



REPUBLIC OF KENYA

MINISTRY OF HEALTH



**KENYATTA NATIONAL HOSPITAL  
ANNUAL REPORT  
1979**

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**KENYATTA NATIONAL HOSPITAL**  
**ANNUAL REPORT**  
**1979**

KENYA NATIONAL ASSEMBLY  
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# KENYATTA NATIONAL HOSPITAL

## ANNUAL REPORT 1979

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## PREFACE

Annual reports are essential for all organizations. They are vital in planning and assessing progress. It is hoped that this report will form a basis for future reports and that there will no longer be any prolonged lapses in their preparations. The last annual report was prepared in 1976. Much effort went into the collection of data and preparation of this report covering 1979, special thanks go to all who willingly provided the information, and to the secretary, Ruth Kamau, who so painstakingly typed the document. I thank the Government Printer for his assistance.

Dr. M. L. ODUORI,  
*Director.*

September, 1981.

## PART 1—GENERAL

### Introduction

Kenyatta National Hospital comprises the main hospital, infectious diseases hospital, Orthopaedic Unit Kabete, Kamiti Prison Hospital and twenty-eight dispensaries as listed in the out-patient chapter of this Report.

Kenyatta National Hospital has a national and local role to play in meeting its objectives of providing:

- (i) Specialized services to patients referred from other hospitals in the Republic.
- (ii) Providing training facilities for medical personnel as directed by the Kenya Government through the Ministry of Health.
- (iii) To function as a district and provincial hospital for the Nairobi area. It goes further to run dispensaries for Government institutions. The Nairobi City Council provides similar services in the residential areas of the City of Nairobi. This is not duplication of services, because it serves to reduce congestion in the general out-patient clinics in Kenyatta National Hospital.

Owing to the facilities available at Kenyatta National Hospital and their lack in some of the neighbouring countries, K.N.H. acts as a referral hospital for them too. In 1979 patients were received for various specialized treatments from Tanzania, Uganda, Malawi, Zambia, Ethiopia, Sudan, Seychelles and Lesotho, to mention a few.

The bed capacity of K.N.H. was 1,556 distributed as under:

(a) Main hospital wards 1 to 4 (paediatric wards) ...	100 beds
(b) Wards 5 to 12 adult medical wards ... ..	200 beds
(c) Wards 13 to 25 surgical wards including radiotherapy wards ... ..	351 beds
(d) Rahimtulla wing middle floor ... ..	43 beds
(e) Rahimtulla wing ground floor ... ..	40 beds
(f) Casualty recovery ward ... ..	15 beds
(g) Adult Observation ward ... ..	40 beds
(h) Paediatric Observation ward ... ..	50 beds
(i) Intensive Care ward ... ..	22 beds
(j) Kamiti Prison Hospital ... ..	195 beds
(k) Burns Unit ... ..	19 beds

(l) Infectious Diseases Hospital	...	...	...	...	237 beds
(m) Orthopaedic Unit, Kabete	...	...	...	...	120 beds
(n) Maternity Unit	...	...	...	...	88 beds

During the middle of the year Spinal Injuries Unit gained its independence from Kenyatta National Hospital. However, close working relations exist and the nursing staff are to a certain degree managed from Kenyatta National Hospital.

### **The Manpower Resources**

It will be noted that the Government employ full time and part time clinicians as well as non-clinical staff. The Government medical staff manages the hospital with help from the medical school and medical training centre. The medical school plays a vital role in the provision of highly qualified staff who undertake clinical work in wards and various clinics. The medical training centre provide semi-skilled manpower in the form of students in various faculties. The two institutions contributed to the running of the hospital in the following manner :

- (a) The Medical School—Doctors, Pharmacists, Dentists.
- (b) The Medical Training Centre—Student Nurses, Student Clinical Officers.

The following categories of staff worked in the hospital :

#### **Kenyatta National Hospital Staffing Return—1979**

##### **Designation**

- Chief Administrator.
- Administrative Secretary.
- Hospital Secretaries.
- Executive Officers.
- Personnel Officer and Personnel Assistants.
- Accountant and Accounts Assistants.
- Receptionist.
- Medical Records Officers and Technicians.
- Catering Manager, Cateresses and Housekeepers, Cooks.
- Mortuary Supervisor and Attendants.
- Public Health Officer and Technicians.
- Supplies Officers and Storemen.
- Doctors, Dentists, Nurses, Clinical Officers.
- Pharmacists and Pharmaceutical Technologists.
- Radiophysicists.
- Radiographers.
- Radiographic Film Processors.
- Physiotherapists.

Occupational Therapists.  
Security Officer and Security Staff.  
Speech Therapists.  
Drivers.  
Tailors.  
Secretaries, Shorthand Typists, Typists.  
Telephone Operators.  
Social Workers.  
Nutrition Field Workers.  
Clerical Officers.  
Boiler Artisans.  
Medical Electronic Technicians.  
Subordinate Staff.

### **Administration**

The pattern in administering the Government hospitals in Kenya of which K.N.H. is not exceptional is to ensure that public funds are properly accounted for and to seek the maximum benefit from such funds. This has led the Ministry headquarters to increase direct intervention, particularly in areas of procurement and development operations as practically seen in composition of Ministerial Tender Board and the equipping of Phase III of the hospital. The Permanent Secretary chairing the hospital management committee reflected the direct involvement of day-to-day running of the hospital.

The hospital is on a democratic manner with very close consultation at the top, i.e. between the Chief Administrator the Administrative Secretary and Deputy Chief Nursing Officer. This goes down at every level with heads of departments and the chiefs of all clinical departments both Government and university. Several committees exist that bring together people with common interests, e.g. theatre users, outpatient and casualty committees, drugs and equipment committees, etc.

The Medical Advisory Committee brings together all clinical and diagnostic disciplines of the hospital. It is composed of all Government and university consultants, the administration and representatives of the junior doctors. It meets on the last Thursday of every month, and discusses all aspects of the running of the hospital. Decisions arrived at by this committee should be final as far as the running of the hospital is concerned had the hospital been autonomous of the Ministry of Health. As this committee is composed of highly intelligent, reasonable and mature people who have wide experience in the hospital work and have the interest of the country at heart, its decisions should be implemented and should not be considered to be mere advisory views.

## FINANCE

This has been a year of appraisal—a year of looking inwards to improve the quality of service and the speed in which it is administered to all patients in all areas of the hospital. In order to achieve this goal, the hospital must be allocated with sufficient funds to run these services. In this hospital we operate two funds:

### Development Expenditure

Every current financial year, we are supplied with accounts working codes for our general information but the expenditure on all development projects is controlled by the Deputy Secretary at the Ministry of Health headquarters. We are however warned very strictly not to attempt to incur expenditure without a specific departmental warrant authorizing us to commit funds having been issued to us. The hospital is therefore not in a position to give annual statements of expenditure.

### Recurrent Expenditure

Funds are allocated during a financial year which runs from July to 30th June as opposed to a calendar year. The financial year in question runs from 1st July, 1979, to 30th June, 1980. Our statement of expenditure is presented later in this report.

Votes in recurrent expenditure are controlled as follows:—

1. Principal Finance and Establishment Officer ... M.O.H. Hqrs.
2. Chief Personnel Officer ... .. M.O.H. Hqrs.
3. Chief Nursing Officer ... .. M.O.H. Hqrs.
4. Permanent Secretary, Ministry of Works.
5. Director, Kenyatta National Hospital.

This Report will only deal with votes controlled by the Director, Kenyatta National Hospital. The Director, Kenyatta National Hospital controls the following votes:

- 080—Passage and Leave Travelling Expenses.
- 084—Leave Travel Expenses Local.
- 100—Transport Operating and Maintenance.
- 110—Travelling and Accommodation Expenses.
- 120—Postal and Telecommunication Expenses.
- 140—Electricity Water and Conservancy.
- 150—Medical Stores, Sera and Vaccine.
- 155—X-ray Supplies.
- 161—Patients' Food.
- 165—Doctors' and Nurses' Food.
- 220—Medical Equipment.
- 230—Office Equipment.
- 250—Maintenance of Equipment.

The Director is also responsible for collection of fees under :  
600—Appropriations in Aid.

The year 1979/80 was a difficult year in that we experienced :

- (a) Shortage of food stuff.
- (b) Shortage of equipment.
- (c) Escalating prices on all commodities.
- (d) Price increases on fuel, electricity, water, office equipments, medical equipment.
- (e) Unpredicted increase of postal and telecommunications.

As a result, the hospital overspent in almost all votes. Another reason for over-expenditure is that the amount we estimated is not what was allocated to us.

To enable our accounts department to function effectively, we would like to see :

- (i) Decentralization of processing of K.N.H. payment vouchers.
- (ii) Decentralization of M.T.B for K.N.H. only.
- (iii) More power to purchase essential drugs, medical equipments including X-rays common user items when we cannot get them from official source of supply.
- (iv) Funds now being given to Permanent Secretary, Ministry of Works for Maintenance, should be given to the Director, Kenyatta National Hospital, to control and all Ministry of Works staff in Kenyatta National Hospital Maintenance Unit should be under the control of the Director, Kenyatta National Hospital.

The year under review has once again shown that the achievements of the accounts department was as a result of a combined and dedicated efforts of all members of staff in the accounts department under the leadership of the Accountant-in-Charge.

(f) *Buildings*.—It had been reported earlier that the improvement and expansion of K.N.H. was to be developed in phases starting with Phase I and ending in Phase III. Phase III which is not yet completed started in 1975 and was expected to be completed in 1979. Owing to unavoidable reasons the original contractor terminated services and the work did not move as expected. On 16th February, 1979, another contractor was found and recommenced the construction which is expected to be completed on 17th October, 1980. The work went on steadily throughout the year.

## **PART II—SUPPORTING SERVICES**

### **Catering Department**

#### **General**

The report covers all sections of the Catering Department in Kenyatta National Hospital complex plus services rendered to students of the Medical Training Centre in the dining hall.

#### **Staffing**

The department was run by a Senior House Keeper assisted by ten other catering officers. It was during the latter part of this year that the post of Catering Manager was filled. A major reshuffle of the staff in the department was made and a large loss of items was discovered at the Postgraduate Nurses' Home.

#### **Improvements**

Work continued in the Main Central Kitchen to provide additional facilities but this was not completed. Many of the already installed equipment had broken down, e.g. steam cookers, potato peelers, mincing machines, etc.

#### **Finances**

While other departments overspent we lived within our means. Considerable amount of supplies were condemned by the Public Health Section of the hospital.

#### **Conclusion**

The years service was a success but the relationship between Medical Training Centre and Kenyatta National Hospital remained a major problem.

#### **Nutrition and Dietetics**

The year 1979 was a difficult year for the section particularly regarding shortage of staff. The only dietitian we had in the hospital, Mrs. G. A. Amsi, who was also in charge of the section resigned in May thus leaving one nutritionist and four nutrition field workers to carry out the work of therapeutic diets both in the wards and in the outpatient department, and nutrition education throughout the hospital.

The position of staff improved slightly towards the end of the year when a newly appointed Dietician Miss B. Mehta was posted to the unit.

#### **Services**

With the four nutrition field workers we were able to cover Paediatric Filter Clinic, I.D.H. Paediatric Demonstration Unit, Paediatric Observation Ward, Paediatric Wards and Kamiti Dispensary.

1. *Paediatric Clinic.*—The protein calorie malnutrition clinic was held twice a week throughout the year in paediatric demonstration unit and once a week in I.D.H. The nutrition field workers worked hard, trying to teach mothers, the importance and dangers of the weaning period, and proper weaning foods. In all the areas, the teaching was done through talks and demonstrations, individual counselling and home visits. We were, however, faced with acute shortages of dried skimmed milk and so had nothing to give to the mothers of the malnourished children to go home with.

2. *Diabetic Clinic.*—The nutritionist and dietician were available in the diabetic clinic once a week throughout the year. Altogether we attended 300 diabetic patients in the clinics alone. This number excludes the number we attended to in the wards during routine ward rounds.

3. *Other Clinics.*—During the same period patients with different dietary problems were referred to us from medical, surgical, and special paediatric clinics. We advised about 100 patients in this group. Those who were overweight, were weighed each time they came to the clinic and re-advised according to their progress. At the same time we prepared therapeutic diet sheets for special diets which were ordered by the doctors through us to the kitchen.

### Teaching

During the year under review, we participated in the teaching of Registered Public Health Nurse students at the Medical Training Centre, by giving them lectures on nutrition and therapeutic diets. This was in addition to our routine duties in the hospital and was quite difficult to find in particularly at the time when only a nutritionist or a dietician was available. In spite of the heavy load, the staff served patients as best as they could.

### Number of Patients seen in the Clinics during the Year 1979

#### *Paediatric Demonstration Unit (PCM Clinic)*

Kwashiorkor (New Cases)	...	...	...	...	806
Marasmus (New Cases)	...	...	...	...	104
Reattendances	...	...	...	...	2,171

#### Diabetic Clinic

New cases and reattendance (Diet Advice)	...	300
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### Central Sterilization Supply Department

The department is large with responsibility for providing sterilized materials, and ensuring proper care and maintenance of surgical instruments.

The department developed, standardized and initiated services by producing aseptic procedure sets for use in all wards, outpatient clinics, casualty and both casualty and outpatient surgical theatres.

C.S.S.D. service is based on top up system, the sets plus supplement packs are delivered to the users points daily in the morning. Special purposes designed trolleys are used for distribution. There are trolleys for sterile items and those for used items.

The department has been helping other hospitals requiring to start their C.S.S.D. by giving three months in-service courses. Machakos Hospital, Mau Hospital, Chogoria Mission Hospital, Kajiado District Hospital to mention a few have benefited this way. During the year, K.R.N. students were given two weeks practical experience in the department. Pharmacy students from Nairobi University had one month practical training while the staff from K.N.H. adult observation ward, Paediatric Observation Ward, Burns Unit, Intensive Care Unit, I.D.H. and Orthopaedic Unit, Kabete, had seven weeks orientation programme in this department.

The department saw some alterations to the rooms which created an extra store for instruments, a reasonable supplementary packing area, and gloves processing area. Also an office and staff room were created to the satisfaction of the staff.

### **Domestic Services**

Although there is a department referred to as domestic services department in this hospital it must be borne in mind that its personnel is all subordinate staff who are distributed in the wards, compounds and estates, administration offices, clinics, stores and other areas. The department is charged with the duty of cleaning the institution, tendering flowers and hedges and cutting of the grass.

There is a night shift which cleans the hospital clinics corridors and all public places as well as toilets to keep them ready for members of the public during the day.

The year was a difficult one in getting the grass under control since the six lawn mowers were too old and out of use for most of the time. Unless the hospital purchases new machines the situation will not improve. Flowers were poorly looked after, some died, while hedges were ruined by human traffic. Lawns were made untidy by people failing to follow paths and went across them. The nursery was kept well with a variety of flowers and trees being grown. However, this nursery did not serve K.N.H. although it was situated in K.N.H. compound.

### **Laundry Services**

This is a very large and modern department designed to cope with all laundry for K.N.H. and the tower block when completed. It is all automated and manual work is only called for in the last stages of folding and loading into trolleys for clean linen to go back to the wards and other departments.

The machines continued to breakdown through-out the year. Two washing machines had been out of order for months. M.O.W. had been pressing to

get a contractor to be maintaining the laundry machines as there were not skilled personnel in the M.O.W. maintenance unit.

The transport department had let down the department. The vehicle allocated to laundry had been in the garage most of the time and it is unsuitable and incapable of handling laundry work. Heavy duty trolleys for ferrying linen had not been repaired for months and unless the management repairs or replaces them the department would be crippled.

