(e) Thirteen (13) people were arrested without medical examination certificates. They were all released.

Water Supply

The office was allocated KSh. 55,000/= for water projects at Kithiiri, Ithimbari and spring protection. Much work could not be accomplished due to lack of transport. However, four (4) springs were completed.

Vector Control

Insecticides such as Malathion, Heskol, D.D.T. Malathion oil and cooper were used at the G.K. Prison, Kaaga Girls High School and the district hospital.

Health Centres and Dispensaries

All health centres and dispensaries remained structurally fair despite financial constraints. However, one block of Chuka Hospital had serious cracks that occupation was discouraged. Also Ruiri health centre had the same problems. Sanitation at the district hospital remained fair. Inspection to schools continued well.

KITUI DISTRICT

Communicable Diseases

Malaria, acute respiratory infections, eye diseases, skin diseases, diarrhoea and intestinal worms and of course gonorrhoea proved the commonest health problems throughout the district. Malaria shot up by over 32,000 cases from a previous figure of 134,000 in 1981. Whooping cough doubled a previous figure of 663 and gonorroea was up by 3,900 cases from a previous figure 18,000. Measles also rose by 2,242 to 5,288 cases.

Food Control

Food quality maintenance and improvement centred on food sampling, food inspection and inspection of food premises.

There was 3,852 bovine carcasses and 19,319 goats and sheep inspected in the district. Out of these, 8 bovine carcasses were condemned for generalised C. bovis and 16 others heat treated for similar less serious condition.

Sodas - 155 crates were seized and samples taken which indicated the presence of foreign matters on laboratory analysis. All were destroyed through the Court's Order. Their value was Kŝ. 5,580/=.

Food handlers - 1,726 were examined out of which 462 were treated and permitted to work on food premises.

Twenty-five persons were convicted of various offences related to food processing, handling and food premises contrary to the Food Drugs and Chemical Substances Act and were fined a total of 9,300/=.

Water Supply

Kakitya well in Ikutha location was protected at a cost of Kŝ. 9,000/=. It is capable of serving 4,000 people. A 10,000 gallons capacity masonary tank was completed in Tseikuru Health Centre with the Government financial assistance of Kŝ. 28,000/=. Mui dispensary was connected to the Ministry of Water mains but there was a defect in the mains to Mui market occasioning bypassing of the dispensary. The defect will be rectified by the Ministry of Water.

Kwa Ivia well in Kauna Sub-location in Matinyani location was protected through UNICEF assistance. Funds for Syongila, Ithiaini and Kyaoni projects amounting to Kŝ. 75,000/= have already been received. Water samples taken on water from Matuu main pipe indicated high coliform count including E. coli but nontheless it was better than none. A temporary sedimentation tank built at Matuu improved the quality of water during the last few months of the year.

Environmental sanitation

Refuse collection in Kitui Township was for a bigger part of the year carried out using wheelbarrows. However, the council lorry assisted in ferrying out refuse from the township. Refuse collection and transportation in all major trading centres was carried out by means of wheelbarrows. There was scarcity of public refuse disposal sites in Kabati and Mwingi areas.

A servey carried out on sanitation in the district revealed that 82,206 households had no hygienic form of faecal matter disposal system and that the number of households with pit latrines were only 4,472. Only 223 households had piped water in their compounds and these served about 1000 people.

The drainage of Kitui hospital liquid waste was water borne into septic tanks and soakage pits which proved rather inefficient due to large volume of water involved. Only the laying of township sewerage system will alleviate the situation in the hospital and other places.

Pit latrines were the only appropriate means of disposal for human waste in rural health institutions in the absence of adequate water supply. Dry refuse was disposed of mainly by burning.

MARSABIT DISTRICT

Disease Control

There was an outbreak of measles during the month of June as a result of which an immunization campaign programme was drawn up and effected. All together 874 children were immunized against the disease.

Other immunisation were carried out in both Government and Mission hospital as well as in Mission health centres and dispensaries.

Food Control

Two hundred forty-four (244) food handlers employed in various food establishments were medically examined 50 of whom were found sick and treated accordingly. Health education on disease prevention measures and on hygienic food handling was taught to these food handlers.

Three samples in respect of sprite soda, tusker and white cap beer were taken for analysis on suspecion of contamination. As a result 76 crates of soda and 88 crates of beer were seized and destroyed through Court's Order.

Twenty-six persons were prosecuted and convicted for various offences related to food handling, food quality and food establishments under Food Drugs and Chemical Substances Act and Public Health Act. A total of KSh. 5200/= was collected in form of fines.

Environmental Sanitation

The public health personnel advised wananchi on construction of well lighted and ventilated houses and provision latrines. Admittedly a long way is ahead before the concept of proper dwelling is grasped and practised particulaly in areas where movement in search of animal pastures is minimal or none. In townships and larger trading centres a few traders were convinced of converting their temporary commercial premises into permanent ones. Otherwise most of commercial premises in the district are either temporary or semi-permanent.

Water Supply

Protection work on Butiye wells was started during the year but completion was delayed due to difficulties in transporting materials.

Marsabit Hospital

There was considerable improvement of sanitation in Marsabit Hospital. However, the semi-permanent staff houses remained in a bad state of repair. Lack of funds was the explanation.

Infectious Diseases

ISIOLO DISTRICT

There was high incidence of malaria during the year as compared to the previous year due to heavy rains that created numerous mosquito breeding places.

Diarrhoea, dysentry and gastroenteritis incidence went down as compared to 1981. Gonorrhoea shot up by 600 cases. See appendix below.

Immunisation

There was no mass immunisation campaign in the district during the year. Mobile clinic was also not in operation due to lack of fuel. Thus, the figures appearing below were from the hospital and health centres.

Food Control

One bar and restaurant, four retail shops and two butcheries were closed down temporarily due to insanitary conditions. They were however, later on opened after complying with conditions from the district health office. Six food samples were taken on various food items for the purpose of ascertaining the presence of aflatoxin, moisture content order and appropriate steps taken accordingly.

Seven bovine carcasses were condemned due to generalised C. bovis infestation and four goats and three sheep were also condemned due to pathological emaciation. In addition, 43 bovine carcasses were heat-treated due to C.b. infestation.

Water Supply

The extension and improvement of Kina Water supply was carried out during the year. Farther expansion is envisaged to serve more population. At Garba Tulla Health Centre several masonry storage tanks were provided for roof catchment. The 5,000 gallons masonry tank for Oldo nyiro dispensary was completed during the year and is quite good condition.

Water samples for bacteriological analysis were taken from Samburu River Lodge and Isiolo township but the results were not satisfactory. Appropriate advice has already been given.

Environmental Sanitation

The laying of the main sewers in Isiolo township was done during the year. This will now render numerous soaakage pits and cesspits unnecessary to the relief of plot owners and business men.

Refuse collection in Isiolo township was fairly carried out except during the last quarter of the year when the Council tractor and donkey cart had several mechanical breakdown. Refuse collection in other trading centres was carried out by individual plot owners and disposed of by means of burning or crude tipping. The Council has been urged to employ conservancy staff for Gurba Tulla and Modogashe trading centres.

Septic tanks and cesspits in the hospital were emptied using conservancy funds.

Appendix I

Notification of Diseases

Diseases	Meru		Machakos		Embu	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Amoebiasis	747	-	-	-	304	-
Ankylostomiasis	1027	-	-	-	395	-
Chicken pox	259	-	203	-	151	-
Dysentary	353	-	3639	-	-	-
Gastroenteritis	342	-	6680	-	198	4
Gonorroea	716	-	7654	-	2857	-
Infective Hepat.	58	-	111	-	-	-
Infruenza	-	-	-	-	-	-
Kala-zar	18	-	-	-	-	-
Leprosy	-	-	-	-	-	-
Cl. Malaria	11,896	6	50,059	3	19,066	-
Microspically proven	1021	1	162	-	1335	-
Measles	3631	13	2376	11	554	6
Meningitis	88	-	100	-	23	-
Mumps	43	-	806	-	85	-
Pneumonia Lobar	3165	41	3242	33	75	-
Poliomyelitis	-	-	1	-	-	-
Rabies	-	-	-	-	-	-
Syphilis	11	-	132	-	43	-
URTI	118	-	21076	-	-	-
Taeniasis	134	-	-	-	-	-
Tetanus	210	-	1	-	10	4
Trachoma	578	-	-	-	441	-
T.B. Pulmonary	579	2	273	63	132	1
T.B. Other forms	24	-	-	-	5	-
Typhoid	6	-	-	-	4	-
Whooping cough	1016	-	1620	-	18	1
Bilharzia	-	-	1085	-	24	-

Appendix II

Immunisation Figures

Vaccine	1st Dose	2nd Dose	3rd Dose	Booster
Embu				
DPT	6624	3610	-	703
Polio	4826	3368	-	216
Tetanus	1941	506	418	-
BCG	2004	-	-	-
TAB	2411	804	-	-
Measles	2896	-	-	-
Machakos				
DPT	43132	49158	13055	-
Polio	41749	47224	14224	-
Tetanus	31153	2340	-	-
BCG	40289	-	-	-
TAB	2479	-	-	-
Measles	29240	-	-	-
Meru				
DPT	16238	12788	7638	-
Polio	18010	14807	8132	-
Tetanus	18784	7630	-	-
BCG	24125	-	-	-
TAB	3164	1604	-	-
Measles	7607	-	-	-
Cholera	-	35	-	-

Appendix III

Meat Inspection Figures

	Machakos		Meru		Embu	
	Inspected	Condemned	Insp.	Cond.	Insp.	Cond.
Bovines	14880	18	14761	9	9785	-
Sheep	1554	-	12440	-	3734	-
Goats	1554	-	22440	1	165	-
Pigs	17	-	623	-	-	-
Camel	-	-	3	-	-	-

Orgnas Condemned

Livers	95211 Kg.	7262	1206
Lungs	1430 Kg.	7070	694
Kidneys	85 Kg.	2349	1406
Stomach	181 Kg.	26	1826
Heads	4 Number	10	106
Hearts	18 Kg.	118	361
Spleens	51 Kg.	139	204
Intestines	490 Kg.	3001	606

NB: Machakos excludes K.M.C.

NB: Meru number of organs condemned.
So is Embu Not in Kgs.

C H A P T E R - V I

VECTOR BORNE DISEASES CONTROL

The Division of Vector Borne diseases in Machakos, Kitui and Embu continued with their work without much problems.

Machakos district is heavily infected with schistosomiasis. The S. Haematobium is confined in Kangundo Division while S. Mansoni is widely seen in the District. During the year under review the Embu Department concentrated on survey and research of malaria infection and Bilhazia infection in Embu, Meru and Isiolo. Also campaigns to combat these infections was organised by the Officer in charge. The Kitui department continued its activities on malaria, schistosomiasis & Kala-azar.

STAFFING PATTERN

	Embu	Machakos	Kitui
District Lab. Technologist	1	1	-
Ento. Lab. Technologist	1	4	-
Ento. Lab. Technician	4	5	3
Lab. Attendants	3	2	6
Casual Worker	-	6	-
Clerical Officer	-	2	1
Typist	1	1	-
Driver	1	1	-
Total	11	23	10

Field Activities Statistics

	Embu	Machakos	Kitui
(a) Mosquito Control			
- dissections	150	-	-
- Culex (-ve)	50	-	-
- A. Gambie (-ve)	100	-	-
- Blood smears	3,648	-	178
- S.T. rings (+ve)	813	92	21

(b) Bilharzia Control

	Embu	Machakos	Kitui
Bilharzia cases (S. masoni)	82	1,838	274
S. Haemotobium	-	249	24
Snails collected (-ve)	246	306 (+ve)	352

(c) Rodent Control

Rats examined (+ve)	6	-	-

(d) Kala-azar Control

(+ve) cases (from Machakos)	2	33	56

(e) Helminths Control

Specimens (stools) examined	3,642	-	-
Ascaris	-	391	197
Trichuris	-	191	61
E. Histolytica	-	140	101
E. Coli	-	811	-

C H A P T E R - V I I

NUTRITION ACTIVITIES

During the year under review nutrition activities continued smoothly. The district nutrition officers supervised nutrition field workers and conducted nutrition education programmes. Patients feeding in most hospitals and health centres was supervised by Nutrition Field Workers and the problems encountered were:-

1. Lack of qualified cooks
2. Scarce funds for patients food & demonstrations
3. Lack of proper kitchens and equipment - especially in health centres.
4. No Dieticians in hospitals.

Staff Deployment

District Nutrition Officer	Station	No. of N.F.W.
Mrs. Idah Nyaga	Meru	17
Mrs. E. Mativo	Machakos	19
Mrs. E. Mutili	Embu	14
Mrs. M. Mukiri	Isiolo	7
Mr. I. Nguyo	Marsabit	6
Mr. T. Makuthi	Kitui	11
	Total	74

The following is an account of nutrition activities per district and by the reports received.

Marsabit

Towards middle of the year transport problem was experienced and therefore normal mobile clinics were stopped. Patients feeding was badly affected by lack of gas and defective freezer. Fruits were not supplied to the patients. Health Education was done in Manyattas, MCH/FP clinics, Adult literacy clinics and in wards.

Malnutrition Statistics

Marasmus	New cases	- 15
	Old cases	- 50
	Total	65
Kwashiorkor	New cases	- 3
	Old cases	- 9
	Total	12

EMBU

Patient feeding was well done. Nutrition Health Education was done in MCH/FP clinics, wards, kitchen, home visits, demonstration gardens and schools. Nutrition demonstration gardens were started in most hospitals and health centres. Several Nutrition Field Workers attended a workshop on curriculum design for training village level leaders at Kaaga in Meru. A freezer for storing perishable foods is still needed in Embu Hospital kitchen.

Malnutrition Cases Handled

Centre	Kwashiorkor	Marasmus
Karurumo RHTC	146	111
Embu Hospital	214	79
Siakago H/Centre	204	2
Ishiara Hospital	38	72
Gotegi H/Centre	44	139
Runyenjes H/Centre	655	378
Totals	1,301	781

KITUI

Patient feeding was well done. The kitchen remained without gas. Two Nutrition Field Workers attended a workshop on curriculum design for training village health leaders at Kaaga in Meru. Nutrition education was done in paediatric wards, MCH/FP clinics, health centres, farmers training centre, community development centre, rehabilitation centres, home visits and schools.

Malnutrition Cases Handled

Place	Marasmus	Kwashiorkor	N. Anaemia	N. Disorders
MCH/FP Clinic	271	306	130	
Paediatric wards	63	139	-	131
Yatta H/Centre	6	8	-	25
Migwani H/centre	9	22	-	-
Mutito H/Centre	22	15	-	24
Total	371	490	130	180

MACHAKOS

Patient feeding was well done. The hospital kitchen experienced problems towards the month of September due to lack of diesel. A temporary kitchen was built and used charcoal as fuel. The kitchen staff remained with inadequate uniform.

The kitchen block remained without toilets. Towards the end of October 1982 Matuu, Mitaboni and Mwala started feeding patients. Transport problem and shortage of Nutrition Field Workers were major problems. Ten Nutrition Field Workers attended a workshop on Curriculum design for training village health leaders at Kaaga. Nutrition education was done in MCH/FP clinics, Barazas, women groups, farmers training centres, community training centres, home visits, wards, school of Nursing and formal schools.

Malnutrition Cases Seen

Place	Malnutrition Cases	
	New	Re-att.
Machakos Hospital	1934	1905
Kangundo Hospital	238	140
Makindu Hospital	225	135
Makueni Hospital	471	678
Tawa H/Centre	208	171
Matuu H/Centre	67	40
Masii H/Centre	178	1028
Sultan Hamud H/Centre	47	162
Mitamboni H/Centre	72	653
Mbooni H/Centre	45	18
Total	3435	5130

C H A P T E R - V I I I

D R U G S I N S P E C T O R A T E

I STAFF

The office of the Provincial Drugs Inspector was strengthened by posting an Inspector of Drugs III with effect from 1st February, 1982. This realised a total strength of two officers to man a Province of six districts. The staff movement during the period under review was as follows:-

Name	Designation	Period
Cyrus J. Wanguku	Prov. Drugs Inspector	1.1.82 - 31.12.82
Stanley S. Sabwa	Drugs Inspector III	1.2.82 - 30.11.82
Johnstone M. Andayi	Drugs Inspector III	1.12.82 - 31.12.82

II DRUGS INSPECTION ACTIVITIES

There were three main factors that hindered field work activities. These were:-

(i) Lack of adequate funds to facilitate movements

(ii) Lack of adequate manpower for effective enforcement

(iii) Lack of a departmental vehicle to facilitate quick and swift movement on investigative matters.

