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COLONY AND PROTECTORATE OF KENYA

MEDICAL DEPARTMENT
ANNUAL REPORT
1957

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REVIEW OF THE YEAR

The year has been a busy and eventful one in all branches and at all levels within the Medical Department. Although the establishment of medical officers, health inspectors, nursing sisters and executive officers was moderately increased, recruitment has still been insufficient to fill all vacancies. It is fortunate that a pool exists in Kenya of former nursing sisters who are married and who can be relied upon for temporary or part-time duties, when a critical situation arises. At one time up to 20 temporary nursing sisters had to be engaged in order to meet the needs of the Poliomyelitis Unit, where an exceptionally large number of patients was under treatment in respirators and needed constant and individual attention throughout the twenty-four hours.

Miss Houghton, Education Officer of the General Nursing Council of England and Wales visited East Africa in March, with a view to assessing the quality of nursing training in all territories and to make recommendations to the Council on the practicability of affording recognition to those schools which could provide the requisite standards of practical training and tuition. King George VI Hospital Nurses Training School has been provisionally approved and nurses graduating from here are eligible to be registered as State Registered Nurses with the General Nursing Council without the need for further training or examination.

Another event of equal importance with the recognition of the King George VI Hospital Nurses Training School has been the decision of the General Medical Council of Great Britain to accept the diploma of Licentiate in Medicine and Surgery of the Makerere University College as a registrable qualification. As from 31st October, 1957, all medical practitioners who are registered by the Uganda Medical Practitioners and Dentists Board will be eligible for registration by the General Medical Council. As there is full reciprocity between the Kenya and Uganda Boards, all licentiates of Makerere College registered in Kenya will have the full status and privileges of medical practitioners whose qualifications are recognised throughout the Commonwealth.

By the close of the year patients attending all but a few hospitals in the Colony, whether as out-patients, or on being admitted were required to pay a fee. Patients at hospitals in the Northern Frontier Province, Turkana, and at Kipini and Maralal were exempted owing to their generally low standards of living.

Much care was given to devising a system of fee paying which would be as simple as possible, but without sacrifice of the principles of sound accounting. Very much extra work and responsibility has been put upon medical officers in charge of hospitals and senior executive officers to ensure that the scheme works properly and that no patient should be denied medical treatment by reason of his inability to pay, either through proverty of by reason of the urgency of his illness. In these circumstances the fee is waived and the latest available figures show that 0·7 per cent of out-patients and 9 per cent of in-patients are excused payment. It could not be expected that the community would wholeheartedly welcome having to pay for what had hitherto been free. It appears on the whole, however, that the general principle has been cautiously accepted.

Following on the building of many rural health centres there have been great developments in field health services and in domiciliary medical treatment which is linked with the increasing activities of health visitors. Much welfare work has been done by members of the Red Cross and St. John organisations, especially in the Central Province.

The role of the African District Councils in financing these services is very important. A Government White Paper has been published and approved by Legislative Council which incorporates the recommendation that African District Councils shall receive from Government a grant of 50 per cent of their net expenditure on approved public health services. In their turn, the African District Councils will pay a calculated sum to the Medical Department for the work done on their behalf. These new financial arrangements are expected to have a significant effect on the development of the local authorities' field health services in the future.

The general health of the Colony has been satisfactorily maintained during the year but, in common with the rest of the world, there was a sharp outbreak of "Asiatic" influenza during the months of July to September, in which many thousands of cases were reported. Some deaths occurred, but the epidemic did not have any widespread or disturbing effects on the economy of the country.

Tuberculosis is still the most important disease and there are now 8,000 patients receiving treatment, chiefly under domiciliary supervision. Variola minor has been prevalent, but the condition has been kept under control by large scale vaccination campaigns. There has been no evidence of exaltation in the severity of the disease, to an extent when fears could be entertained of an outbreak of serious smallpox.

Poliomyelitis was more widespread than in 1954. The Poliomyelitis Unit at the South Hill Hospital in Nairobi has been constantly busy treating a succession of severe cases suffering from respiratory symptoms. It was not possible to start the poliomyelitis vaccination campaign until March when supplies of vaccine became available, but by the end of the year many thousands had been protected.

STAFF

It was with regret that the department said "good-bye" to its previous Director. His retirement led to a number of promotions within the department. The post of Director was filled by the Deputy Director, who was himself replaced by the senior Assistant Director.

The post of Medical Superintendent at King George VI Hospital was raised to the status of Assistant Director and was filled by the second of the two substantive Assistant Directors. The two vacant posts in the establishment of Assistant Directors had not been filled by the end of the year.

The Ear, Nose, and Throat Specialist also retired; the department was fortunate in having within its ranks a surgeon with the appropriate training and experience who was able to fill the breach immediately.

Mention should be made of the resignation of one of the department's most senior African doctors, who has now established himself as the first African doctor in private practice in Kenya.

Recruitment of medical officers was barely sufficient for the department to be able to supply a service comparable to that of the previous year; increasing responsibilities are proving a severe strain on many of our medical officers in their efforts to maintain the standard of service.

Twelve new medical officers joined the department from overseas, one on transfer from Malaya.

The staff position at the end of the year was as follows:—

Establishment for Medical Officers	Officers on Permanent terms	Officers on Contract terms	Officers on Temporary terms	Posts Vacant
97	74	9	8	6

Recognition by the General Medical Council of Great Britain of the Makerere diploma in medicine and surgery has raised 17 licentiates to the status of full medical officers.

There has been a welcome increase in the strength of the nursing services since eleven sisters and three health visitors on permanent terms arrived in the Colony.

In addition, one sister tutor and 37 sisters were recruited on contract terms. Against these numbers, the department lost one Matron, Grade I, three health visitors and 12 nursing sisters either through transfer, or resignation. Thus there has been a net gain of 36 nursing sisters, which represents the very satisfactory result of a special effort to fill a longstanding backlog of vacancies in this branch of the service.

With regard to health inspectors, although there was an increase in the numbers of health inspectors in the field, there remained four posts out of a total establishment of 28 which remained unfilled. It was possible for the first time to post a health inspector to Kitui and to meet a commitment to provide a Port Health Inspector for the new Nairobi Airport. A number of assistant health inspectors left the department to join local authorities. This is a natural consequence of the growth of local government in the Colony.

The Chief Health Inspector, who joined the service in 1926 retired and was replaced by the promotion of a senior health inspector.

TRAINING

General

Some advance was made during the year in the sphere of the post-graduate training of doctors. A Post-Graduate Training Advisory Board was established under the auspices of the Director of Medical Services. It is composed of senior members of the department and of representatives of the Association of Surgeons, Association of Physicians and the Kenya Faculty of the College of General Practitioners. Officers from within the department are posted to one of the six registrar appointments at King George VI Hospital. They are expected to attend a course of lectures and demonstrations in addition to their normal clinical duties which are carried out under the guidance of specialists. An examination is required to be taken at the end of the two year period of training.

The training of assistant health visitors was continued at Embu and Kisumu. Five students qualified at Embu and eight at Kisumu. All these candidates are now employed by African District Councils. At Kisumu the first refresher course was held for trained assistant health visitors. The course proved most helpful and was much appreciated by all who attended.

The Nurses and Midwives Council of Kenya

The work of the Council still increases and six full Council Meetings have been held in addition to a considerable number of committee meetings. There has been a further increase in the number of candidates presenting themselves for examinations.

During the year the following categories were registered by the Council:—

Registered Nurses	204
Registered Midwives	103
Registered Sick Children's Nurses	15
Registered Fever Nurses	2
Registered Mental Nurses	4
Enrolled Nurses	3
Enrolled Midwives	2
Enrolled Assistant Nurses	7
Enrolled Assistant Nurses, Grade I ..	33
Enrolled Assistant Nurses, Grade II ..	121
Enrolled Assistant Midwives	58

The following are the results of the examination conducted by the Council:—

1957	Government Training Schools		Non-Government Training Schools	
	Passed	Failed	Passed	Failed
Kenya Registered Nurses Final Examination	3	1	—	—
Kenya Registered Nurses Preliminary Examination	4	—	5	—
Assistant Nurses Grade I Final Examination	27	—	3	2
Assistant Nurses Grade I Preliminary Examination	37	8	16	4
Assistant Nurses Grade II Final Examination	57	21	52	26
Assistant Midwives Final Examination	21	4	33	15

The Church of God Mission Hospital at Mwihila was added to the list of schools approved by the Councils for the training of Assistant Nurses Grade II.

FINANCE

Expenditure

The gross total expenditure of the Medical Department (excluding capital development expenditure) during the period 1st July, 1956 to 30th June, 1957 amounted to £1,845,597 as compared with £1,616,576 during the previous financial year.

This expenditure included the cost of medical services rendered to the High Commission Services, and salaries of departmental staff seconded to local authorities. Reimbursement to the extent of £70,162 was received in respect of the above services. The increase in this reimbursement over that of the previous financial year results from a revision in the capitation fees paid to the Department by the High Commission and other organisations for medical attention to their employees.

The following is a summary of expenditure under the main sub-heads during 1956 to 1957:—

	Year ending 30th June, 1957 £
Personal Emoluments	986,714
Travelling and Transport	65,496
Medical and Surgical Stores and Equipment ..	299,295
Non-medical Stores	138,591
Grants	126,617
Miscellaneous	146,071
Medical Training School	82,813
Total	£ 1,845,597

The increase in expenditure over 1955–1956 is due to rising costs and the general development of medical services, coupled with an increase in the amount of Capital Grants paid to hospitals, and the inclusion of a contribution to Development Funds under an International Co-operation Administration Scheme for the extension of the Medical Training Centre in Nairobi. The latter is fully offset by an equivalent Appropriation-in-Aid.

Revenue

Revenue collected during the year and taken as Appropriations-in-Aid amounted to £269,416. Arrears of revenue amounted to £28,116 at 30th June, 1957 of which £16,997 related to hospital fees.

The following is a summary of revenue collected during 1956–1957:—

	£
E.A. High Commission	12,433
E.A. Railways and Harbours	39,107
E.A.P. & T. Administration	10,523
Court of Appeal for Eastern Africa	77
Colonial Development Corporation	42
International Co-operation Administration ..	34,298
A.D.C.'s and Public Health Authorities—Staff Reimbursements	8,092
Hospitals and Dispensaries Fees	46,393
Miscellaneous	9,914
Infectious Diseases Hospital	8,506
Fees for Government Analyst	714
X-ray Fees	5,378
Fees for Massage and Physiotherapy	372
Medical Fees—Workmen's Compensation ..	6,187
Medical Laboratory	10,666
Rations	442
Quinine and Mepacrine Sales	94
Medical Stores and Equipment Issued to A.D.C.'s	51,113
Health Education Materials	938
Medical Stores for Mission Hospitals	10,189
Artificial Limbs	1,822
Recoveries from Medical Learners for Boarding Fees	12,116
Total	£ 269,416

The system for the charging of fees for the basic out-patient and in-patient treatment provided by Government was gradually introduced on a colony wide basis during 1957. By the end of the year out-patient fees were being charged at 50 hospitals and dispensaries and in-patient fees at 46 hospitals.

Development Account and Buildings

Expenditure in 1956/57 under the Development Plan amounted to £280,989 of which £278,537 was spent on capital projects. Details of the work done, or in hand, together with approximate costs are given in the schedule below.