The tailoring department had nine electric serving machines and six ordinary ones located at the main hospital and two at I.D.H. one electrical and one ordinary whereas Kabete had one electrical machine.

The department was charged with the responsibility of repairing all hospital linen and some patients uniforms and making uniforms for enrolled nurses, and subordinate staff. During the year the department repaired 224,432 pieces of patients linen and a total of 10,239 pieces of new hospital uniforms and 2,480 pairs of subordinate staff uniforms and 640 pairs of enrolled nurses uniforms.

With the completion of the ward tower more will be expected of this department. The department requires bigger space as the present one is far too small. The department had made it cheaper to provide uniform to our staff. Had we gone to private companies, labour charge alone for subordinate staff and enrolled nurses uniforms could have been over 700,000 shillings at the rate of Sh. 160 per pair.

It will in the long run be cheaper to have the uniform of the whole Ministry of Health in Nairobi area to be made from one place. At the same time terms and salary structure of tailoring staff should be reviewed with a view to establish—a career which could attract and retain competent personnel.

### **Maintenance of Buildings and Equipments**

Ministry of Works remained the main maintenance unit of hospital buildings and fixed equipments. The hospital experienced peeling of the finishing coating of the outer walls of Phase II buildings. The problem was noticed too late to get the contractor to repeat the work and the hospital is left with unsatisfactory buildings. The walls of casualty, filter clinics and x-ray are made of glass which breaks from time to time and they were not replaced most of the time. Efforts were exhausted to repair some areas in x-ray department during the year thus increasing the chances of thefts. The autoclaves in both pharmacy and laboratories were not repaired throughout the year, much to the dissatisfaction of users.

Problems were experienced in procuring spare parts of most fixed equipments and were to be purchased by the hospital through crown agents by the hospital to control the situation. The Officer in charge of the maintenance unit at K.N.H. complained to his immediate officer, i.e. the Provincial Works

Officer that his efforts in finding sources of spares of good quality and providing specifications to his office were frustrated by junior officers who diverted and purchased items of poor quality and of wrong specifications thus delaying work for long periods. The provincial office did not appear to be hospital oriented and treated urgent hospital spares in normal manner. Unless the maintenance unit is 100 per cent answerable to Chief Administrator K.N.H. maintenance will never be effective.

This officer also remarked that M.O.W. lacked skilled manpower to cope in most fields of the hospital and unless the recruitment of competent personnel is done, hospital equipment will remain unattended to.

Shortage of water was continually experienced owing to the low pressure in City Council mains. Unless the hospital gets its own main or bore-hole water, Phase III of the hospital will have a lot of problems caused by water shortages. Repairing and replacing of P.V.C. tiles of kitchen and toilets in catering department and students kitchen were needed. It was recommended that these be replaced with terrazo.

#### **Medical Records**

The responsibilities of the medical records department are that of offering the service of communication and record with specific duties of:

- (a) Receiving and scheduling of patients.
- (b) Registration and initiating medical records for out- and in-patients.
- (c) Storing of medical records.
- (d) Organizing the appointments for consultants and producing of medical records when required.
- (e) Provision of records for research.
- (f) Organizing courses for medical records technicians.

#### **Staffing**

<i>Designation</i>	<i>Strength</i>
Medical Records Officers ... ..	10
Senior Receptionist ... ..	1
Clerical Officers ... ..	73
Typists ... ..	2
Subordinate Staff ... ..	47
<b>TOTAL</b> ... ..	<b>133</b>

Members of staff should be commended for attempting external examinations privately. Two of them attempted the examination of the association of medical records officers in the University of Nairobi and passed whereas five attempted the diploma examination but failed. It is expected that the Ministry will encourage them more by promoting them according to their qualifications.

Training of 12 medical records technicians went on in the Medical Training Centre out of whom seven expect to complete in June 1981.

Mechanical documentation machines were idle most of the time because of lack of addressograph plates in the country and procurement through Crown Agents did not materialize.

Shelves were full in the year and authority was given to purchase additional shelves. The department was frustrated to keep on reminding the procurement section for over seven months and yet none was procured.

Security of the records left much to be desired. In filter clinic there was no door to the patient case records and anyone could walk in and out freely. Patients took with them X-ray films. Clinicians continued to take records from the clinics to their offices or homes without informing the department to note. This contributed to many missing patient files.

### Patient Statistics for 1979

#### PATIENT ATTENDANCES—1979

	New	Old	Total
<b>OUT-PATIENTS</b>			
<i>General Out-Patient Clinic</i>			
Paediatric .. .. .	94,597	59,539	154,136
Adult (Male) .. .. .	45,861	38,144	84,005
Adult (Female) .. .. .	50,516	36,041	30,557
Eye .. .. .	23,375	14,393	37,770
E.N.T. .. .. .	3,455	7,094	10,549
Civil Servants (GP) .. .. .	1,911	8,331	10,242
Staff Clinic .. .. .	—	—	5,036
<b>TOTAL</b> .. .. .	<b>219,715</b>	<b>163,544</b>	<b>388,295</b>
<b>CASUALTY—Accidents and Emergencies</b> .. .. .	<b>145,355</b>	<b>39,210</b>	<b>184,565</b>
<b>CONSULTANT CLINICS</b>			
Paediatric .. .. .	2,288	14,929	17,217
Medical .. .. .	6,043	39,038	45,081
E.N.T. .. .. .	4,232	12,135	16,367
Obs./Gynae. .. .. .	13,233	39,587	42,820
Eye .. .. .	1,416	5,287	6,703
Surgical (General) .. .. .	5,377	18,550	23,927
Fracture .. .. .	3,963	10,024	13,987
Other .. .. .	1,669	4,949	6,618
<b>TOTAL</b> .. .. .	<b>38,221</b>	<b>134,499</b>	<b>172,620</b>
<b>OTHER CLINICS</b>			
Radiotherapy .. .. .	645	13,391	14,036
Child Welfare Clinic .. .. .	10,434	15,180	25,614
Kwashiorkor Clinic .. .. .	776	1,790	2,566
Immunizations given .. .. .	63,286	17,068	80,354
I.D.H. T.B. Clinic .. .. .	621	441	1,062

	New	Old	Total
<b>OCCUPATIONAL THERAPY</b>			
Wards .. .. .	—	—	1,065
Out-patients .. .. .	—	—	1,034
I.D.H. .. .. .	—	—	432
Orthopaedic .. .. .	—	—	415
Paediatric Clinic .. .. .	—	—	775
<b>TOTAL .. .. .</b>	<b>—</b>	<b>—</b>	<b>3,721</b>
<b>OTHER OUT-PATIENT ACTIVITIES</b>			
Electroencephalograms .. .. .	—	—	597
Electrocardiograms .. .. .	—	—	3,854
Cardiac Catheterization .. .. .	—	—	197
Hearing Aids .. .. .	340	656	996
<b>PHYSIOTHERAPY DEPARTMENT—OUT-PATIENT .. .. .</b>			
Total number of treatments .. .. .	—	—	75,012
X-rays Done total .. .. .	—	—	207,141
			75,725

	<i>Admissions</i>
<b>IN-PATIENTS</b>	
K.N.H. Paediatric Wards .. .. .	1,609
Paediatric Observation Wards .. .. .	8,824
Medicine .. .. .	2,839
Adult Observation Wards .. .. .	5,458
Surgical Wards .. .. .	5,182
Recovery Wards .. .. .	2,375
Obstetrics—Maternity (Mother)	6,015
Births .. .. .	4,918
Gynaecology Wards .. .. .	8,090
I.C.U. .. .. .	129
E.N.T. Wards .. .. .	1,001
Eye Wards .. .. .	1,073
Radiotherapy .. .. .	339
Amenity Ward .. .. .	628
I.D.H. Wards .. .. .	2,823
Orthopaedic and Dental (Kabete) .. .. .	1,920
<b>TOTAL .. .. .</b>	<b>53,223</b>

RETURN OF DISEASES FOR 1979

Disease Codes	Basic Tabulation List (Diseases)	Alive	Death	Total
001-009	Intestinal infectious diseases .. .. .	767	47	814
010-018	Tuberculosis .. .. .	742	71	813
020-041	Other bacterial diseases .. .. .	108	56	164
045-079	Viral Diseases .. .. .	208	41	249
080-088	Rickettsioses and other Arthropod-borne Diseases .. .. .	299	14	313
090-099	Venereal diseases .. .. .	0	0	0
100-139	Other infectious parasitic diseases and late effect of infectious and parasitic diseases ..	23	8	31
140-149	Malignant Neoplasm of iporal cavity and pharynx .. .. .	26	14	40
150-159	Malignant Neoplasm of digestive organs and peritoneum .. .. .	193	142	335
160-165	Malignant Neoplasm of respiratory and intrathoracic organs .. .. .	117	28	145
170-175	Malignant Neoplasm of bone connective tissue, skin and breast .. .. .	64	27	91
179-189	Malignant Neoplasm of genito-urinary organs	336	40	376
190-199	Malignant Neoplasm of other and unspecified sites .. .. .	63	45	108
200-208	Malignant Neoplasm of lymphatic and haematopietic tissue .. .. .	105	75	180
210-229	Benign Neoplasms .. .. .	312	7	310
230-234	Carcinoma <i>in situ</i> .. .. .	1	—	1
235-238	Neoplasms of uncertain behaviour .. .. .	21	4	25
239	Neoplasms of unspecified nature .. .. .	48	16	64
240-246	Disorders of thyroid gland .. .. .	120	1	121
250-259	Dissases of other endocrine glands .. .. .	371	28	399
260-269	Nutritional deficiencies .. .. .	470	90	560
270-279	Other metabolic disorders and immunity disorders .. .. .	80	8	88
280	Iron Deficiency Anaemias .. .. .	82	—	82
281	Other Deficiency Anaemias .. .. .	32	—	32
282	Hereditary Haemolytic Anaemias .. .. .	98	1	99
283	Acquired Haemolytic anaemias .. .. .	5	—	5
284	Aplastic Anaemias .. .. .	7	—	7
285	Other and unspecified anaemias .. .. .	182	18	200
286	Coagulation defects .. .. .	7	1	8
287	Pupura and other Haemorrhagic conditions ..	7	2	9
288	Diseases of white blood cells .. .. .	2	—	2
289	Other diseases of blood and blood forming organs .. .. .	17	3	20
290-299	Psychoses .. .. .	84	—	84
300-316	Neurotic disorders, personality disorders and other Non-Psychotic mental disorders ..	187	4	191
317-319	Mental retardation .. .. .	8	—	8
320-326	Infammatory diseases of cetral nervous system ..	306	46	352
330-337	Hereditary and degenerative diseases of central nervous systems .. .. .	101	6	107
340-349	Other disorders of the central nervous system ..	298	26	324
350-359	Disorders of the peripheral nervous system ..	46	8	57
360-379	Disorders of the eye and adnexa .. .. .	691	—	691
380-389	Diseases of the ear and mastoid process .. ..	195	—	195

## RETURN OF DISEASES FOR 1979—(Contd.)

Disease Codes	Basic Tabulation List (Diseases)	Alive	Death	Total
390-392	Acute Rheumatic Fever .. .. .	49	—	49
401-405	Hypertensive Disease .. .. .	372	10	382
393-398	Chronic Rheumatic Heart disease .. .. .	153	21	174
410-414	Ischaemic Heart disease .. .. .	3	11	14
415-417	Diseases of pulmonary circulation .. .. .	30	13	43
420-429	Other forms of heart disease .. .. .	449	152	601
430-438	Cerebrovascular disease .. .. .	106	51	157
440-448	Diseases of arteries, arterioles and capillaries .. .. .	29	4	33
451-459	Diseases of veins and lymphatics and other diseases of circulatory system .. .. .	123	5	128
460-466	Acute respiratory infection .. .. .	413	4	417
470-478	Other diseases of upper respiratory tract .. .. .	366	3	369
480-487	Pneumonia and influenza .. .. .	1,590	121	1,711
490-496	Chronic obstructive pulmonary and allied conditions .. .. .	418	10	428
500-508	Pneumoconioses and other lung diseases due to external agents .. .. .	13	4	17
510-519	Other diseases of respiratory system .. .. .	135	1	136
520-529	Diseases of oral cavity, salivary glands and jaws .. .. .	34	1	35
530-531	Diseases of oesophagus, stomach and duodenum .. .. .	490	28	518
540-543	Appendicitis .. .. .	120	Nil	120
550-553	Hernia of abdominal cavity .. .. .	229	5	234
555-558	Non infective enteritis and colitis .. .. .	20	6	26
560-569	Other diseases of intestines and peritoneum .. .. .	289	43	339
570-579	Other diseases of digestive system .. .. .	267	90	357
580-589	Nephritis, Nephrotic syndrome and nephrosis .. .. .	152	74	226
590-599	Other diseases of urinary system .. .. .	282	5	287
600-608	Diseases of male genital organs .. .. .	210	8	218
610-611	Disorders of breast .. .. .	13	Nil	13
614-616	Inflammatory disease of female pelvic organs .. .. .	860	5	865
617-629	Other disorders of female tract .. .. .	1,260	—	1,260
630	Hydatidiform mole .. .. .	24	—	24
631	Other Abdominal product of conception .. .. .	2	—	2
632	Missed Abortion .. .. .	30	—	30
633	Ectopic Pregnancy .. .. .	272	3	275
634	Spontaneous abortion .. .. .	5	—	5
635	Legally induced abortion .. .. .	15	—	15
636	Illegal induced abortion .. .. .	6	—	6
637	Abortion unspecified .. .. .	4,006	—	4,006
638	Failed attempted abortion .. .. .	—	—	—
639	Complication following abortion and ectopic and molar pregnancies .. .. .	20	3	23
640-648	Complications mainly related to pregnancies .. .. .	225	4	229
650-659	Normal delivery and other indications for care in pregnancy labour and delivery .. .. .	9	—	9
660-669	Complication occurring mainly in the course of labour and delivery .. .. .	133	2	135
670-676	Complications of the puerperium .. .. .	71	3	74
680-686	Infection of skin and subcutaneous tissue .. .. .	113	2	115
690-698	Other inflammatory conditions of skin and subcutaneous tissue .. .. .	28	2	30
700-709	Other diseases of skin and subcutaneous tissue .. .. .	38	1	39
710-719	Arthropathies and related disorders .. .. .	111	2	113
720-724	Dorsopathies .. .. .	24	—	24