However, with the available resources some inspection were carried out as will be seen in the ensuing paragraphs.

(a) Government Institutions

With the posting of an additional drugs inspector, visits to government institutions picked up compared to other previous periods. The table appended below summarises the trend.

District	Hospital	Health Centre	Dispensaries
Embu	1	2	7
Meru	1	2	Nil
Kitui	1	5	16
Machakos	1	2	5
Marsabit	Nil	Nil	Nil
Isiolo	Nil	Nil	Nil
Totals	4	11	28

Lack of Med. 128 and 128A was a common problem in most institutions checked. A satisfactory degree of accuracy in record keeping of drugs was observed in most government institutions checked on.

(b) Mission Hospitals and Dispensaries

As mentioned earlier due to financial constraints visits to mission hospitals were curtailed. It was possible however to inspect Muthale Mission, Mutomo Mission in Kitui district, Kyeni Mission and Kibugu Mission dispensary in Embu district.

We have had very few problems with mission institutions because their pattern of control of drugs is very tight. Like we have said earlier on it is necessary to modify the existing antibiotic registers and replace them with "Drug Registers" in order to enforce control of all drugs including basics as it is done by the mission hospitals.

(c) Licences to Sell Poisons

(i) Retail Chemists

The Province is served with five chemistshops distributed as follows:-

Machakos	- 1
Meru	- 2
Embu	- 2
Total	5

(ii) Mining Agricultural and Horticultural Poisons (Sec. 28)

Nine applications for licences to deal in poisons for mining, agricultural or horticultural purposes were made through this office.

(d) Private Medical Practice

Doctors in private practice remained as reported in my previous report. A few private doctors visited during the year under review produced statutory documents to account for their drugs found on their respectiv premises.

In order to curb on illegal clinics in the country an even distribution of private practice licences is needed. It is therefore suggested that the Medical Practitioners and Dentists Board seek the advice of the Medical Officers of Health in charge of districts to identify areas within their respective Jurisdiction which in their opinion are inadequately served by private practitioners. It will be noted that the identified areas are those prone to illegal clinics manned by unqualified people. Therefore the only effective way to reduce this menace is by replacing it with the services of qualified available manpower. For instance a centre like Maua in Meru district has no private practitioner. It would be useless trying to close down all the illegal clinics in Maua without replacing them by acceptable sustitutes. This is an area with beneficial socio-economic factors - such that to the illegal clinics operators the risks are worthy taking.

The suggestion given above would enable the Medical Practitioners and Dentists Board realise an even distribution of private practice licences and take services to the people in the rural areas where the majority of the unsuspecting population is to be found.

(e) Prosecution

Most of the people prosecuted were charged with the offence of unlawful possession of Part I Poisons contrary to section 26 (2) of the Pharmacy and Poisons Act, Chapter 244, Laws of Kenya. Court cases were as detailed below:-

Three illegal private clinics operated by nurses were closed down without court action.

(f) General Observation

The idea of tying accurate records on antibiotics only in our Government institutions should be reviewed so that all drugs are thoroughly accounted for right to the wards. It has been observed that even the basic drugs like aspirins, paracetamols have become very marketable and are easily obtainable from our institutions due to lack of tight control on them. It is suggested that a drugs register be designed to accommodate all drugs used in Medical Institutions.

Name	PCR No.	Offence	Punishment
John Njeru	Nkubu PCR 32/82	Sec. 26 (2)	Fined 1,000/=
Jonathan N. Ndumpha	Nkubu PCR 33/82	Sec. 26 (2)	4 months (W.O.O.F.)
Teresia N. Njeru	Nkubu PCR 34/82	Sec. 26 (2)	4 months (w.o.o.f.)
Mercy Mbuthu	Nkubu PCR 35/82	Sec. 26 (2)	Fined Kes. 300/=
Lucy Nantu	Nkubu PCR 35/82	Sec. 26 (2)	Fined 1,000/=
John Mwendwa Kakilo	Mks -PCR 363/82	Sec. 26 (2)	6 months (w.o.o.f.)
Benedict K. Ngumbo	Mks -PCR 364/82	Sec. 26 (2)	6 months (w.o.o.f.)
Joseph M. Mukima	Mks -PCR 365/82	Sec. 26 (2)	6 months (w.o.o.f.)
Boniface Mutuku	Mks -PCR 446/53/82	Sec. 324 (2) of penal code	12 months (w.o.o.f.)
Justine Mbae	Ntumu PCR 243/82	Sec. 26 (2)	Unknown
Margaret Wanja Stanley Runyenjes	PCR 904/82	Sec. 26 (2)	Unknown

NB:

(w.o.o.f.) - Without option of fine

C H A P T E R - IX

PHYSICIAN SERVICES

ESTABLISHMENT:

(a) The department consists of four (4) wards.

Ward 3 Female medical	- 34 beds
Ward 4 Male medical	- 34 beds
Ward 8 Tuberculosis (Male & Female)	- 20 beds
Ward 9 Psychiatric ward	- 17 beds

(b) The department also runs four (4) outpatient clinics which serve as follow up clinics as well as Consultation clinics for peripheral hospitals.

Staffing

(a) Specialist: Dr. F. K. Mwonzora was the consultant Physician until March, 1983 when he left for the United Kingdom. No replacement has been made todate.

(b) Medical Officers: Five Medical Officers rotated through the department.

(c) Nursing Officers

A Registered Nurse was attached to each ward and acted as in charge of Community Nurses, Enrolled Nurses and student community nurses who also worked in these wards.

Ward Statistics

Ward 3 - Female Medical

Total admissions - 374

Deaths - 33 (11.3% of all admissions)

Causes of deaths:-

Anaemia	- 15
Dysentry	- 6
Chest infection	- 3
Diabetes mellitus (D.K.A)	- 2
Congestive cardiac failure	- 2
Paraplegia	- 1
Cardiovascular accident	- 1
Malaria	- 1
Hypertension	- 1
Hepartomia	- 1
	33 11.3% of admissions.

Anaemia, malaria, diabetes mellitus, hypertension formed the bulk of admissions in 1982 into this ward and accounted for 64.2% of all admissions. Anaemia was the single most important reasons for admission 27% of all admissions. The type of anaemia seen here was of iron deficiency type mostly associated with nutritional deficiency,

bleeding Oesophageal varices due to Portal hypertension and hookworm infestation. It was, however, difficult to investigate these anaemic patients due to lack of specimen containers for stool urine etc.

Diabetes mellitus - (D.M.) and hypertension were important indications for admission. D.M. patients were admitted either as new cases or due to complications. Mostly due to Ketoacodosis in type I patients due to inadequate storage of insulin hypertensive patients were also admitted as new cases [illegible] poor control due to lack of medicines while they waited for the next date of next clinic appointment.

Ward 4 : Male Medical

Total admissions - 609

Total deaths - 42 - 6.8% of all admissions.

Causes of Death

Hepatocalular carcinoma	- 10
Cor - pulmonale	- 9
R.H.D.	- 8
Coma	- 4
Anaemia	- 2
Epilepsy (asphyxia)	- 2
Portal hypertension	- 2
Chronic renal failure	- 2
Systemic hypertension	- 2
Diabetes Mellitus (D.K.A.)	- 1

The causes of death above reflect common medical conditions in the district and its environs. Hepatocellular carcinoma is the commonest cause of death (25% of all deaths in the ward in 1982). Portal hypertension is very prevelant here due to endemic Schistomiasis and haematemesis and malena due to bleeding varices is the terminal event.

Laboratory investigations in general were inadequate due to lack of specimen containers for stool, urine and sputum. Specimens sent to Kenyatta National Hospital (K.N.H.) e.g. Biopsy specimens, Bone Marrow, Lymph node, liver biopies take a long time to process (four to eight weeks) and others are often difficult to track. This results in delay institution of appropriate therapy.

Ward 8 T.B.

This ward has bed capacity of 20: 10 beds - males
10 beds - females

Admissions		Deaths	
Males	Females	Males	Females
137	108	39	16

348 new cases of pulmonary T.B. were diagnosed and registered in the district during the year. There were 245 new admissions during the same year.

Needless to say, health education & follow-up campaigns especially in the peripheral areas need intesification. It would be beneficial to expand the bed capacity of T.B. ward.

Ward 9 - Psychiatric ward

New Admissions	Re-admissions	Discharges	Parole	Death
290	189	393	54	0

A consultant Psychiatrist (Dr. P. K. Mwanza) continued his once monthly visits to the Psychiatric Unit here. There are 17 beds in this unit. The incident of recorded psychiatric disease increased by 110 patients in the year over 1981. The average monthly admission figure is 24.1 patients.

From the above statistics it is clear that the unit needs urgent expansion. I wish to thank Dr. P. K. Mwanza for his continued consultation visits. However, there is need for a resident Psychiatrist as soon as one is available.

The Psychiatric mobile clinics were halted due to lack of transport.

Medical O.P.D. clinic attendances:-

General medicine	- 1,240
Hypertension	- 760
Diabetic	- 350
T. B. Clinic	- 348
Psychiatry	- 682

C H A P T E R – X

OBSTETRICS AND GYNAECOLOGY SERVICES

Maternity Unit Capacity

The capacity went up during the year 1962 to 157 beds (108 beds and 49 cots) not all authorised.

Staff

(i) Doctors

(ii) Obst/Gynaec. Specialist – 2

(iii) Postgraduates (S.H.O. from A.M.C.) – 1

(iv) General Medical Officers – 3

(v) Intern

(b) Nursing Staff

Labour Ward: Average number of qualified Nurses – 13

Nurse delivery ration – 1:409

Student Nurses – 13

Nurse/student ration – 1:1

Patient Movement & Mortality

	Labour Ward	T/Floor Ward	Ground Ward	Ward 10
Total Admissions	6179	7035	806	1815
Average daily adm.	17	19	2	5
Total discharge	6363	6882	583(?)	1693
Occupied bed days	2925	25391	7663	10132
Average daily disch.	17	19	2	5
Av. daily available days	11	43	24	30
Vacant bed days	1090	–	1097	818
Average inpat. census	8	70	21	28
Percentage occupancy	73%	162%	87.5%	92.5%
Turn over internal	4 hours	–	2 days	10 hours
Av. length of stay	5 hours	3.5 days	13 days	5 days
Turn over per bed	578	160	24	63
Maternal deaths	10	–	5 (?)	–
Bed capacity	11	43	24	30
Hospital days	4121	48217	12759	10132

LABOUR WARD

The following figures were obtained from the perinatal mortality meetings, for reasons explained in my previous annual report (not from delivery/admission book, neither from records office).

Total Admission	- 6568
Mothers delivered (total deliveries)	- 5319
Total births	- 5416
Born babies alive	- 5184
Babies born before arrival	- 62
Referrals	- 378
Twin deliveries	- 93
Triplets	- 2
Babies below 2500g	- 445
Not weighed	- NR
Babies to Nursery	- 316
Congenital malformations	- 28
Still births	- 232
Early neonatal deaths (1st week)	- 119
Maternal deaths	- 22
Multiple pregnancy rate	- 1.8%
Still birth rate	- 42.8%
Neonatal death rate	- 22.9%
Perinatal mortality	- 64.8%
Maternal mortality	- 4.1%

Type of Delivery

S.V.D.	4228 = 79.5%
Abnormal vertex	22
Vacuum extraction	186
Breech	179
Forceps	1
Smphysiotomy	1
Uterine Rupture	8
Caesarean section	749
Destructive operation	8
Breech rate	3.3%

TOP FLOOR WARD

Total antenatal admissions 1813, up by 6% compared to 1981 (1210). It is not possible to give the reasons for admissions as the shortage of stationery was "solved" by tearing empty pages from the admission books, loosening already filled in ones. When needed they were lost so the remaining records are too incomplete to be of any use. This might be a thing of the past as we have just introduced the WHO "International Classification of Diseases" Return system. Whatever, the reasons for admissions in T/Floor ward were not significantly different from 1981.

WARD 10 GYNAECOLOGY

Total admissions: 1815, up by 31% compared to 1981 (1385) Breakdown of reasons for admissions and deaths suffered the same set back as mentioned under T/Floor ward.

Operation Maternity Theatre (as from Theatre records)

Major

Caesarean section	- 779 (+ 2/L 94, Classical 16)
Tuballigation per laparatomy	- 48
Uterine rupture	- 48
salpingectomy ectopic pregnancy	- 47
VVF repair	- 7
Abdominal hysterectomy	- 5
COphorectomy	- 5
Exploratomy Laparotomy	- 5
Destructive Operation	- 4
Salpango - Cophorectomy	- 3
Salpingostomy/adhaesiolysis	- 2
Hysterotomy	- 1
	915

Minor

Evacuation abortion	700
Diagnostic D & C	31
EUA. VVF	31
Manual removal placenta	28
Marsupialisation	25
Secondary suturing burstabd	10
Staging & Biopsy Ca. cervix	12
EUA. PPH (Unspecified)	12
Shirodkar stitch	10
Repair tears	10
Removal stick coil	5
EUA. APH	7
Polypectomy	2
Perforation hymen	2

Maternal And Child Health Clinic

The figures are for MCH - 9 mobile clinics combined.

	1982	1981
a) Antenatal first visits	10400	19391
b(Antenatal re-attendances	30976	58003
Total	41356	77394
c) F/Planning new cases	774	1486
d) F/P re-attendances	4975	10953
Total	5749	12439

This is pretty bad, partly explained by the mobile clinics virtually coming to a halt for reasons explained earlier.

OPD GYN/ECOLOGICAL CLINIC

Total patients seen on appointment	- 532
Total patients seen without appointment	- 264
Total	796

This clinic is deliberately planned to be once per week only.

The number of patients with fertility problems is limitless.

C H A P T E R - X I

P A E D I A T R I C S S E R V I C E S

The Paediatrics department consists of the MCH/FP, wards 5, 6, 7 and nursery unit. The paediatrics clinic is held on Mondays and Fridays and generally deals with referrals from all hospitals in the Province.

Assessment of patient management was done during the mortality meetings held every Tuesdays afternoon. During these meetings weekly deaths are reviewed to determine whether they were avoidable. These meetings were attended by all the doctors and nurses representatives from each ward.

During 1982 teaching was done during major rounds and during clinical meetings which were held every Wednesday afternoon. In addition special Paediatric lectures were given by Paediatricians.

Causes of Death During June to December 1982 - Ward 5

	Causes of Death	Number
	Respiratory Infections	55
	Meningitis	9
	Gastro-enteritis	8
	Malnutrition	7
	Malaria	4
	Cardiovascular diseases	2
	Liver failure	1
*	Intestinal obstruction	1
	Unknown	3
	total	90

* Died before he was taken over by the surgeons.

This ward admits children under 2 years of age together with their guardians, preferably the mother. In 1982 there were a total of 1492 admissions on the average there were 5 discharges and 5 admissions daily with a mean daily inpatients of 30. Inorder to be able to do most of the procedures on these tiny children and a thorough daily ward round, 2 doctors are required to run this ward. This was not the case for most of 1982.

There were 90 deaths in ward 5 during the period of June to December 1982, both months inclusive. There was no reliable data before June 1982. Majority of the deceased came too late to the hospital and died within the first 24 hours of admission. In most cases the delay was at their homes rather than in the hospitals or health centres referring the patients to us. As indicated above respiratory problems are the main killers and also the commonest among the inpatients in ward 5.

(b) WARD 6

This ward admits children 2 - 12 years of age. The mean daily admissions is 3 patients and the mean daily discharges is 3 patients. The mean daily inpatients is 20 patients. One doctor is attached to this ward.