Schedule of Buildings' Development in Hand—1957

	£
(*a*) *King George VI Hospital, Nairobi:*	
New casualty reception centre, improvements to main kitchen, new central laundry, various minor items	8,000
(*b*) *South Hill Hospital, Nairobi:*	
Bulk Store	5,000

	£
(*c*) *Mathari Hospital, Nairobi:* Improvements to the laundry, the out-patients block, drainage and new water reticulation	7,000
(*d*) *Mombasa: Coast Province General Hospital:* Phase II was completed and work on Phase III was started. Phase III involves the construction of a new 70-bed ward block, laundry, kitchen, sisters' quarters, mortuary, and various minor items	81,000
(*e*) *Nairobi City Council Dispensaries*	20,000
(*f*) *Medical Training School, Nairobi:* The overall programme is for £152,000 comprising a new Training School with classrooms, dormitories, kitchen and dining hall, library, lecture hall, and workshops for 300 students costing approximately £128,000 and staff flats costing £24,000. This project is well advanced and, apart from the staff flats, should be completed by May, 1958	120,000
(*g*) *Improvements and Extensions to Hospitals:* A 26-bedded ward block at Thika, an out-patient block, 26-bedded ward and new kitchen at Nanyuki; out-patient extension and 24-bedded ward at Kapsabet; out-patient extension at Nakuru; a new theatre, laundry, stores and kitchen at Moyale, a 26-bedded ward at Kisii; an infectious diseases ward at Kericho and out-patient extensions at Lamu	22,400
(*h*) African staff housing was constructed at Bungoma, Kericho, Malindi, Londiani and Thomson's Falls; nurses quarters at Machakos; medical officers and other staff housing improvements at Kangundu and in the Northern Frontier Province; a new medical officer's house at Nakuru and a new sister's house and improvements at Kilifi and Eldoret	29,800

HOSPITAL SERVICES

General

The outstanding event of the year was the completion of Phase II of the new hospital at Mombasa. This has made possible the evacuation of the old hospital in Salim Road. The near completion of this thoroughly modern hospital marks a major step forward in the development of the hospital services at the Coast.

A second important event was the opening of the new consultative clinic at the King George VI hospital, Nairobi. A comprehensive consultative service is now available for all races under one roof. The release of the old administrative block has made possible its adaptation to do service as a casualty department .This, and the construction of a new laundry, bring to a close an era of reconstruction of the main Nairobi hospital started before the second world war.

Government grants on a 50 per cent contributory basis have made it possible to construct a 100-bedded extension to the Nairobi European Hospital, and an entirely new hospital in the Parklands area of Nairobi which is to be known as "H.H. the Aga Khan Platinum Jubilee Hospital".

A further grant to the Nairobi City Council has been used for the construction of four strategically sited dispensaries which, in the new year, will provide a more accessible dispensary service than was previously the case.

The setting up of the East African Land Forces Organisation as from 1st July, 1957 has restored to the Kenya Government certain of the duties and functions surrendered to H.M. Government in 1939. The revived responsibility for sick military personnel has, except in Nanyuki, required only minor adjustment of existing services. In Nanyuki it has been necessary to take over part of the old military hospital until such time as certain extensions and improvements to the permanent district hospital have been completed.

The institution of a system of fee paying for out-patients and in-patients attending at Government hospitals has had little effect on the overcrowding of many of our hospitals, the fall in admissions of 0·57 per cent being no more than a normal annual variation. Particular mention was made of Thika and Kapsabet hospitals in last year's report. Overcrowding was still present in 1957, but new wards were under construction towards the end of the year. The overcrowding at Kisii hospital was also such as to demand further expansion.

The number of beds in Government hospitals at the end of 1957 was 6,600; this figure is 66 per cent in excess of the number of beds available 10 years ago, whilst the number of beds per 1,000 head of population has risen from 0·75 to 1·0 during the same period.

The increasing use of Government hospitals during the last 10 years has called for a stricter selection of cases for admission; many of the types of patient who would at one time have been admitted to major district hospitals are now receiving competent attention at health centres.

Infectious Diseases Hospitals

The construction of a special poliomyelitis unit in Nairobi has more than justified itself. Poliomyelitis occurred in epidemic form during 1957, and many special nurses had to be recruited to work in the unit. The devotion to duty shewn by the staff during a very trying period was exemplary. The highest standards of treatment and nursing were attained and the public's sympathy for the patients and gratitude to the staff has been amply expressed by the handsome contributions made to the Poliomyelitis Fund of the Kenya Branch of the British Red Cross Society. More than £8,000 has been contributed in a very short period. This money will be used to purchase specialised apparatus and to assist patients during the period of their illness and subsequent rehabilitation.

The Port Reitz Tuberculosis and Infectious Diseases Hospital at Mombasa was improved in a number of ways and a new well-equipped ward was provided by the adaptation of an existing dwelling which was formerly occupied by the medical officer in charge. This old Royal Air Force hospital is beginning to show such signs of wear as to indicate that a considerable degree of replacement will be a matter of necessity in the not too distant future.

Mental Hospital Services

As in previous years, the Mathari Hospital has had to accommodate upwards of a 100 patients in excess of the bed establishment laid down. The resultant overcrowding places a heavy strain on an already hard worked staff. The Specialist Psychiatrist has in fact recommended that there should be an increase in the nursing staff and estimates that another two medical officers could be fully occupied in giving early and active treatment that nowadays gives such good promise of returning the patient quickly to normal balance.

There are invariably about 100 convicted patients under treatment at any one time in Mathari Hospital and it is clear that a proposed "Broadmoor" type institution, apart from being administratively necessary, would alleviate the continued overcrowding. Some semi-permanent buildings which were formerly used as a hospital attached to the old Nairobi Prison have been found suitable, after modification, to serve as an asylum for convicts whose balance of mind is disturbed. It has, however, not yet been possible to transfer these special patients to their separate accommodation.

Medical Stores

The year proved a heavy one for the Medical Stores, and, although the organisation was strained at times, supply and handling of stores was maintained at a

satisfactory level. Delivery from overseas was prompt and no serious delays were experienced.

Stores handling continues to increase, and during the year some 40,000 cases and packages were received and issued and 5,000 despatch vouchers prepared. Apart from this, 400 tons of milk powder received from charitable organisations were stored and distributed. The need for stacking and handling equipment is appreciated, for manhandling the vast amount of stores now dealt with is difficult. A preliminary experiment in mechanisation was, however, unsuccessful as, owing to the wide variety of shapes and sizes of packages in store, no one piece of apparatus could satisfactorily replace the human element.

The issue of medical stores on repayment to local authorities and Missions greatly increased and their value amounted to £61,302. Unforeseen expenditure for the purchase of anti-poliomyelitis vaccine and large quantities of drugs used in the treatment of tuberculosis made heavy inroads into the voted provision for medical stores. Although there was a diminution in the value of supplies to "Emergency camps" the total stores expenditure for the year amounted to £299,295. The apparent over-expenditure was more than recouped by the re-sale of vaccine and drugs to local authorities.

The Sterile Preparation Unit

This small unit, whose accommodation has not been materially enlarged since it was built, has quadrupled its output in the last four years. The staff consists of one qualified dispenser and seven or eight student dispensers under the supervision of a pharmacist.

A wide variety of sterile therapeutic fluids is now prepared in quantity and distributed to all hospitals. The increasing demand for these preparations illustrates the shifting emphasis of treatment in hospital from slow acting drugs, taken by mouth to a more definitive and exact medication by injection. Samples of the products are regularly submitted to tests for purity and sterility and full stocks of all the usual perfusion fluids and solutions for injection are maintained ready for immediate use.

During the year the following items were prepared:—

Intravenous solutions: 540 ml. flasks	44,969
Injections various: 20, 50 and 100 ml. vials	19,688
Injections various, ampoules	1,069
Blood transfusion sets (giving and taking)	1,249
Miscellaneous items	1,167
Total	68,142

Blood Transfusion

Reports indicate that the use of blood is increasing throughout the country, and that the idea of giving blood is becoming generally more acceptable.

One hundred and twenty-five to one hundred and fifty pints of blood are now being used each month at King Geoge VI Hospital, and twenty pints at one of the district hospitals. These are representative figures and indicate the success which has been achieved in establishing panels of voluntary donors.

The Kenya Branch of the British Red Cross continues to maintain and to give support to this invaluable service in Nairobi and in other parts of the country.

LABORATORY SERVICES

Staff

No one from outside the Laboratory Division was available to fill the new post for Provincial Pathologist at the Coast and as it was essential to send someone there before the changeover to the new Provincial Hospital one of the pathologists from Nairobi had to be transferred, keeping the number of medically qualified workers in the Medical Research Laboratory still at three, which was barely adequate even for the routine work called for. The response in increased demands on the Mombasa laboratory following the Provincial Pathologist's arrival there showed once more that this appointment was overdue, as it is in the other provinces also, and demonstrated that increased services are almost at once fully utilized and that saturation point in respect of clinical pathology is nowhere imminent.

Routine Examinations

Nearly 90,000 specimens were dealt with, the approximate totals of the various groups being as follows:—

General Bacteriology	24,000
Public Health Bacteriology	6,000
Haematology and Parasitology	20,000
Biochemistry	5,000
Kahn Tests	24,000
Blood Grouping and Cross Matching	4,300
Histology	2,900

Nearly 5,000 specimens were examined for tubercule bacilli and 509 strains were tested for sensitivity to para-minosalicylic acid, isoniasid and streptomycin; 184 of them were from new cases, previously untreated so far as is known, and of these 32 were resistant to one or more of the drugs, four were resistant to all three.

The discovery that a case of meningitis at Nakuru was due to Cryptococcus neoformans led to the recognition of eight others from the same district. In retrospect it seems likely that previous cases have been missed.

The laboratory was asked to investigate the source of an increasing number of postoperative wound infections by pencillin resistant staphylococci in three Nairobi hospitals, carriers and blankets were both incriminated. Strains were typed by the Public Health Laboratory, Colindale, and phage-type 80 was found to predominate.

A food poisoning outbreak involving 98 pupils at a girls' boarding school was investigated and found to be due to Shigella manchester and traced to a carrier in the kitchen.

Vaccine Production

Demands for smallpox vaccine were lower by two million doses than in the previous year; production was reduced by one million doses, largely because of one of the officers responsible for its manufacture being away on vacation leave towards the end of the year. The amounts produced and issued and the revenue earned from other Governments was as follows:—

VACCINE PRODUCTION, 1957

	Prepared	Issued to Kenya	Issued to other Territories	Total Issues
Vaccine Lymph (doses)	5,750,000	2,475,043	4,018,270	6,493,313
Typhoid Vaccine (mls.)	406,224	264,760	44,365	309,125
Anti-Rabies Vaccine (mls.)	49,280	31,320	5,820	37,140
Plague Vaccine (mls.)	30,600	15,000	None	15,000
Agglutinable Diagnostic Suspensions (mls.)	111,320	111,320	None	111,320

REVENUE EARNED BY THE SALE OF VACCINE TO OTHER GOVERNMENTS

	Vaccine Lymph	Typhoid Vaccine	Anti-Rabies Vaccine	Total
	£	£	£	£
Tanganyika Territory	2,700	391	3	3,094
Uganda	3,000	900	60	3,960
Zanzibar	171	23	None	194
British Somaliland	156	5	34	195
Nyasaland	None	10	None	10
Totals .. .. ..£	6,027	1,329	97	7,453

Visiting Workers

Drs. Foy and Kondi, of the Wellcome Trust, continued their work on anaemias during the first half of the year, after which they were in Europe. They published their results to date in an important series of papers. A technologist from the Medical Research Council arrived in May to assist with the bacteriological work in the East African Council for Medical Research trial of drugs for the treatment of tuberculosis. This has already involved some seven thousand individual cultures, all the media for which have been made in the laboratory's media section in addition to the normal demands.

Provincial and District Hospital Laboratories

The Provincial Laboratory at Mombasa was transferred to its new quarters in the new Provincial Hospital early in the year and worked well thereafter. Until the old Native Hospital was finally vacated the laboratory there had to be kept in use for urgent work for in-patients. In the new laboratory it was gratifying to find when it was put into use so long after the plans had been drawn that no alterations were needed and that there were virtually no regrets about the design.

The Provincial Laboratories at Nakuru and Kisumu continued to function satisfactorily and to increase their scope; the number of examinations performed is remarkable considering the cramped working conditions and the smallness of the staffs and reflects much credit upon the technologists who are in charge of them and who work in almost complete isolation and have little opportunity for professional contact with their fellows. In the district hospitals too, the African laboratory assistants all carry out a great deal of work with creditable accuracy and diligence. Their tasks are made the heavier by the continuing need to keep up to date with new and sometimes more complicated techniques, in addition to their getting through a vast amount of work.