## RETURN OF DISEASES FOR 1979—(Contd.)

Disease Codes	Basic Tabulation List (Diseases)	Alive	Death	Total
725-729	Rheumatism, excluding the back .. ..	57	—	57
730-739	Osteopathies, chondopathies and acquired musculoskeletal deformities .. ..	67	2	69
740	Anenocephalus and similar anomalies .. ..	0	—	0
741	Spinabifida .. ..	32	1	33
742	Other congenital anomalies of nervous system ..	72	11	83
743	Congenital anomalies of eye .. ..	33	—	33
744	Congenital anomalies of ear, face and neck ..	14	—	14
745	Bulbus cordis anomalies and anomalies of cardiac septal closure .. ..	32	4	36
746	Other congenital anomalies of heart .. ..	20	6	26
747	Other congenital anomalies of circulatory system	29	3	32
748	Congenital anomalies of respiratory system ..	15	1	16
749	Cleft palate and cleft lip .. ..	3	1	4
750	Other congenital anomalies of upper alimentary tract .. ..	8	1	9
751	Other congenital anomalies of digestive system ..	48	10	58
752	Congenital anomalies of genital organs .. ..	46	—	46
753	Congenital anomalies of urinary system .. ..	13	2	15
754	Certain congenital musculoskeletal deformities	2	—	2
755	Other congenital anomalies of limb .. ..	3	—	3
756	Other congenital musculoskeletal anomalies ..	26	—	26
757	Congenital anomalies of the integument .. ..	3	—	3
758	Chromosomal anomalies .. ..	14	2	16
759	Other and unspecified congenital anomalies ..	25	5	30
760	Fetus or newborn affected by maternal conditions which may be unrelated to present pregnancy .. ..	—	—	—
761	Fetus or newborn affected by maternal complications of pregnancy .. ..	2	—	2
762	Fetus or newborn affected by complications of placenta, cord and membranes .. ..	—	1	1
763	Fetus or newborn affected by other complications of labour and delivery .. ..	—	—	—
764	Slow fetal growth and fetal malnutrition ..	—	1	1
765	Disorders relating to short gestation and unspecified low birth weights .. ..	27	11	38
766	Disorders relating to long gestation and high birth weight .. ..	—	—	—
767	Birth Trauma .. ..	2	1	3
768	Interuterine hypoxia and birth asphyxia ..	—	—	—
769	Respiratory distress syndrome .. ..	—	—	—
770	Other respiratory conditions of fetus and newborn	—	1	1
771	Infection specific to the perinatal period ..	52	32	84
772	Fetal and neonatal haemorrhage .. ..	2	1	3
773	Haemolytic diseases of fetus or newborn due to isoimmunization .. ..	52	2	54
774	Other perinatal jaundice .. ..	231	25	256
775	Endocrine and metabolic disturbances specific to the fetus and newborn .. ..	24	2	26
776	Haematological disorders—fetus and newborn	—	—	—
777	Perinatal disorders of digestive system .. ..	1	—	1
778	Conditions involving the integument and temperature regulation of fetus and newborn ..	1	3	4

## RETURN OF DISEASES FOR 1979—(Contd.)

Disease Codes	Basic Tabulation List (Diseases)	Alive	Death	Total
779	Other and ill-defined conditions originating in the perinatal period .. .. .	3	—	3
780-789	Symptoms .. .. .	495	62	557
790-796	nonspecified abnormal findings .. .. .	5	—	3
777-799	Ill-defined and unknown causes of morbidity and mortality .. .. .	17	11	28
800-804	Fracture of skull .. .. .	196	10	206
805-809	Fracture of neck and trunk .. .. .	77	15	92
810-819	Fracture of upper limb .. .. .	70	4	74
820-829	Fracture of lower limb .. .. .	202	7	209
830-839	Dislocation .. .. .	14	—	14
840-848	Sprain and strains of joints and adjacent muscles	1	1	2
850-854	Intracranial injuries excluding those with skull fracture .. .. .	475	100	575
860-869	Internal injury of chest abdomen and pelvis .. .	58	8	66
870-879	Open wound of head, neck and trunk .. .. .	291	3	294
880-887	Open wound of upper limb .. .. .	14	—	14
890-897	Open wound of lower limb .. .. .	8	—	8
900-904	Injury to blood vessels .. .. .	3	—	3
905-909	Late effect of injuries, poisoning, toxic effect and other external causes .. .. .	6	3	9
910-919	Superficial injury .. .. .	14	—	14
920-924	Contusion with intact skin surface .. .. .	89	1	90
925-929	Crushing injury .. .. .	3	—	3
930-939	Effects of foreign body entering through orifice..	73	3	76
940-949	Burns .. .. .	155	19	174
950-957	Injury to nerves and spinal cord .. .. .	8	4	12
958-959	Certain traumatic complications of unspecified injuries .. .. .	56	2	58
960-979	Poisoning by drug, mediments and biological substances .. .. .	—	—	—
980-989	Toxic effects of substances chiefly non-medicinal as to source .. .. .	—	1	1
990-995	Other and unspecified effects of external causes..	1	—	1
996	Complication peculiar to certain specified procedures .. .. .	—	—	—
997	Complication affecting specified body systems not elsewhere classified .. .. .	—	—	—
998	Other complications of procedures not elsewhere classified .. .. .	5	—	5
999	Complication of medical care not elsewhere classified .. .. .	—	2	2
E800-E807	Railways accidents .. .. .	5	—	5
E810-E819	Motor-vehicle traffic accidents .. .. .	558	85	643
E820-E825	Motor-vehicle traffic accidents .. .. .	2	2	4
E826-E829	Other road vehicle accidents .. .. .	5	1	6
E830-E838	Water transport accidents .. .. .	2	—	2
E840-E845	Air and space transport accidents .. .. .	2	2	4
E846-E848	Vehicle accidents not elsewhere classifiable ..	1	—	1
E850-E858	Accidental poisoning by drugs, medicaments and biological .. .. .	26	6	32
E860-E869	Accidental poisoning by other solid and liquid substances, gases and vapours .. .. .	28	2	30
E870-E876	Misadventure to patients during surgical and medical care .. .. .	—	—	—

RETURN OF DISEASES FOR 1979—(Contd.)

Code No.	Basic Tabulation List of Diseases (1979)	Alive	Deaths	Total
E870-E899	Surgical and medical procedures as the cause of abnormal reaction of patient or later complication without mention of misadventure of the time of procedures .. .. .	3	2	5
E880-E888	Accidental falls .. .. .	318	18	336
E890-E899	Accident caused by fire and flames .. .. .	53	12	65
E900-E909	Accident due to and environmental .. .. .	13	1	14
E910-E915	Accident caused by submersion, suffocation and foreign bodies .. .. .	84	3	87
E916-E928	Other accidents .. .. .	212	12	224
E929	Late effect of accidental injury .. .. .	—	—	—
E930-E949	Drugs medicaments and biological substance causing adverse effects in therapeutic use .. .. .	8	1	9
E950-E959	Suicide and self inflicted injury .. .. .	37	—	37
E960-E969	Homicide and injury purposely inflicted by other persons .. .. .	453	19	472
E970-E999	Legal interuention .. .. .	84	14	98
V22	Normal pregnancy .. .. .	67	—	67
V25	Contraceptive management .. .. .	15	—	15
V45	Other postsurgical states .. .. .	8	—	8
V61	Other family circumstances .. .. .	68	—	68
V23	Supervision of high risk pregnancy .. .. .	1	—	1
V65	Other persons seeking consultation without complaint sickness .. .. .	4	—	4
000-999	Tabulation of diseases 1979 .. .. .	22,009	1,779	23,788
900-999	Injury and poisoning .. .. .	1,819	183	2,002
E800-E999	External cause (E Code) —E .. .. .	1,894	178	2,072
V-Code	Supplementary classification V .. .. .	163	—	163
	<b>TOTAL .. .. .</b>	<b>25,885</b>	<b>2,137</b>	<b>28,025</b>

**Pharmaceutical Services**

Every patient who comes to the hospital ends up with a prescription. No wonder therefore that most complaints from members of the public are directed towards this department.

The pharmacy department of this hospital is divided into the following sections :

- (i) Main Pharmacy.
- (ii) Out-patient Pharmacy—No. 15.
- (iii) G.P. Pharmacy.
- (iv) Paediatric Pharmacy—No. 9 and 20.
- (v) Casualty Pharmacy.

(vi) Manufacturing Unit.

(vii) Sterile Preparation Unit.

(viii) Pharmacy Stores.

(i) *Main Pharmacy*.—This is the administrative centre for the pharmaceutical services in the hospital. It is in this pharmacy that dangerous drugs and high quality drugs, i.e. non-scheduled drugs, are issued from. Drugs for all in-patients in the hospital are collected from here.

(ii) *Out-patient Pharmacy—No. 15*.—This is the busiest pharmacy in the hospital as it serves male and female filter clinics, adult and children skin clinic, gynaecology clinic, surgical out-patient clinic, thyroid and liver clinics and radiotherapy clinic. About 1,600 patients are attended here daily. It was never designed to serve such a large number of patients just as the rest of the hospital was not intended to serve the large number of patients we now have to deal with.

(iii) *G.P. Pharmacy*.—This pharmacy deals with ear, nose and throat cases and also attends the paediatric observation discharged patients besides patients from the Senior Civil Servants Clinic.

(iv) *Diabetic Pharmacy*.—This pharmacy is identified by No. 20. It serves diabetic patients but patients from other areas have found their way to it from haematology clinic, neurology clinic, cardiac clinic, etc. The pharmacy handles about 280 patients daily. The problem of congestion here was the same as in other areas of the hospital.

(v) *Paediatric Pharmacy*.—This pharmacy dealt with about 350 prescriptions daily while the work load stood at around 700 daily, mainly from the paediatric filter clinic. This pharmacy opens during the weekends to serve children from the filter clinic and paediatric observation ward. It is one of the smallest pharmacies in the hospital, yet the most overworked.

(vi) *Casualty Pharmacy*.—This pharmacy serves the casualty department, consultant clinics. It serves an average of 350 patients a day. Like any other pharmacy it has no storage space and washing sinks for bottles.

(vii) *Manufacturing Unit*.—The Unit carries out the following functions :

(a) General manufacturing which includes: (1) Ointments; (2) Mixtures; (3) solutions; (4) Nasal drops; (5) lotions; (6) paints; (7) creams; (8) emulsions; (9) syrups; (10) suppositories; (11) linctus; (12) pastes, etc.

(b) General dispensing involving the giving out of the already prepared products to other pharmacies, wards, theatres, intensive care unit, surgical outpatients and other departments.

- (c) Simple dispensing: This is the manufacturing and dispensing of simple prescriptions that cannot be prepared in other pharmacies, e.g. some ointments, creams, syrups which are not available in the compendium.
- (d) Training: This takes place here, as in other pharmacies, for students from the Medical School and the Medical Training Centre.
- (viii) *Sterile Preparation Unit*.—This section deals with the manufacturing of intravenous fluids. The section supplies all Ministry of Health and some private institutions with this fluid as well as eye drops. There was only one autoclave to prepare such fluids but there is room for improvement if the second autoclave could be repaired and made functional. It is disheartening to report that the only spare autoclave which blew up in 1974 has not yet been repaired and it is feared that the overworked autoclave will pack off any time paralysing services, and all hospitals in the Republic will be badly hit. Items like aluminium caps rubber stoppers and infusion sets were not available most of the time in Central Medical Stores during the year.

### Public Health

The following areas were covered by the public health department in the hospital:

- (i) Main Kenyatta National Hospital.
- (ii) K.N.H. housing estates, flats and laboratories.
- (iii) K.N.H. shopping centre.
- (iv) All dispensaries associated with K.N.H.
- (v) Medical Training Centre.
- (vi) Infectious Diseases Hospital.
- (vii) National Spinal Injury Hospital.
- (viii) Orthopaedic Unit, Kabete.
- (ix) Kamiti Prison.
- (x) Mathare Hospital.
- (xi) All kitchens.

### General Sanitation

(a) *Refuse Collection and Disposal*.—Refuse collection was satisfactorily carried out by hospital staff but our major problem was disposal. The City council is responsible for refuse disposal. City council was regularly collecting refuse and they were reminded all the time by making telephone calls and personal visits and letters.

(b) *Drains and Sewers*.—Drains and sewers were blocked on many occasions. The main reasons for the blockage were heavy rains and misuse of water closets by residents. M.O.W. personnel were used to unblock or repair

drains and sewers. Drains at Kabete Orthopaedic Unit remained poor throughout the year. Both drains, sewer and septic tank were very old and uneconomical to repair.

(c) *Pest and Rodent Control.*—All wards and clinics and other areas of the hospital reported some insects and pests. Relevant insecticides were used to spray the infected areas. During the year the hospital sent three subordinate staff to be trained by the City council on disinfection and pest control.

(d) *Building Public Toilets* within the hospital posed smell and fly breeding nuisance. The toilets were left unattended for several days a week. Also some of them required repairs and replacement of missing sanitary fittings. Measures taken to get toilets cleaned regularly were effective. City council had been asked to provide public toilet at the K.N.H. Bus terminal. It is hoped that it will be constructed soon. Anderson hall was renovated, and minor repairs were done in the estate while the shopping centre was moved to a new site.

(e) *Food Inspection.*—All stuff received for use by patients, students, doctors and nurses were inspected and public health personnel condemned some due to infections, decomposition or emaciation.

(f) *Open Markets and Kiosks.*—There was an open market at K.N.H. housing estate and sellers were instructed not to sell their goods on polluted or contaminated grounds but to erect suitable shades. Kiosks at bus terminal and Mbagathi Road were to have proper refuse storage bins to avoid scattered litter.

(g) *Water Supply.*—Problems of not getting enough water in K.N.H. was experienced. Rationing of water hit the residents as they were getting supply from 2 a.m. to 6 a.m. and the life was very miserable to members of staff.

(h) *Medical Examination and Sampling.*—All food handlers from kitchens, canteen and shopping centre were examined regularly. Sampling of foods and water from kitchen, canteens and shopping centre were done and taken to routine laboratory for bacteriological examinations.

### Security Services

There exists the security department of the hospital whose responsibilities are to provide security coverage in the whole institution and safeguard Government property and maintain organized flow of human traffic in an orderly manner to conform with institutional regulations, Government laws and City council by-laws within the hospital grounds.

The hospital management realized the need of skilled security unit and established a post of Security Officer in Job Group "H". The holder was expected to be a trained police officer or army officer of proven experience at the rank of inspector of police. It looks unbecoming to have a senior

officer in the establishment with no "army" to command. This was the situation in 1979 because next to the security officer were subordinate staff in Job Groups "A" and "B". Most of the "askaris" as they are referred to had no formal education and are too old to learn how to detect offences, or organize ambushes, detect an intended plan to commit a crime, arrest a violent person or even to stop and search a person or vehicle at certain points.

It is evident that the criminals are becoming more skilled with modern technology and use of sophisticated weapons. This by itself outpoint hospital security personnel. Kenyatta National Hospital security should be strengthened by either establishing a police out-post for Kenyatta National Hospital coverage alone or the present one be accorded the status of administrative police station with qualified staff and with any security assigned to safeguard the Government property of Kenyatta National Hospital in terms of value and importance.

### The Security Strength in 1979

<i>Designation</i>	<i>Job Group</i>		<i>Number</i>
	<i>H</i>	<i>B</i>	
Security Officer .. .. .	H	1	
Subordinate Staff .. .. .	B	10	
Subordinate Staff .. .. .	A	62	
<b>TOTAL</b> .. .. .		<b>72</b>	

Hospital security officer had experienced problems in handling theft cases in the local courts because of general failure of accounting for hospital supplies in this hospital. At times the head of department would deny ownership of drugs or other items simply because her or his books would not reflect the loss and the culprit would get away with it.

Several heads of departments were not co-operative enough. In some cases losses would be reported too late or never at all. It was observed that some issues were sorted out in their departments with a view to covering up culprits. Several cases were dealt with under the following offences:

<i>Cases</i>	<i>Reported</i>	<i>In Court</i>	<i>Pending</i>	<i>Disciplinary</i>
Theft .. .. .	15	6	Nil	9
Pick Pockets .. .. .	5	5	—	—
Malicious damages .. .. .	2	—	—	2
Breakings .. .. .	3	2	1	—
False information .. .. .	2	—	—	2
Liquour .. .. .	19	19	—	—

## Supplies

The supplies department in this hospital renders supplies services to the hospital and its satellites. It is headed by a Senior Supplies Officer who is answerable to the Chief Administrator through the Administrative Secretary. The establishment strength was as under:

<i>Designation</i>	<i>Strength</i>
Senior Supplies Officer ... ..	1
Supplies Officer II ... ..	4
Supplies Assistant ... ..	7
Storemen ... ..	24
Subordinate staff ... ..	?