During the period April to December 1982, there were 68 inpatients and 34 deaths. No reliable data is available before April 1983. The breakdown of inpatients in ward 6 is as shown below.

Most of the respiratory infections were pneumonias, while schistomiasis formed the bulk of the parasitic infections. The blood disorders were mainly severe anaemias requiring blood transfussion. The cause in most cases was suspected to be malaria. Observations show that most of these anaemic patients came from Makindu Sub-District Hospital, which has no blood bank facilities. This coupled with the fact that the hospital is on the main Nairobi-Mombasa road where it is likely to admit accident patients, justify introduction of blood bank storage facilities. In most of the cases, the illness were too advanced to effect a cure.

Breakdown of Diagnosis of Inpatients In Ward 6 April - December 1982

Diagnosis	Number	Percentage
Respiratory diseases	287	42.2
Parasitic infections	88	12.9
CNS diseases (except tumours)	73	10.7
Gastro-enteritis	59	8.7
Malnutrition	37	5.4
Blood disorders	29	4.3
Cardiovascular diseases	21	3.1
Urinary tract infections	8	1.2
solid malignancy	4	0.6
Others	74	10.9
Total	680	100

Breakdown of Causes of Death In Ward 6 - April - December 1982

Diagnosis	Number
Pneumonia	10
Meningitis	5
Crebral Malaria	3
Severe Anaemia	3
Hepatitis	2
Portal Hypertension	2
Kwashiokor	2
Gastro-enteritis	2
Encephalitis	1
Epilepsy	1
Unknown	3
Total	34

(c) WARD 7

This ward admits patients with highly infectious diseases. Most of the patients admitted in 1982 had measles and whooping cough. A total of 839 patients were admitted to this ward from January to December 1982. The mean daily inpatient was 25. The breakdown of inpatient diagnosis is as shown below.

The high rate of measles admission reflects both the prevalence and severity of the diseases as compared to the other infectious diseases. Most of the deaths in ward 7 are due to respiratory complications especially pneumonia and laryngo-trachea (bronchitis.)

It is rather discouraging to note that 31.5% of measles. Although the records do not show at what age these immunizations were administered, it is quite probable that the administration was either at an earlier age than recommended or the vaccine was not potent. To a lesser extent the immune status of the patient at the time of anti-measles vaccination may also have contributed to the high failure rate. This ward is in a "Condemned" building but for lack of alternative space, it is still used. It lacks a source of steam like an electric kettle which is very essential in the management of cases of lary-ngo tracheal bronchitis. Provision of an isolation ward with the necessary facilities is highly recommended.

Diagnosis of Inpatients In Ward 7 in 1982

Diagnosis	Number	Percentage
Measles	765	91.2
Whooping cough	43	5.1
Chicken pox	7	0.8
Rabies	3	0.4
Others	21	2.5
Total	839	100

Immunization Status of Measles & Whooping Cough Patients Admitted to Ward 7 In 1982

Diagnosis	Immunized	Not Immunized	Unknown	Total
Measles	241	378	146	765
Whooping cough	3	40	Nil	43

(d) THE NURSERY

This unit admits neonates either from our labour was or from outside. During 1982, there were a total of 1271 admissions. The breakdown of these admissions is as shown below.

The Nursery has no incubators and relies on fixed electric radiators for supply of extra warmth. Despite this limitation, however, we managed to save a good number of preterm babies weighing slightly more than 1 Kg.

When (Dr. Harami) joined this hospital, there were 7 orphans in the Nursery. Six (6) of them had lost their mothers and the other one had been abandoned by the mother. Subsequently with the help of the hospital Medical Social Worker and the childrens department of the Ministry of Social Services, we managed to discourage all of them as follows:-

Two (2) children to children home in Mombasa and Dagoret respectively, four (4) children to their guardians, but one of them died of gastro-enteritis.

Diagnosis of Inpatients In The Nursery In 1982

Diagnosis	Number
Preterm	391
Asphyxia	267
Neonatal Jaundice	189
Sepsis	162
Respiratory Infections	118
Congenital Malformations	40
Gastro-Enteritis	24
Birth Trauma	24
Others	56
Total	1,271

C H A P T E R - X I I

S U R G E R Y S E R V I C E S

Establishment

The department is made of three wards and surgical main theatre which consists of major and minor theatres as indicated below:-

Ward 1 - Male surgical ward - 29 beds

Ward 2 - Female and Children surgical ward - 34 beds

Orthopedic ward - Male, Female and children with orthopedic problems has 34 beds.

Surgical main theatre - Consists of major and minor theatres.

The department also runs three surgical out patient clinics weekly which are as follows:-

General Surgical Out Patient Clinic

Wednesday 8.30 a.m. to 12.30 a.m.

Orthopedic out Patient Clinic

Tuesday 8.30 to 12.30

Medico - Legal Clinic

Thursday 9.00 am to 12.30 am.

These clinic serve as follow up clinics as well as a consultant clinic for peripheral hospitals. Medico - Legal clinic deals with police P3, compensation and invalidity cases.

All surgical and orthopedic emergencies are seen daily and admitted or treated on out patient basis according to the severity of their conditions.

Staffing

Specialists (a) Dr. S. Sattinger also incharge of surgical department.

(b) Dr. Kanzaria - Specialist in the department.

General Medical Officers

The year 1982 had a very high intradepartmental transfer rate as well as transfers to other hospitals. However an average of three Medical Officers were in the department from January to October when new interns qualified to be medical officers. This increased the average to six medical officers.

Interns

An average of three interns were in the department from January to October when they qualified to be medical officers. Each group of interns spent three months in the department before proceeding to other departments for their internship.

After October, the department had no interns due to University closure from August 1st 1982 disturbances. However, patients were attended to by all medical officers who were now in charge of both interns and medical officers duties.

Nursing Staff

Each ward and the main surgical theatre had a Kenya Registered Nurse who also acted as incharge of Community and Enrolled Nurses, Student Community Nurses, and attendants. Other than in operating theatre, the qualified Nurse. Patient ration is very high. This leads to overworking of the Nursing staff since surgical patients need a lot of attention, in particular, post operative cases.

Ward Statisitics

Ward 1 - This is a male surgical ward. The total admission, discharge, transfer in/out and deaths in ward one freom January 1982 to December 1982 was as follows:-

Admission	- 349
Transfers In	- 13
Transfers Out	- 17
Discharges	- 292
Deaths	- 26

Comment

The majority of patients admitted to ward I had intestinal obstruction of which 90% had volvolus the rest had intussecaption rarely worms. Other causes of admission were duodenal ulcers.

Recurrent appendicitis, urethral stricture and extensive burns.

The main causes of death are mostly terminal cases, late arrival of obstructions who come in toxic condition and in shock.

Ward 2

Ward 2 is a female surgical ward plus children surgical ward: The total admission, discharge, transfer in/out and death from January-December 1982 was as follows:

Admission	- 434
Transfers In	- 17
Transfers Out	- 1
Discharges	- 388
Deaths	- 18

Comment:

The year 1982 was difficult for orthopaedic ward due to constant lack of crutches. Patients ready for discharge had to delay in the ward.

The majority of patients admitted to orthopaedic ward have fracture of the femur simple or compound. The rest have compound fracture of tibia, fracture pelvis, and multiple fractures of different bones.

The main cause of death is severe trauma with head injuries.

Surgical O.P.D. clinic patients reviewed	- 2,112
Orthopaedic O.P.D. clinic patients reviewed	- 1,937

Main Theatre

All operations under general anaesthesia were done in major theatre, while minor operation, under local anaesthesia and other surgical non-operative procedures were done in minor theatre. There is a staff nurse in charge of the other enrolled and community nurses and student nurses and attendants.

Statistics of Operations Major & Minor are Given Below

Laparaton	132	Herniorraphy	35
Appendisectomy	29	Limb Amputation	22
Prostatectomt	14	Cystandtumeur Excision	13
Suprapobic Cystostomy	12	K. Nailing	9
Thyroidectomy	8	Suture of wound	8
Hydrocelectomy	6	Colostomy	6
Reduction of Fracture	5	P O S	7
Gastrextomy	5	Mastectomy	8
Splenectomy	4	Ectopic pregnancy	3
Orchidectomy	3	Skin grafting	3
Gastro Jejunestory	2	Pattelectomy	2
Foreighbalc	2	Sequestrectomy	2
Surgical toilet	2	Thyroido abs.	1

Comments

(1) Skin grafting knife and blader as pointed out last year was not bought. This skin grafting can not be done.

(2) Diathermy machine is out of order.

(3) Blood shortage is very chronic with acute episodes when there is no blood at all.

(4) Drug shortage especially - Parenteral Valium - Flagyl/etc.

Patients who had fractures and can be discharged are delayed in orthopaedic ward due to lack of crutches.

C H A P T E R - X I I I

REVENUE & FUNDS CONTROL

1982/83 Financial year a part from being like any other past financial years was unique in the sence that it is in this year when funds were frozen by Treasury for the first time in the history of Post-Independent Kenya. New in the year is the way funds were released from Ministry's Headquarters. The beginning saw a deviation from the normal procedure of releasing the entire funds allocation. Whereas previously the entire allocation was released at one time, this financial year, funds allocated were released in two stages, the first for July 1982 - December 1982 with the second half for January 1983 - June 1983 released in January 1983.

This system created a favourable impact on the past spending habits in that whereas previously the entire financial years allocation was released at ago thus letting spending points, have no control on their habit and as a result having nil balances as early as January, having exhausted the entire years allocation, the system brought with it a monthly permissable expenditure and restricting the spending in a month within that limit.

However, the system failed to work in some areas, this though can be attributed to lack of knowledge om how the system work on some spending points. It has also to be attributed to the failure on the part of those allocating funds. This can be seen in areas like annual leave allowances, patients food and others where a projection could not be easilyt made. This is supported by the fact that at the time of allocating funds, it was not taken into account the case of leave allowance, the number of personnel working in various stations, this resulting in most cases under allocation. Not enough to cater for the entire personnel in the stations.

Though due to the Government being unable to collect the budgetted revenue to meet expenditure in the financial year, it must be appreciated that Ministry of Health being an essential area was not affected a part from few minor areas. The Government was keen in seeing health services run smoothly despite adverse financial position at that time. This shows the Government commitment in provinding health facilities to her people. Though this is the case the Government has neglected some areas through which revenue could be generated towards meeting expenditure. Some cases in point are listed:-

(a) Meat inspection fees has been less than Kn. 5/= per carcass from time for back. This despite increament in prices per cattle which has more than doubled, the same charge still stands. If say the government increased the charge to between Kn. 10 - 20/= per carcass depending whether it is a sheep, goat or cattle. The Pay Master General could be augmented by the collections from these areas.

(b) Fees charged on private practitioners while doing medical test for them is far too low. Whereas the fees charged from the sick by these private practitioners have far gone high, there has been no change on the charges at the various health institutions.

Funds Control

While it is a accepted fact that public funds needs a proper amd strict control of its flow, most of the A.I.E. holders in various stations have yet to come to the reality of restricting their spending habits and as such have displayed laxity in control of funds. This disease affects many health insitutions in the Province and as a result no proper and accurate figures in the form of returns is given. Some health institutions have tended to give assumed figures as their return, this forcing this office to work on wrong figures at the time of consolidating expenditure return for the Province. Most of these returns have been sent back for arithmetical accuracy to be worked out before this office can accept them back.

The problem here is that, while it is a known truth that expenditure return is a management tool necessary in funds control, some spending points while forcing us to send back their return cause a big delay and as such our returns reach Hea.quarters very late. This gives a problem on the part of those charged with the responsibility of funds management due to inaccuracy in returns. This practice has to stop and with the introduction of the returns being made in the district treasury, I hope it will improve frustration.

Appropriation In Aid/Revenue Usage

Despite numerous circulars issued by treasury stressing the seriousness in using revenue to meet an expenditure at the collection points, the tendency has continued in some hospitals. The most affected is Embu District Hospital where some administrators have taken it upon them as a routine to use revenue for purchases at will. This dispite numerous letters written to them vide Provincial Commissioner's letters Fin 4/40/8/162 dated 23/9/82, Fin 4/51/2/Vol. II/209 dated 6/10/82, Fin 4/51/2 Vol. II/259 dated 15/2/83, Fin 4/64/1/Vol. II/55 dated 21/4/83 and Fin 4/51/2/Vol. II/270, also my personal discussion with the Hospital Administration in the presence of two Accountants from Ministry of Health Head office. The practice has not stopped. I feel strongly that Ministry of Health must do something as numerous letter written, talks held is not resulting in anything when all the letters are copied to the Ministry and reports given.

I must strongly commend two hospitals which have greatly improved (Machakos Provincial General Hospital and Meru District Hospital). The two hospitals have improved on the side of revenue usage since during my recent accounting inspections have revealed stoppage of the same. This goes towards realities which have downed on the administrators and the acceptance and implimentation of government circulars. What ever is collected as revenue had been budgeted for by treasury and unless the same reach the consolidated fund for rechannelling, accountable it becomes a bit hard and as such renders the annual budgets useless.

Vehicle Repairs

This is one area which needs a careful and serious planning in the way vehicles are run and repaired. In my recent visits to most health institutions a number of their vehicles are either grounded or have major mechanical problems. Worst still is the missing tools which these charged with the responsibility of checking have failed either

to carry on their duty of inspection at least once a month or have failed to submit the returns. Most hit are three major hospitals - Machakos Provincial Hospital, Embu District Hospital and Meru district Hospital. There is an urgent need to have a team comprising one officer from Ministry of Transport, Provincial Commissioner's office and one officer from this office to do an extensive survey of all these vehicles grounded in various garages in these stations and those with major mechanical problems so that a possibility of boarding same is considered before their condition deteroriates further and thus becoming scrap.

Annual Estimates

Most of the institutions have been prompt in sending their annual estimates in time of course barring a few which this office has persistently reminded of the need to send them in time. One thing which must be realized at this stage is that those who prepare these estimates are at the spending points and therefore are in actual position to tell which particular areas funds allocation should be channelled. As opposed to this reality, those allocating funds have either tendered to ignore some major areas where priority of fuels allocation should have been channelled. An example in hand:-

Funds for fuel and gas for health centres have been allocated without much thought as to the cost and period which whatever the allocated sum would take. If say in a district with 20 dispensaries which store vaccines is allocated with only Kn. 6000/= for six months towards fuel and gas, this divided equally among the dispensaries would come to Kn. 50/= per health centre per month. It is a known fact that no gas refuel will cost less than Kn. 100/= at refilling time. This as can be seen would not be adequate to run the storage of vaccines, and leading to every possibility in vaccines becoming impotent. So in case of an outbreak of a disease which would have either been prevented by the vaccines, the Government would be forced to spend much more than had the fuel been given for storage of vaccines. This situation needs an immediate review so as to curtail any possible loss by vaccines becoming impotent.

General Fund Administration

The Ministry must be a lert at all times of a constant check and control is to be enforced on cash flow in those health institutions. The defaulters must be quickly replaced and possible action taken. Tthe continuous letter writing with no response will only aid in further deteroriation in funds control and as such laxity and intended misuse of funds become a routine.

C H A P T E R - X I V

T R A N S P O R T

As perhaps would be evident from the attached list of vehicles establishment in the Province most of the vehicles have been on the road for more than six years. As would be appreciated the districts in which these vehicles are deployed have some of the most difficult terrain in the country and in effect the vehicle tend to deteriorate faster.

This deterioration has affected the allocations on vehicle maintenance since the old vehicles are in and out of the garages regularly while fuel consumption is higher than in new vehicles. Perhaps if a system was introduced whereby vehicles are replaced after serving for six years and not more than eight years they would fetch better prices when sold and it would be cheaper to maintain the newer vehicles.

Authority for repairs has of late been taking too long to obtain though all relevant documents have been forwarded to Afya House. This has the effect of the vehicles deteriorating further and the cost of repairs being higher because of the deterioration on the prices have gone higher than they were when the estimates were done. Perhaps in the ensuing years Afya House would endevour to obtain Treasury Authority sonner.