THE PREVENTATIVE HEALTH SERVICES

General

Kenya is experiencing an agricultural and industrial revolution, both of which in their separate ways are intensifying the problems normally to be found in association with increasing sophistication, the need for better and more housing, improved standards of sanitation and safe supplies of water. More intensive demands on the curative and environmental sanitary services have to be met, without compromising the development of the personal and promotive health services.

The traditional picture of the district medical officer largely occupied with his hospital and dispensaries is fast disappearing. In his place has come a true medical officer of health who is the leader of a small team of professional workers concerned with the health of the individual, be he in hospital, at home, at school, in the factory or elsewhere, whether living in an urban or rural environment. The curative, environmental, sanitary and personal health services still function as a comprehensive unit throughout most of the country, for, although they are financed in a variety of ways, their co-ordination remains in the hand of one person, the district medical officer of health.

Health Centres

The concept and development of the health centre service has been thoroughly discussed in earlier reports and published papers. By and large the programme continues satisfactorily, the limiting factors being the availability of money and of trained staff.

A further 25 rural centres were completed or started building in 1957. These were distributed throughout the provinces and districts in the following manner:—

Nyanza Province, nine: at Oyugis, Niamira, Ndhiwa, Ogembo and Homa Lima in South Nyanza district, at Sigor in Kericho district, at Nambeni in Elgon Nyanza District, at Ukwala in Central Nyanza district and at Matungu in North Nyanza district, the last replacing the health centre at Navakholo which was badly sited.

Central Province, eight: at Othaya, Mukurueni and Wamagana in Nyeri District, at Kigumu and Kandara in Fort Hall district, at Siakago in Embu district, at Merimenti in Meru district and at Mwangigi in Kiambu district.

Southern Province, four: at Mbooni and Nunguni in Machakos district, and at Migwani and Usueni in Kitui district.

Rift Valley Province, two: at Chepkorio in Elgeyo-Marakwet district and at Sigor in the West Suk district.

Coast Province, two: at Kombeni in Kilifi district and at Kinango in Kwale district.

In addition to the above, four urban health centres were built by the City Council in Nairobi and one rural centre by the Nakuru County Council at Dundori.

Several mobile health units have been put on the road to tour through certain areas not yet served by static health centres or where special needs are evident. Some of these units operate in the pastoral areas using vehicles and equipment supplied by U.N.I.C.E.F. The idea of sending out small mobile units from the permanent health centre in a circuit of the neighbouring dispensaries, reported in 1956 as having originated in Nyanza Province has now spread to the Central Province, where the staff of the rural health centre pays regular visits to surrounding villages. A travelling team primarily concerned with the treatment of yaws, which first began to operate in Meru district in 1951, has achieved considerable success. It is now anticipated that the infectious forms of the disease will, within the next few years, be eradicated from this once heavily infected district.

Health centres are deservedly popular and there is a constant demand for more to be built. There is no doubt that the ready availability of curative services is responsible for this, but there is at the same time a more widespread acceptance of the preventive and promotive functions of these institutions and no opportunity is lost to stress the importance of these latter aims.

Maternal and Child Welfare

Maternal and child welfare clinics are firmly established at all health centres and district hospitals. An interesting and very promising extension of the work of these clinics, which first developed in the Central Province has been to link them closely with the activities of the Red Cross and St. John workers.

A widespread health and home visiting service is growing up. Sensible girls and women of personality or strong character are given a short training in the elements of home hygiene and child care and become members of this service. The success of the scheme is dependent upon the goodwill of the local authority and the people and on co-operation between the Medical Department, workers from the voluntary societies and the Community Development Department.

Great efforts have been made to combat malnutrition in children. Soup kitchens have been in operation in Central Province and in the eastern forest reserve of the Rift Valley Province. More than 300 tons of dried milk, made available by U.N.I.C.E.F. and church welfare associations have been distributed throughout the country. Serious malnutrition has only been found in a few isolated pockets.

There has also been the problem of the uncared for child and the stray who finds his way to the large towns. A heavy load is being placed on the homes, orphanages and residential schools run by charitable organisations, but attention is being increasingly focussed on preventing the social causes that lead a child to leave home. Every effort is also made to return the stray to his own family circle. Tribute must be paid to the activities of the Probation Service, the officers of which are approved Inspectors of Children, and of the Child Welfare Society which are contributing much to the solution of individual problems.

Occupational Hazards

Up to some little time ago hazards have been those connected with agriculture, such as anthrax, tetanus and phagedenic ulcers. Of recent years, however, industrial occupational hazards have been reported with increasing frequency. The Specialist Medical Officer of the Labour Department draws attention to the type of risk connected with insecticides, dust and the use of caustic soda in industry.

Three incidents of poisoning by chlorinated hydrocarbons are reported, which were the result of carelessness and misunderstanding, such as the eating of seed grain which had been dressed with insecticide and the use of old insecticide containers as food utensils. It is difficult to prevent incidents of this nature, even though fully comprehensive protective legislation has been enacted.

Manufacturing processes involving the creation of dangerous dusts are increasing and protective measures are necessary. Some of the dusts encountered contain up to 900 p.p.m. of soluble fluorides, but no case of fluorisis has occurred as yet amongst the workers exposed to the risk. Occupational skin diseases, the result of handling alkalis, have been reported from tanneries, in soda handlers and in the fabrication of aluminium ware.

The potential hazards of X-radiation are more generally recognised and most hospital X-ray departments were inspected and recommendations were made to minimise the exposure of the staff to scatter radiation. Some existing X-ray units will need to be modernised before they can comply with international safety regulations.

Health Education

During the year the Health Education Division has been handicapped not only by the absence of the Health Education Officer on a course in the United Kingdom, but also by the re-building of the new Medical Training School, which meant that the Health Education Division had to be removed and accommodated in temporary wooden buildings. Despite these handicaps the routine work of producing posters, models, photographs, film strips, flannelgraphs and radio scripts has continued.

The growth of demand from health centres and increasing numbers of health exhibitions produced for district agricultural shows have taxed the capacity of the unit, and the development of new ideas has often had to be abandoned in order to keep pace with routine work.

Health Education exhibitions were prepared for the Royal Agricultural Shows at Nakuru and Nairobi. That at Nakuru was of a general nature whose theme focused attention on sanitation, housing and fly-borne diseases. The exhibition at the Nairobi Show concentrated on tuberculosis—the problem, the cure, and the prevention, demonstrating the role of the health centre in the scheme for the domiciliary supervision and treatment of the patient suffering from the disease.

There have been three important advances during the year. The first is the establishment of closer liaison with the Education Department and the Community Development Department, and the production of aids for teaching hygiene both in the school and the home. The second is the introduction of formal tuition in the methods of health education for medical auxiliary staff under training and for Jeanes School students. The third is the acquisition of a mobile health education unit.

The mobile health unit has proved to be a great success. It is mounted on a three-ton chassis supplied by U.N.I.C.E.F., fitted with exhibition cupboards, interior lighting and a strip and film projector, and so designed as to be suitable for the demonstration of subjects of a general, or scientific nature. No sooner was the vehicle ready for the road than an epidemic of typhoid occurred in Nandi, and the unit was despatched there to give public instruction on preventive measures.

Hardly had this tour finished than the unit was reorganised to support a campaign in the Rift Valley Province against cysticercosis. In this project the unit combined an instructional programme on the farms with the treatment by dichlorophen of tapeworm infected persons. Posters, charts, models, film strips and films were exhibited. The initial programme in the Naivasha area led to immediate demands for further visits and, with the co-operation of the Information Department, another mobile unit was put on the road. Thus far, four tours of this nature have been made, and it is abundantly clear that a unit to each province is required to achieve lasting results.

PUBLIC HEALTH CONTROL

International Health

The Port of Mombasa

Full sanitary precautions and surveillance were maintained at the port with particular regard to preventing the entry of smallpox into the country. Parts of Asia and the Persian Gulf, in direct shipping contact with Kenya were potential sources of infection and a close check was kept on passengers from these areas. A few cases of other infectious disease were encountered and amounted to 28 cases of measles, 32 of chickenpox, 6 of tuberculosis, 4 of mumps, 1 of infective hepatitis, 3 of whooping cough and 1 of typhoid, occurring in some 54 vessels. Cases were dealt with by isolation either in hospital or on board ship.

The closure of the Suez Canal and disturbed conditions in the Middle East, resulted in a decrease in the numbers of foreign dhows, but an increase in numbers of steamships entering the port.

The following numbers of vessels were boarded and cleared:—

Ocean-going ships	..	971
Ocean-going dhows	..	110
		—1,081
Coastal ships ..	..	280
Coastal dhows ..	..	649
		— 929

A total of 42,458 passengers landed from these vessels.

Airports

Routine surveillance was maintained at Eastleigh and Nairobi West airports. The new Nairobi Airport was under construction and will be classed as a "Sanitary Airport" under International Sanitary Regulations. Arrangements were made for the formal appointment of port health staff who will be charged with the duty of maintaining high standards of hygiene and medical supervision in the operation of what is expected to become a very busy point in the air routes of the continent.

Food

The processes in the manufacture and preparation of local foodstuffs have for long been subject to control by the Public Health (Manufacture, Preparation, Packing and Re-packing of Food) Rules.

Now, a Food Standards Committee is in being whose functions are to advise the Minister on any necessary legislation to govern the standards and quality of prepared foodstuffs, with a view to protect both the public health and the interests of the consumer and the reputable manufacturers. Rules have been drafted to ensure proper labelling of all packaged food with adequate description of the contents and net weight. Further proposals are being discussed to regulate the standards of quality of dried milk powders, soft drinks and ice cream.

The general food supplies in the Colony in respect of quantity have been good. Cases of malnutrition due to a deficiency of protein in the diet are still common, but a small supplement of skim milk to the normal daily intake soon produces a remarkable change in the condition. As health centres and the health visiting services increase and enlarge, dried skim milk powder can be distributed on a wide scale for the specific treatment of protein malnutrition. Some of the cases are found to be suffering from tuberculosis, hence dietary deficiencies are not always to blame for every case discovered. The United Nations Children's Fund and the Food and Agricultural Organisation have taken a special interest in East African food problems. A joint working party visited the territories and examined schemes for stock improvement, processing milk surpluses into milk powder, establishment of fish ponds, facilitating slaughter stock movements from pastoral areas, production of dried beef (biltong) and manufacturing fish meal from lake and sea sources. Each and every scheme was worthy, but involved some expense and possible risk in development.

In a country like Kenya the food is, however, produced on the spot, a natural product of any farmstead holding. The trouble is that an insufficient quantity of the right food is grown, or if grown is not consumed, but sold for cash. Examples have come to light of certain children having been given dried milk supplements for protein malnutrition when it was later discovered that fresh milk produced by their parents' own beasts was being sold in the local township. The same goes for eggs, poultry and even pork. Clearly this is a case for education and the proper planning of farm production. With this should be coupled a call for the improvement of stock, for the production of more milk, better beef and many eggs from the same land and for the same effort.

Although land consolidation and all that goes with it holds promise of the creation of more wealth all round, it is a mistake to imagine that it should all accrue in terms of cash. The first products should go towards improving the state of nutrition, especially in children. It is manifestly uneconomic to sell all the crop for money which is then used to buy substitute foodstuffs which may have to be prepared and transported from afar at a relatively high cost.

The solution of the problem of malnutrition in the rural areas is to be found on the farm itself. The situation is different in the towns and the production of good, cheap and plentiful foodstuffs, prepared for urban consumption is a science of which we know too little and in whose study the assistance of the specialized agencies of the United Nations Organization is most welcome.

Water Supplies

In urban areas supplies continue to be improved. In 11 townships augmentation schemes were carried out and new supplies provided at Sotik, Lumbwa, Kimilili, Kiganjo and Budo. The Mzima Springs supply, which serves Mombasa, is now available to centres of population between the source and the sea. Nakuru's supply has been supplemented by the Melawa River Scheme, and the proportion of soluble fluorides in the town's water supply thereby reduced. Eldoret is actively engaged in planning a supplementary water supply.

Lamu Township, formerly supplied by wells which were undoubtedly polluted now has a piped supply of treated water.

Most remarkable is the improvement in water supplies which has been facilitated by the concentration of people into villages in the Central Province. By means of hydraulic rams, furrows and storage tanks, supplies at low cost of maintenance have been achieved. Overall there is a substantial increase in the number of people who have a water supply which is easily accessible and is of reasonable quality and quantity. Protection of springs continued in all African areas.