The department had been allocated two lorries and a van and yet it complained that the van could not cope with the work of following up the indents sent to C.M.S. or supply branch as well as sending out quotations. The department could not convince the administration on this respect so the additional vehicle had not yet been given.

The department recommended consolidated store house so that Senior Supplies Officer and procurement section could be together for efficiency of communication and control; this is planned.

Inventory management had not been satisfactory in the whole year. There was no check report of inventories so no one would rule out that the state of stores in K.N.H. was not known. It would be difficult to account for losses for surplus when situations were allowed to exist.

The hospital experienced difficulty in procurement during the year. The indents submitted to Central Medical Stores were pruned to less than half in most items. While non-availability was the order of the day. This made the procurement staff to be always on the road purchasing without proper planning.

Despite these constraints the hospital endeavoured to provide required supplies in time. During the year the stock control department moved to the main warehouse and started controlling of supply while near the bin cards.

## Telephone Services

The hospital management transferred out all subordinate staff to create vacancies for operators. The department had the strength of 27 operators. However, two of the subordinate staff who had passed their examinations were promoted to operator grade III thus making the strength to be 29 at the close of the year.

The department experienced shortage of spare parts. Communication became very poor and complaints were very many from out and in callers. Expenditure went high despite the financial constraints. This was because there were very many dialing "9" facilities and many subscribers made use of the facilities to ring outside. The bleep services were interrupted often and the hospital had to use a lot of money to get faults rectified.

A new and modern equipment has been bought and stored in telephone room but it would not be installed until accommodation was completed.

### Transport

The strength of vehicles in K.N.H. remained 24 from 1976 to 1979. Although the number of charge remained the same there were bad days in 1978 when the boarded vehicles were not replaced. Six of boarded vehicles were replaced to the satisfaction of the hospital. The total establishment of vehicles for the hospital was 24 distributed as under:

Main K.N.H.	...	...	...	...	...	...	20
Orthopaedic Unit, Kabete	...	...	...	...	...	...	2
I.D.H.	...	...	...	...	...	...	1
Kamiti Prison	...	...	...	...	...	...	1

### Welfare

1979 was a year whereby the department identified the need to improve on the existing welfare services serving a population of approximately 16,000 (staff and relatives).

Anderson Hall, which is situated next to the K.N.H. staff housing was started to act as a recreational centre for the staff. The following activities are operated there:

- (1) Indoor games—druoghts, playing cards.
- (2) Television watching.
- (3) Ceremonial gatherings—i.e. marriages, etc.
- (4) Religious worship on Sundays.

In addition to the above activities, the hall houses a nursery school for children of K.N.H. members of staff.

During this same year, the health of members of staff was catered for by the introduction of:

1. Maternal and child health care, nutrition and family planning services.
2. Social Worker services.

The officers handling the above services are stationed in Anderson hall. It is believed that mothers and their children can be treated right in the hall without having to come to the main hospital.

### **Welfare Fund**

The hospital continued to operate a welfare fund controlled by the chief administrator. This fund gave loans to needy members of staff who would otherwise not perform their duties well due to financial hardships. Efforts to expand the fund have been started.

### **Christmas Parties**

The department organized Christmas parties for both junior and senior members of staff at the end of the year. The senior X-mas party covered the entire Ministry of Health staff. These get-together parties are to be encouraged as they create a sense of belonging and hence increased productivity.

## **CLINICAL SERVICES**

### **Dental**

Number of patients registered at Dental Clinic, Kabete in 1979 was 101,141. These patients were filtered to different departments as follows:

	<i>patients</i>
(1) Oral Diagnosis	73,164
(2) Oral Surgery	7,868
(3) Exodontia	56,148
(4) Conservative	7,646
(5) Prosthetic	5,135
(6) Orthodontial	1,881
(7) Periodontia	4,819
(8) Cold Cases	1,167
(9) Theatre Cases	158

Out of the total cold cases 213 patients were treated for fractures of facial bones and 90 patients treated for fractures of zygomatic arch and splinting of teeth.

Out of the 158 theatre cases, 26 were for repair of cleft lip; seven were for repair of cleft palate; 26 were for biopsy excision of tumours and the rest for open reduction and T.M.J. dislocation.

During 1979 total revenue collected was K.Sh. 428,056.

In 1979 we had nine working units in Kabete and there were 17 dental officers including one senior consultant in charge. Two dentists went for further studies overseas and five resigned.

During the year we had a visit from the Minister for Health Hon. Arthur Magugu, M.P.

### **Diagnostic Laboratory Services**

It has been suggested year after year that the laboratory staff manning diagnostic laboratory should be posted to K.N.H. rather than to National Public Health Laboratory as at present. This situation had affected the efficiency of laboratory services because of double loyalty. It has not been possible for K.N.H. management to control the performance of laboratory staff or manage to establish preventive maintenance of laboratory equipment effectively. There was a deficiency of qualified personnel.

There was an increase of about 15 per cent of the workload in 1979 as compared to 1978. This reflected the fact that the work will go in increasing especially when the tower block will be opened. The urgent demand of an increase of technical staff is obvious. Also the clerical staff should be increased to take up all skilled clerical duties in the laboratories from subordinate staff.

### **Laboratory**

There are several laboratory equipments which had been out of order for years. Efforts had been made to get them repaired by MOW but all in vain. It will be in order to get the equipments boarded and disposed off to create space in the laboratory.

Piping in the whole laboratory complex was rotten because of corrosive chemicals like acids used in the laboratories. The piping system should be rectified. Repairs to autoclaves and hot rooms had not been done satisfactorily.

It is disappointing to report again that a fire gutted through the bio-chemistry laboratory destroying a few things in the department in 1975 and no repairs were carried out up to and including 1979. Laboratory department is over-due for painting and we are looking forward to getting it repaired in 1980.

The year saw the improvement of supplying chemicals in laboratory. With enough supply available, examinations were made in time.

### **Blood Products Preparation**

In the routine laboratory of this hospital are prepared fresh frozen plasma, cryoprecipitate and platelet concentrates. Because of cumbersome procedures in preparation of these products and failure to obtain constant supply of blood there is a limited amount in stock. Despite this several doctors ordered blood or thawed out plasma then return it after it had stayed

in the wards for hours or even days. With the increased demand for platelets concentrate to treat thrombocytopenic patients the constant supply of blood should be maintained.

#### Statistics of Specimens Handled During 1979

<i>Section</i>	<i>Specimen</i>
Haematology	36,314
Cytology	4,557
Routine Lab.	7,656
Histology and Post-mortems	11,538
Biochemistry	39,279
Microbiology	95,251

#### Mortuary Services

The year was busy and the department continued to receive dead bodies from K.N.H., Mathare Hospital, Orthopaedic Unit Kabete, Armed Forces Hospital and Infectious Diseases Hospital.

The number of deaths including maternity cases were 4,280. This number averaged 12 deaths per day. The rate is high enough to warrant medical investigation. 573 postmortems were performed; the number was very low as the medical students are expected to do six postmortems per week.

The staff remained one mortuary superintendent and 11 subordinate staff. It will be noted that the number of staff is not enough to cope with mortuary services. The one mortuary van had not been in good condition and was away for several months in garages. Because of this state pick-ups were used to transport dead bodies which is very risky. It is suggested that the van should be replaced. The public would appreciate a hearse for hiring to transport the deceased to their final resting places.

#### Dispensaries

There were 28 dispensaries and other bigger health institutions managed by K.N.H. Among the biggest and the busiest are Kamiti Prison Hospital with two doctors, two registered nurses, four clinical officers and enrolled nurses; Loco Dispensary with two doctors, a nursing sister, three clinical officers and enrolled nurses; Muguga Dispensary headed by a clinical officer and staffed with a nursing sister is a very busy clinic.

The busiest centres saw every day an average of 250-300 new cases while the least busy saw 7-10. Our management included staffing, supervision and supply of drugs and equipment. A Nursing Officer I visited the dispensaries regularly. Besides Loco Dispensary and Kamiti Prison Hospital, nine other centres were headed by clinical officers while the rest were headed by enrolled staff. All these centres are situated in some of the major institutions such as Prisons, Railways, State House, National Youth Service, General Service Unit, etc. to render services to Government personnel as well as staff families.

Some of the clinics have their own pharmacies while most of the others collected their drugs from Kabete pharmacy. A few of them collected drugs from K.N.H.

**The following recommendations are made for further implementation**

- (1) These centres should be supervised more regularly than at present.
- (2) Lack of regular transport was a major constraint in the management of these centres. There should be a vehicle/vehicles set aside exclusively for use of visiting the dispensaries.
- (3) The staffing of these places should be done by the Ministry of Health headquarters rather than K.N.H. being relied upon to provide staff from our already inadequate numbers.

**Returns from Dispensaries for 1979 and 1980**

**1. Nairobi Allocation and Remand Prison**

*Medical Inspection Room (M.I.R.)*

New cases in 1979 were	...	...	...	...	4,787
Re-attendants were	...	...	...	...	3,554

*Staff Clinic*

New cases in 1979	...	...	...	...	20,420
Re-attendants	...	...	...	...	15,603

There are three enrolled nurses working at the station and one patient attendant.

**2. Prison Training College**

New cases in 1979	...	...	...	...	3,335
Re-attendants	...	...	...	...	4,490

There is one enrolled nurse and one patient attendant.

**3. Langata Women Prison**

*Staff Clinic*

New cases in 1979	...	...	...	...	851
Re-attendants	...	...	...	...	676

*M.I.R.*

New cases in 1979	...	...	...	...	945
Re-attendants	...	...	...	...	2,708

There are four enrolled nurses at the station.

**4. Loco Dispensary**

New cases in 1979	...	...	...	...	16,835
Re-attendants	...	...	...	...	51,472

There are four enrolled nurses, two patient attendants and one Kenya Registered Nurse.

<b>5. Railway Training School</b>						
New cases in 1979	...	...	...	...	...	1,729
Re-attendants	...	...	...	...	...	6,595
There is one enrolled nurse.						
<b>6. Provincial Works Dispensary</b>						
New cases in 1979	...	...	...	...	...	6,441
Re-attendants	...	...	...	...	...	5,164
There is one enrolled nurse and patient attendant.						
<b>7. Administrative Police Training College</b>						
New cases in 1979	...	...	...	...	...	4,653
Re-attendants	...	...	...	...	...	1,237
There is one enrolled nurse.						
<b>8. G.S.U. Training School</b>						
New cases in 1979 from June	...	...	...	...	...	1,492
Re-attendants	...	...	...	...	...	1,376
New cases in 1980	...	...	...	...	...	1,073
Re-attendants	...	...	...	...	...	1,360
<b>9. Magadi Dispensary</b>						
New cases	...	...	...	...	...	1,023
Re-attendants	...	...	...	...	...	282
There is a clinical officer from June 1980.						
<b>10. Port Health Embakasi</b>						
New cases in 1979	...	...	...	...	...	19,967
Re-attendants	...	...	...	...	...	14,690
There were eight enrolled nurses and seven Kenya registered nurses. There were five enrolled nurses and seven Kenya registered nurses.						
<b>11. Wilson Airport</b>						
New cases from June 1979	...	...	...	...	...	1,369
Re-attendants	...	...	...	...	...	1,259
There are two enrolled nurses and one Kenya registered nurse.						
<b>12. M.O.W. Supplies Branch</b>						
New cases in 1979	...	...	...	...	...	3,185
Re-attendants	...	...	...	...	...	3,170
There is one Enrolled Nurse working at the station.						
<b>13. Kamiti Prison Hospital</b>						
<i>M.I.R.</i>						
New cases in 1979	...	...	...	...	...	8,976
Re-attendants	...	...	...	...	...	22,329

In-patients were	...	...	...	...	...	256
In-patients were	...	...	...	...	...	409

*Staff Clinic*

New cases plus re-attendants 1979	...	...	...	...	...	5,486
In-patients	...	...	...	...	...	178

The staff were as follows: doctors 2, clinical officers 4, Kenya registered nurses 2, enrolled nurses 15, patient attendants 15.

14. *Blood Donor Service*

In 1979 the units of blood collected were 21,747. There was one KRN, five enrolled nurses and two laboratory technicians.

15. *Muguga Health Centre*

New cases in 1979	...	...	...	...	...	11,979
Re-attendants	...	...	...	...	...	13,049

There was one Kenya registered nurse, two enrolled nurses and one clinical officer.

16. *Police Depot Dispensary, Nairobi South "B"*

New cases in 1979	...	...	...	...	...	4,478
Re-attendants	...	...	...	...	...	1,429
Deaths	...	...	...	...	...	3
New borns	...	...	...	...	...	12

There was one enrolled nurse.

17. *Railway Headquarter Dispensary*

New cases and re-attendants 1979	...	...	...	...	...	2,093
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There was one Kenya registered nurse and one patient attendant.

18. *G.S.U. Headquarter Dispensary*

New cases in 1979	...	...	...	...	...	2,443
Re-attendants	...	...	...	...	...	5,843

There is one enrolled nurse.

19. *Starehe Students Clinic*

New cases in 1979	...	...	...	...	...	14,056
Re-attendants	...	...	...	...	...	56,224
In-patients	...	...	...	...	...	56

There is one doctor, one nursing officer II, two clinical officers and three enrolled nurses. These staff do not belong to M.O.H.

20. (a) *Kabete Approved School.*  
 (b) *Getathuru Approved School.*  
 (c) *Nairobi Juvenile Remand Home.*

New cases in 1979	...	...	...	...	6,685
Re-attendants	...	...	...	...	1,392
Admissions to hospital (K.N.H.)	...	...	...	...	4

The three dispensaries are manned by one enrolled nurse and one clinical officer.

### **Infectious Diseases Hospital**

#### **Buildings**

The central sterilization department and the out-patient T.B. clinic as well as the medical records office were opened. Other outstanding constructions requested during the year included the new store extensions, extension of oxygen, renovation of the old laundry into physiotherapy and occupation therapy units. Also towards the end of the year a request was made for a new modern kitchen and extension of the skin ward (Block 4) and the boiler house.

#### **Maintenance**

This was poor. Many of the blocks had broken or missing louvre glasses, window panes, etc. but the items remained out of stock in the Ministry of Works, K.N.H. depot. The hospital ought to have been painted but this was not planned for.

#### **Compound**

The compound remained clean. The flowers and fence were nicely trimmed.

#### **Vehicles**

The hospital remained with only one vehicle for its numerous tasks such as transporting patients, supplies, banking, office work, etc.

#### **Finance**

Since our vote is controlled by the Chief Administrator, it means all the purchasing had to be channelled through him for approval. Not even imprest is kept here. This is a very cumbersome arrangement in that it makes the work difficult. It is however a necessary control measure.

#### **Supplies**

A lot needs to be done in this unit to overcome the chronic shortages. No proper inventory checks were carried out.

## Visitors

March, 1979: Dr. P. James Connor from Creighton School of Medicine Omaha, U.S.A.

Dr. Elizabeth White from the Ministry of Overseas Development, United Kingdom and Liberia.

Dr. E. N. Mngola, Permanent Secretary/D.M.S.

Mr. J. R. Larter from Beecham Marketing and Technical Services, Nairobi.

April, 1979: Dr. Walker from CIBA Geigy, Switzerland.

October, 1979: Prof. Matenniva S. S. from U.S.S.R. WHO collaborating centre on small pox and related infections.