The care of lorries in the district is pertinent here. While some drugs and stores are delivered direct from Central Medical Stores there are other vital supplies which are not delivered by Central Medical Stores. Such supplies like medical gases, intravenous infusions and items from Supplies Branch have to be collected from Nairobi. This has necessitated the stations to make weekly trips to Nairobi normally in Land Rovers at very high cost in fuel consumption and travelling expenses for the officers. With a lorry these supply trips could be made once a month at very low cost in diesel consumption while the same lorry could be used to make the monthly supply of drugs to Rural Health Facilities in particular now most of the districts are espected to be on New Drugs Management to R.H.T. The initial capital in-put might be high but the savings will be more than compensate the cost of using L/Rovers.

It will be noticed that the two vehicles at Mwingi Hospital were borrowed from other hospitals. Efforts should be made to supply this busy hospital with four vehicles.

List of Vehicles

STATION	GK No.	MAKE	YEAR OF PURCHASE	COMMENTS
PMO's Office	911T	Datsun	1978	Good
- do -	976T	L/Rover	1979	Fair
- do -	943T	R/Roho	1979	Fair
- do -	82Q	L/Rover	1978	Fair
- do -	353C	Peugeot	1982	Excellent
- do -	78D	Datsun	1975	Grounded
- do -	7146	Lorry	1975	Poor
Embu Hospital	134Q	L/Rover	1978	Fair
- do -	4625	Chev	1981	Excellent
- do -	923X	L/Rover	1980	Accident
Kiritiri H/C.	C431	Chev	1981	Excellent
Embu Hospital	7086	V/Wagon	1976	Poor
- do -	783T	Nissan	1979	Fair
- do -	92Q	V/Wagon	1975	Poor
Siakago H/C	7088	Datsun	1976	Fair
Kiritiri H/C	E 805	Chev	1982	Good
Training Sc. Embu	860X	L/Rover	1979	Good
Embu Hospital	7108	L/Rover	1971	Poor
- do -	953T	V/W Kombi	1979	Fair
- do -	6882	Mazda	1970	Poor
- do -	6927	L/Rover	1968	At Boarding stage
- do -	6953	L/Rover	1969	At Boarding stage
Kangundo Hosp.	862X	L/Rover	1979	Good
- do -	903X		1979	Good
- do -	7040	Mazda	1976	Poor
. do -	C 175	Chev Luv Ambulance	1981	Good
- do -	181D	L/Rover	1972	Poor

STATION	GK No.	MAKE	YEAR OF PURCHASE	COMMENTS
G/Tulla H/Contre	823T	L/Rover	1980	Good
Merti H/Centre	832T	L/Rover	1980	Good
Isiolo Hospital	154Q	V/Wagon	1978	Fair
Isiolo Hospital	814T	L/Rover	1978	Fair
Isiolo Hospital	6982	L/Rover	1977	Poor
Isiolo Hospital	C053	L/Rover	1981	Good
Isiolo Hospital	992T	L/Rover	1979	Poor
Isiolo Hospital	A 281	Chev. Luv	1982	Good
Isiolo Hospital	C 316	Chev. Luv	1981	Good
Machakos P.G. Hosp.	461B	Datsun	1977	Good
" "	7072	Toyota	1976	Fair
" "	850T	L/Rover	1980	Fair
" "	155Q	V/Wagon	1978	Fair
" "	915X	L/Rover	1980	Good
" "	C067	Chev. Luv	1981	Good
Sch. Nursing Mks.	877T	Nissan	1979	Good
Machakos P.G. Hosp.	901T	Leyland Bus	1979	Good
" "	907T	V/W Kombi	1979	Poor
" "	85Q	L/Rover	1978	Poor
Tawa R.D.H.C.	974T	L/Rover	1979	Good
Mwala R.D.H.C.	973T	L/Rover	1979	Good
Matuu R.D.H.C.	E802	Chev Luv	1982	Excellent
Masii H/Centre	841T	L/Rover	1980	Good
Mbooni H/Centre	C 428	Chev Luv	1981	Excellent
Kalawa Dispensary	6951	Mazda	1977	Fair
Nunguni Dispensary	888T	Chev. Luv	1979	Fair
Sultan Hamud	7206	Datsun	1976	Poor
Machakos P.G. Hosp.	239D	Ambulance	1970	Boarded

Machakos P.G. Hosp.	11Q	V/Wagon	1976	Boarded
" "	7120	V/W Kombi	1975	Boarded
" "	212D	Toyota	1970	Boarded
" "	476B	Toyota	1969	"
" "	7059	L/Rover	1971	"
" "	142D	Nissan	1975	"
" "	7187	L/Rover	1978	"
" "	33Q	V/Wagon	1976	Very poor
" "	472B	Datsun	1975	Very poor
" "	855T	L/Rover	1980	Poor
Meru Hospital	6833	L/Rover	1978	Fair
Githongo H/Centre	510B	Mazda Modified	1976	Fair
Meru Hospital	133Q	L/Rover	1978	Good
MTC. Meru	856X	L/Rover	1980	Good
Meru Hospital	C320	Chev Luv Ambulance	1981	Good
" "	462B	V/Wagon	1975	Poor
" "	844T	L/Rover	1980	Good
" "	B851	L/Rover	1981	Good
" "	988X	Nissan	1978	Good
" "	C345	Toyota Stout	1981	Fair
Marimanti H/C.	C317	Chev Luv	1981	Good
Chuka H/Centre	927X	L/Rover	1981	Good
Miathene H/Centre	C052	L/Rover	1980	Good
Ruiri H/Centre	7005	L/Rover	1973	Too old needs replacement
Lare H/Centre	908X	L/Rover	1980	Fair
Mpukoni H/Centre	888X	L/Rover	1980	Good
Githongo H/C.	203D	Land Cruiser	1968	Boarded
Meru Hospital	149Q	V/W Sedan	1978	Boarded

MTC - Meru	782T	Nissan	1978	Fair
Meru Hospital	60Q	Jeep	1978	Boarded
" "	6970	Toyota L/C.	1972	Boarded
Chuka H/Centre	464B	L/Rover	1967	Boarded
Meru Hospital	12Q	V/W	1976	Boarded
Ruiri H/Centre	989T	L/Rover	1979	Boarded
Miathene H/Hentre	6844	L/Rover	1973	Boarded
Kitui Hospital	7002	Mazda	1976	Poor
Migwani H/Centre	937X	L/Rover	1980	Good
Nguni H/Centre	934X	L/Rover	1980	Good
Tse-Kuru H/Centre	6883	L/Rover	1973	Poor
Katulani H/C.	C170	Chev Luv	1981	Good
Kitui Hospital	941T	L/Rover	1979	Good
" "	981T	L/Rover	1979	Good
" "	6884	L/Rover	1973	Poor
" "	7191	L/Rover	1978	Fair
Yatta H/Centre	793T	L/Rover	1978	Fair
Kitui Hospital	7144	L/Rover	1973	Pood
" "	E 815	Chev Luv	1982	Good
" "	147Q	V/W	1978	Fair
Ikutha H/Centre	500B	L/Rover	1971	Poor
Mutito H/Centre	925X	L/Rover	1980	Good
Kitui Hospital	66Q	V/Wagon	1977	Fair
Kitui Hospital	197Q	L/Rover	1978	Good
Nuu H/Centre	180D	L/Rover	1974	Poor
Kitui Hospital	965T	Motor cycle	1979	Fair
" "	F031	Motor cycle	1982	New
Kitui Hospital	238D	Toyota L/C	1970	Boarded
" "	6961	L/Rover	1975	Boarded

Makueni Hospital	944X	L/Rover	1980	Fair
" "	C073	Chev Luv	1981	Good
Marsabit Hosp.	6836	Leyland Lorry		Boarded
" "	204D	L/R (LWB)	1972	Boarded
" "	6862	L/Rover	1973	Boarded
" "	6909	L/Rover	1972	Boarded
" "	74Q	L/Rover	1977	C.M.C.
" "	433B	L/Rover	1977	Fair
" "	6910	L/ROver	1978	Good
" "	794T	L/Rover	1978	C.M.C.
North Horr H/C.	882X	L/Rover	1980	Good
Marsabit Hosp.	819T	L/Rover	1980	Good
North Horr H/C.	A 751	L/Rover	1981	Good
Moyale Hospital	818T	L/Rover	1980	Fair
" "	7070	L/Rover	1972	Boarded
" "	498B	L/Rover	1977	Fair
" "	925T	L/Rover	1979	Fair
" "	978X	L/Rover	1982	Good
" "	101D	L/Rover	1977	Fair
Ishiara Hospital	877X	V/W Kombi	1979	Fair
" "	135Q	L/Rover	1978	Fair
Makindu Hospital	243D	Chev Luv	1978	Poor
" "	960X	L/Rover	1980	Good
D.D.C. (PHT) Embu	859X	L/Rover	1979	Fair
Karurumo RHTC	121Q	1978	L/Rover	In garage CMC
Karurumo RHTC	122Q	1978	L/Rover	Grounded
" "	114Q	1978	V/W Kombi	In garage CMC
" "	98Q	1978	V/W Kombi	In garage CMC

Karurumo RHTC	195Q	1978	L/Rover	Burnt out. At Ministry of Health Headquarters Nairobi Yard.
Mwingi Hospital	A 84	1981	Chev Luv	Transferred from Marsabit Hospital. In good condition
Mwingi Hospital	934X	1980	L/Rover	Transferred from Nguni H/Centre. In good condition.

C H A P T E R - X V

TUBERCULOSIS/LEPROSY PROGRAMME IN KITUI DISTRICT

BUILDINGS

No new buildings were completed during 1982.

Bed Capacity:			TOTAL
Kitui D. Hospital	- 23 tuberculosis	3 Leprosy	26
Mutomo	- 12	12	24
Kimangao	- 12	12	24
Muthale	- 12		
	49 Tuberculosis	27 Leprosy	

In-patient treatment at Kitui District Hospital.

(1) The majority of newly diagnosed cases is treated for 30 days as a in-patient (30 streptomycine injections).

(2) Patients with extensive disease are treated for 60 days (60 streptomycin injections). This with reference to East African/ British Medical Research Council Fifth Thiacetazone Investigation second report 1970 which states: "the addition of streptomycine 1 gr. daily for the last 8 weeks to the standard regimen of thiacetazone 150 mgr plus isoniazid 300 mgr. daily, substantially improved the response to treatment of pulmonary tuberculosis as assessed at 12 months. Initial daily supplement for 4 weeks and for two (2) weeks were less effective. This result was confirmed at 18 month's, the trend being stretistically significant and it was concluded that if a patient had disease of sufficient severity the aim should be to give it daily for a minimum of 4 and preferable 8 weeks.

As extensive disease is considered.

Patient in general poor condition with bilateral

PTB or with milliary tuberculosis.

(3) Patients with tuberculosis of bone are treated for 60 days (60 inj. streptomycine)

(4) Patients for study - E - have in average in-patient stay of 11 weeks (14 cases).

The bed capacity is 23 x 365 - 8395 patient days (P.D)
The maximum admission capacity is - 280 new cases/year when all these new cases are admitted for 30 days only. Not only patients admitted for longer than 30 days (see above mentioned categories 2, 3 and 4 but also there are re-admissions.
This means that the bed-capacity in Kitui District Hospital is insufficient and on average there are over 30 patients admitted.

The bed-capacity in Mutomo and Kimangao is sufficient. (each 160 new cases/year x 30 days.

Achievements:

1. Implementation of "Chronic cough Register" at Kitui Tuberculosis Office, with daily Clinics.

2. Good co-operation between Kimangao H.C. and family care centre to the effect that all newly diagnosed Tuberculosis cases at F.C.C. are referred to Kimangao H/Centre for the start of treatment. This means that in Kitui District start of Th-treatment on a outpatient basis is abolished.

3. Start of Study-E in Tuberculosis (Kitui)

4. Leprosy-compliance study (April/May) (in Kitui, Mutomo, Kimangao).

5. Start of Mobile Health Education Programme (Kitui).

6. Preparations completed for the forth-coming multiple Drug Regimen study in Leprosy-Treatment (Kitui, Mutomo, Kimangao).

7. Laboratory - diagnosis quality study (Kitui, Mutomo, Kimangao).

8. Completion of office-manual (Kitui).

9. Start of Mantoux - Register (Kitui).

KITUI DISTRICT

Total newly diagnosed previously untreated. Tuberculosis cases at the end of 1982.

	PTB		EPTB		TOTAL
	Adult	Children	Adult	children	
Kitui	170	91	33	20	314
Mutomo	56	6	18	4	84
Kimangao	39	-	-	3	42
Total	265	97	51	27	440

	Kitui	Mutomo	Kimangao	Total
Sputum	144	56	37	237
X-Ray	85	10	-	95
Manboux	38	1	-	39
Cultrere	3	-	1	4
Biopsy	30	6	-	36
Clinical	14	11	4	29
Total	314	84	42	440

LEPROSY PATIENTS KITUI DISTRICT AT END OF 1982

	L. Cases	Non L. Cases	Total
Kitui	73	64	137
Mutomo	145	368	513
Kimangao	184	193	367
Total	392	625	1017

Total of new Leprosy cases diagnosed during 1982.

	L. Cases	Non L. Cases	Total
Kitui	7	7	14
Mutomo	4	25	29
Kimangao	8	16	24
	19	48	67

NEW CASES KITUI DISTRICT HOSPITAL

Leprosy	L. cases	Non L. cases	Total
1981	2	5	7
1982	7	7	14

NEW CASES MUTOMO MISSION HOSPITAL

Leprosy	Cases	Non cases	Total
1981	8	25	33
1982	8	16	24
	KIMANGAO HEALTH CENTRE		
1981	8	25	33
1982	8	16	24

Tuberculosis statistics, Family care ce ntre Muruu.

Newly diagnosed patients	66
AFB positive	43
Clinical diagnosis	23
Patients referred to Kimangao since September, 1982 (all positive)	27

KITUI DISTRICT HOSPITAL

KITUI CENTRAL - TUBERCULOSIS STATISTICS

	P T B		E P T B		
	Adult	Children	Adult	Children	Total
Begin 1982	301	96	39	48	484
Out discharged	111	37	16	21	185
Lost sight off	19	4	2	5	30
Death	9	1	0	0	10
Total out	139	42	18	26	225
In Previously untreated	170	91	33	20	314
Previously treated	6	-	-	-	6
Transferred in	52	8	3	2	65
Total in	228	99	36	22	385
End 1982	390	153	57	44	644

KITUI CENTRAL LEPROSY STATISTICS

	L- Cases	Non L- Cases	Total
Begin 1982	56	113	169
OUT Release from	0	55	55
Out of control	0	9	9
Transferred out	1	7	8
Death	0	2	2
Total Out	1	73	74
IN Previously untreated	7	7	14
Readmitted	1	0	1
Transfered in	10	17	27
Relapsed	0	0	0
Total In	18	24	42
End 1982	73	64	137

KITUI DISTRICT HOSPITAL

New Cases
Tuberculosis

	P T B		E P T B		
	Adult	Children	Adult	Children	Total
1981	171	65	32	54	322
1982	170	91	33	20	314

Method of Diagnosis

	Sputum	X-Ray	Mantoux	Bapsy	Clinical	Culture
1981	175	65	24	47	7	4
1982	144	85	38	30	14	3

Comment:

Due to sputum negative results on many cases with highly suspecion for PTB an X-ray chest, the method in diagnosing PTB has changed.

The same problem is noticed when comparing the actual laboratory results.

	Total of sputum Examined	Total of Sputum AFB-POS	
1981	1835	174	9.4%
1982	2103	144	6.8%

Comment:

Under diagnosis of AFB-Positive specimens seem likely.

NAIROBI - LABORATORY RESULTS

	Kitui	Mutomo	Kimangao
Total of sputums send for culture	383	114	124
Total sputums with positive culture	66	14	15
Total sputums INH-Resistance	33	8	15
Total sputums streptomycine Resistance	3	4	3
Total results not received	43	46	18
Total sputum contaminated	75	19	4

Muthale Mission Hospital

Although patients are diagnosed in the hospital their statistics appear under Kitui District Hospital as they are Registered in the Kitui District Hospital register.