Public supplies are subject to bacteriological examination at intervals, and with the exception of supplies to some of the smaller towns and of divisional centres, satisfactory results have been noted. Many water supplies are found to have a high fluoride content.

Sanitation

Work on drainage and sewage disposal schemes was commenced at Thomson's Falls (£38,000) and at Thika (£200,000). As yet, sewers only have been laid at Thika and the disposal plant is not complete. A start was made to provide a sewage system for Bungoma, administrative centre of the new Elgon Nyanza District, and in the development of one to serve the more congested parts of Mombasa Island.

In many of the country areas of Kenya there is either insufficient soil, or unsuitable soil to allow of the construction of satisfactory deep pit latrines. This problem has been encountered during the construction of the villages in the Mwea/Tabere development scheme in the Central Province. The land is flat and consists exclusively of black cotton soil. Cost and the lack of piped water rule out the possibility of putting in a sewered system, but it will be practicable to build aqua privies.

Successful trials have been made in building communal tanks with multiple stances to allow of one for each household. With care and proper maintenance the aqua privy can be made to work well. A small type suitable for a single household is now being developed. It is made out of a round concrete cylinder like a road culvert and stands above the ground. The effluent passes into a cairn of stones and the fluid is thus lost by evaporation without requiring to be absorbed by the soil. This type of individual domestic aqua privy may well turn out to be the solution of a difficult and recurring problem in rural sanitation, especially for irrigation areas.

Housing

The Department continued to be represented on the Central Housing Board, and is associated in the Boards approval to loan money to local authorities who were engaged building housing to a total value of approximately £371,000.

The Department has also been closely concerned with the proposals to develop satellite towns in the Kiambu District and close to the Nairobi City Council boundary.

There is a great demand for the larger type of family house which can only be economically built by adoption of a sound indigenous type of construction and design. In order to maintain sanitary standards, the sites for such houses should be fully serviced with water supplies, roads and storm water drains. It would not be necessary to connect water to every dwelling and where soil conditions are suitable, pit latrines would be allowable.

In the search for cheaper materials, an officer of the Department has conducted trials in the Central Province of building with rammed mud blocks. The success in this type of construction depends upon the nature of the soil available locally and the ordinary red earth in this area has been found to be quite suitable. Walls built of this material have to be rendered with a weather proof facing. Trials and developments of this nature have to be pushed forward with some urgency, since many of the temporary villages in the Central Province have now to be re-sited and rebuilt. Stone and other materials are scarce and only available at a price far beyond the pocket of all but the wealthiest of the villagers. There is, indeed, such shortage of poles for building that they can only be used for roofs and alternative methods for the construction of walls must be developed.

COMMUNICABLE DISEASES

The pattern of these diseases remains unchanged, with water-borne diseases such as dysentery and typhoid, infectious diseases such as poliomyelitis, pertussis, variola minor, meningo-coccal meningitis and tuberculosis, the helminthic diseases such as roundworm, hookworm and taeniasis and the vector-borne diseases such as malaria, bilharzia, leishmaniasis, and relapsing fever still prevalent.

Respiratory and alimentary diseases, together with malaria account for the major portion of ill-health. Plague, yellow fever and cholera have become unimportant, but much greater attention is now being given to controlling tapeworm infestation which is calculated to cost the country some tens of thousands of pounds loss, through the concomitant infection of beef carcasses with measles.

Kala-azar

There has been an increase this year in the number of cases reported (total 552 as compared with 315 in 1956), due to recrudescence in the northern and eastern locations of Kitui district, which accounted for 452 of the cases reported. A few were discovered in the adjacent area across the Tana River in the Meru District. The field hospital established at Tseikuru continued to serve as a centre for treatment. Active research is being undertaken in order to determine the most effective treatment and to discover the vector, but in neither direction can any notable degree of success be claimed.

Smallpox

The outbreak of variola minor which started in 1956 (total 374 cases) has continued throughout the year, though it now appears to be on the wane. Of the total of 806 cases reported, in 1957, 363 occurred in the Rift Valley Province, an attack rate of 52 per 100,000 as compared with 14 per 100,000 for the Colony as a whole.

Yellow Fever

The World Health Organization has gazetted Kenya as a Yellow Fever Receptive area in view of the continued absence of the disease from Kenya.

Cerebro-Spinal Meningitis

Of a total of 760 cases, 487 were reported from Central Province. This is approximately half the number that occurred in 1956. Fortunately major outbreaks of the more severe form of the disease, such as occur in other countries, have not been experienced in Kenya. Outbreaks here are small and sporadic and a limited distribution of prophylactic sulphonamides serves to control the spread of infection.

Poliomyelitis

Poliomyelitis has long been endemic in Kenya, being formerly responsible for the occurrence of isolated cases of infantile paralysis amongst African children; it is only in the last few years that epidemics have occurred.

In 1947 there was a minor outbreak in and around Nairobi affecting 13 Europeans and four Africans, but no Asian cases were recognized. The disease ran its course during the months of November and December, affecting children in the 4–13 year age group and 45 per cent of the patients came from one school. Towards the end of 1953 a further and much larger epidemic occurred, which spread throughout the Colony, involving all races. It was possible to isolate Type 1 virus from some of the recorded cases of paralytic disease of whom there were 134 Europeans, 60 Asians and 290 Africans.

During 1955 and 1956, the incidence of the disease remained low until November and December, 1956 when 31 cases occurred. It was clear that a further epidemic had commenced. A peak was reached in mid-1957 and the decline from this date has been painfully slow. The outbreak started in Nairobi, and then spread along the lines of communication to the rest of the country, mainly north to the Central Province and then north-west to the Rift Valley and Nyanza Provinces.

A total of 614 cases with 30 deaths was recorded, to which must be added the 31 cases reported in the last two months of 1956 which belong to the present epidemic. The heaviest incidence has been in Nairobi and environs, Central Province and the Rift Valley Province. The respective attack rate per 100,000 population of each of the racial groups has been 80 amongst Europeans, 40 among Asians and 7·2 amongst Africans. During May, June and July, a total of 56 cases were reported from the Kerugoya and the Embu District, exclusively Africans of whom 54 were under the age of five years.

Experience from the 1954 epidemic and of early cases in 1957 assisted in determining priority groups for the anti-poliomyelitis inoculation campaign. Vaccine was in very short supply at the beginning of the year and priority was given to children under five years of age and to nursing or pregnant women, later, as supplies became more liberal the age limit was raised by stages, until, at the present time, protective inoculation is open to all. At the end of the year 24,000 persons had received a course of at least two injections. Analysis of the reported cases of paralytic disease suggest that the vaccine confers a 75 per cent protection.

Typhoid

The prevalence of typhoid has remained at practically the same level as in 1956, with a repetition of the epidemic in the Nandi District. This epidemic started slowly at the beginning of the year and rose to a sudden peak in 21st to 24th weeks, with 40–60 cases per week being reported, and diminished to 4–5 cases per week, at the end of the year. Altogether a total of 550 cases were reported for the district which has a population of just under 100,000 persons. The epidemic threw considerable strain on the local medical and health services, and the remarkably low death rate (4·6 per cent) is a very creditable reflection on the standard of care and treatment given. Emergency beds and wards were erected in the hospital curtilage to accommodate cases at the peak period. Field measures initiated included widespread inoculations, a health education campaign and an intensified drive to provide more household latrines and to protect the many springs and other natural sources of water from contamination. The management of this epidemic provided a fine example of co-operation between various departments, in the face of a public health emergency. The epidemiological investigation suggests that the spread was due to the presence of temporary and convalescent carriers in unusually large numbers who promiscuously infected the surface water supplies. A small epidemic also occurred in the villages in Embu District.

Leprosy

Intensive surveys have been carried out in the Nyanza Province revealing an overall rate of rather less than 10 cases per 1,000 of whom approximately 10 per cent are lepromatous. This gives an estimated total of approximately 20,000 for the province, of whom 2,000 will be infectious. This is a considerable reduction on previously estimated figures. The difficulty still remains, however, to persuade patients to attend clinics regularly and for a prolonged period for treatment. There is a singular lack of understanding by the people in this province of the infectious nature of leprosy. In these circumstances, health education of the public is of paramount importance.

Tuberculosis

It is estimated that 8,000 cases of pulmonary tuberculosis were under treatment at the end of the year. Beds in hospitals are used for the primary assessment of cases, and for the initiation of treatment. Once this is established, cases are discharged home to continue with their course of drugs, under the supervision of the district health staff, who are charged with the responsibility of ensuring there is no default in regular attendance at the follow up clinics and of tracing contacts of infectious cases.

Opinion on the whole is that the patients conscientiously take their medicines as ordered, but the numbers who fail to report for treatment after a period of six months is disturbingly high. On the other hand when a special effort was made to trace the defaulters, the proportion of cases who appeared to have been cured was gratifyingly large.

The annual cost of the standard regime of treatment with 10 G. para-aminosalicylic acid (P.A.S.) and 200 mg. of isoniazid is of the order of Sh. 80 per patient. This is relatively expensive and the P.A.S. is far from pleasant to take. The Medical Department in conjunction with those of the other E.A. territories and the Medical Research Council of Great Britain are conducting trials on alternative remedies which may be as effective, more acceptable and cheaper. Final arrangements have been made for a survey of the prevalence of tuberculosis in rural areas by a team from the World Health Organization. This is in addition to the urban survey in Nairobi, which is to be carried jointly by the department, the City Council and the World Health Organization, supplied by equipment from the United Nations Children's Fund.

Influenza

In common with other countries throughout the world Kenya experienced an epidemic of influenza, which reached a peak during August and September, 14,513 cases being reported. The disease has been essentially mild in character, with six reported deaths, the result of respiratory, or haemorrhagic complications. The virus has not been isolated or identified, but there is little reason to doubt its being the same variety of type A that was first isolated in the Singapore outbreak.

Yaws

During the 1920's yaws was widespread throughout Kenya, up to 60,000 cases a year being observed, but intensive campaigns between the –20's and early –30's resulted in a steady diminution of cases. The widespread use of pencillin during the past seven years has led to a further reduction and although cases can still be found in the Coast Province, Ukambani and Nyanza Province; the Meru district, once the worst affected of all is now virtually clear of the disease. With the rising standard of personal hygiene and availability of early treatment, a recrudescence is not expected.