November, 1979: Dr. Eyassn Hable from Department of Internal Medicine Addis Ababa, Ethiopia.

Communication was generally good but a few units such as X-ray, C.S.S.D. and medical records had no telephone extensions. Requests for these new extensions were made before the units were opened but still nothing was done.

The following are the patients treated in Infectious Diseases Hospital in the year 1979. The figures are broken into two parts These are in-patients and out-patients. The first figures are the number of admissions and deaths from January to December, 1979. Figures in brackets represent deaths.

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	<i>Male patients</i>	<i>Female patients</i>
(a) Admissions and deaths .. .. .	1,506(87)	1,027(56)

Total number of patients admission—2,533(143)

### (b) Out patients for T.B. and Leprosy Clinics

	<i>Male patients.</i>	<i>Female patients.</i>
T.B. Clinic .. .. .	734	328
Leprosy Clinic .. .. .	655	310

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Total number of patients treated in the out-patients clinics from January to December, 1979 = 1,062.

## Annual Statistics 1979

During the above mentioned year a total of 1,053 patients were X-rayed and the following examinations were done :

### Examinations

Chest adults cases	...	...	...	...	...	581
Chest paediatrics cases	...	...	...	...	...	361

### Other Examinations

Abdomen cases	...	...	...	...	...	9
Vertebral column cases	...	...	...	...	...	23
Skull	...	...	...	...	...	21
Hips	...	...	...	...	...	5
Pelvis	...	...	...	...	...	2
Mastoids	...	...	...	...	...	0
Upper extremity	...	...	...	...	...	28
Lower extremity	...	...	...	...	...	42

TOTAL ... .. 1,072

## Clinical Work

*Plague.*—There was an out-break of plagues in January, 1979. A total of 42 patients were seen, and treated. There was only one death.

*Tuberculosis.*—Total of 1,055 new T.B. patients were seen in 1979.

*Cholera.*—None.

## Intensive Care Unit

The work of the unit is growing every year as the need for patients requiring intensive care increases. In 1979 we admitted a total of 491 patients compared to 484 in 1978. A total of 312 patients were transferred to the wards. That means 63.5 per cent of patients admitted benefited from the intensive care management.

179 (36.5 per cent) patients died in the unit. More cases of successful open heart surgery were done last year as it is shown in Table II below.

TABLE I

	Number	Per cent
Total admission	491	100
Discharges	312	63.5
Deaths	179	36.5

TABLE II

	Number admitted	Died	Percent	Percent Total
<b>DISEASES OR CONDITIONS</b>				
<b>1. Post operative cardiac surgery</b>				
(a) Double valve replacement .. .. .	6	3	50	1.22
(b) Aortic valve replacement .. .. .	11	1	91	2.24
(c) Mitral valve replacement .. .. .	16	1	6.25	3.26
(d) Fallet petrology complete correction	4	1	6.25	0.81
(e) Blalock operation .. .. .	2	—	0	0.41
(f) Ligation of PDA .. .. .	3	—	0	0.61
(g) Coronary artery disease .. .. .	1	1	100	0.20
(h) Aortic aneurism .. .. .	2	1	50	0.41
(i) Closure of ASD .. .. .	5	—	0	1.02
(j) Pulmonary valvotomy and closure of VSD .. .. .	1	—	0	0.20
(k) Mitral valvotomy .. .. .	7	2	28.6	1.43
(l) Pericardectomy .. .. .	8	2	25	1.63
<b>2. Other post operative cases</b>				
Neural surgery .. .. .	42	22	52.4	8.55
General Surgery .. .. .	49	17	34.7	9.98
Obstetrics and Gynaecology .. .. .	8	4	50	1.63
Paediatric surgery .. .. .	25	10	40	5.09
Tracheal Oesophageal fistula .. .. .	10	7	70	2.04
Thoracic Surgery .. .. .	10	5	50	2.04
Car. Oesophagus .. .. .	10	3	30	2.04
Post. Cardiac cathoterization .. .. .	6	1	16.7	1.22
Multiple injuries .. .. .	14	10	71.4	2.85
Phaeochromocytoma .. .. .	5	—	0	1.02
3. Respiratory Distress .. .. .	20	—	0	4.07
4. Post measles L.T.B. .. .. .	24	10	41.7	4.89
5. Tetanus .. .. .	27	11	40.7	5.50
6. Meningitis .. .. .	7	6	85.7	1.43
7. Renal failure .. .. .	48	17	35.4	9.78
8. Diabetes mellitus .. .. .	5	4	80	1.02
9. Cerebral malaria .. .. .	4	2	50	0.81
10. Drug over dose .. .. .	9	2	22.2	1.83
11. Food poisoning (Botulism) .. .. .	2	2	100	0.41
12. Cardiac diseases .. .. .	20	3	15	4.07
13. Pulmonary Osdema .. .. .	5	3	60	1.02
14. Foreign Body in Lung .. .. .	9	1	11.1	1.83
15. Bulbar Polio .. .. .	5	2	40	1.02
16. Space occupying lesion .. .. .	5	4	80	1.02
17. Head injury .. .. .	5	2	40	1.02
18. Septic shock .. .. .	2	1	50	0.21
19. Status asthma .. .. .	6	3	50	1.22
20. Status epilepsy .. .. .	6	—	0	1.22
21. Flail chest .. .. .	4	2	50	0.81
22. C.V.A. .. .. .	2	2	100	0.41
23. Upper motor neuron disease .. .. .	1	—	0	0.20
24. Guillan Barre syndrome .. .. .	4	2	50	0.41
25. Myasthenia gravis .. .. .	5	1	20	0.21
26. Bronchopneumonia .. .. .	21	8	38	1.63

TABLE III—AGE DISTRIBUTION

	<i>Number of Patients</i>	<i>Percentage</i>
0-4 years .. .. .	157	31.98
5-9 years .. .. .	29	5.91
10-14 years .. .. .	56	11.41
15-45 years .. .. .	201	40.94
Over 45 years .. .. .	48	9.78
TOTAL .. .. .	491	100

TABLE IV—SEX DISTRIBUTION

<i>Sex</i>	<i>No. of Patients</i>	<i>Percentage</i>
Male .. .. .	275	56.01
Female .. .. .	216	43.99
TOTAL .. .. .	491	100.00

TABLE V—DURATION OF STAY IN THE UNIT

<i>Duration</i>	<i>No. of Patients</i>	<i>Percentage</i>
Less than seven days .. .. .	37.4	76.17
8-22 days .. .. .	84	17.11
Over 22 days .. .. .	33	6.72
TOTAL .. .. .	491	100.00

### The Intensive Care Unit

Other than the administration of anaesthesia, the department continued to provide services to other units in the hospital on request. In addition the department took full charge of the management of critically ill patients in the Intensive Care Unit.

This unit was run on a multidisciplinary basis with much support and co-operation from the department of medicine and paediatrics. Both medical and paediatric registrars continued to rotate in the unit on a six weekly basis as part of their training in critical care medicine. The combined ward rounds between these groups were held as usual on Saturday mornings. These were followed by a clinical meeting and review of mortality figures for each week. These sessions continued to be a source of encouragement and real learning for all these concerned.

On the whole, despite the acute shortage of staff and materials we were able to provide uninterrupted service to the whole of the Kenyatta National Hospital complex. It would appear that the volume of work did not show much change from the previous years. If all the difficulties referred to in this report are overcome, the output from the department could be more than double in the not too distant a future.

*Staffing of Intensive Care Unit in 1979—Doctors.*—There was adequate coverage by doctors in the unit for the whole year.

*Department of Medicine:*

Dr. Silverstein.  
Dr. Warshaw.

Was a monthly rotation of senior house officers in medicine.

*Paediatrics Department:* Dr. Amolo provided an excellent service all the year round. There was also S.H.O.s paediatrics one month rotation.

*Department of Anaesthesia:*

Prof. Ayim.  
Dr. Kisia.  
Dr. Omondi.  
Dr. Kahuho.  
Dr. Knightingale and  
also S.H.O.'s anaesthetic rotation.

**Nurses**

Mrs. L. Wangome was the unit matron and Mr. P. M. Kimani took over as nursing officer II in charge of the unit at the beginning of the year from Mrs. Edebe who was transferred to Nyanza General Hospital.

The patient/nurse ratio was better than 1978 but not adequate. The number of nurses posted to the unit has been fluctuating and many times it was not possible for the senior nursing officer to replace the nurses as soon as they left the unit.

Some of the nurses problems affecting smooth and adequate patient care management were:

- (1) Taking of emergency unexplained leave reasons given—
  - (a) illness of member of the family;
  - (b) main problems.
- (2) Transfers to join husbands elsewhere.
- (3) Resignation from Government service.
- (4) When a number of nurses have been taken for post-graduate courses.

- (5) Maternity leave especially when 2 or 3 nurses happen to leave at the same time.
- (6) A few who are not interested in intensive care nursing.
- (7) Sick-offs due to poor health.

*The Staff Pattern:*

Nursing Officer I	...	...	...	...	...	1
Nursing Officers II	...	...	...	...	...	8
Nursing Officers III	...	...	...	...	...	25
Enrolled Nurses	...	...	...	...	...	2
Enrolled Midwife	...	...	...	...	...	1
Domestic Staff	...	...	...	...	...	10

*Physiotherapists.*—There were three in number who provided day service up to 4.30 p.m. This service was extended to weekends and Public Holidays. We would like this service to be extended to 24 hours.

*Laboratory Technologist.*—They were four in number and their coverage was adequate.

*Medical Electronics and Maintenance.*—This department was almost at a total collapse when three of the technicians resigned to join private companies. This was later corrected and the number of the technicians increased. We hope it is going to do better next year.

*Intensive Care Nursing Course.*—Six post-graduate nurses who had an in-service intensive care course were allowed to do two months course in theory and practical in intensive care nursing and all these candidates successfully completed the course and they were awarded a diploma in intensive care nursing.

*Dismissal from Training.*—All the six post-graduate nurses who were on their last month of completion of their course were dismissed from the training due to gross misconduct.

*Promotion for Nurses.*—Six nursing officers III were promoted to nursing officer II during the year.

*Training Overseas.*—Mrs. Mukungu was awarded a scholarship to Japan for six months, at National Cardiovascular Centre to specialize in post-operative care management of open heart surgery.

*Problems faced during the year.*—These were similar to those of 1978:

- (a) Shortage of trained I.C.U. nurses—and patient/nurse ratio was still not adequate.
- (b) Lack of equipments, spare parts and drugs.
- (c) Physiotherapist coverage to extend to night duty.

*Visitors.*—In September, 1979 we were lucky to have a group of cardiac surgeons and specialists from America who were invited by the Kenya Heart Foundation and the Kenya Government. The group consisted of:

- (1) Cardiac Surgeons: Dr. J. N. Cunningham and Dr. L. D. William.
- (2) Cardiac Anaethiologist: Dr. K. Shevde.
- (3) Post-operative Cardiac Nurse Specialist: Miss Margaret Nooran. This group with the co-operation of our local team were able to perform ten cases of open heart surgery within two weeks. We learnt a lot from them.

### **Division of Medicine**

Activities of the division of medicine are reflected in patient attendances to be found in the statistics from the records department.

This division suffered from numerous organizational problems, with several changes of senior staff and minor administrative but important problems between university and Ministry of Health staff. Dr. Mngola became the Director of Medical Services/Permanent Secretary and Dr. W. Kahugu was later appointed Chief Administator of this hospital. At the end of 1979, Dr. Kahugu retired to full time private practice. The division did not adjust itself quickly to these changes to provide a comprehensive report of its activities. A fuller report is expected for 1980.

*Cardiology.*—The department had a busy year of increased cases for investigation and introducing of a new technique which had not been used in the East African region before. Echocardiogram is the newly introduced technique. An increase of 10 per cent was noted for the whole year.

#### *Statistics for 1979*

E.C.G. ... ..	4,065
Cardiac Gatheterization ... ..	238
Echocardiograms ... ..	120
Aortograms ... ..	37
Renal Angiography ... ..	11
Aesopharaphy ... ..	2
Urethrogram ... ..	1

It is disappointing to note that most of the essential materials were not available when required. As most of the materials are not available locally, provision should be made for overseas purchases to be done in time.

*Equipment.*—The breakdown of equipment was minimal and any defect was rectified by medical maintenance unit immediately. Few spare parts were ordered to up-date the equipment but they are not yet received.

#### *Staff strength for the year 1979*

Cardiologists ... ..	5
Senior Technician ... ..	1
Nursing Officers ... ..	2
Radiographer ... ..	1

Darkroom Technician	...	...	...	...	...	2
E.C.G. recorder	...	...	...	...	...	1
Cardiological trainees	...	...	...	...	...	3
Attendants	...	...	...	...	...	3
Medical Electronic Engineer	...	...	...	...	...	1
Medical Secretary	...	...	...	...	...	1

### **Electroencephalography**

The department is short of qualified staff. For E.E.G. department to function accordingly to international standards of a teaching hospital there should be at least three qualified technologists and an E.E.G. machine with 16 channels. At the moment there is only one qualified E.E.G. technologist. As a result there is overloading and consequently it is not possible to tackle the needs of patients as quickly as doctors would like. Currently, there are two students who are helping the qualified technologist.

The department was able to attend to five patients and send two patients to Aga Khan Hospital daily, i.e. seven patients are examined and reported on daily. The patients will cease to be sent to Aga Khan as soon as an additional qualified technologist is posted to the department.

From January to April, 1979, there were no papers and we could do only 25 cases while from May to December, 1979, 600 patients were recorded making a total of 625 patients for the whole year.

The department had been exposed to a lot of problems. The supply of papers as noted above was inadequate and it is suggested that supply services should be effectively planned to avoid further shortage.

Maintenance of equipment had been a headache. The internal electronic maintenance unit was not conversant with maintenance of E.E.G. instruments. This resulted in delayed repair of working with faulty machines. This situation requires serious consideration by hospital management.

### **Nursing**

Since the last annual report, there had been gradual increase of staff. There were 326 Kenya registered nurses (K.R.N.s) and 279 enrolled nurses (E.N.s). The following changes among the senior nursing staff took place:

- (i) Mrs. E. Ngugi, Senior Nursing Officer since 1971, was promoted to Deputy Chief Nursing Officer and posted to the Ministry headquarters.
- (ii) Mrs. E. Ongeru, Nursing Officer I, was promoted to Senior Nursing Officer and moved to Deputy Chief Nursing Officer's office to replace Mrs. Ngugi.
- (iii) Mrs. H. Kukubo, Nursing Officer I, was promoted to Senior Nursing Officer I and was transferred to Bungoma.

(iv) Mrs. Nyambok, Mrs. Willey, Mr. Kimani, Mrs. Gichuru, Miss Kamau, Mrs. Songe, Mrs. Ali, Mrs. Pamba, Nursing Officers II, were promoted to Nursing Officers I.

(v) There were 23 Nursing Officers III promoted to Nursing Officer II.

(vi) There were 11 Enrolled Nurses III promoted to Enrolled Nurse II.

Frequent movement of nurses in and out of Kenyatta National Hospital continued. This caused discontinuity of service training. While the number of trained nurses on paper was large at any given time, between 25 to 36 per cent were on annual, maternity or emergency leave.

In-patient areas were overcrowded, especially the acute gynaecology maternity, observation and surgical wards. Despite the overcrowding, the staff did a commendable job and care of patients was generally better. Trained staff worked closely guiding students. It was frustrating to work in overcrowded areas with limited supplies. One continuing worry was how the graduates of the hospital were going to be assisted to learn that nursing patients on the floor or two in a bed is not acceptable. No answer was yet available, but research is continuing.

