were provided on Study progress at the time of each of the three reports; and the interim report provided the Board with a preview of the Team's preliminary recommendations so that it could provide feedback before the end of the Study.

Each subgroup worked through each of its assigned problem clusters to identify hypotheses about the problems and possible solutions to be tested through data collection. More than forty different data sources were used by the Team, including patients, staff, and management of KNH and comparison facilities; medical records; and officials of related institutions. Data were collected through interviews, record reviews, observations, and review of documents. Team members, six nurse enumerators, and 36 ordinary enumerators gathered different types of data over a period of six and one-half weeks.

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Data analysis was both quantitative and qualitative. No sophisticated statistical techniques were used, mainly description statistics and cross-tabulations.

The Team formulated options to each of the preliminary recommendations presented in the interim report for this report. The Team then analyzed the strengths and weaknesses of each option. At least two options and their identified strengths and weaknesses were retained in each area to provide the Board with a choice of ways to address every problem and some grounds on which to make the choice. For each of the recommended options steps for implementation were laid out to serve as basic scopes of work for implementation.