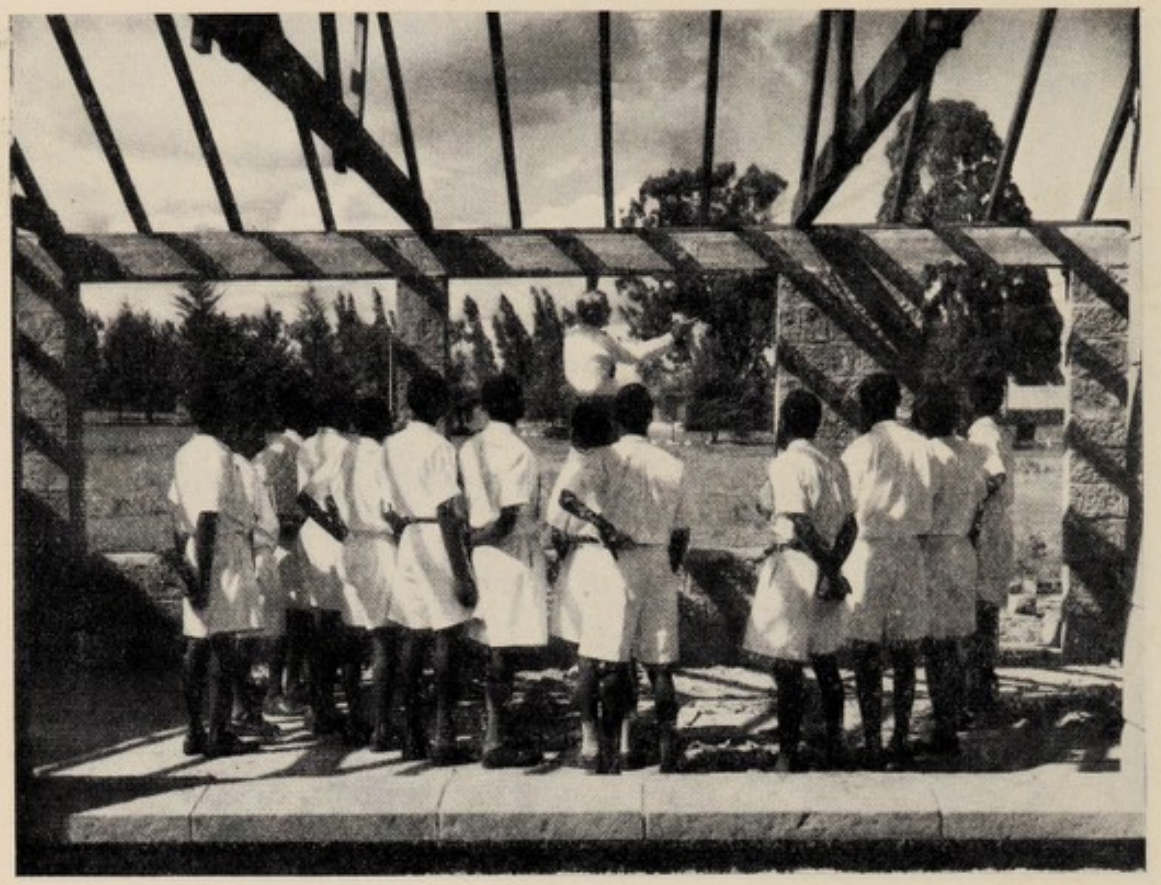
In passing it may be observed that syphilis has also receded over the past five years. Infectious cases attending clinics have fallen from a figure of 17,000 in 1952 to 8,000 in 1957, whilst a fall of 80 per cent has been apparent over the same period in the number of cases of congenital syphilis. On the other hand, the incidence of reported cases of gonorrhoea has shewn no decrease whatsoever, running steadily at approximately 20,000 cases annually.

Malaria

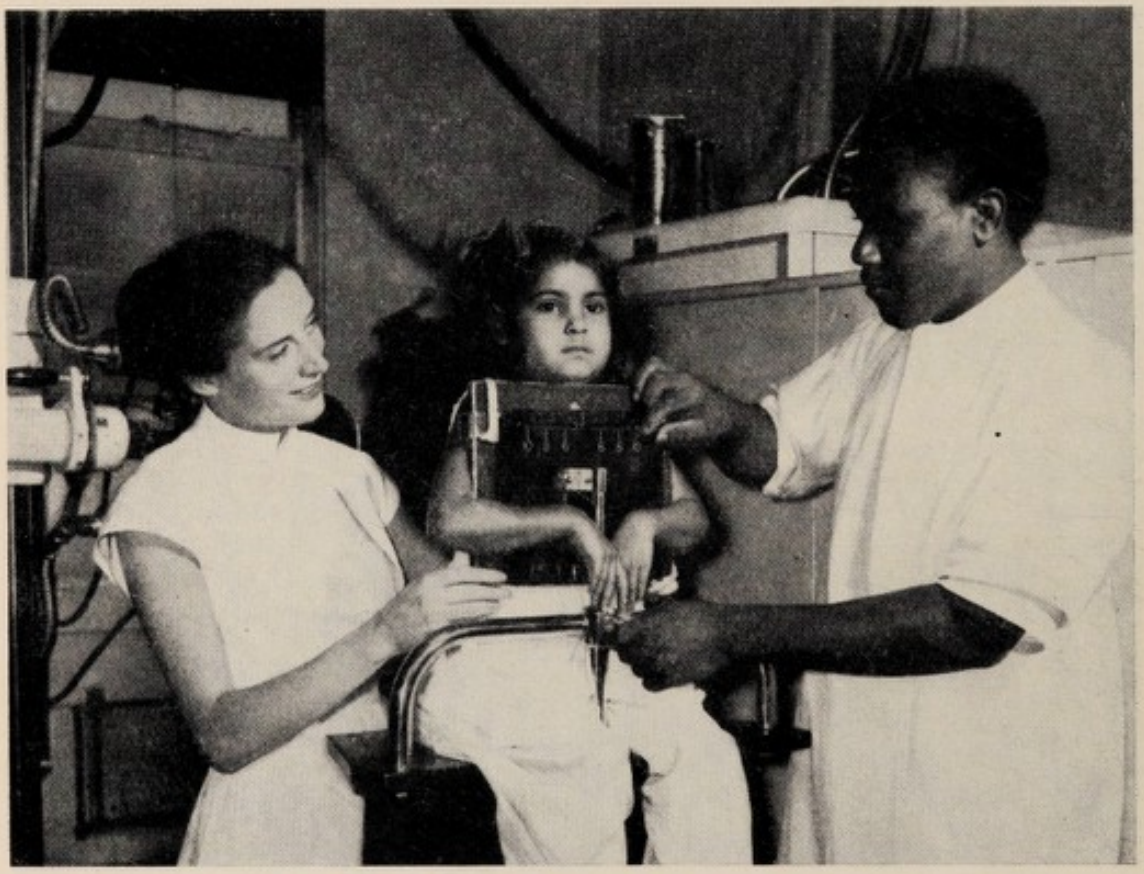
Malaria control in municipalities and large townships is well established. Permanent drainage measures are being reinforced by the larvicidal application of oil to the few remaining anopheline breeding places and the spraying of dwellings on the outskirts of the town with long acting insecticides. In rural areas the problem is as yet untouched, apart from the control measures in the Nandi District which are now in their third year. The last application of dieldrin was made to 40,171 huts during the first quarter of the year. Further details are given in the report of the Division of Insect-borne Diseases.

Demonstrating measly beef as part of the Cysticercosis campaign

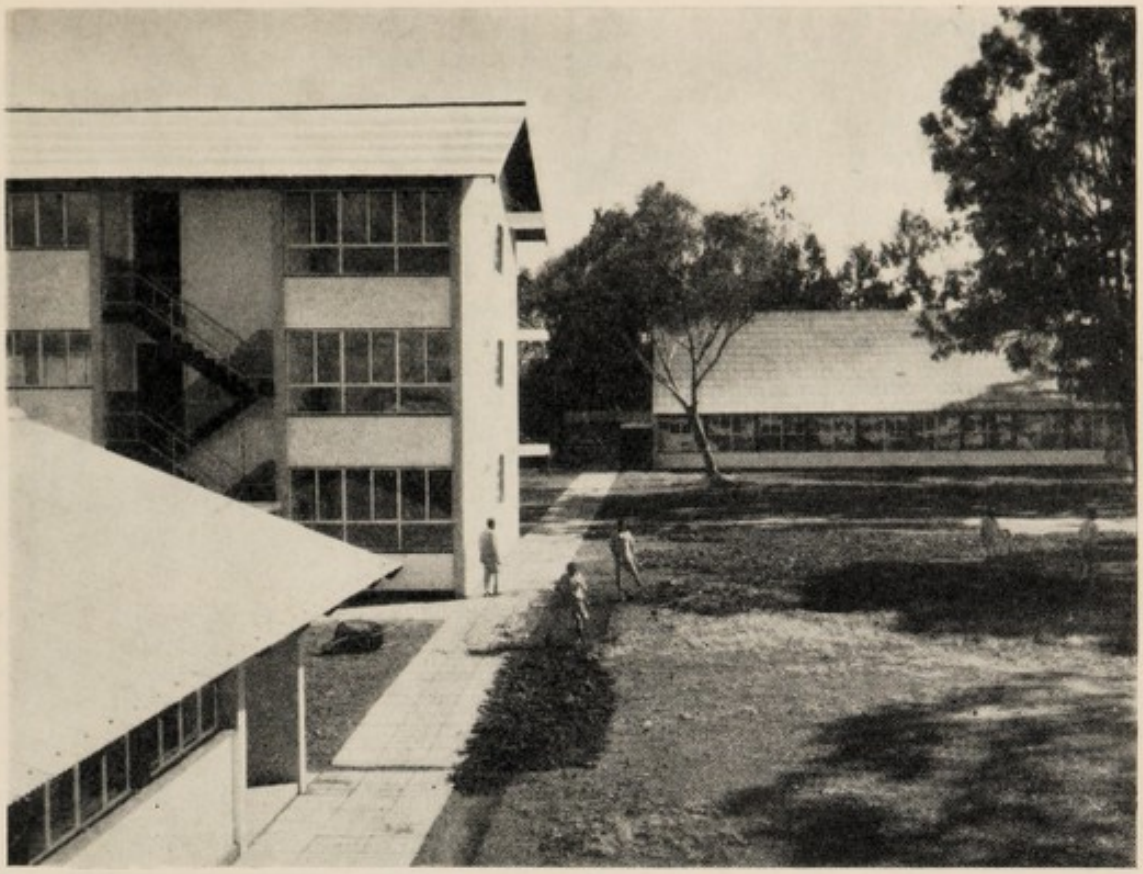
Mobile Health Education Unit demonstrating the measly beef problem and its prevention



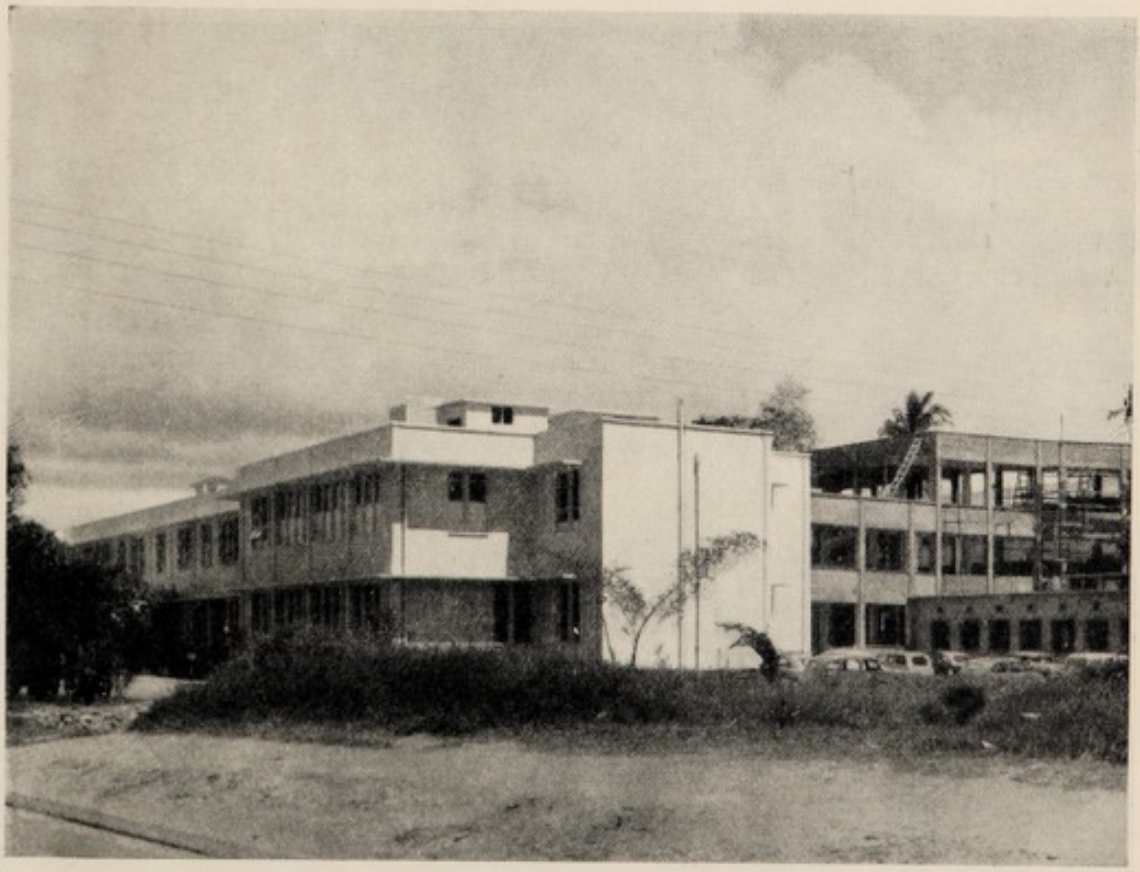
Training of Auxiliary Staff—Health Trainees



Training of Auxiliary Staff—X-ray Trainee



A corner of the new Medical Auxiliaries Training School



The new Provincial General Hospital, Coast Province, in the course of construction

Kitui Town Planning—The Old Town

Kitui Town Planning—The New Town

The East African Institute of Malaria and Vector-borne Diseases continued their trials in the control of malaria in hyper endemic areas, in the region of the Pare mountains and Taveta. After two cycles of spraying dwellings at nine-monthly intervals with dieldrin, malaria transmission has ceased. The cost of control by these means is beyond the reach of anything that the rates' income of the Taveta district could support. Whilst it has been demonstrated technically that malaria in hyper endemic areas can be controlled by the spraying of dwellings with insecticides, the problem now is to maintain the suppression of transmission by other and cheaper means, probably through periodic mass prophylaxis with specific drugs.