### **Training**

We qualified the first group of nurses in theatre technique. These were twelve enrolled nurses recruited from the whole country. Only two were left in K.N.H. The course for K.R.N. has not yet started due to lack of trained trainers.

The six nurses due to qualify in intensive care nursing were discontinued because they proved unsatisfactory two months before they were due to qualify. One candidate was from a private hospital. They had decided to sit in class and revise for examinations while they were expected to work in the I.C.U. for 4 hours daily.

The nursing division trained teams of nurses from Coast General Hospital, Garissa, Embu and Meru in central sterile supply department. The section Head of this Department, Mr. Irungu, visited these hospitals also to assist in setting up the new departments.

There were requests from other hospitals to train nurses in casualty technique but this could not be done. With the return of Mrs. Ali from her course in casualty management, we hope to organize some training in this section for our staff as well as others who may require it.

On basic training, K.R.N. students and midwifery training continued gaining clinical experience from the hospital and also provided a significant part of the labour force. Physiotherapy, occupational therapy, radiography and clinical officer students were seconded to nursing section for 4 weeks experience. The nurses were invited to address pharmacy students on team work and administration.

## **Voluntary Organizations**

The Kenyatta National Hospital League of Friends continued to offer very essential service to the hospital. They had the music/radio system installed in I.D.H. and orthopaedic unit, Kabete. They gave 13 wheel chairs to individual patients and provided darts and cards for patient entertainment.

Various churches continued to second Pastors to take care of spiritual aspects of our patients and staff. These were the Presbyterian Church, Anglican Church, Baptist and the Catholic churches. The chaplains organized Sunday services, Holy Communion and Christmas carols for patients. The hospital chaplaincy of Kenya co-ordinated the work of chaplains. It was evident that work of the chaplains had now developed to a stage where the administration of the hospital should recognize it as a section in its own right. Two chaplains were on the Ministry of Health's pay roll.

Starehe Boys Centre, Girl Guides Association and St. John's Ambulance continued to send their students to work in the hospital during the holidays and Saturdays for either general work or specific experience.

There was a request by at least two parents to have their daughters work in the hospital during the holidays instead of staying idle at home. This was granted and the girls worked with no problems.

The National Nurses Association of Kenya organized monthly half day lectures that were on topics of interest to nurses.

## **Comments and Recommendations**

(a) There is need to develop clinical post basic courses in—

- (i) casualty management;
- (ii) paediatric nursing;
- (iii) neonatal nursing;
- (iv) theatre nursing for K.R.N.s;
- (v) medical-surgical nursing

if this hospital has to play its proper role as a teaching hospital responsible for setting the standards for the country.

(b) It is going to be necessary to implement decisions of the project committee on operational policies before moving to the new ward tower, to ensure that service departments do not continue depending on nurses for messenger services for delivery of various supplies.

(c) We would like to implement recommendations of nursing research findings:

- (i) That nurses work shift system.
- (ii) That nursing care plans, cardex and nursing notes documents be fully used as part of nursing record system.
- (iii) Decentralize nursing administration according to clinical divisions.

### Division of Obstetrics and Gynaecology

Statistics of activities in this division are to be found in the records department. This division suffered similar problems which beset medicine. Mr. S. R. Patel and Dr. S. Musila, retired to full time private practice, thereby leaving the division with no senior Government staff. Efforts are being made to rebuild the strength of senior staff and bring about harmonious working relationships between Ministry of Health and University staff.

### Occupational Therapy Services

During the first half of the year the department had 15 members of staff but two were transferred out later leaving a strength of 13. The staff were distributed as under:

- (a) Main K.N.H. wards were served by four therapists.
- (b) Out-patient department was served by five therapists.
- (c) Orthopaedic Kabete had one therapist.
- (d) Infectious Diseases Hospital had one therapist and one at spinal injuries unit.

#### *Patients Statistics 1979*

	<i>Patients</i>
Main K.N.H. wards ... ..	1,065
Out-patient ... ..	715
Orthopaedic Kabete ... ..	775
I.D.H. ... ..	432
Spinal Injuries ... ..	208

From the records, conditions treated in large numbers were:

- (a) In paediatric—polio, hydrocephalous, kwashiokor, congenital abnormalities, cerebral palsy.
- (b) In physical disabilities—rheumatoid arthritis, fractures of both upper and lower limbs, stiff joints and contractures, traumatic amputees, burns, head injuries paraplegia, hemiplegia, leprosy and tuberculosis.

The department was much frustrated because materials and equipment were not purchased for it. The procurement department blamed the Ministerial Tender Board. The department badly requires orthopaedic splinting materials. We have resorted to substituting P.O.P. for making splints, but this material is not durable at all.

### Ophthalmology:

Well controlled blindness in any country is not more than 0.5% but two surveys carried out in Kenya in 1959 and 1979/80 indicated 1.6% to 6% varying in different parts of Kenya.

The year 1980 was devoted to update the quality of eye work, improvement of working conditions by distributing equal responsibility to the members of

the clinical staff, adequate coverage of the eye outpatients clinic, consultative clinic, inpatients wards and eye emergencies. Enhance the academic knowledge, the Department hosted the 4th World Eye Congress in which some 250 world renowned eye surgeons participated, who also visited the Department. The consensus of opinion conveyed to us following the visit to our facility is worth mentioning. It was said, the type of facility and the service provided was comparable to any world renowned eye centre. The department also had visits by various other foreign based reputed eye surgeons, who gave lectures to the staff.

Congenial atmosphere prevailed between the Government and the University staff. The Government staff fully participated in the teaching and training of under graduates. Meetings were held with the Dean of the Medical School to streamline the participation of the Government and University staff to make the teaching curriculum more profitable and worthwhile.

Other peripheral Government eye facilities, like hospitals in Northern Kenya and other hospitals in the country which do have eye staff were visited by eye surgeons from the Kenyatta National Hospital.

The delivery of eye care, recruitment of ophthalmic personnel and establishment of cost effective eye facilities for the whole country generated from the eye Department of Kenyatta National Hospital with the help of the Ministry of Health Headquarters.

A documentary film was made with permission of the Ministry of Health which showed the activities of the Kenya Government Ophthalmic Programme. It has been well received by other countries, some of whom have indicated their intentions to send their paramedical staff for training in Kenya. For this to materialize, it has been suggested that an International Kenya Rural Ophthalmic Centre be established. Funds from international sources, like the Agency for the Prevention of Blindness which is a subsidiary of the WHO are available. A draft proposal has been sent to the Ministry of Health for their advice.

The International Trachoma Research Centre which was based in Tehran, Iran, had to be closed down. A recommendation has been made to the Ministry of Health that this Research Centre which is also sponsored by the WHO, should shift to Kenya. Baringo, where trachoma is one hundred per cent endemic has been suggested and earmarked as a suitable centre. As an initial step, an eye facility has been created at Kabarnet Hospital.

All the activities enumerated above and others which have not been written in this report, are associated with the Eye Department of the Kenyatta National Hospital. Despite the above achievements, the eye facility at the Kenyatta National Hospital still faces many problems.

### **Drugs**

Very limited eye drugs were made available to the Eye Department. In spite of furnishing the basic list of eye drugs to the concerned authorities, it is sad to say few substandard drugs were provided which not only betrayed

the patients trust to seek first class consultative treatment but many eyes unnecessarily went blind. It is recommended. Due consideration should be given immediately to the basic list of Eye Drugs which was submitted.

### **Secretarial Service**

The Department had an efficient Secretary who is now well trained as Ophthalmic Secretary but the Secretary's Office has a worn out typewriter and many other office items are not present. Requests made during the last 10 years have never received attention.

### **Repairs**

The eye outpatients section and eye consultative clinics need repairs to the building and electrical fittings.

### **Eye Wards/Staff**

There was lack of eye dressing trolleys with dressing and medications. Many times nursing staff, with no knowledge of handling eye cases were posted as seniors. Proper preparation of patients prior to surgery was therefore not done according to the specified instructions, because of inexperienced staff.

### **Theatre**

The equipment is about 30 years old, although it is hoped new equipment would soon arrive. There were frequent breakages of vital eye instruments which were badly handled by staff with no knowledge on eye equipment. Representations were made to engage in addition to rotating staff, one permanent eye staff who would help and also look after the equipment. With the arrival of new equipment it is vital that such staff be provided.

If circumstances allow, a separate eye theatre be requisitioned in the Eye Department on a permanent basis. Some new equipment has to be fitted on permanent basis. Drugs needed during surgery often missed and many times operations had to be postponed.

### **Administrative Liaison**

The Department seldom received Ministry of Health's circulars, including posting orders. It is necessary that all relevant communications be sent to the department.

### **Eye Safari**

Eye safari by eye surgeons are convened and executed from the Kenyatta National Hospital to un manned eye facilities in other areas of the Republic. It has been a very difficult practice to run from one office to another to get mileage claims approved.

### New Laser Unit

There has been an offer to provide free Eye Section with new laser unit which is specific for retinal work. The eye consultative clinic already has space and electrical fittings for such a unit.

### Department of Paediatrics

1979 was rather a successful year in that the department experienced no major problems. The chief paediatrician, though tied down by the Medical Practitioners and Dentist Board did spare time to give advice to the three other paediatricians who were working in the department.

#### Staff Strength

(i) Chief Specialist	...	...	...	...	...	1
(ii) Senior Specialist	...	...	...	...	...	1
(iii) Specialist I	...	...	...	...	...	1
(iv) Specialist II	...	...	...	...	...	1
(v) Senior House Officers	...	...	...	...	...	18
(vi) House Officers	...	...	...	...	...	9
(vii) Medical Officers	...	...	...	...	...	3
(viii) Qualified Clinical Officers	...	...	...	...	...	12
(ix) Student Clinical Officers	...	...	...	...	...	30
(x) Specialists from the Medical School	...	...	...	...	...	12

#### Training

Postgraduate training at the department of paediatrics and the Medical Training Centre was continued. Examinations were conducted in the Medical Training Centre and at the department of paediatrics.

#### Out-patient Section

These areas were extremely busy. The paediatric filter clinic was at times congested. The spill into paediatric observation ward created a few problems which were handled by the hardworking senior house officers, medical officers, interns, nurses, consultants and attendants whose devotion managed to cope with work. The department feels that a solution should be found to reduce congestion.

#### Meetings

The department had been a mother to many meetings: Dr. M. L. Oduori, Chief Paediatrician, Chairman of Medical Practitioners and Dentists Board, K.N.H. meetings. Dr. S. Kimemiah, Senior Specialist, Member of Medical Practitioners and Dentists Board, Ministerial Tender Board, Medical Advisory and University of Nairobi departmental meetings. Dr. P. Muiva, Specialist I, Drugs and Supplies Committee K.N.H., postgraduate meetings, nutrition, statistical and department of paediatrics meetings.

#### Paediatrics Demonstration Unit

This small unit has been a boom to the health of newborns and mal-nourished. Despite the shortage of vaccines the staff rendered superb service.

Health education and home visiting were conducted. There were five registered public health nurses attached to this unit.

### **In-patient Services**

The services continued to improve. Patients with chronic illness were a problem in wards 3 and 4 as they stayed too long while wards 1 and 2 discharged patients promptly. Infectious Diseases Hospital block 3 had its usual share of measles cases but whooping cough was on the decline. Two cases of rabies were seen and treated. Sporadic outbreaks of plague and cholera kept the staff alert. Paediatric observation ward remains with its facilities. Maternity nursery was busy but well staffed (two consultants and three senior house officers). Shortage of water and linen in maternity affected the care of babies.

### **Department of Paediatrics (University)**

The staff in this section gave all the support in the care of children. The number of specialists remained twelve. The first regional paediatric congress for Africa was held here in February, 1979.

### **Rural Visits**

The department has operated on a programme whereby two paediatricians visit a province once a month. They take along with them a senior house officer. Each province is visited twice a year and by undertaking this exercise it is felt that Kenyatta National Hospital staff boost the morale of those working in the field. Three to four senior house officers are attached for three months to a provincial paediatrician to get the experience managing a provincial hospital.

### **Statistics**

The following tables show some of the important figures in relation to amount of work done. Mortality rate figures for paediatric observation ward, general wards, and I.D.H. block 3 and maternity nursery are as under :

#### **Kenyatta National Hospital Paediatrics Statistics 1979**

							<i>Admission</i>
Ward 1	...	...	...	...	...	...	670
Ward 2	...	...	...	...	...	...	403
Ward 3	...	...	...	...	...	...	265
Ward 4	...	...	...	...	...	...	271
						<b>TOTAL</b>	<b>1,609</b>
I.D.H. Block 3	...	...	...	...	...	...	1,421

*Paediatric Demonstration Unit*

New	...	...	...	...	...	...	...	63,286
Old	...	...	...	...	...	...	...	17,068
								80,354
								80,354

**Physiotherapy Services**

The year experienced shortage of staff more than last year. This was caused by so many officers being promoted and posted out without replacement. The remaining staff were overstretched. However, the situation improved in the second half of the year when the new lot qualified from M.T.C. The years strength of physiotherapists was 38.

In-patient cases were treated at an average of 100 patients a day this included taking ward rounds with the doctors.

Out-patient department remained busy especially over the cold seasons. Both the treatment and gymnasium rooms handled an average of 90 patients a day. Each patient taking about 30 minutes of treatment.

In I.D.H. there had been very small room to operate from although a bigger one has been proposed to be renovated for this purpose.

It has been suggested that a small section will be established in Rahimutulla wing for proper rehabilitation rather than just bed side physiotherapy.

One physiotherapist is attached at casualty and observation and recovery wards. He has a small treatment room. He has been involved in attending fracture clinics and supervision of distribution of crutches. Burns unit and I.C.U. requires specialized skills and a conversant staff in these areas as our present personnel is not highly specialized it will be suggested that training for managing burns and I.C.U. physiotherapy personnel should be looked into urgently.

Servicing of physiotherapy equipment had been poor. Electrical equipment were serviced satisfactorily, non-electrical equipment, i.e. static bicycles, rehabilitation machines and rowing machines have no contractor to repair and M.O.W. gave very poor service, if any.

PHYSIOTHERAPY STATISTICS 1979

<i>Unit</i>	<i>Male Patients</i>	<i>Female Patients</i>	<i>Total</i>	<i>Total No. of treatment</i>
In-patient Department .. .. .	8,249	5,559	13,808	132,029
Out-patient Department .. .. .	7,880	5,121	11,001	75,012
	16,129	8,680	24,809	207,141

## Radiological Services

75,000 patients were examined. Special examinations were done but there was recurrent shortage of essential contrast media like barium sulphate for barium meal examinations, urograffin for I.V.P., myodil for myelography, etc. which limits the examinations which could have been done. Unless provision of supplies is improved the services regarding special examinations are bound to continue suffering.

### *Special Examinations done in 1979*

Barium Meal	...	...	...	...	...	1,838
Barium Enema	...	...	...	...	...	278
Barium Sallow	...	...	...	...	...	526
Carotid Angiography	...	...	...	...	...	480
I.V.P.	...	...	...	...	...	1,190
Splenic Venography	...	...	...	...	...	44
Myelography	...	...	...	...	...	186
H.S.G. Hystenosalingograms	...	...	...	...	...	573
Casualties	...	...	...	...	...	34,412

X-ray department identify its equipment by the rooms they are installed. There are 12 rooms in all. This makes it easy in distributing the work load to the appropriate equipments.

The equipment did not give satisfactory service in most of the rooms. However, rooms II, III, VII, VIII and XII worked satisfactorily throughout the year.