MUTOMO MISSION HOSPITAL

TUBERCULOSIS STATISTICS

		P T B		E P T B		
		Adult	Children	Adult	Children	Total
Begin 1982		514	95	43	37	639
	Transferred out	38	15	1	5	59
OUT	Discharged	63	16	11	10	100
	Lost sight off	32	2	-	1	35
	Death	20	5	3	1	29
	Total	153	38	15	17	223
IN	Previously untreated	56	6	18	4	84
	Previously treated	4	-	-	-	4
	Transferred in	39	7	1	5	52
	Total in	99	13	19	9	140
	End 1982	460	20	47	46	556

LEPROSY STATISTICS

		L - Cases	Non L-Cases	Total
	Begin 1982	145	388	533
OUT	Release from control	3	41	44
	Out of control	5	4	8
	Transferred out	1	1	1
	Death	2	2	4
	Total out	11	48	58
IN	Previously untreated	4	25	29
	Re-admitted	2	3	5
	Transferred in	1	-	1
	Relapsed	4	-	4
	Total in	11	28	39
End 1982		145	368	513

In 1982 only 7 patients were diagnosed, all of them PTB (5 adults, two (2) children).

In 1982 in total 158 sputum examinations were done and 4 of them found positive for AFB.

Family Care Centre - Muruu.

During 1982 dose cooperation between this centre and Kimangao has been established as they are very near. As from September, 1982 all newly diagnosed patients from this centre are referred to Kimangao for registration and treatment. This in effect, leaves this centre, only as a diagnostic centre. The bed capacity at Kimangao is sufficient to cope with these extra load off patients.

These patients appear in the Kimangao statistics as "Transferred In" patients. In 1982 there were 440 sputum examinations done and 243 of them were found positive for AFB.

HEALTH EDUCATION ACTIVITIES

Mobile Health Education Programme was started in June 1982 by Mr. Kihara the District Health Educator - Kitui. It is done through school H/Ed. and Barazas.

Population covered:

Children	- 3,550
Teachers	- 70
In Barazas	- 700
Total	- 4,320

C H A P T E R - X V I

C H U R C H H O S P I T A L S

CHOGORIA CHURCH HOSPITAL

Staffing Summary:

AREA / STAFF DESIGNATION	Patient Care in Hosp. (IP + OP)	Support Services	CHD Dispensaries (25)	Nurse Training School	Totals
Medical Officers	5	1	1	-	7
Clinical Officers	5	-	-	-	5
Reg. Nurses	8	-	1	4	13
Enrolled staff	52	-	26	1	79
U.T.	4	-	1	1	6
Diagnostic	9	-	-	-	9
Field Staff	-	-	32	-	32
Domestic	48	12	41	4	105
Administration	4	19	3	1	27
Maintenance	1	43	6	1	51
AYOs.	-	-	2	-	2
	136	75	113	12	336

STATISTICS

General Hospital

Accommodation - Beds

Male	General	50	Isolation	4	Amenity	2	=	56
Female	General	50	Isolation	4	Amenity	2	=	56
Maternity	"	36	"	2	"	2	=	40
Children	"	28	"	20	"	2	=	50
					Total Hospital Beds			204

Ante-natal clinic	- 12
Leprosy Hostel	- 12
Total Hostel Beds	24

In-Patients & In-Patient Days (Non Maternity)

	In-Patients	In-Patient Days
Male	1,249	15,299
Female	2,265	19,802
Children	2,009	16,414
	5,523	51,515

Percentage Bed Occupancy

Non-Leprosy and Non-Maternity	- 87.12
Including Maternity	- 90.79

Theatre

Major Operations	432
Minor Theatre	1,097

Total No. of Major In-patients operated upon 577

Major Operations

Class 1 Caesarian Section:

Lower Segment	108
Classical	2
	110

of which there were Uterine Rupture 3

Class 2 Tubal Ligations

Incidental	23
Laparoscopic	24
Mini-Lap	46
Vaginal	12
Total	105

Class 3 Ectopic Pregnancy 18

Class 4 Other Tubo-Ovalians Surgery

Ovarian Cyst	5
Salpingectomy	3
Salpingo-Oophorectomy	7
Salpingostomy	1
	16

Class 5 Laparotomy + Pathology

Duodenal Ulcer	15	18
Gastric Ulcer	3	
Carcinoma Stomach	8	
1° Hepatoma	7	
Hepatic Cirrhosis	6	
Adhesions	6	
Others less than 5	37	
	82	

Class 6 Laparotomy - No Pathology 11

Class 7 Prostatectomy

Trans Perinoal	6
Transvesical	3
	9

Class 8 Polio Remedial Surgery 0

Class 9 Major Limb Amputations

Above knee	3
Below knee	2
Symes	1
	6

Class 10 Hernias

Inguinal	16
Epigastric	14
Umbilical	6
Incisional	1
	37

Class 11 Histerectomy

Total ABD	26
Sub-total ABD	4
Vaginal	2
	32

Class 12 Intestinal Obstruction

Adhesions	6
Volvulus i) Small bowel	1
ii) Large bowel	1
Intussusception	2
Paralytic Ileus	1
	11

of which only one needed resection.

Class 13 Tonsillectomy		6
Class 14 Laparoscopy		
	Diagnostic	43
	T. L. (already accounted)	24
Class 15 Appendicectomy		
	Acute	1
	Perforated	2
	Normal	3
	Incidental	3
		9
Class 16 Eye Surgery		6
Others x		
	Osteomyelitis	10
	Fractures i) Open reduction	2
	ii) Internal Fixation	2
	iii) Compound	2
	iv) Skull	4
	Dislocations Open reduction	3
	Bone Cysts - grafting	3
	Other Orthopaedic OPS	2
	Major Tendon Repairs	6
	Tyroid surgery	5
	Thyrpglossal cysts	3
	Urological Procedure Other than Prostate	
	- Repair V.V.F.	3
	Repair Urethral Fistula	1
	Testicular Torsion	4
	All others less than 5	42
		92

GRAND TOTAL = 593 OPERATIONS

Laboratory, Blood Bank and X-Ray

Total number of patients tested	19,265
Total number of tests done	28,639
Inpatients tests done	9,811
Out-patients tests done	17,165
Meat examinations	None
Specimens sent to Nairobi	92

Ward Breakdown of In-patients tests

Medical		5,020
Children		2,254
Surgical		1,474
Maternity		1,063
Blood groupings	734	
X-matchings done	599	
Transfusions given	367	
Units of blood donated	330	

X-Ray Department

Total X-ray examinations, all types	2,778

Deaths In Hospital

Peri-natal deaths	63
All others	162
Total	225

MATERNITY DEPARTMENT

(i) Obstetric Section

The most important statistics are again reported in a uniform way to allow comparisons between years and hospitals.

Namely: Abortions are all stillbirths weighing less than 100 gm regardless of estimated gestational age.
Still births include only babies weighing 1000 gm.
Neonatal deaths include all live births dying before discharge from hospital.
Perinatal deaths include still births plus neonatal deaths.

1981 figures are included for comparison.

	1981	1982
Total women delivered	1,744	1,915
Total deliveries (babies	1,770	1,936
SVD	1,558	1,711
Others	212	224
Abortions (less than 1000 gm)	17	11
Toxaemias, Hypertension	N/A	N/A
Haemorrhages	N/A	N/A
Breech deliveries	64	35
Other malpresentations	N/A	N/A
Multiple pregnancies	26 twins	19 twins
		1 triplet
Ruptured uterus	2	6
Caesarean sections LSCS	96	108
Classical	2	2
Rate	5.5%	5.7%
Vacuums	46	71
Rate	2.6%	3.7%
Forceps	4	7
Symphysiotomy	0	1
BBA	21	23
Maternal deaths	2	2

Paediatric Statistics

	1981	1982
Craniotomy	0	1
Low birth weight	129	112
Rate	7.3%	5.8%
Still Births	37	36
Rate	2.1%	1.9%
Neonatal deaths	31	27
Rate	1.8%	1.4%
Perinatal deaths	68	63
Rate	3.8%	3.3%

OUT-PATIENT DEPARTMENT

General Out-Patient Clinic

	New cases	Return	Total
Hospital	26,255	16,837	43,092

T.B. Clinic

The nearby patients attend monthly at a clinic conducted by the ungraded nurse in charge of the Leprosy/TB. Project. See under 3 Leprosy & Tuberculosis.

Dental Clinic

Commenced March 1962 under Miss Thornton, Volunteer Registered Dental Practitioner from U.K. after exploratory visits to patients assembled for general medical O.P.s., and considerable public announcement.

Equipment installed at the end of April and a programme of work begun including -

General dentistry
Assistant training
Oral & Dental Hygienic and preventive work in schools and amongst public.
Instruction of dispensary Enrolled Nurses.

Staffing increased when Mr. M. B. Kireru join the team and has continued to the end of the year. The clinic is a financially viable operation through fee payment.

WORK DONE

Dental extraction	- 900
Amalgam restorations	- 750
Scaling and polishing	- 284
Dental check ups	- 221
Composite restorations	- 113
Temporary dressings	- 41
Endodontic restorations	- 25
Dentures - Partial & Full, porcelain jacket crowns	- 16
Surgical extractions (L.A.)	- 15
Sili cate restorations	- 13
Other procedures less than 10	- 34
Total No. of patients treated	2,412
Dental extractions	750

Ophthalmic Clinic

Staff – Clinical Officer, Bernard Kithinji successfully completed the Ophthalmic training at Medical Training Centre and was established in his clinic in March under the supervision of Dr. Philip Ambler.

Equipment

Since no equipment was provided by the M.T.S. only a very scratch set was available from the hospital.

Dr. Ambler presented several more.

The lack of a set of Test lenses has been a big hindrance.

Drugs Irregular supply has been a problem.

Mobile Clinics

Kithinji has accompanied the Leprosy/T.B. Team on its quarterly safaris.

Comment

This service has been much valued by the patients and has saved the Meru Eye Team the time and cost of travel to the South end of the district though major and all Intra-ocular surgery has to be referred to Meru.

Work Load

Total patients seen in clinic	2,661
Total patients seen on safari	1,000

Case Breakdown:

With pathology	1,952
With	688
Surgical cases	213

Clinic for the Disabled

A.P.D.K. has continued its work with assistance from Hospital staff.

Comment

General out-patient work has increased again as follows:-

1981 12% increase on 1980

1982 11.2% increase on 1981.

LEPROSY AND TUBERCULOSIS

Activities

Medical Officer supervises all patient care through monthly mobile clinics held in all service delivery points of Chogoria Hospital, and in-patient care of all admitted for complications, and quarterly visits to Tharaka clinics. Unqualified Nurse conducts and manages all the routine treatments and maintains records.

Field workers conduct home visits, follow-ups, ulcer care and general motivation, contact tracing, and attend clinics in home areas- both in Tharaka.

COTULEP Kiambih, in general overall charge - but manifestly cannot, at present handle the day to day supervision, work of so large an area. This requires rationalisation. Chogoria Hospital accommodates 12 - mostly helpless cripples and some temporary residents undergoing special treatment.

Statistics Leprosy & Tuberculosis

	Leprosy	T.B.
New cases notefied	17	41
Cases under treatment	301	100
Cases released from control	5	22
Cases lost sight of	12	10

Drug Supplies

Dapsone & Thiazina has been inadequately supplied by M.O.H. through COTULEP Meru, & emergency supplies have been sought from Nairobi on one occasion.

Finance

The majority funding of the project is from the Netherlands Leprosy Relief Association with assistance from the Leprosy Mission of London and Medical Mission Institute, Wo. Germany.

Reports on finances sent to donors.

COMMUNITY HEALTH DEPARTMENT

Comment On Staffing

The importance attached to the Community Health work is evidenced by the size of the staff employed, i.e. over one hundred salaried employees.

The population served numbers approximately 250,000 persons.

Activities

(a) Integrated Curative and Preventive Health Care

This service is delivered through the static, satellite service delivery points in 25 Family Health Clinics and the Hospital. Of these 14 were opened during 1982. (All were previously maintained as monthly mobile clinics or sub-stations of less developed dispensaries.) One Family Health Clinic at Kinoro was taken over by the Ministry of Health.

Only four mobile stations are currently being maintained. Supervision is once every two months from Chogoria. The "Cold Chain" is maintained with a mixture of gas operated and paraffin refrigerators. The standard Family Health Clinic is now staffed by one Enrolled Community Nurse who has had extra training in diagnosis and treatment, plus Family Planning. Hospital trained helpers are present depending on the work done. Over 640 patients per month qualified the clinic for a second helper. One and in some places two Family Health Field Educators in each family health clinic supervise the work of up to 10 Volunteer Family Health Workers. In 5 of these clinics, there is accommodation for up to 3 Enrolled Community Nurse pupils doing their practical work.

Statistics

Curative Services at F.H. Clinics

	New	Return	Total
Hospital	26,255	16,837	43,092
F.H. Clinics	113,423	34,996	148,419
Totals	139,678	51,833	191,511

Preventive Services at F. H. Clinics

YEAR	CHILD WELFARE			ANTE NATAL			FAMILY PLANNING		
	New	Return	Total	New	Return	Total	New	Return	Total
1980	6478	37808	44286	4474	9247	13722	2685	14140	16825
1981	4944	28032	32976	3451	7536	10987	2507	18142	20649
1982	4843	25288	30071	3579	7039	10618	2531	15929	18460

(b) Youth Programme

The two Assistant Youth Officers, under the direction of the Director, have maintained a full programme of teaching, counselling and film showing and supervision of teachers trained in earlier seminars, Youth Leaders and Church Leaders. This programme is financed by Family Planning International Assistance (F.P.I.A.) and the Ford Foundation.

(c) Community Based (Volunteer Health Worker) Programme

In the majority of the Family Health Clinics there is operating an Area Health Committees of Volunteer Community Representatives. Careful attention is being paid to the development and training of these. These select suitable persons for training as Volunteer Health Workers, who receive training from the Department. This training lasts one week and is followed up with In-Service on-site training conducted by the Community Based Health Care Facilitators, both of whom have attended all three "Training for Teachers" Courses held by the African Medical and Research Foundation.

These Volunteer Health Workers operate around their Family Health Clinic, responsible to their Area Health Committee, and supervised by the Family Health Field Educator. Guidance and advice is also given by the Enrolled Community Nurse in charge of the Clinic.

The work of the Volunteer Family Health Workers is mainly education, motivation and home visiting of referred cases and Family Planning. The programme is much in demand. This programme is solely supported by the Swedish International Development Aid.

(d) Voluntary Sterilisation Programme

Requests for Voluntary Sterilisation are met with a supported programme of either Laparoscopic or Mini-lap Tubal interruption. The clients are admitted on first day, operated upon the second and allowed home on the third. The demand is slowly increasing. Total Tubal Ligations in 1982 was 105. This programme is financed by F.P.I.A.

(e) Family Planning Training of Enrollled Community Nurse Pupils

The instruction of pupil nurses in the theory and practice of Family Planning is integrated with the full syllabus. Chogoria Hospital is probably unique in this, and in view of the Nation's needs, recommends it to all Enrolled Community Nurse Training Schools.

(f) Leprosy/Tuberculosis Control Project, Meru District

The monthly supervision of treatment and management of Leprosy and Tuberculosis patients in the South end of the District by Chogoria Hospital is a combined effort between the Ministry of Health, Meru District Hospital and the Chogoria Hospital. The COTULEP in Meru, Mr. Francis Kiambi is the M.O.H. officer concerned and the Chogoria work closely with him.

Chogoria is entirely responsible for the Chogoria cases and receives cases referred, both T.B. cases, but refers most of the Leprosy to Chogoria.

Meru and Maua handle all their own cases of both diseases. Chogoria with Meru handle the Tharaka cases through three monthly safaris to nine Service Delivery Points, which are staffed for the rest of the months by M.O.H. personnel.

Total number of patients under care of Chogoria:-

This rate of ratio of funding is required to maintain existing service.

It is intended to maintain these for a further two years and then drop steadily to maintenance levels, by which is meant , those levels that can be maintained from existing hospital generated funds and volunteer services rather than overseas funding. Reduction in funding during the year under reporting, has meant considerable strain on existing service, and staffing levels are minimal.