Helminthic Diseases

Although seldom a direct cause of death, helminthic infections lead to a considerable amount of ill-health. Hookworm and roundworm infestations are common in the people of the Coast Province where, since the 1920's, there has been a continuous programme of treatment combined with the education in the adoption of higher standards of domestic sanitation.

Tapeworm infestation is much more widespread and besides being detrimental to health, is also a matter of considerable importance to the beef industry. Every year up to nearly 20,000 persons have been treated at hospitals, health centres and dispensaries for tapeworm. Many reputed vermifuges have been employed ranging from ngaita seeds obtained from an indigenous tree, through malefern to mepacrine. Dichlorophen is the latest and probably the safest and most effective remedy to be adopted. There are hopes that this agent will at last provide a tool for the eradication of tapeworm from selected groups of regularly treated persons, at least.

The close co-operation over the years between the Medical and Veterinary Departments is epitomized in the workings of a joint Cysticercosis Committee, whose objectives are:—

(i) to eradicate tapeworm infestation by mass treatment;
(ii) to protect grazing areas from contamination by improved pasture hygiene;
(iii) to detect the larval stage in beef carcasses by wider application of Meat Inspection Rules;
(iv) to promote research on methods for inducing artificial immunity in cattle against cysticercosis.

In furtherance of these objectives the Medical Department in co-operation with local health authorities decided to test the efficiency of dichlorophen in the field. To this end a field mobile unit was sent out on tour in Naivasha County to ascertain the practicability and safety of the scheme. Further trials to determine the efficiency of the drug were carried out by the Medical Officer of Health of the Nairobi County Council. Results in both cases were sufficiently encouraging to warrant the extension of a combined treatment and health education programme, in an attempt to limit the disease both in humans and cattle.

RESEARCH ACTIVITIES

Division of Insect-borne Diseases

The year 1957 was one of considerable research activity. Further attempts were made to elucidate the epidemiology of filariasis, tick typhus and leishmaniasis, and a number of interesting discoveries were made. There was also intensive work on schistosomiasis, vector snails and trypanosomiasis. Malaria has not been forgotten and careful observations are still being made at Nandi.

Field Investigations and Research

Malaria and Mosquito Control Measures

At Nandi, spraying with dieldrin has ended, but entomological and parasitological observations are continuing. The last spraying of the district was completed in March, 1957. In June a few *A. gambiae* reappeared in the treated areas, specimens being caught at Turbo, Kigi and Shiru.

A striking feature has been the small number of anopheline vectors found in huts; the only exception was at Chemase where 270 *A. gambiae* were collected from huts previously treated with dieldrin.

Each quarter a number of blood slides are prepared from children and examined for malarial parasites. The findings from December, 1956 to December, 1957 indicate that the numbers infected never rose above three per cent, but for most of the year the figure remained in the region of half to one per cent.

Evidence suggests that there may be some resistant strains of *A. gambiae* in the Nandi District and that malarial transmission is continuing. A reserve supply of pyrimethamine is being held for mass treatment should the disease appear in epidemic form.

At Malindi, following previous spraying with dieldrin hardly any *A. gambiae* were found in dwellings throughout the year; only one was caught during the first six months. There was a sharp increase in *C. fatigans*. This species has persisted in spite of vigorous attempts at eradication. Gammexane has proved quite ineffective; it is intended to try diazinon. The association of *C. fatigans* and filariasis makes it essential that this mosquito should be eradicated.

Residual insecticide spraying, using gammexane, has not been sufficient to prevent malaria in the Shimba Hills Settlement Scheme, settlers may have been infected prior to arrival. It was decided to dose all with pyrimethamine, and as a result the parasite rate fell from 40 per cent to 15 per cent.

The insecticidal spraying of huts at Hola, too, has not proved very effective against malaria, which may only be controlled by the use of anti-malarial drugs.

Kala-azar and Sand Flies

P. martini, a sandfly of the major group, is still suspected as being the vector of *L. donovani*. This sandfly occurs in both the main kala-azar areas, but its status as a vector has yet to be proved.

Examination and inoculation of a number of dogs and puppies did not suggest that they are carriers of infection.

Leishmania morphologically identical with *L. donovani* were isolated from a ground squirrel (*Xerus rutilus*) at Marigat, and gerbils (*Tatera* sp.) from Rimo in the Kerio Valley. This finding suggests that kala-azar is a zoonosis in Kenya but more work requires to be done.

Tick Typhus

Evidence suggests that the form of rickettsia responsible for tick-borne typhus in East Africa is the same as that which is found in South Africa, and that both are distinct from that found in North Africa. The finding of rodent carriers in South Africa has been repeated in Kenya, but dogs have not been shewn to be seriously involved. It would therefore appear that tick typhus is also a zoonosis.

Filariasis

At Faza, a new species of filarial worm allied to the malayi type has been found in dogs, cats and ganet cats. The vector has been shown to be *Aedes pembaensis* and *C. fatigans* has been shown to be the only vector on this island of *W. bancrofti*, the cause of human filariasis. *W. bancrofti* failed to develop in *A. pembaensis*. The new worm was also found in cats from Ngau on the Tana River, *Taeniorhynchus africanus* being the probable vector here.

In January, 1957, hetrazan was given to 1,170 of the people of Faza. There was an immediate and dramatic reduction in micro-filarial density and six months later the *bancrofti* infection rate had been halved, whilst the infection rate in *C. fatigans* dropped from seven per cent to less than one per cent. In Kenya *C. fatigans* appears to be the main, if not the only vector of human filariasis in the northern part of the coast, but further south *A. gambiae* becomes increasingly important.

Schistosomiasis

The chief object of this work was to find naturally infected snails and to determine the species of worm causing the infection. In addition, a number of observations have been made on the snail hosts with attempts at control with copper sulphate and sodium pentachlorophenate in a few limited areas.

A certain amount of concern was felt because of an increase in *S. mansoni* infections in Nairobi schoolchildren. These infections were probably acquired in the Nairobi River and the matter is now being investigated. A number of Biomphalaria species have already been tested, some emitted bifid cercariae, but hamsters could not be infected.

It is believed that the method of low continuous dosage with copper sulphate as employed in irrigation schemes in the Sudan is not effective in Kenya; this was shewn to be the case at Mwea–Tebere. Experiments have shewn that Biomphalaria species developed well in rice fields at Mwea–Tebere, but it is believed that they are unlikely to survive dry periods. Schistosomiasis is not yet a problem here. Hola, on the Tana River, is potentially dangerous but immigrants have so far remained uninfected. The value of fish as a snail reducing agent has been shown in Nyanza, where in five dams stocked with *A. alluandi* the snail population was reduced by 58 per cent, whilst control dams showed a large increase.

Trypanosomiasis and Tsetse Research

The results of the remarkable and most effective insecticidal campaign organized and directed by the Zoological and Tsetse Section of the Veterinary Department suggests that gambian sleeping sickness will be eliminated from Nyanza Province before very long. The principle of this insecticidal attack is to spray the vegetation along the banks of the fly infested river with dieldrin. *G. palpalis* has been virtually eliminated from many areas.

Although gambian sleeping sickness is becoming less of a problem, the danger of the rhodesian form still exists. In Central Nyanza 37 of the 57 cases of sleeping sickness reported in 1957 contracted their infection in the Samia region of Uganda. There is a strong suspicion almost amounting to certainty that most of these cases were caused by *T. rhodensiense*. *T. rhodensiense* has been isolated from an old man and a young girl living in Sakwa in Central Nyanza. The vector appears to be *G. pallidipes*, but the biting habits of the fly require further investigation.

Onchocerciasis

Examinations during 1957 of the previously treated areas in North and South Nyanza have shown no reappearance of *S. neavei*. There is, however, active transmission of *O. volvulus* on Mount Elgon on the border contiguous with the Uganda focus of onchocerciasis.

Relapsing Fever

There has been a striking reduction in tick-borne relapsing fever in the Central Province with the exception of the Meru district, which may be due to the settlement of the Kikuyu into new villages. The total number of cases reported in the past five years from the districts under observation has been as follows:—

1952	..	..	..	193
1953	..	..	..	128
1954	..	..	..	150
1955	..	..	..	14
1956	..	..	..	2

In Meru District there has been a fall in cases, but one which is not quite so dramatic.

Nairobi,
31st May, 1958.

A. J. WALKER,
Director of Medical Services.

VISITORS

The following visitors from overseas were shewn aspects of the work of the department:—

LORD LIMERICK, Chairman of the Medical Research Council.

SIR HAROLD HIMSWORTH, Secretary of the Council and Chairman of the Colonial Medical Research Committee.

DR. E. R. CULLINAN, Physician to St. Bartholomew's Hospital, London, E.C. 4.

DR. WILFRED SHELDON, Physician to the Hospital for Sick Children, Great Ormond Street, London.

DR. M. SIMKISS, Registrar to the Hospital for Sick Children, Great Ormond Street, London.

MONS. JUNOD AND DR. GAILLAND, International Red Cross delegates.

DR. C. A. EGGER, Director of the African, Eastern Mediterranean and European Region, U.N.I.C.E.F.

MISS F. N. UDELL, O.B.E., Chief Nursing Officer, Colonial Office, London.

MISS M. HOUGHTON, M.B.E., Education Officer of the General Nursing Council of England and Wales.

DR. BONNE, Director, Division of Communicable Diseases, W.H.O., Geneva.

DR. EISELEN, Regional Health Officer, Union of South Africa.

DR. H. GOODMAN, Dermatologist, New York, U.S.A.

DR. K. S. SEAL, W.H.O. Fellow.

DR. S. WAND, Chairman of the Council of the British Medical Association.

DR. D. E. C. MEKIE, Deputy Chairman of the Overseas Committee of the British Medical Association.

MISS JULIA HENDERSON, Director of the Bureau of Social Affairs, United Nations.

MR. H. F. RUTHERFORD, House Governor and Secretary of the Hospital for Sick Children, Great Ormond Street, London.

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Articles Published by Members of the Department, 1957

GOINY, H., E. C. G. VAN SOMEREN AND R. B. HEISCH.—"Eggs of Aedes (Shusea) Pembaebsis Theobald, Discovered on Crabs." *E.Afr.Med.J.* Vol. 34, p. 1.

GRATTEN, E. O' D. C.—"Post-operative Complications of Chest Surgery." *E.Afr.Med.J.* Vol. 34, p. 237.

GRATTEN, E. O' D. C.—"Shock." *E.Afr.Med.J.* Vol. 34, p. 259.

GRATTEN, E. O' D. C.—"Surgery for Lung Tuberculosis." *E.Afr.Med.J.* Vol. 34, p. 321.

HARDEN-SMITH, W., AND M. SMITH.—"What is the Minimal Dose of D.D.S. Effective in Leprosy." *E.Afr.Med.J.* Vol. 34, p. 391.

HARRIES, J. R. AND W. E. LAWS.—"The Advantages of Glossopharyngeal Breathing." *Brit.Med.J.*, 1957 II, p. 1204.

HARRIES, J. R. AND W. E. LAWS.—"Poliomyelitis in Nairobi." *S.Afr.Med.J.* Vol. 32, p. 16.