Room I—Chest Room—the equipment is old and functioned intermittently during the year. This equipment has been recommended for replacement.

Room IV—a number of faults occurred in the screening equipment and put off services for about six months but by September, 1979, the equipment was satisfactorily repaired. Repairs in rooms V and VI had delayed over seven months after the L.P.O. had been issued to contractors. The excuses given were lack of spares.

Room XI—the screening unit is due for replacement with a new Philips unit which has already been bought.

The department did not experience major breakdowns with the darkroom equipment except for the gaevamatic type 4 automatic processors which continued to be out of use throughout the year because of non-availability of spare parts. These three machines never rendered any good service right from the time they were installed because of repeated breakdowns even while still being tested with only water.

## Radiotherapy and Nuclear Medicine Unit

### Staff

(i) Consultant Radiotherapy—oncologist and head of the department	...	...	...	...	...	...	1
(ii) Senior House Officers	...	...	...	...	...	...	3
(iii) Radiophysicist	...	...	...	...	...	...	1
(iv) Radiophysicists Trainees	...	...	...	...	...	...	4
(v) Therapeutic Radiographers	...	...	...	...	...	...	4
(vi) Nursing Staff	...	...	...	...	...	...	7
(vii) Copy Typists	...	...	...	...	...	...	2
(viii) Attendants	...	...	...	...	...	...	2

### Equipment—

- (a) One cobalt machine was overhauled with replacement of hydraulic system of treatment table and new timer system plus emergency switches were fitted.
- (b) Caesium 137 unit for gynaecological cancer treatment.
- (c) An X-ray machine for treatment of superficial cancer and benign lesions.
- (d) Strontium—90 for the treatment of eye diseases.
- (e) Scanner from International Atomic Energy Agencies with this we to carry out brain, liver, thyroid and renal scans in the department.

Work on the extension of the department started and a second cobalt-60 machine from Umea, Sweden, will be installed as soon as the building is ready. The department is in need of the thermoluminescence dosimeter which will help in standardizing the radiation monitoring equipment in the country both for diagnostic, protection and therapy.

From the figures it will be noted that the single cobalt-60 machines the department has is fully occupied despite the fact that only a fraction of diagnosed cancer patients are treated in the department up to now. Completion of the new building will enable the department to add a simulator and another cobalt unit. The next plan would require a linear accelerator of about 6MeU to be purchased for completion of radiotherapy treatment machines.

### Out-patients

The patients are seen daily in the department have been referred from different units in the hospital, provincial hospitals in Kenya and from neighbouring countries. Cancer control clinics are held every Wednesday in the department to follow up all the patients that have undergone treatment in the department and a joint E.N.T. Oncological Clinic is run on every second Friday of the month.

### In-patients

The department was allocated 14 beds for general cancer patients, i.e. seven beds for male, seven for female in 1973. There are also 14 beds for gynaecological patients. The increase of patients from 1973 to date had not been taken into account. However, the tower block will give us about 140 beds. The main problem in 1979 was with gynaecological patients who had greatly increased during the last four years and had to be admitted to ward 15 while awaiting their investigations and while having their external radiation treatments. The number of carcinoma of cervix makes 43 per cent of all cases treated in 1979.

### Teaching

There had been regular teaching programmes for nurses in all classes, and medical students in their 3rd and 5th years. Also doctors in surgery, diagnostic radiology and other para-medical students were taught.

### Research

The department can only do clinical research work owing to lack of laboratory facilities for experimental research work. The following work is going on:

- (i) Effectiveness of prophylactic intracrania; radiation therapy in
- (i) Effectiveness of prophylactic intracranial radiation therapy in leukemia patients on remission together with the department of haematology.
- (ii) Effectiveness of combined surgery and radiotherapy in Wilm's Tumours in children—together with paediatric surgeons and haematology department.
- (iii) Effectiveness of post operative radiotherapy as compared to post operative chemotherapy in breast cancers.
- (iv) Effectiveness of external radiation therapy and intracavity radiation in stages I to III of cancer of the uterine cervix.

#### PATIENTS VISITS 1979

Month	Male	Female	Total
January .. .. .	463	686	1,149
February .. .. .	430	552	1,050
March .. .. .	527	771	1,298
April .. .. .	339	526	865
May .. .. .	647	642	1,289
June .. .. .	506	542	1,048
July .. .. .	399	567	966
August .. .. .	458	637	1,095
September .. .. .	641	316	1,457
October .. .. .	587	905	1,492
November .. .. .	536	851	1,387
December .. .. .	370	570	940
TOTAL .. .. .	5,971	8,065	14,036

NUMBER OF TREATMENT AND INVESTIGATIONS IN 1979

Month	Cobalt-60	SXT	Cs-137	Iodine Therapy	Investigations SCANS
January .. .. .	1,015	60	9	—	—
February .. .. .	946	—	9	—	—
March .. .. .	1,127	47	4	—	—
April .. .. .	738	14	3	—	—
May .. .. .	1,035	8	7	1	31
June .. .. .	925	14	1	—	26
July .. .. .	967	35	6	1	24
August .. .. .	922	14	5	—	12
September .. .. .	1,245	7	6	—	9
October .. .. .	1,368	11	6	—	58
November .. .. .	1,277	4	8	—	42
December .. .. .	824	7	3	—	28
TOTAL .. .. .	12,389	221	71	1	238

**Medical Social Services**

The department was badly hit by frequent transfers without replacements. The Chief Administrator tried in vain to stop such transfers. One social worker resigned in the middle of the year. The department was left with limited personnel who could not adequately cover the hospital. The staff who transferred out left the station secretly without handing over and it was not possible to trace the cases they were dealing with.

The nature of cases differed from one to another, but the aim of medical social worker is to try to solve patients' problems of any nature, be it personal, emotional, physical and family social problems which may be adding to the patient's state of illness such as psychosomatic illness or emotional stress. The cases from all units were as follows:

- (a) *Out-patients*: 109 cases—including paediatric, female and male filter clinics, eye clinic and paediatric demonstration unit.
- (b) *Follow up clinics*: 87 cases.—Most of the cases dealt with were destitutes, mental retardation, marital problems, abandoned cases, sterility, compensation, social, economical and deserted relatives.
- (c) *Casualty/Receiving Area Recovery Ward*: 51 cases.—These included abandoned cases, beggars, cases collected by police from streets and a few parking boys.
- (d) *Paediatric Wards*: 91 cases.—These were abandoned children, unwanted.
- (e) *Medical Wards*: 83 cases.—Owing to shortage of medical workers there was no social worker covering this unit. Cases attended to were only emergency cases. Types of cases recorded were those due to loss of employment, paraplegic and hemiplegic, permanent disability abandoned, old age, bed ridden and unemployed.

- (f) *Surgical Wards*: 607 cases—the cases included unknown persons brought by police or members of the public to the hospital, abandoned cases, assault, suicide attempts, head injuries and unemployed.
- (g) *Maternity Unit*: 151 cases.—Types of cases in maternity are babies of mentally ill, mothers who deliver and go back to the mental hospital, abandoned babies, unwanted babies for adoption, stranded, destitute mothers with their babies, unmarried or depressed mothers due to social problems.
- (h) *Rahimtulla Wing*: 11 cases.—The cases were of patients who had lost employment, neuro-surgical and deep emotional stress.
- (i) *Infectious Diseases Hospital*: 35 cases.—For about eight months there was no social worker and the social worker who worked there for four months was transferred out without our knowledge and she left without handing over. Types of cases included were T.B. patients who were socially neglected because of the nature of their illness, malnutrition owing to poverty, divorce and separation after suffering infectious diseases.
- (j) *Orthopaedic Unit*: 89 cases.—The unit is occasionally visited by the social worker from spinal injuries hospital and the cases are referred to rehabilitation centres and district hospitals.

It should be submitted that this report is not comprehensive because some sections had no regular worker at least for one year and there was poor handing-over if there was any at all.

### Surgical Services

*Department of Anaesthesia and Intensive Care Unit*.—The anaesthetic department continued to be the busiest department in the whole of the Kenyatta National Hospital complex. The departmental activities cut right across all the medical disciplines. Towards the end of the year there were 30 anaesthetists of all categories as follows:

#### Ministry of Health—

- 4 Specialists;
- 9 Senior House Officers in Training;
- 1 Medical Officer;
- 12 Clinical Office Anaesthetists.

#### University Staff—

- 1 Professor;
- 2 Lecturers;
- 1 Senior House Officer (Postgraduate from Uganda).

In addition there were six doctors from the department undergoing post-graduate studies in anaesthesia oversea. By the end of the year all these doctors had passed their Part I F FARCS examination and were looking

forward to sitting Part II of the same examination within a year or so. The nine months post-graduate course in anaesthesia for certified clinical officers is still continuing and at the beginning of the year eight students successfully completed their training in anaesthesia. Another class of trainees was due to start their course at the beginning of 1980.

The post-graduate M. Med. (Anaesthesia) course which started in 1978 gathered momentum. In 1979 there were three senior house officers who obtained the Part I M. Med. (Anaesthesia) examination and six S.H.O. on the Part I M. Med. (Anaesthesia) course. Staff also gave lectures in anaesthesia to nurses.

Anaesthetic services were provided at the following stations within the Kenyatta National Hospital complex :

(i) *Mathare Mental Hospital.*—A total of 3,011 patients were given anaesthesia for Electro convulsive Therapy (ECT). Of these 1,028 were females, and 1,983 were males. There were no deaths. 11 patients took too long to recover from the anaesthesia after the ECT and 1 patient vomited after ECT.

*Remarks.*—The number of patients given ECT under anaesthesia was less than that of 1977 (3,621) but more than the one for 1978 (2,446).

(ii) *Orthopaedic Unit at Kabete.*—Major and minor anaesthesia was administered to a total of 1,300, orthopaedic, dental and plastic patients.

(iii) *Casualty Department.*—Records were incomplete. However, as a guide to the volume of anaesthetic work in this department in 1977, 750 cases were anaesthetized and in 1978 the figures had risen to 989. The resuscitation of patients in this department especially when a mass accident occurred continued to pose a big challenge to the department of anaesthetics and all the other departments concerned. With the introduction of the WERE resuscitation trolley the task of reviving the critically injured was made much easier. This trolley is equipped with all the necessities. The hospital will acquire more of this type of resuscitation trolleys for the casualty and all the wards including the adult and paediatric observation wards when funds are available.

(iv) *X-ray Department.*—507 anaesthetics were administered with no deaths. In 1977 and 1978, the number of anaesthetics administered were 542 and 414 respectively.

(v) *Radiotherapy Unit (Caesium Unit).*—108 anaesthetics were administered with no deaths or other serious complications.

(vi) *Maternity Unit.*—1,452 patients were anaesthetized in this unit with three deaths. The deaths occurred in patients with associated medical pathology.

(vii) *Main Theatres including Rahimtulla Wing Theatre:*

Type of Surgery	Major	Minor	Total
General Surgery .. .. .	1,171 (1,100)	1,098 (1,181)	2,269 (2,281)
Cynaecology .. .. .	933 (837)	5,682 (5,274)	6,615 (6,111)
E.N.T. .. .. .	338 (442)	873 (854)	1,211 (1,290)
Orthopaedic Surgery .. .. .	303 (174)	103 (139)	406 (313)
Plastic Surgery .. .. .	48 (36)	30 (56)	78 (92)
Ophthalmic Surgery .. .. .	929 (807)	314 (130)	1,243 (937)
Neuro Surgery .. .. .	471 (337)	173 (103)	644 (440)
Cardiothoracic Surgery .. .. .	193 (137)	31 (43)	224 (180)
Paediatric Surgery .. .. .	234 (168)	230 (151)	464 (319)
	4,620 (4,038)	8,534 (7,931)	13,154 (11,969)

\*The figures in brackets are those for 1978

Thus a total of 19,532 patients were anaesthetized in 1979. This figure compared with those of 1978 and 1977 (18,259 and 18,628) respectively shows a marginal increase. Thirteen patients died in theatre during the year and the causes of death were as follows :

Ruptured liver with massive haemorrhage	...	...	1
Severe cardiac disease in failure	...	...	1
Bullet wounds	...	...	2
Road traffic accident with multiple injuries	...	...	1
Post abortum septicaemia	...	...	2
Aortic Aneurysm on by-pass procedure	...	...	1
Stab wound in the chest	...	...	1
Foreign body in the bronchus	...	...	2
Cerebellar tumour	...	...	1
Carcinoma of the right lung	...	...	1
			—
		<b>TOTAL</b>	<b>13</b>

Thirteen patients developed various life-threatening complications: 8 patients had cardiorespiratory arrest; 1 patient regurgitated during induction of anaesthesia; 4 patients failed to breath after the use of muscle relaxants. Most of these patients were resuscitated and then admitted to the Intensive Care Unit or sent directly to their wards.

#### Comments

With 13 deaths recorded this gives a mortality of approximately 1:2,000 anaesthetics. Most of the deaths which occurred in theatre, were inevitable. Most of the patients who came to theatre for emergency surgery had had very little or no pre-operative preparation. On the whole there was a marginal increase in the volume of work done during the year when compared with the previous years.

	1977	1978	1979
Total number of anaesthetics given	18,628	15,813	19,532

Reason for this static performance could be attributed to a number of factors:

- (i) Non-availability of blood.
- (ii) Inadequate pre-operative preparations of patients in the wards.
- (iii) Surgeons or anaesthetists late or not being available for their lists.
- (iv) By far the most serious cause of cancellation of operations was due to an erratic supply of basic but essential items such as—
  - blood giving sets;
  - syringes and needles;
  - laryngoscopes and bulbs;
  - intravenous cannulae;
  - faulty anaesthetic equipment;
  - essential drugs;
  - endotracheal tubes.
- (v) The maintainance of all machinery and electronic equipment used in theatre left a lot to be desired. It is encouraging to note the hospital authority has now established a bio-medical engineering department.

#### **Thoracic and Cardiovascular Surgical Unit**

The year 1979 represented a definite development of this unit towards final stability after being under-staffed ever since its establishment at the beginning of the seventies. This is reflected in the number of senior surgical staff, the higher number of major operations performed during the year than previously, and the fact that overall results were much better than hitherto for all types of operations, particularly for the open heart operations.

It is hoped with availability of all relevant facilities that this growth will continue.

#### **Staffing**

##### *(a) Surgeons:*

January-June, 1979—

Mr. A. T. S. Paul.

Mr. P. A. Odhiambo.

July-October, 1979—

Mr. A. T. S. Paul.

Mr. P. A. Odhiambo.

Mr. F. G. O. Omaswa.

November-December, 1979—

Mr. P. A. Odhiambo.  
Mr. F. G. O. Omaswa.

(b) Senior House Officers :

January-August	...	...	...	One per rotation
September-December	...	...	...	Two per rotation

(c) Nurses :

Same group spread to cover the neuro-surgical wards.

### Supporting Departments/Units

(a) Cardiology—well-staffed; good pre-operative service and post-operative support. Has very good technical back up.

(b) Anaesthesia—limited by numbers but fully involved during prescribed session and always in the I.C.U.

(c) Operating theatre—thoroughly inadequate sessions: i.e., only 1½ days per week for open heart, lungs, closed heart, esophageal and peripheral vascular operations.

(d) Intensive Care Unit :

(i) Nurses.—The numbers were inadequate, but they had very commendable skills. Formal consolidation as a cardiac I.C.U. nursing team should be explored.

(ii) Technicians.—They had acceptable skills, which will be helped to improve.

(e) Perfusion team.—They were of international standard, however, more need to be trained.

(f) Physiotherapists—limited by numbers but very commandable coverage.