T R A I N I N G

ENROLLED COMMUNITY NURSES

Staff

Tutor	- Full time	2
Clinical Instructors	- Full time Registered	1
	- Part time Registered	1
	- Full time Enrolled	1

Due to staff movements there have been very many changes and the general ward staff have had to be called in to assist. Such changes are unsettling for the pupils.

Pupils in Training

Females	131
Males	37
Total	168

Intakes

January	24
July	21

Discontinuations

For persistant social misconduct	1

Recommencements

Following maternity leave	8

Examination Results

42 sat	37 passed	4 failed	1 withdrawn

Graduation Ceremony

Those qualified in December, 1981 and June 1982 were presented in July 1982. The Guest of Honour was Mr. G. Mwirichia, the Permanent Secretary in the Ministry of Health.

Pupil Selection Procedure

The procedure involving the Hospital Management Committee and through it, the community it represents as suggested by Jean Griffiths of the Medical Training Centre was accepted and implemented.

C H A P T E R - X V I I

NKUBU DIOCESAN HOSPITAL

Population covered - 200,000.

Aims:

Continuation of Christs work in His Ministry of Healing in a needy area - preparation of leaders in Health Sector.

SERVICES AVAILABLE

No. of Doctors	5
Operating theatre	
Surgical ward	40 beds
Maternity ward	42 beds
Medical ward	40 beds
Paediatric ward	70 beds
Isolation ward	31 beds
T.B. ward	18 beds
Amenity ward	16 beds
O.P.D.	
Mobile clinics	12 stations.

There is a Rural Health Programme sponsored by the Hospital and Pro Family Life Programme.

ANNUAL STATISTICS

	1981	1982
Beds general	215	215
Beds maternity	42	42
Total beds	257	257
In-patient (M)	1,576	1,637
In-patients (F)	1,295	1,209
Children	2,319	2,775
Maternity	4,039	4,456
Total In-patients	9,229	10,077
Total deliveries	4,221	4,234
Normal deliveries	3,489	3,364
Abnormal deliveries	732	817
C/S	214	268

	1981	1982
V/D	214	268
Forceps deliveries	231	346
Face deliveries	5	7
Prolapse of cord	41	26
Twins	15	12
Breech deliveries	154	144
Triplets	-	-
Ruptured Uterus	6	7
A.P.H.	17	17
P.P.H.	30	56
Premature babies	300	329
Stillbirths	72	47
Cord prolapse	-	12
CONGENITAL ABNORMALITIES		
Hydrocephalous	7	24
Exomphalous	3	2
Anancephalous	-	2
Meningocele	-	2
Cleft Palate	-	1
Spina Bifida	1	3
DEATHS		
Neo-Natal & Perinatal Deaths	35	68
Adults	158	124
Children	132	204
Maternal deaths	2	2
Total Deaths	332	398
OPERATIONS		
Major Operations	601	816
Minor Operations	3,172	4,389
Total Operations	3,773	5,202
Application Plastor of Paris	162	1,086
Tubal Insufflation		372

OUT-PATIENTS	1981	1982
New cases	71,941	62,783
Re-attendance	19,393	16,794
Total Out-patients	91,334	79,574
T.B. Clinic		1,789
CHILDREN WELFARE IMMUNIZATIONS		
B.C.G.	5,136	4,708
Oral Polio	8,576	8,084
Triple Vaccine (D.P.T.)	9,573	8,610
Anti-Tetanus Toxoid	6,854	6,013
Measles	2,870	2,164
Total Immunizations	33,009	29,579
Ante-natal Clinic		
New cases	4,452	4,891
Re-attendances	12,775	13,322
Total	17,227	18,213
POST-NATAL	1,207	913
FAMILY PLANNING (Individual and groups)	2,359	2,600
INFECTIOUS DISEASES		
Pulmonary T.B.	154	120
T.B. Glands	3	1
T.B. Spine	-	-
Abdominal T.B.	-	-
T.B. of Bones	-	-
Total T.B. Patients	157	121
Typhoid 10	10	5
Leprosy	1	-
C. S. Meningitis	33	23
Virus Hepatitis	107	50
Tetanus	14	9
Kala-azar	2	2
Measles	243	522
Whooping cough	6	45
Chicken Pox	7	8
Mumps	6	9
Total	416	676

	1981	1982
TOTAL X-RAY	3,559	3,931
LABORATORY TESTS		
Urine Tests	9,859	9,014
Pregnancy Tests	957	148
Stool Tests	14,747	12,456
Sputum	597	2,027
Smear	1,316	1,097
C.S.F.	158	170
Malaria Slide	2,603	1,373
E.S.R.	4,869	6,437
H.B.	6,873	5,881
WCC/DC	1,872	4,073
Blood Grouping & Crossmarch	3,092	2,949
V.D.R.L.	3,944	4,882
Widal	78	176
CHEMISTRY) Bilirubin) Transaminase) Blood sugar) Blood Urea	2,453	4,203
TOTAL LABORATORY TESTS	54,518	56,477
BIOPSY REF. TO NAIROBI	228	203

C H A P T E R - X V I I I

KYENI DIOCESAN HOSPITAL

The hospital is by the Diocese of Meru together with Nkubu hospital (257 beds) and Tigania hospital (56 beds).

Kyeni hospital was founded in 1956 when it was developed out of dispensary. The Diocesan Medical Board is the governing body and it meets twice a year for policy matters.

Hospital Capacity

children ward	- 30 beds
Isolation ward	- 8 beds
male	- 24 beds
female ward	- 45 beds
maternity ward	- 50 beds
	- 14 antenatal
	- 21 post natal
	- 8 veriobel
	- 3 sergical
	- 10 cots
	- 2 incubators

Maternity

	1981	1982
Normal delivery	1290	1436
Breech	33	56
vacuum	124	65
symphyseotomy	8	10
forceps	2	3
caesarian	121	124
Twins	27	38
still born - premature	8	9
- term	27	22
neonatal death - premature	20	27
- term	14	25

The maternity occupancy rate was 91% and the number of in-patient days = 16,653.

General Wards

	1981	1982
paediatric ward	656	901
Isolation ward	44	55
male ward	530	684
female ward	998	1376

The total number of inpatients days for general wards was 30,525 (24,103 - 1981) occupation rate of 74% (62% - 1981).

Deaths in general wards - 1981 = 97 1982 = 139.

THE MCH/FP ACTIVITIES

The Natural Family Planning method was started.

	New Cases	Reatt.
Antenatals	1,732	3,726
Childwelfare	1,493	6,588

There was an increase of children reattendances over previous year.

VACCINATIONS		1981	1982
D.P.T.	1	749	1220
	2	741	1174
	3	591	832
Polio	1	756	1146
	2	706	1087
	3	585	795
Measles		432	632
B.C.G.		1632	1615
T.T.	1	842	963
	2	442	527

OUT PATIENT ATTENDANCES

The O.P.D. attendance increased by 8%.

	New	Reatt.
Adults - men	4045	1727
- women	6176	2891
Children - Under 5	2835	801
- under 12	1291	398
Total	14,347	5,817

THEATRE STATISTICS

Major operations	259
Minor operations	1,394
Caesarians	124

LABORATORY STATISTICS

Specimens examined

Urine	3,353
Sputum	554
Stool	4,570
Blood slides	4,618
Blood transfusions	152 pints

PHARMACY

The X-ray assistant is also in charge of Pharmacy.

SCHOOL REPORT

Enrolled Nurse Training programme continued.

In March 9 students passed Nurses Council Final Examination.

In September 7 students qualified.

In April there was a fresh intake of 11 student nurses.

No intake in October.

Four (4) discontinued

Total students at the end of year = 39

Training school received a vehicle from Ministry of Health. (Land Cruiser)

NB:

Enrolled Nurses accommodation remained a pressing problem. There are plans to build a Community Nurse Training School.

C H A P T E R - X I X

MUTHALE CHURCH HOSPITAL

In 1949 the Franciscan Missionary Sisters for Africa opened a small dispensary in Muthale and in 1958 it became a hospital.

Hospital Capacity

The hospital has 75 beds made up as follows:-

General Ward - 32 beds (that is 15 male, 15 female and 2 Isolation)

Paediatric ward - 21 beds

Maternity ward - 22 beds

During the year under review, there was 18% decrease in admissions in the general ward. This resulted in the bed occupation of only 50% presumably because the only Medical Officer was on leave and Mwingi Hospital had opened.

Main cuases of death were cerebro-vascular accident, heart failure, malignant tunours and suicide with poison.

Family Planning

The Billings Ovulation Method of Natural Family Planning is promoted and because of time required for individual counselling, the instructors are available any day and at the time which suit the couple concerned.

ESSENTIAL STATISTICS

	1982	1981
Mobile Clinics		
OPD: total visits	510	1920
ANC: total visits	1744	2261
Antenatal Clinic Muthale		
new cases	713	460
re-visits	4491	3279
	5204	3739
Out Patients		
new visits	6057	6795
re-visits	958	1178
	7015	7973
Inpatients		
total	1969	2005
total nursing days	19709	20811
total beds	75	75
average bed occupancy rate	71.9%	76.6%

Surgery

	1982	1981
major operations	37	38
minor operations	197	237

Major Operations

caesarean section	22
hysterectomy	4
ectopic prognancy	2
tenotomy + arthrodesis	1
thyroglossal duct extirpation	1
pyomyositis abdominal wall	1
hernia inguinalis	1
enucleation eye	1
prostatectomy	1
harelip repair	1
big skingraft	2

Minor Operations

D. and C	31
insufflation	2
removal tumor	10
biopsy	2
incision + drainage	33
tooth extraction	25
foreign body	20
primary suturing	25
lumbar puncture	18
cutdown	6
punctures	6
spleen puncture	3
plaster of paris	10
others	6

Laboratory

total tests done	5571
malaria thick film	1397
haemoglo bine	794
white bloodcell count	538
ESR	294
Bloodfilm	68
formolgeltest	4
transfusions blood	110
urine sediments	706
urine glucose	2
urine protein	420
stools	746
sputum AFB	154
smear gonorrhoea	97
CSF	11

Inpatients General

	1982	1981
24 beds		
total admissions	609	746
of which female	420 (68.9%)	512(68.7%)
male	189	234
total inpatients days	5817	7957
average stay in days	9.5%	10.6%
bed Occupation	49.8%	67.8%
deaths	28	19

Inpatients Children

21 beds		
total admissions	545	547
of which girls	267 (48.9%)	251 (46%)
boys	278	296
total inpatients days	5045	4956
average stay in days	9.3%	9.6%
bed occupancy rate	65.8%	64.2%
deaths	51	51

Inpatients Maternity

total admissions	815	712
total inpatient days	8847	7898
average stay in days	10.8%	11.1%
bed occupancy rate	110%	98%
total deliveries	728	567
of which normal	537 (73%)	429 (75.7%)
abnormal	191	138

Childbirth Rate

of which : boys	391 (52.4%)	312 (54.3%)
girls	354	262
twins	17	7
triplets	1	-
stillbirths	35	26
praematures	50	28
praem. died first week	12 (24%)	9 (30%)
neonatal death (incl. praem.)	29	19
perinatal death rate	8.5%	7.9%
maternal death	-	1
LSCS	16	17
classical CS	6	3
vacuum extraction	58	23
forceps extraction	5	1
symphysiotomy	8	5
breech	30	14
retained placenta	14	10
cranio cay	1	1
rupture uterus	1	1
P.P.H.	13	9
B.B.L.	26	15
version and extraction	1	-
eclampsia	3	7

C H A P T E R - X X

CHUKA CONSOLATA HOSPITAL

No. of beds : General - 34 Maternity - 20 Cots - 6 Total = 54
No. of Admissions: General - 1,586 Maternity - 610 Total = 2,190
No. of Deliveries: Normal - 582 Abnormal - 20 Total = 602
No. of Deaths: Maternity - - Still/Birth - 3 Neonatal - 7
Adults - - Children - 42 = 52

ALL CLINICS AND SAFARI WORKS

O.P. Adults and children	1st Visit	Re-attendance	Total
(over 5 years)	12,236	567	12,803
Children (under 5 years)	7,754	782	8,536
Ante-natal clinic	829	3,122	3,937

IMMUNIZATIONS

	Total			Total
B.C.G.	480	Oral polio	1	340
D.P.T. 1	336	Oral Polio	2	440
D.P.T. 2	471	Tetanus T.	1	323
Measles	175	Tetanus T.	2	440

ACTIVITIES

The hospital has been in safari clinic weekly except during heavy rain season. The Medical Officer from Consolata Hospital Kyeni paid regular visits to the In-patients and Out-patients alternate weeks. Ante-natal clinic have been carried out two days per week. Post-natal clinic and teaching classes to the mothers once a week.

IMPROVEMENTS

The all floors of the hospital have been rebuilt and all old patient's beds have been replaced by new ones.

CONCLUSION

The running of the Unit has been rather smooth throughout the year due to the good collaboration of the all personnel engaged in the hospital work and its activities and their commitment to patients and the various duty.

C H A P T E R - X X I

TIGANIA DIOCESAN HOSPITAL

Total number of in-patients	2,603
Total deliveries	1,053
Total normal deliveries	1,050
Abnormal deliveries	3
Twins deliveries	11
Breech deliveries	3
Stillbirths	7
Neonatal deaths	22
Maternal deaths	1
Infants deaths	36
Adults deaths	11
D & C	41

OUT PATIENTS

Total number of out patients	21,064
Child Welfare Immunizations	
B.C.G.	1,728
Measles	1,200
Triple Vaccine	4,475
Polio Vaccine	4,592
Anti-Tetanus Toxoid	2,799
Total Ante natal attendances	6,473
Laboratory tests	18,127
X-Rays. (chest only)	232

Family Planning. We have started teaching the natural method of Family Planning as groups.

INFECTIOUS DISEASES e.g.

Tuberculosis, Measles, Whooping Cough, Tetanus. We refer them to Meru Hospital or Nkubu because we have no Isolation but this year we are going to open an Isolation ward.

SERVICES AVAILABLE

No. of Doctors	- 2	Maternity beds	15
Paediatric cots	- 12	Med. ward beds	19
O.P.D.		Mobile services	6 stations
Rural Health Programme sponsored by the Hospital World Neighbours.		Population covered	10,000

C H A P T E R - X X I I

LIST OF SENIOR OFFICERS - P.M.O's OFFICE - EMBU

Name	Designation	Periodicity
Dr. A. O. Oyoo	Provincial Medical Officer	1.1.82 - 31.12.82
Miss L. Ongaya	Provincial Matron	- do -
Mrs. G. W. Munuhe	Deputy Provincial Matron	- do -
Mr. I. K. Kerungongo	Pro. Public H. Officer	- do -
Mr. S. Njau	Deputy P. P. H. Officer	- do -
Mrs. R. Ngaruro	Provincial Nutritionist	- do -
Mr. C. J. Manguku	Prov. Drugs Inspector	- do -
Mr. S. S. Sabwa	Deputy Prov. D. Inspector	1.2.82 - 30.11.82
Mr. J. M. Andayi	Deputy Prov. D. Inspector	1.12.82 - 31.12.82
Mr. R. M. Kei	Prov. Health Educator	1.1.82 - 31.12.82
Mrs. D. M. Mambo	Prov. Personnel Officer	-.do -
Mr. F, K. Kagunya	Prov. Hospital Secretary	1.1.82 - 1.3.82
Mr. A. K. Macai	Prov. Supplies Officer	1.1.82 - 1.6.82
Mrs. J. W. Kamuruana	Prov. Supplies Officer	1.6.82 - 31.12.82
Mr. J. R. Kiragu	Hospital Secretary	1.1.82 - 31.12.82
Mr. Cyrus Wainaina	Prov. Hospital Secretary	1.3.82 - 31.12.82
Mr. D. K. Muindi	Acting Accounts Assistant	1.1.82 - 31.12.82

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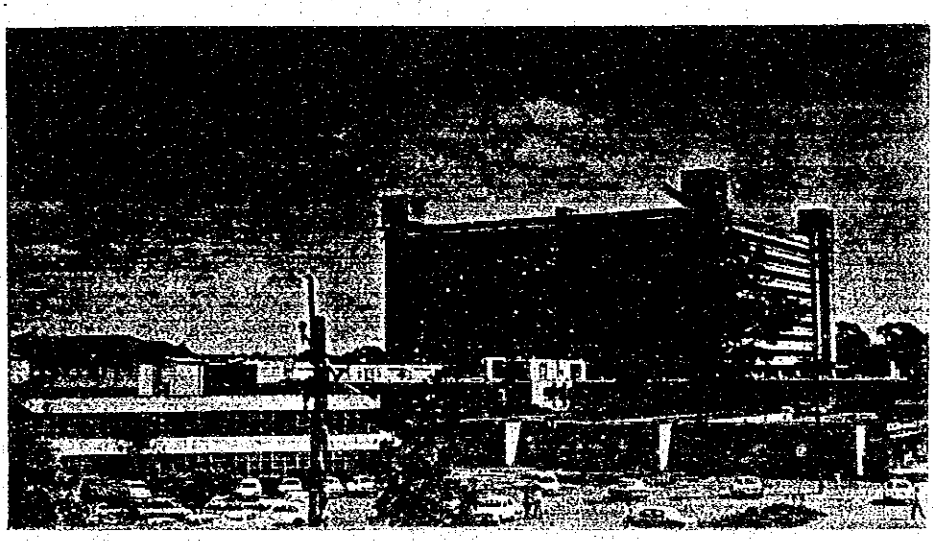
REPUBLIC OF KENYA

KENYATTA NATIONAL HOSPITAL

STAFF MANUAL



"Administration Block and Part of Old Hospital. New Ward Tower and a Section of the General Out Patient Clinic".