HEISCH, R. B., R. MCPHEE AND L. R. RICKMAN.—"Epidemiology of Tick Typhus." *E.Afr.Med.J.* Vol. 34, p. 459.

HEISCH, R. B.—"Rickettsia from Ticks and Rodents in Kenya." *E.Afr.Med.J.* Vol. 34, p. 287.

HEISCH, R. B.—"Isolation of Leishmania from a Ground Squirrel." *E.Afr.Med.J.* Vol. 34, p. 183.

INNES, J. R., M. SMITH AND W. HARDEN-SMITH.—"Interim Report on S.U. 1906 in Leprosy." *E.Afr.Med.J.* Vol. 34, p. 395.

JARVIS, F. J.—"Restoration of Hearing." *E.Afr.Med.J.* Vol. 34, p. 251.

KENT, P. W.—"Control of Tuberculosis in Kenya." *E.Afr.Med.J.* Vol. 34, p. 307.

LAWES, W. E.—"Water and Electrolyte Balance in the Post-operative period." *E.Afr.Med.J.* Vol. 34, p. 243.

MACDOUGALL, L. A.—"Effect of Aureomycin on Under-nourished African Child." *J.Trop.Pediat.* Vol. 3, p. 74.

MANSON-BAHR, P. E. C.—"Distribution of Leishmania in the body in E.A. Kala-azar." *Trans.Roy.Soc.Trop.Med.Hyg.* Vol. 51, p. 371.

MANSON-BAHR, P. E. C.—"Fevers of Africa 6. Leishmaniasis South of the Sahara." *Cent.Afr.Med.J.* Vol. 3, p. 189.

MCKINNON, J. A.—"Mass Treatment of Tapeworm with Mepacrine." *E.Afr.Med.J.* Vol. 34, p. 15.

MCMAHON, J.—"Note on Housefly Resistance to Residual Insecticides." *E.Afr.Med.J.* Vol. 34, p. 507.

MCMAHON, J.—"Notes on Simulium Neavei Group of Simuliidae with particular reference to *S. Nyasalandicum* and *S. woodi*." *Bull.Ent.Res.* Vol. 48. p. 607.

MATSON, A. T.—"History of Malaria in Nandi." *E.Afr.Med.J.* Vol. 34, p. 431.

NELSON, G. S. AND R. B. HEISCH.—"Microfiliaria like those of *Wuncheria malayi* in Dogs and Cats in East Africa." *Trans.Roy.Soc.Trop.Med.Hyg.* Vol. 51. p. 90.

NEVILL, G. E. AND L. B.—"Problem of Surgery for Lung Tuberculosis in East Africa." *E.Afr.Med.J.* Vol. 34, p. 227.

O'KEEFE, D.—"A case of Traumatic Caesarian Section." March 30th, *Brit.Med.J.*, 1957, Vol. I, p. 748.

SHORT, E. I. AND M. CASE.—"A Spot Test for Isoniazid in Urine." *Tubercle*, Vol. 38, p. 288.

STOTT, H.—"Isoniazid Alone in the Treatment of Pulmonary Tuberculosis." *E.Afr. Med.J.* Vol. 34, p. 325.

TALLACK, R. J. K.—"Epidemiology of Yaws in Zanzibar and Pemba." *E.Afr.Med.J.* Vol. 34, p. 535.

TAYLOR, J. H.—"Twin Pregnancy; Well-formed Hydatidiform Mole association with normal viable child." *Brit.Med.J.*, 1957, p. 1103.

TEESDALE, C.—"The Genus Musa Linn. and its role in the breeding of Aedes (stegomyia) *Simsoni* (theo.) on the Kenya Coast." *Bull.Ent.Res.* Vol. 48, p. 251.

WHITTAKER, L. R.—"Incidence of Cervical Rib in African Patients." *E.Afr.Med.J.* Vol. 34, p. 431.

WHITTAKER, L. R.—"Minor Lobes of the Right Lung." *E.Afr.Med.J.* Vol. 34, p. 27.

NOTIFICATIONS OF THE MAIN INFECTIOUS DISEASES, 1957

	Mombasa Port	Coast Province	Nairobi City	Central Province	Rift Valley Province	Nyanza Province	Northern Frontier Province	Southern Province	Total	Deaths
Kala-azar	—	—	—	20	55	—	5	472	552	5
Plague	—	—	—	19	—	—	—	—	19	19
Smallpox	12	22	59	182	363	105	4	59	806	1
Endemic Typhus.. ..	—	6	5	—	8	5	3	—	27	1
Cerebro-Spinal Meningitis	1	8	22	487	90	85	—	67	760	98
Poliomyelitis	21	20	113	202	125	104	1	28	614	30
Relapsing Fever	—	6	—	13	—	9	—	2	30	1
Typhoid Fever	18	42	43	694	657	150	13	54	1,671	87
Trypanosomiasis.. ..	—	—	—	—	—	61	—	—	61	5
Bacillary Dysentery ..	37	703	364	329	642	506	162	172	2,915	44
Influenza	10	2,535	—	1,656	4,441	838	4,373	660	14,513	—
Lobar Pneumonia ..	168	577	—	1,714	1,635	1,387	477	513	6,471	481

RETURN OF DISEASES—OUT-PATIENTS, 1957

Code	Diseases	European			Asian			African		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
	Infectious and Parasitic Diseases									
001–008	Respiratory Tuberculosis	39	15	54	1,542	965	2,507	5,985	3,591	9,576
010–019	Other Tuberculosis	—	2	2	1	—	1	947	650	1,597
020–029	Syphilis	—	—	—	1	—	1	4,859	2,774	7,633
030–035	Gonorrhoea	6	—	6	6	1	7	13,965	5,350	19,315
036–039	Other Venereal Diseases	—	—	—	—	—	—	927	222	1,149
045	Bacillary Dysentery	87	75	162	51	21	72	4,019	2,661	6,680
046	Amoebic Dysentery	29	25	54	16	13	29	1,306	906	2,212
055	Diptheria	1	—	1	—	—	—	28	28	56
056	Whooping Cough	10	4	14	38	18	56	3,906	4,002	7,908
057, 340	Meningitis (excluding Tuberculosis)	—	—	—	—	—	—	226	164	390
058	Plague	—	—	—	—	—	—	4	2	6
060	Leprosy	—	—	—	—	—	—	643	429	1,072
061	Tetanus	—	—	—	—	—	—	194	128	322
062	Anthrax	—	—	—	1	—	1	217	187	404
071	Relapsing Fever	—	1	1	—	—	—	5	6	11
073	Yaws	—	—	—	—	—	—	2,224	1,806	4,030
080	Acute Poliomyelitis	3	3	6	2	1	3	70	91	161
084	Variola Major	—	—	—	—	—	—	—	2	2
084	Variola Minor	—	—	—	—	—	—	173	91	264
085	Measles	12	47	59	17	11	28	2,526	2,019	4,545
086	Rubella	2	8	10	—	—	—	21	12	33
087	Chicken Pox	6	33	39	9	2	11	2,141	1,127	3,268
088	Herpes Zoster	9	8	17	15	13	28	955	470	1,425
089	Mumps	30	90	120	12	8	20	894	496	1,390
092	Infectious Hepatitis	12	15	27	5	3	8	640	409	1,049
095	Trachoma	—	—	—	11	4	15	2,012	1,547	3,559
110	B.T. Malaria	—	—	—	—	—	—	263	265	528
111	Qt. Malaria	—	2	2	—	1	1	209	123	332
112	S.T. Malaria	112	46	158	30	16	46	8,797	6,987	15,784
115	Blackwater	—	—	—	6	4	10	4	1	5
121	Trypanosomiasis	1	—	1	—	—	—	23	6	29
120.0	Schistosomiasis (Haematobium)	1	—	1	3	—	3	2,247	769	3,016
123.1	Schistosomiasis (Mansoni)	—	2	2	—	—	—	334	233	567
126	Tapeworm	9	5	14	10	12	22	7,388	4,122	11,510
127	Onchocerciasis	3	8	11	—	—	—	6	5	11
129	Ankylostomiasis	1	2	3	3	—	3	2,489	1,912	4,401
130.0	Ascariasis	6	14	20	5	5	10	5,241	4,727	9,968

RETURN OF DISEASES—OUT-PATIENTS, 1957—(*Contd.*)

Code	Diseases	European			Asian			African		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
	Infectious and Parasitic Diseases—(*Contd.*)									
131	Tinea	49	43	92	3	5	8	1,370	683	2,053
135	Scabies	4	1	5	36	31	67	7,564	6,789	14,353
N.O.S. 036–138	Other Infective and Parasitic Diseases	54	41	95	44	21	65	12,026	8,348	20,374
	New Growths									
140–205	Malignant Neoplasms	3	4	7	—	1	1	167	126	293
210–239	Benign and other Neoplasms	30	46	76	1	1	2	475	367	842
	Allergic Metabolic and Blood Diseases									
241	Asthma	28	49	77	173	106	279	3,175	1,555	4,730
286.6	Kwashiorkor	2	—	2	—	2	2	1,645	1,535	3,180
290–293	Anaemia	20	80	100	41	58	99	2,121	1,778	3,899
N.O.S. 240–299	Other Allergic, Endocrine, Metabolic and Nutritional Diseases	137	153	290	212	48	260	3,096	1,236	4,332
	Diseases of Nervous System and Sense Organs									
300–326	Mental Disorder	45	61	106	13	9	22	471	246	717
353	Epilepsy	2	2	4	2	4	6	493	260	753
N.O.S. 330–369	Other Diseases of the Nervous System and Sense Organs	197	249	446	103	47	150	2,530	940	3,470
	Diseases of Eye and Ear									
370	Conjunctivitis and Ophthalmia	104	92	196	210	147	357	16,065	13,152	29,217
373	Stye	23	23	46	26	10	36	1,423	834	2,257
389	Blindness	—	—	—	—	—	—	418	136	554
N.O.S. 371–388	Other Diseases of Eye (not Trachoma)	37	51	88	19	7	26	2,571	1,899	4,470
390–398	Diseases of Ear and Mastoid Process	366	247	613	304	181	485	10,375	6,477	16,852
	Circulatory Diseases									
400–447	Diseases of the Heart	39	54	93	16	4	20	592	437	1,029
450–468	Other Circulatory Diseases	87	74	161	11	5	16	1,254	1,032	2,286
	Respiratory Disease									
490–493	Pneumonia	29	34	63	148	135	283	9,918	7,838	17,756

RETURN OF DISEASES—OUT-PATIENTS, 1957—(*Contd.*)

Code	Diseases	European			Asian			African		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
	Respiratory Diseases—(*Contd.*)									
N.O.S. 470–527	Other Diseases of the Respiratory System (including Coryza, Pharyngitis and Bronchitis)	1,762	1,722	3,484	5,445	2,997	8,442	129,405	79,142	208,547
	Alimentary Diseases									
530–535	Dental Caries–Other Disease of Teeth and Gums	76	83	159	108	45	153	12,559	8,458	21,017
537	Glossitis	3	4	7	1	2	3	262	233	495
536–538	Stomatitis and Other Diseases of the Buccal Cavity and Salivary Glands	144	193	337	299	117	416	7,552	5,329	12,881
560–561, 570	Intestinal Obstruction and Hernia	56	40	96	16	11	27	848	109	957
571.0	Gastro-enteritis under 2 Years	38	27	65	218	167	385	10,560	10,908	21,468
571.1	Gastro-enteritis over 2 Years	285	231	516	225	148	373	14,934	8,324	23,258
N.O.S. 539–587	Other Diseases of Alimentary System	367	298	665	587	278	865	36,780	24,934	61,714
	Genito-Urinary Diseases									
613	Hydrocele	7	—	7	—	—	—	462	—	462
N.O.S. 590–617	Other Diseases of Genito-Urinary System and Male Genital Organs	92	30	122	30	1	31	5,480	877	6,357
636	Sterility (Female)	—	32	32	—	18	18	—	2,092	2,092
N.O.S. 620–637	Other Diseases of Uterus and Female Genital Organs	—	717	717	—	93	93	—	9,641	9,641
	Normal Pregnancy	—	471	471	—	57	57	—	7,263	7,263
650–652	Abortion	—	24	24	—	11	11	—	2,818	2,818
N.O.S. 640–689	Other Diseases of Childbirth	—	29	29	—	8	8	—	292	292
	Skin and Musculo-Skeletal Diseases									
690–698	Boils, and Infections of Skin and Subcutaneous Tissues	430	361	791	405	341	746	22,694	13,838	36,532
715	Chronic Ulcers	3	7	10	89	55	144	24,806	15,085	39,891
N.O.S. 700–716	Other Diseases of the Skin	401	368	769	303	179	482	11,998	7,948	19,946
720–759	Diseases of Bones, Joints, Muscles and Malformation	433	341	774	696	221	917	28,590	14,000	42,590