(g) Haematology Department—

(i) Coagulation studies and monitoring;

(ii) Blood transfusion service.

Both well covered.

(h) Pharmacy—good service. Optimally accessible for communication. Availability of scheduled drugs needed to be improved.

### Activities of the Unit

(1) Total Admissions

Kenyans	...	...	...	...	...	...	134
Ugandans	...	...	...	...	...	...	3

Zaireans ... ..	2
Tanzanian ... ..	1
Rwandan ... ..	1
Asian origin ... ..	2
<b>TOTAL ... ..</b>	<b>143</b>

(2) Consultations within Kenyatta National Hospital ... 340

(3) *Out-patient Clinic Attendance.*—Figures available only for the months of July-December, 1979:

New patients ... ..	69
Old patients ... ..	268
<b>TOTAL ... ..</b>	<b>337</b>

The other months (January-June, 1979) were mixed up with general surgical patients of firm I. Approximate total for 1979 ... 674

(4) *Operations*

(a) Open Heart Operation ... ..	39
(i) By local team ... ..	25
(7 died; mortality = 28.0 per cent.)	
(ii) By visiting team ... ..	14
(4 died; mortality = 28.57 per cent.)	
(b) Closed heart operations ... ..	66
(closed valvotomies, PDA ligations, pericardectomies, etc.)	
(c) Pulmonary and general thoracic ... ..	76
(d) Oesophageal operations ... ..	14
(e) Peripheral vascular operations ... ..	6
(f) Minor procedures (endoscopies, pleural, drainage, etc.)	35
<b>TOTAL ... ..</b>	<b>236</b>

(5) *Wasted Time and Resources.*—As indicated under introduction, the unit had the capacity to perform open heart operations regularly on a weekly basis. Very often, however, no operations were performed because of irregularity of various supplies and facilities. The periods affected were as follows:

- (1) March-May, 1979 (two months).
- (2) July-August, 1979 (two months).
- (3) October, 1979 (one month).
- (4) December, 1979 (one month).

It means therefore that the 25 open heart operations performed by the local team were staggered over the remaining six months only!

### **Suggestions for Future Developments**

(1) (a) At least two full-time trainees cardiothoracic surgeons immediately for development of the Kenyatta National Hospital Unit.

(b) Many will be needed to cover general thoracic surgery in the provinces. For now, special crash sessions of six months for interested (M. Med.) surgeons will be a worthwhile starting point.

(2) General cadre type of supporting staff urgently required, apart from S.H.O. who often need time to do research for their M. Med. dissertations. Registered clinical officers will be very good material to train into special cardiothoracic patient care. When surgeons are compelled to do ordinary calls, this minimizes time to cater fully for other bigger responsibilities of the unit, leave alone planning and affecting its development.

(3) More theatre time as an absolute prerequisite for the unit to maintain internationally acceptable standards of open heart surgery, to provide a necessary training work load for the trainee surgeons as well as to help refine and maintain the skills and smoothness of the supporting staff, and even the surgeons themselves for the ever-improving benefits of our patients.

(4) Instruments, equipments and drugs usually ordered separately. The supply of drugs, syringes, needles to mention a few has been particularly inefficient and frustrating. This situation should improve.

(5) It is high time that the Ministry of Health, the University of Nairobi and the Kenyatta National Hospital thought very seriously about the bio-engineering department in a fully functional sense.

(6) Surgical senior house officers should rotate through the I.C.U. as an essential part of their training immediately prior to rotating through the cardiothoracic unit.

### **Department of Ear, Nose and Throat and Head and Neck Surgery—Staff**

Mr. I. S. Bal. Consultant in charge.

Mr. M. J. D'Cruz, Sessional Consultant.

Dr. (Mrs.) Okoko, Specialist.

Mr. C. Ssali, Specialist, joined the department during the year.

Mr. H. Rupani, Specialist in training.

One or two senior house officers on rotation. Clinical officers—seven qualified and a number of student trainees in E.N.T.

### **Out-patient Clinics**

There were two clinics running simultaneously in the department of E.N.T. namely the consultant clinic and the filter clinic. The functioning of the filter clinic caters for all direct referrals from the casualty, general out-patient

clinics, etc. In spite of the shortage of staff the clinics worked beyond their normal capacity. The waiting lists for out-patients have been reduced. Patients referred from outside Nairobi have been seen in the clinics or admitted as out-patients on appointment basis. The attendance in various clinics was as follows :

E.N.T. Consultant Clinic	Day and Time	New	Old	Total
E.N.T. . . . .	Monday-A.M. . . . .	789	2,877	3,666
E.N.T. . . . .	Tuesday-P.M. . . . .	666	2,760	3,426
Audiograms . . . . .	Daily . . . . .	909	758	1,667
E.N.T. . . . .	Wednesday-P.M. . . . .	781	3,037	3,818
E.N.T. and cancer	Friday-A.M. . . . .	1,087	2,703	3,790
	TOTAL . . . . .	4,232	12,136	16,367

This is a substantial increase from the attendance in the consultant clinics in 1976, from 11,287 to 16,367 in 1979. The situation of audiological investigations has improved a lot during this year, emphasis being made on speech and pure tone audiometrics in a more elaborate way.

*Attendance in E.N.T. Filter Clinics*

<i>Day and Time</i>	<i>New</i>	<i>Old</i>	<i>Total</i>
Daily 8.30 a.m. to 4.30 p.m. . . . .	3,456	7,094	11,549

In both the filter and the consultant clinics a total of 27,916 patients were seen.

**Speech and Hearing Aid Clinic**

The utility of this clinic increased considerably with an increase in the staff from one to three. There was a lot of collaborative work with the society for the deaf, regarding school hearing assessment programmes and issuing of hearing aids to patients in those clinics. The joint Kenya-Swedish audiology programme aims at improving the existing facilities in the department.

**In-patient Services**

The total number of beds remained at 49, with a few extra cots for children in ward 18. At any given time 75 per cent of the ward beds were occupied by cancer patients. The overall admission rate of cancer patients was on the increase because of a larger number of cases being diagnosed in and outside Nairobi. The total number of patients admitted to E.N.T. wards in the year 1979 was 1,001. Pressure on these wards for beds has been on the increase. 36 patients died in these wards.

## **Operations**

One thousand two hundred ninety-seven operations were performed, out of these, 204 were done at the Rahimtulla Wing theatre comprising mainly of tonsillectomies and adenoidectomies. Out of the 1,093 operations done in the main theatres, 374 were major cases and 719 were minor cases. These figures showed a steady increase in the number of operations done over the previous years.

## **Visits**

Dr. I. S. Bal went to the University of Delhi as a visiting lecturer for a series of talks on the clinical aspects and management of Burkitt's Lymphoma in October, 1979. Professor Lundborg from Sweden visited the department of E.N.T. on the invitation of Miss Kristina Kenyatta, in charge of Special Education, with an aim to establish an audiology set up. A joint Kenya-Swedish audiology programme was established with the aim of training audiology technicians and granting some needed equipment to the department.

## **Research and Teaching**

Research activities continued in Burkitt's Lymphoma and post-nasal space carcinoma, most of it locally and some in collaboration with the Karolinska Institute, Sweden, and Seattle, U.S.A. Teaching load increased considerably during the year for under-graduates, post-graduates, clinical officers in E.N.T., paediatrics, nursing staff, dentistry students, etc.

### **Neurosurgical Unit**

To understand and solve problems facing the neurosurgical unit, each issue is being dealt with separately and individually.

(1) *Accommodation for the Unit.*—At present the unit is housed in the Rahimtulla Wing ground floor and has a bed-strength of 18 beds which at the most can take 20 patients. At any given time the unit looks after about 20-30 patients in the medical and paediatric wards besides the head injuries in the surgical wards. Ideally all the patients especially pre- and post-operative patients should be accommodated under the same roof for efficient care of patients. Head injuries patients are being looked after with the help of the surgical firms and need no special mention, for this system is adequate and is still being followed at most of the centres even in developed countries. During past years it has been suggested that Rahimtulla Wing should be converted into a speciality wing with neurology and neurosurgery occupying one floor and cardiology and cardiothoracic occupying the other. With neuro patients at the same place, patient care and co-ordination would improve considerably provided staffing is adequate.

#### **(2) Personnel:**

(a) *Senior Staff.*—At the moment there is only one Kenyan Neurosurgeon and for the continuity and effectiveness of the unit that is a sad

state of affairs. At present the workload in the unit requires a minimum of three neurosurgeons. Repeated appeals, to train local people, have failed to attract any attention so far. It is highly recommended that a person be earmarked now to be sent for training. Dr. Maingi, who is a senior house officer and has been in correspondence with the Montreal Neurological Institute should be given all encouragement and support to undergo the training.

(b) *Resident Staff*.—There is a total lack of resident staff support in the unit and that is one of the drawbacks. The unit usually has a senior house officer posted by rotation to the unit for a period of three months and at best we have had two S.H.O.s but no other resident staff. The minimum requirement of the unit is at least two senior house officers and a medical officer who can look after the ward.

(c) *Nursing Staff*.—The present staffing in Rahimtulla ground floor is:

	<i>Sister</i>	<i>Staff Nurse</i>	<i>Enrolled Nurse</i>	<i>Student</i>
Morning .. ..	1	3	1	5
Afternoon .. ..	—	2	—	3
Night .. ..	—	1	1	1

This is quite inadequate to look after the needs of two specialized units. The requirements for the nursing staff have already been submitted and the basic requirement for each unit appears overleaf.

*Physiotherapist*—the need for a full time physiotherapist along with students to be posted to the unit cannot be overemphasized. Requests to this effect have already made.

*Operating time*.—The operating time for the neurosurgical unit is inadequate and this leads to long delays in patients being taken up for surgery. In the process of waiting many patients deteriorate and some die before surgery.

The situation about emergencies is even worse and theater allotment for emergencies need to be reviewed. A system has to be evolved for selection of patients for emergencies and fixing of priorities.

*Patients care*—the inadequacies at these various levels lead to unsatisfactory patient care. In speciality units the performance of the units depends as much on the post-operative care as on the operative performance.

Considering the facilities, including the theatre that is available, the unit has been performing at more than what is optimally possible.

*Radiological Facilities*.—In terms of the totality of the situation in relation to improving the neurosurgical care in the hospital it is highly recommended that the hospital should acquire a CAT scanner. The initial high cost would

be offset by its advantages in terms of improved diagnostic facility, saving on multiple neuroradiological diagnostic procedures on an individual patient and tremendous reduction in the hospital stay of the patient. Besides it would considerably improve the management of acute head injuries which account for a substantial number of admissions to the hospital.

### Plastic and Burns Unit

There are three types of services burns patient can be offered. He could be managed in a general ward, together with the rest of surgical patients. This is a "Burns Service". A "Burns Unit" is a specialized unit, within the confines of a big hospital, that looks after burns. Kenyatta National Hospital moved from a "Burns Service" to a "Burns Unit" in 1975 when this unit was started. There are a number of advantages of a burns unit over a service. First and foremost, is isolation. The use of cubicles per patient means that a seriously ill patient can be kept in a quiet atmosphere, can be kept away from unnecessary staff and visitors. This results in reduced incidence of cross infection. It is also easier to maintain aseptic techniques, regulate temperature, and supply important apparatus for oxygen, suction, etc. in a cubicle than would be possible in a general ward.

The burns unit is situated near the Intensive Care Unit (I.C.U.) and the tower block only a few yards away. We admit seriously burned patients from around Nairobi as well as referrals from provinces and district hospitals around Kenyatta National Hospital such as Kiambu, Gatundu and Thika. Table I shows the admission morbidity and mortality. Nearly 200 patients were admitted, about 60 per cent being children. There were 28 deaths making a 15 per cent overall mortality rate. Table II shows mortality related to extent. Over 70 per cent of those that died had 40 per cent body burns or more, most of them were children.

TABLE I

	<i>Patients</i>	<i>Per centage</i>
(1) Total admissions .. .. .	193	100
(2) Adults .. .. .	75	38
(3) Children .. .. .	118	62
(4) Deaths .. .. .	28	15

TABLE II

<i>Extent</i>	<i>Deaths</i>
0- 9 per cent .. .. .	0
10-19 per cent .. .. .	8
20-29 per cent .. .. .	4
30-39 per cent .. .. .	3
40-49 per cent .. .. .	3
50-59 per cent .. .. .	3
60 per cent and over .. .. .	9
TOTAL .. .. .	<u>28</u>

*Staff.*—The unit experienced an acute shortage of doctors, with only one consultant, and one senior house officer. It meant that these two were on call daily throughout the year. It is hoped that the situation will improve in future.

The nursing staff improved in quality and in quantity. They held seminars on patient care. The night cover was better arranged as was recommended by Kenya Nurses Project Team.

*Training.*—The sister reports that those trainee nurses that went through the unit did very well in their exams.

*Maintenance.*—There were major improvements we had been expecting to be completed during the year. The heating system was faulty and needed adjustment. The windows needed to be adjusted so that one could open them. The unit theatre needed to be modified so that it can be used by the unit. All this was not achieved. We hope next year, 1980, will see improvement in these items.

*Drugs.*—These were on the whole supplied as required except for sofratulle, creams and antibiotics which were not at the pharmacy when we required them.

*Theatre Time*—remained Wednesday mornings, mainly for burns patients. Surgery (General), ophthalmology, orthopedics:

No detailed reports are available for General Surgery, Ophthalmology nor for orthopedics and Trauma Units. However relevant statistics appear on pages 11, 12 on return of diseases and page 64.

### Theatres

In previous reports it had been noted that quite a large number of operations were not entered in the register. The responsibility of entering the operations in the register has been given to doctors themselves and the blame of omission should be accepted by them. It had been observed that records of some firms are never correctly kept. With this state of affairs the operation figures will never be as correct as one would expect to get in Kenyatta National Hospital. Many scheduled operations were cancelled for various reasons the commonest being:

- (a) Surgeons occasionally failed to turn up for operations after the list had been made with their full knowledge or they failed to complete the listed cases. They failed to observe patients properly and some problems were discovered by anaesthetists shortly before operations and patients were sent back to wards.
- (b) Nurses occasionally failed to prepare patients and the stretcher men returned to theatres without patients.
- (c) Laundry—on many occasions linen was said to be short owing to breakdowns of laundry machines or delays in collecting linen from the laundry in time.

- (d) Shortage of blood.—This happened particularly on Mondays because the blood reserved for them was used up during the weekend for emergencies. The position here could be improved if the ward staff made sure that relatives donated blood at the time of admission of their patients.
- (e) Building Repairs.—General repairs had been a headache in the theatres. The woodwork especially doors had been under repairs and water leaks had been experienced in theatres. Equipments have failed a good number of operations.
- (f) Other factors necessitating cancellation of operations included shortage of supply and shortage of staff not only in nursing but shortages among the anaesthetists. Despite all the problems the records show what operations were done in 1979 as shown in the following statistics:

Type of Surgery	Major	Minor	Total
General Surgery .. .. .	1,171	1,098	2,269
Gynaecology Surgery .. .. .	933	5,682	6,615
E.N.T. .. .. .	338	873	1,211
Orthopaedic Surgery .. .. .	303	103	406
Plastic Surgery .. .. .	48	30	78
Ophthalmic Surgery .. .. .	929	314	1,248
Neurosurgery .. .. .	471	173	644
Cardio-thoracic Surgery .. .. .	193	31	224
Pediatric Surgery .. .. .	234	230	464
<b>TOTAL .. .. .</b>	<b>4,620</b>	<b>8,534</b>	<b>13,154</b>