CONTENTS

PREFACE

It is a pleasure to welcome you to the staff of the Kenyatta National Hospital. (KNH)

Work in a hospital demands a high degree of team work and hence ability to collaborate diligently. Every patient must be treated as a separate entity to which care must be tailored. It is our hope and expectation that you will find the atmosphere of our hospital congenial to enable you to settle in and derive satisfaction from your work.

We aim at establishing here in KNH an excellent treatment and training institution where the best men and women both young and old can work and study. Anything that contributes towards this goal is encouraged and welcome.

This manual, the first of its kind, is issued in the interests of improving communication, which has been a felt need. It is hoped that thereafter we shall fully join forces in giving our patients the best possible treatment and care, and that our students will have the best teaching and examples to follow.

Acknowledgements and thanks are extended to all those who contributed information and suggestions and ultimately made the production of this manual possible. I thank especially the Dean of the Medical School, Prof. Wasunna, A., the tutor in charge of the School of Nursing Mr. J. Khachina, Matron (Deputy Chief Nursing Officer) Kenyatta National Hospital, Mrs. W. Nyoike, Mr. Kiriga the Senior Records Officer for their valuable assistance. The Printers Kenya Literature Bureau were very understanding and patient.

Dr. M.L. Oduori, MBChB. DCH, FRCP
DIRECTOR
July 1981

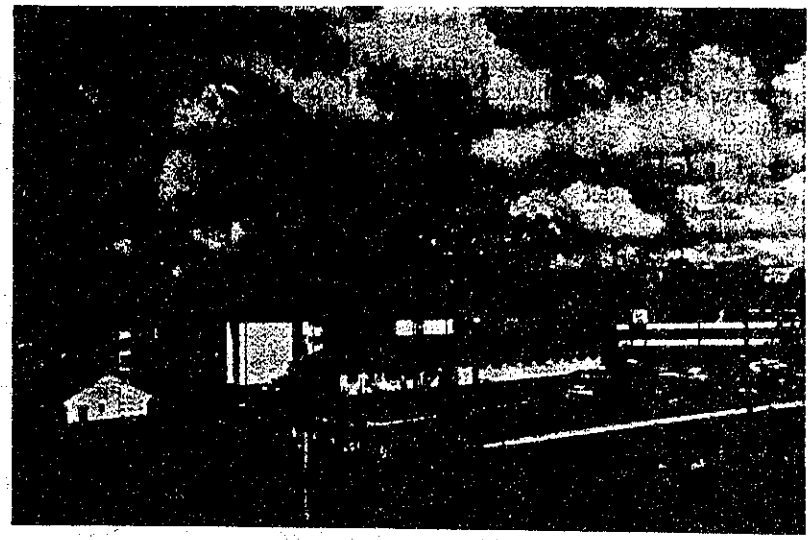
DR. MUEKE : present Dir.

INTRODUCTION

HISTORY OF THE HOSPITAL

The oldest part of the hospital, originally called the Native Civil Hospital was built about 1901. It is recorded that in 1908 there were 45 beds and that 712 inpatients and 6425 out patients were seen. During the first world war it became a camp for the 5th Kenya African Rifles. A more modern part of the hospital, 300 bedded medical wing was completed in 1939. The second world war hindered further progress in building expansions.

Further extensions were made in 1951 and 1953, by the completion of a 300-bedded surgical wing and the Ismail Rahimtulla Wing (to accommodate patients from the Asian community). The hospital was renamed King George VI Hospital in 1951.



Part of the Old Hospital

1956 and 1957 saw the completion of the 267 bed Infectious Diseases Hospital and outpatient clinics respectively. Many other service departments were built after the second world war, and by the early sixties nearly all departments had been built.

The total bed complement for this hospital as at late sixties, (until new extensions were made in 1969) was approximately 1,000 beds distributed as follows:

Medical	300	Amenity	70
Surgical	300	Infectious Diseases	267

Since a great deal of work of a national nature was assigned to the hospital, its name was changed to Kenyatta National Hospital in 1964, in honour of the first President of the Republic of Kenya, HE. the late Mzee Jomo Kenyatta. The Hospital now functions as a national hospital for the whole republic, as well as acting as a provincial and district hospital for the Nairobi area. It also provides primary health care.

In July, 1965 the hospital commenced clinical training of medical students. In December of the same year the maternity unit was opened and simultaneously the training of Kenya Registered midwives started.

The Medical Training Centre was also expanded, developed and improved so that more nurses, and professions allied to medicine could be trained.

The following are details of the hospital building programme in chronological order.

1939	Medical block of 300 beds completed and opened.
1939-1945	Medical block used as Military hospital
1946	Medical block opened for use by general African public.
1949	Surgical block completed and opened.
1951	Theatre block and Ismail Rahimtulla Wing completed and opened. Hospital named King George VI Hospital.
1956	Infectious Diseases Hospital completed and opened.
1957	Old out patient clinics completed and opened.
1961	Orthopaedic centre (site of present maternity Unit opened.

1964	Hospital named Kenyatta National Hospital.
1965	Kenyatta National Hospital took over the British Military Hospital, at Kabete, and now use it as its orthopaedic Unit. Later a Dental unit was added.
1968	Radiotherapy Department was built with Swedish assistance and opened.
1971	New Out patient block completed and opened.
1972	Spinal Injuries Unit was opened. In 1979 this became the National Spinal Injuries Unit.
1981	New wards expected to be completed and opened. New tower block will provide approximately 1200 beds.

THE NATIONAL HOSPITAL TODAY:

The present modern hospital was built in three phases; the third phase is the ward tower block which is nearing completion. Funds were obtained from Kenyan tax payers and partly from the British Government.

Phase I mainly consists of the Out Patient and some Service departments. This covers a major portion of the treatment and diagnostic requirements which are currently used in conjunction with the existing wards. The departments include: a boiler house, general out patient clinics, medical records, casualty, surgical out patient clinics, medical out patient clinic, gynaecology out patient clinics, paediatrics out patient clinics, ear, nose and throat out patient clinic, out patient laboratory, anaesthetic department, burns unit, eight operating theatres and theatre sterile supplies unit (T.S.S.U.), intensive care unit, clinical sciences blocks and accommodation for medical students of the Faculty of Medicine, and maintenance department which is supervised by the Ministry of Works.

Phase II consists of service departments which include: catering facilities, pharmacy, stores, sterile preparations unit (S.P.U.), mortuary.

The total value of Phase I and II was K.£3,835,180. For 1980/81 financial year the following beds are budgeted for the various departments.

National Hospital	*Beds*
Paediatrics division	176 (cots) & beds
Surgical division	337
Orthopaedic and Dental	107 + 40 cots
Medical division	216
Gynaecology & Obstetrics division	236 + 110 Cots

Infectious Diseases Hospital	167 + 77 Cots
Intensive Care Unit	22
Rahemtulla Wing	44

Present Boundaries of K.N.H.

The main KNH compound occupies an area of 90.25 hectares (223 acres); wards, clinics, out-patients, and administrative buildings and the Medical School occupy 26.5 hectares (65.48 acres). The associated Infectious Diseases Hospital (IDH) occupies 6.25 hectares (15.44 acres).

Within the boundaries of KNH are the main general hospital, the National Public Health Laboratories, the Government Chemists Laboratory, the National Tuberculosis Research Centre, the Medical Research Centre ("Dutch" Laboratory), Ministry of Works KNH Maintenance Depot, National Cripple Rehabilitation centre, National Family Welfare Centre, Medical Training Centre, University of Nairobi Medical School, Health Education Unit for the Ministry of Health. There are also residential quarters for doctors, nurses and other hospital workers as well as hostels for University of Nairobi medical students in their clinical years and for students of the Medical Training Centre.

The hospital can easily be reached via Ngong' Road and Hospital Road as well as via the new Mbagathi Road. There are frequent buses and "matatus" operating on these roads.

MANAGEMENT OF KENYATTA NATIONAL HOSPITAL

BOARD OF MANAGEMENT

The KNH Management Board is responsible for the running of the hospital subject to any direction from the Ministry of Health, and in discharging its duty takes account of the interests of patients and the public. The Board endevours to get standards of performance and ensure that full use is made of modern management aids such as cash accounts and management statistics.

Members are responsible for deciding policy, receiving and modifying it as necessary but its execution is left to officers. It follows that the hospital Board has to define its aims, and decisions in such a way that officers can proceed to execute them confidently without further reference to members except on major issues.

The following in chronological order have made efforts to improve the management of KNH

1967	KNH Management Committee was set up under the Chairmanship of Dr. Likimani, J. the then Director of Medical Services. The committee did not function for a long period.
1977-1978	Ad Hoc Management Committee was set up under the Chairmanship of Mr. Kyalo J. the then Permanent Secretary. It did not last long.
July 1978	A Management Committee was reconstituted and chaired by Dr. J.M. Gekonyo, Senior Deputy Director of Medical Services. This met only twice.
1978-1979	Executive Management Committee was set up and chaired by Dr. E.N. Mngola, Permanent Secretary/ Director of Medical Services, Chief Specialist Physician.
1979	A KNH Visiting Committee was established and chaired by Mr. Paul Boit, then Provincial Commissioner, Nairobi. The Committee did not function for long due to a variety of reasons.
February 1980	The present KNH Management Board was set up by Hon. A.K. Magugu EGH/M.P., Minister for Health. The first Chairman was Mr. P.H. Okondo. He was later succeeded after 4 months in office by Mr. S. Mwakisha, P.C. Nairobi. There are thirteen members. The Director of the Hospital is the Secretary.

(ii) ADMINISTRATORS:

(a) *Medical Superintendent*

1960 - 1966	Dr. T.K.H. Mathews
1966-1967	Dr. Evelia, T.
1967 - Jan. - June	Dr. Onyango, R.
1967 June - 1970	Dr. Evelia, T.

Chief Administrator;

1970 -1973	Dr. Munano, P.
1973 - 1978	Dr. Thuku, J.J.
1978 - 1979	Dr. Kahugu, W.

Director

1980	Dr. Oduori, M.L.

(b) *Group Hospital Secretaries:*

1956 - 1957	Mr. Cruickshank
1957 - 1966	Mr. Heward
1966 - 1967	Mr. Lee
1967 - 1968	Mr. Mwamburi

Senior Hospital Secretary:

1969 - 1973	Mr. Norda, S.L.

Administrative Secretary:

1970 - for 3 months	Mr. W. Muguro
1970 - 1973	Mr. D. Mbela
1973 - 1978	Mr. L. Ndungu
1978	Mr. H.F. Odhiambo

(c) *Matrons in-charge:*

1953 - 1959	Miss Rees, S.B.
1960 - 1961	Miss Parsons, G.
1961 - 1963	Miss Race, I.
1964 - 1969	Miss Richmond, L.R.
1969 - 1975	Mrs. Nyoike, W.

Deputy Chief Nursing Officer i/c. K.N.H.

1976-	Mrs. Nyoike, W.

FUNCTIONS OF THE HOSPITAL

Soon after Kenya became independent in 1963, the Government's health policy was to provide total health care including modern hospital services to all Kenyans.

(a) The functions of Kenyatta National Hospital are:

(1) To receive patients for health care, students for learning and staff for working without any form of discriminaton;
(2) As the National Referral Hospital to participate in National health planning, and in particular to examine and approve proposals for new departments within its ambit.
(3) As a teaching hospital for the University of Nairobi to provide facilities for medical education and research either directly or through other co-operating health institutions.
(4) To provide facilities for nursing and other paramedical education and training.
(5) To assist in the prevention and promotion of health care in Kenya.

(b)

(i) The hospital is recognised by the Medical Practitioners and Dentists Board for internship (preregistration or training employment) of doctors and dentists.
(ii) Post graduate medical training courses leading to University awards of Master of Medicine degrees, and diplomas in advanced nursing and laboratory technology are undertaken.
(iii) The hospital is recognized by the Nurses, Midwives and Health Visitors Council for training of Registered nurses and midwives. It is also the training hospital for clinical officers, pharmaceutical technicians, laboratory technicians, public health technicians, physiotherapists occupational therapists, orthopaedic and dental technicians, etc.

DIVISIONS:

The following divisions assist the administration in supervising clinical and diagnostic areas. They are all headed by Chairmen elected by members of the respective divisions: Medicine, Surgery, Paediatrics, Obstetrics and Gynaecology, Laboratory medicine, Radiology, Dentistry.

COMMITTEES:

The Medical Advisory Committee:

This committee has representatives from every professional department. It advises on all matters affecting the hospital. It has the following sub-committees to assist in the running of the hospital. The Chairman is elected by members.

(i) *Drugs & Equipment Committee:*
The purpose of this committee is to work for the co-ordination and rationalization of purchases of drugs and equipments and recommends priorities.
(ii) Theatre Users
(iii) Ethics & Research
(iv) Medical Education
(v) Out-patient & casualty
(vi) Radiation Protection
(vii) Medical Records & Statistics
(viii) Diagnostic
(ix) Diet and Nutrition sub-committee
(x) Infection Control

General Purposes Committee:

This committee comprises all heads of non-professional departments in the hospital. The Committee sets objectives and reviews regularly the progress of each department and hence the hospital services.

Disciplinary Committee:

Deals with disciplinary cases in the hospital and decides on appropriate action to be taken. As far as possible disciplinary cases are dealt with whenever problems arise. The hospital disciplinary Committee reports to the Board of Management and Ministry or University.

Housing Committees:

There are three housing committees in the hospital, Junior, Middle and Senior Housing Committees. They deal with allocation of houses to junior, middle and senior members of staff respectively. There are very limited institutional houses. Hence members of staff should explore other accommodation such as pool houses from the Ministry of Works, private rental, owner occupying or any others.

ORGANISATION OF SERVICES:

(a) *Administrative Departments:*

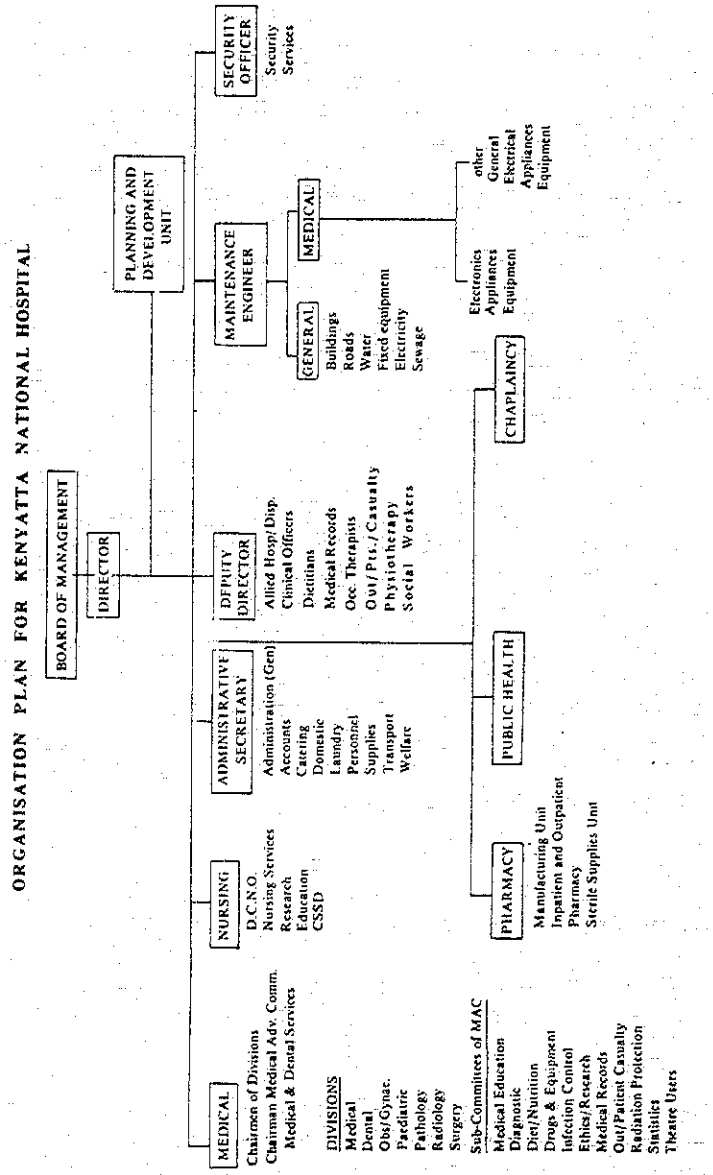
1.	Director	Co-ordinates and manages the Hospital.
2.	Deputy Director	Assists the Director and co-ordinates medical function.
3.	Administrative Secretary	Responsible for the business administration of the hospital.
4.	Deputy Chief Nursing Officer	Responsible for nursing functions of the hospital.
5.	Personnel Officer	Deals with all personnel matters
6.	Accounts Department	Deals with revenue, expenditure and accounting.
7.	Senior Supplies Officer	Provisioning and procurement of equipment and supplies required by the hospital.
8.	Catering Department	Preparation of patients' and students' meals. Operation of Senior and Junior Staff Common Rooms, doctors and sisters messes.
9.	Transport Service	Internal and external transport.
10.	Laundry Department	Deals with cleaning and distribution of hospital's linen.
11.	Maintenance Unit	(M.O.W.) Operation and maintenance of equipment, plant and buildings.
12.	Chaplain's Office	The hospital's religious services.

(b) *Clinical Out-patient Services:* General and specialist out-patient services are provided. (See Appendix).

(c) *Clinical In-Patient Departments:*

1.	Surgical Units	Operative treatment of heart, lungs, blood vessels stomach, intestines, etc. and operative treatment of metabolic ailments.
2.	Radiotherapy Unit	Treatment of different types of cancers.
3.	Renal Unit	Surgical and medical treatment of kidney diseases.

ORGANISATION PLAN FOR KENYATTA NATIONAL HOSPITAL



4.	Cardiothoracic Unit	Surgical and medical treatment of heart diseases.
5.	Medical Unit	Examination and treatment of internal ailments e.g. diseases of the stomach, kidneys, heart, metabolic, haematological hormonal disorders, etc. disorders.
6.	Orthopaedic and Trauma Unit	Treatment of diseased, broken, injured and dislocated bones, joints vertebrae and congenital malformations.
7.	Dermatological Unit	Investigation and treatment of skin ailments and sexually transmitted diseases.
8.	Paediatrics Unit	Examination and medical treatment of sick children.
9.	Ophthalmology Unit	Operative and medical treatment of eye diseases.
10.	E.N.T. Unit	Operative and medical treatment of ailments of the ear, nose and throat.
11.	Department of Obstetrics and Gynaecology	
(a)	Obstetric Section	Deals with childbirth, treatment of expectant and nursing mothers.
(b)	Section of Gynaecology	Treatment of abdominal (pelvic) ailments in women and diseases related to pregnancy.
12	Family Welfare Centre	Undertakes family planning activities.
13.	Neurosurgical Department	Operative treatment of disorders of the nervous system.
14.	Dental Unit	Treatment of all dental disorders.
15.	Other Units	Include occupational therapy, physiotherapy, speech therapy.

(d) *Voluntary organisations associated with the Hospital:*

1. Kenyatta National Hospital League of Friends started in 1971.
2. Hospital Chaplaincy of Kenya.

(e) SUPPORTIVE SERVICES:

1. *Maintenance:* Maintenance of all buildings within the Hospital compound is done by the Ministry of Works IKNH Maintenance Depot, through funds provided by M.O.W. and partly by the Ministry of Health.

2. *Security:* The hospital employs its own security staff but gets assistance from the local Police Station at Kilimani. It is hoped to have a police post within the compound. *All staff are required to be security conscious, to protect both government and personal property.*

3. *Supplies:*
General: Practically all the hospital's supplies are obtained from the Ministry of Health's Central Medical Stores (for professional items) and the Ministry of Works Supplies Branch (for general user items e.g. soap, brooms, etc.) The Hospital does at times obtain non-scheduled items directly by special arrangements with the Central Medical Stores.

4. *Pharmacy:* A list of essential scheduled drugs and non-scheduled drugs is available. Doctors are urged to follow it when prescribing. Signatures should be clear and names printed on prescriptions and other official documents.

5. *Laundry and Tailoring:* This is a large and important department which undertakes all laundry work for the hospital. The tailoring section saves the hospital considerable sums annually in uniforms, sheets, repairs, etc.

6. *Transport:* The hospital operates a fleet of vehicles of different types including saloon cars, vans, lorries, pickups. However it is not possible to serve everyone satisfactorily. The hospital therefore urges all persons who are on night duties to make departmental arrangements in consultation with the administration regarding sleeping accommodation where these are indicated. This applies especially to doctors, dentists and clinical officers. During the day officers are required to share transport as much as possible whenever indicated.

STAFF COMPLEMENT FOR HEALTH WORKERS IN K.N.H. DURING 1980

(i) TECHNICAL STAFF

M.O.H.	Ministry of Health Staff	M.O.	Medical Officers
S.H.O.	Senior House Officer	P.O.	Pharmaceutical Officers
C.O.	Clinical Officers	D.O.	Dental Officers
UNIV.	University Staff		

DIVISION	SPECIALISTS		S.H.O.		H.O.	M.O./ D.O.	C.O./ P.O.
	MOH	UNIV.	MOH	UNIV.	MOH	MOH	
ANAESTHESIA	3	5	9	-	-	1	14
MEDICINE	4	27	26	4	16	15	12
DERMATOLOGY	4	-	4	-	-	-	-
OBSTETRICS/GYNAE	1	8	30	-	8	-	-
PAEDIATRICS	4	13	26	-	7	3	15
PATHOLOGY	1	9	9	-	-	-	-
MICROBILOGY	1	3	-	-	-	-	-
PSYCHIATRY	0	5	-	-	-	-	-
RADIOLOGY	4	4	11	-	-	-	-
RADIOTHERAPY	2	-	1	-	-	-	-
SURGERY:							
-GENERAL	5	12	19	5	11	2	-
-ORTHOPAEDIC	3	6	-	-	-	-	-
-CARDIOTHORACIC	1	1	-	-	-	-	-
-PLASTIC	2	1	-	-	-	-	-
-NEUROSURGERY	1	2	-	-	-	-	-
-EYE	6	2	4	-	-	3	-
-E.N.T.	2	1	1	-	-	-	3
	46	99	140	5	42	21	66
DENTISTRY	1	7	-	-	22	17	8
PHARMACY	10	12	-	-	-	-	34
NURSES:							
-REGISTERED	327	-	-	-	-	-	-
-ENROLLED NURSES	345	-	-	-	-	-	-
OCCUPATIONAL THERAPISTS	20	-	-	-	-	-	-
PHYSIOTHERAPISTS	30	-	-	-	-	-	-
RADIOGRAPHERS	57	-	-	-	-	-	-
RADIOGRAPHIC FILM PROCESSORS	23	-	-	-	-	-	-
LAB. TECHNICIANS	44	-	-	-	-	-	-

(ii) OTHER TECHNICAL STAFF

		PRESENT NUMBER
(a)	Public Health Officer	1
	Public Health Technician	1
(b)	EEG Technicians	1
(c)	Medical Social Workers	6
(d)	Medical Engineering Technologists/Technicians	9
(e)	ECG Technicians	3
(f)	Cardiovascular Perfusionist	1
(g)	Nutritionists	2
(h)	Nutrition Field Workers	10
(i)	Family Health Field Educators	15

(iii) NON TECHNICAL STAFF

(a)	Hospital Secretaries	9
(b)	Personnel Officer & Assistants	2+1=3
(c)	Accountants and Assistants	2 + 1 = 3
(d)	Personal Secretaries	1
(e)	Medical Secretaries	3
(f)	Shorthand Typists	6
(g)	Copy Typists	13
(h)	Clerical Officers	126
(i)	Mortuary Superintendent & Attendants	1 + 10 = 11
(j)	Drivers	45
(k)	Artisans	31
(l)	Cooks	15
(m)	Telephone Supervisors & Operators	1 + 25 = 26
(n)	Security Officer/Watchmen	69
(o)	Subordinate Staff	855
(p)	Supplies Officers & Storemen	36
(q)	Domestic (Sup. & Supervisors)	11
(r)	Ministry of Works & Boilers	170 + 7 = 177
(s)	Tailors & Launderers	29 + 1 =30
(t)	Catering Officers	5
(u)	Cateresses	7
(v)	Medical Records Officers	8
(w)	Medical Records Technicians	13

SUMMARY:

TOTAL Number of Staff in Kenyatta National Hospital—2973

					%	%
(i)	*Technical:*	Doctors:	353	-	11.9	
		Nurses:	672	-	22.6	
		Dentists:	55	-	1.8	
		Pharmacists:	56	-	1.9	49.4
		Clinical Officers:	66	-	2.2	
		Radiographers, etc.	80	-	2.7	
		Lab. technologist. etc.	89	-	3.0	
		Other technical staff	99	-	3.3	
(ii)	*Non-Technical Staff (KNH)*	1326	-			44.6
		Maintenance (MOW) Staff	177	-		6.0
			2973	-		100.0

FINANCE:

Gross operating expenses for KNH for 1980 were calculated at approximately K. Shs. 100,000,000/-. This excludes funds managed from headquarters and exceeds allocations of several other ministries.

The annual budget of K.N.H. is approved by the Ministry of Health and ultimately by the Treasury. The hospital administration is responsible for application of funds and for keeping within the budget. Medical School facilities excluding buildings are funded by the Ministry of Education through the University Administration. All the buildings are maintained by the Ministry of Works KNH Maintenance Unit.

Capital Expenditure:

Funds are provided by the Ministry of Health for new buildings. For expenditure on instruments recommended by the Drugs and Equipment Sub-committee, funds are granted directly from the appropriate section of the budget. The administration shares out these funds according to priorities agreed by the departments.

Cost of Treatment:

The number of patients admitted in 1979 was 53223. During that year the Hospital treated 693763 patients. *Note:* Cost of treatment per patient per day is approximately K. Sh. 154/-. Other details are shown in the accompanying table.

TABLE

Wards	Admissions	Patient Days	Average Length of stay	Total Cost K. Shs.
General	13374	290204	21.8	3357/-
Acute Gynae	7516	24811	3.3	508/-
Adult Observation Ward	5458	46407	8.3	1278/-
Paediatric Obs. Ward	8824	26500	5.3	816/-
Recovery Ward	2375	16601	7.0	1078/-
Infectious Diseases Hospital (Kabete) Orthopaedic and	2823	23600	8.0	1232/-
Dental Unit	1920	39723	22.4	3450/-
Maternity Unit (Mothers)	6015	29055	5.0	
Babies	4918	29055	5.0	
All Wards Combined	53223	657036	13.1	2017/-

STAFF REGULATIONS:

(a) *Code of Regulations:*

All Ministry of Health employees are governed by the Civil Service Code of Regulations, whereas University employees observe the University Staff Code of Regulation.

In case of doubt the appropriate personnel officers should be consulted. Official correspondence to the Ministry of Health or to the University should always be made through the Director or Dean as the case may be.

Professional staff are required to have relevant certificates of registration, e.g. from the Medical Practitioners and Dentists Board or the Nurses and Midwives Council, etc. All staff are expected to possess letters of appointment to the hospital. They are expected to abide by the hospital's rules and discipline.

(b) *Practical Information:*

(i) *Uniforms:* All medical personnel should wear white overcoats, nurses appropriate uniforms and other personnel, the relevant uniforms provided to them. These uniforms should be clean, at all times. Staff should wear identity name plates on their coats or uniforms.

(ii) *Procedures for Management of Massive Accidents and Medical Emergencies:*
An emergency plan has been drawn up for the hospital. The Plan has been distributed to all departments. All employees are required to know the plan and their own places when a state of emergency is declared.

(iii) *Fire Drill:*
Staff should be conversant with the fire drill.

(iv) *Routine for Notification of change of names, New address, etc.*
Changes of names, addresses, telephones, should be notified to the administration without delay.

(v) *Notice of Injury:*
An employee who is injured during working hours should fill in a notice or injury form within 24 hours of the accident. Forms are available from the Personnel Office. This also applies to students of the Medical Training Centre.

ETHICS AND ATTITUDES:

General:

It is the duty and responsibility of every member of staff to maintain a helpful, friendly and proper conduct towards patients. *The key words in this context are cheerfulness, understanding, friendliness, calmness, politeness and good humour. The golden rule applicable here is to behave towards others as you yourself would like them to behave towards you.*

Consideration for the patient must always take precedence over personal interests. Co-operation and congenial working relationship between staff and departments and between departments and administration are of great importance in achieving the objectives of the hospital.

Attitudes to Economy;

The hospital operates within a tight financial budget. Funds allocated for the hospital have to be spent carefully through that financial year. All members of staff are urged to observe great care in using hospital supplies where savings can be made. *Waste of supplies is highly discouraged. The most effective form of saving can be made at the point of consumption.*

Co-operation with outside agencies such as the Nairobi City Council health units, private hospitals, provincial government hospitals and

mission hospitals should be pursued in order to enable the hospital to achieve its penultimate objectives i.e. better patient care.

Keep your Hospital Clean:

This slogan has been circulated to every corner of the Hospital and members of staff are urged to help keep their areas of work clean. *A high standard of cleanliness is an essential factor in a hospital environment due to the consequent high risk of infection. Therefore, let us all work together to keep our hospital exceedingly clean!*

Professional and Official Secrecy:

The pledge of secrecy is made in the patient's interest to ensure that personal matters relating to sickness and state of health remain confidential. Provisions of the Official Secrets Act must also be observed.

Professional secrecy also entails that special circumstances shall be disclosed only to employers who need to know them in connection with their employees work.

Breach of professional secrecy and Official Secrets Act may be punishable. Official information covering patients and hospital matters is only given on the Director's authority.

FACILITIES FOR HOSPITAL STAFF

Day Nurseries:

The Hospital operates two day nurseries for children of members of staff. One is situated in KNH, (Anderson Hall) in Kabati Estate and the other at Kabete Orthopaedic Unit. Application forms are available from the Welfare Officer.

Canteen and Shop:

There is a canteen for meals and a shop in the Administration Block for all personnel. A Senior Staff Common room serves meals and light refreshments. A Junior staff Common Room will soon be available. These common rooms are only open to bonafide members of staff who identify themselves. Moderate fees are charged for these services.

Post Office:

The Hospital post office is situated in the Administration Block and operates within normal working hours. Private post box rentals are available.