RETURN OF DISEASES—OUT-PATIENTS, 1957—(*Contd.*)

Code	Diseases	European			Asian			African		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
	ILL-DEFINED DISEASES AND INJURIES									
760–776	Neonatal Diseases	18	11	29	—	—	—	391	274	665
788.8	Pyrexia of Unknown Origin	234	149	383	499	194	693	45,424	29,034	74,458
N.O.S. 780–795	All Other Ill-defined Causes of Morbidity	377	542	919	279	124	403	4,604	3,080	7,684
N.800–N.839	Fractures and Dislocations	56	29	85	33	7	40	5,459	2,820	8,279
N.840–N.848	Sprains	84	37	121	121	28	149	7,401	2,475	9,876
N.930–N.936	Foreign Bodies	18	18	36	38	42	80	3,310	1,646	4,956
N.940–N.949	Burns and Scalds	16	8	24	93	75	168	6,073	4,531	10,604
N.960–N.979	Poisoning	12	2	14	5	2	7	509	257	766
N.O.S. N.850–N.999	Other Injuries and Wounds	272	169	441	1,212	808	2,020	53,246	22,308	75,554
Y.00–Y.18	Examinations	1,462	653	2,115	3,275	1,097	4,372	17,279	5,487	22,766
	TOTAL	8,281	8,305	16,586	17,123	9,046	26,169	604,263	387,191	991,454

RETURN OF DISEASES—IN-PATIENTS, 1957

Code	List No.	Diseases	European			Total Deaths	Asian			Total Deaths	African			Total Deaths
			Admission				Admission				Admission			
			Male	Female	Total		Male	Female	Total		Male	Female	Total	
		General Infectious and Parasitic Diseases												
	A.													
001–008	1	Respiratory Tuberculosis	7	3	10	1	118	53	171	9	2,915	1,907	4,822	530
010	2	T.B. of Meninges and Central Nervous System	—	—	—	—	—	—	—	—	118	86	204	78
011	3	T.B. of Intestines, Peritoneum and Mesenteric Glands	—	—	—	—	—	1	1	—	107	84	191	21
012, 013	4	Tuberculosis of Bones and Joints.. ..	—	—	—	—	—	—	—	—	361	223	584	19
014–019	5	Tuberculosis—All other Forms	1	1	2	—	6	1	7	—	372	270	642	67
020	6	Congenital Syphilis	—	—	—	—	—	—	—	—	47	32	79	12
021.0, 021.1	7	Primary Syphilis	—	—	—	—	1	—	1	—	150	76	226	—
021.2–021.4	7	Secondary Syphilis	—	—	—	—	—	—	—	—	124	118	242	—
024	8	Tabes Dorsalis	—	—	—	—	—	—	—	—	19	5	24	1
025	9	General Paralysis of Insane	—	—	—	—	—	—	—	—	30	9	39	5
022, 023	10	Cardio Vascular Syphilis	—	—	—	—	—	—	—	—	11	2	13	4
026–029	10	All other Syphilis	—	—	—	—	—	—	—	—	102	47	149	2
030, 031	11	Gonorrhoea, Genito-Urinary	—	—	—	—	1	—	1	—	447	246	693	3
033	11	Gonoccal Infection of Eye	—	—	—	—	—	—	—	—	97	73	170	—
032, 034, 035	11	Other Gonoccal Infections	—	—	—	—	—	—	—	—	101	171	272	—
040	12	Typhoid Fever	1	—	1	—	1	—	1	—	800	844	1,644	182
041, 042	13	Salmonella Infections	—	—	—	—	—	—	—	—	14	8	22	—
043	14	Cholera	—	—	—	—	—	—	—	—	—	—	—	—
044	15	Brucellosis	1	—	1	—	—	—	—	—	99	41	140	4
045	16	Bacillary Dysentery	10	20	30	—	—	3	3	—	1,331	822	2,153	91
046	16	Amoebiasis	6	1	7	—	7	2	9	—	579	386	965	30
047, 048	16	Other Unspecified Dysentery	1	2	3	—	3	—	3	—	518	355	873	40
050	17	Scarlet Fever	—	—	—	—	—	—	—	—	22	14	36	—
051	18	Streptococcal Sore Throat	—	—	—	—	4	2	6	—	281	230	511	—
052	19	Erysipelas	—	—	—	—	—	—	—	—	9	—	9	—
053	20	Septicaemia and Pyaemia	—	—	—	—	—	—	—	—	30	17	47	21
055	21	Diptheria	2	—	2	—	3	4	7	—	28	9	37	11
056	22	Whooping Cough	—	—	—	—	—	1	1	—	964	1,064	2,028	122
057	23	Meningococcal Infections	—	1	1	—	2	1	3	—	361	206	567	95
058	24	Plague	—	—	—	—	—	—	—	—	3	2	5	1
060	25	Leprosy	—	—	—	—	3	—	3	—	157	61	218	7

RETURN OF DISEASES—IN-PATIENTS, 1957—(*Contd.*)

Code	List No.	Diseases	European			Total Deaths	Asian			Total Deaths	African			Total Deaths
			Admission				Admission				Admission			
			Male	Female	Total		Male	Female	Total		Male	Female	Total	
		General Infectious and Parasitic Diseases—(*Contd.*)												
	A.													
061	26	Tetanus	—	—	—	—	1	—	1	—	301	204	505	258
062	27	Anthrax	—	—	—	—	—	—	—	—	270	220	490	28
080	28	Acute Poliomyelitis	33	29	62	4	12	16	28	2	304	217	521	34
082	29	Acute Infectious Encephalitis	—	1	1	—	1	1	2	1	25	26	51	8
081, 083	30	Late Effects Poliomyelitis and Infectious Encephalitis	—	—	—	—	2	3	5	1	48	54	102	2
084	31	Variola Major	—	—	—	—	—	—	—	—	—	—	—	—
084	31	Variola Minor	1	—	1	—	—	—	—	—	471	370	841	2
085	32	Measles	9	4	13	—	—	—	—	—	962	779	1,741	48
091	33	Yellow Fever	—	—	—	—	—	—	—	—	5	3	8	—
092	34	Infectious Hepatitis	1	1	2	—	2	1	3	1	215	113	328	20
094	35	Rabies	—	—	—	—	—	—	—	—	6	1	7	2
100	36	Louse Borne Epidemic Typhus	—	—	—	—	—	—	—	—	—	—	—	—
101	36	Flea Borne Endemic Typhus	—	—	—	—	—	—	—	—	—	—	—	—
104	36	Tick Borne Typhus	4	—	4	—	—	—	—	—	7	2	9	—
N.O.S. 102–108	36	Other Rickettsial Diseases	—	—	—	—	—	—	—	—	—	—	—	—
110	37	B.T. Malaria	—	—	—	—	2	—	2	—	39	22	61	1
111	37	Qt. Malaria	1	—	1	—	—	—	—	—	87	50	137	1
112	37	S.T. Malaria	41	8	49	—	17	3	20	2	2,972	2,634	5,606	188
115	37	Blackwater Fever	—	—	—	—	1	—	1	—	7	1	8	—
N.O.S. 113–117	37	Other Forms of Malaria	1	—	1	—	23	1	24	—	2,035	1,266	3,301	77
123.0	38	Schistosomiasis (Haematobium)	—	—	—	—	3	—	3	—	545	266	811	5
123.1	38	Schistosomiasis (Mansoni)	—	—	—	—	5	1	6	—	269	151	420	7
123.2	38	Schistosomiasis (Japonicum)	—	—	—	—	—	—	—	—	2	—	2	—
123.3	38	Other Unspecified Schistosomiasis	—	—	—	—	—	—	—	—	80	18	98	2
125	39	Hydatid Disease	—	—	—	—	—	—	—	—	27	19	46	6
127	40	Onchocerciasis	—	—	—	—	—	—	—	—	25	6	31	—
	40	Loiasis	—	—	—	—	—	—	—	—	1	—	1	—
127	40	Filariasis (Elephantiasis)	—	—	—	—	—	—	—	—	43	20	63	—
127	40	Other Filariasis	—	—	—	—	—	—	—	—	22	4	26	—
129	41	Ankylostomiasis	—	—	—	—	1	1	2	—	539	444	983	1
126	42	Tapeworm and other Cestode Infestation	5	—	5	—	—	—	—	—	586	442	1,028	—

RETURN OF DISEASES—IN-PATIENTS, 1957—(*Contd.*)

Code	List No.	Diseases	European			Total Deaths	Asian			Total Deaths	African			Total Deaths
			Admission				Admission				Admission			
			Male	Female	Total		Male	Female	Total		Male	Female	Total	
		General Infectious and Parasitic Diseases—(*Contd.*)												
	A.													
130.0	42	Ascariasis	—	—	—	—	—	—	—	—	540	462	1,002	1
130.3	42	Guineaworm	—	—	—	—	—	—	—	—	7	4	11	—
N.O.S. 124–130	42	Other Diseases due to Helminths	—	—	—	—	—	—	—	—	80	38	118	—
036	43	Chancroid	—	—	—	—	—	—	—	—	15	2	17	—
037	43	Lymphogranuloma Venereum	—	—	—	—	—	—	—	—	16	2	18	—
038	43	Granuloma Inguinale	—	—	—	—	—	—	—	—	10	7	17	—
039	43	Other Unspecified Venereal Diseases	—	—	—	—	—	—	—	—	67	45	112	—
049	43	Food Poisoning, Infective and Toxic (excepting Salmonella Infections)	—	—	—	—	—	—	—	—	137	78	215	—
071.0	43	Relapsing Fever (Louse Borne)	—	—	—	—	1	—	1	—	6	3	9	1
071.1		Relapsing Fever (Tick Borne)	—	—	—	—	—	—	—	—	8	5	13	—
072	43	Weil's Diseases	—	—	—	—	—	—	—	—	—	2	2	—
073	43	Yaws	—	—	—	—	1	—	1	—	39	32	71	—
086	43	Rubella	—	—	—	—	—	—	—	—	12	10	22	—
087	43	Chicken Pox	—	1	1	—	3	2	5	—	875	283	1,158	—
088	43	Herpes Zoster	1	—	1	—	—	—	—	—	36	22	58	—
089	43	Mumps	6	5	11	—	—	1	1	—	158	64	222	—
090	43	Dengue	—	—	—	—	—	—	—	—	10	—	10	—
095	43	Trachoma	—	—	—	—	—	—	—	—	205	225	430	—
096.7	43	Sandfly Fever	—	—	—	—	—	—	—	—	10	—	10	—
120	43	Leishmaniasis	—	—	—	—	—	—	—	—	70	23	93	13
121.0	43	Trypanosomiasis (Gambiense)	—	—	—	—	—	—	—	—	11	11	22	6
121.0	43	Trypanosomiasis (Rhodesiense)	—	—	—	—	—	—	—	—	—	—	—	—
121.2	43	Other Unspecified Trypanosomiasis	—	—	—	—	—	—	—	—	25	—	25	2
131	43	Dermatophytosis (Tinea)	—	1	1	—	10	5	15	—	33	35	68	—
135	43	Scabies	—	—	—	—	—	—	—	—	236	215	451	—
N.O.S. 054–122	43	Other Infectious and Protozoal Diseases	—	—	—	—	2	—	2	—	84	44	128	—
N.O.S. 132–138	43	Other Parasitic Diseases	1	1	2	—	14	4	18	—	185	143	328	2

RETURN OF DISEASES—IN-PATIENTS, 1957—(*Contd.*)

Code	List No.	Diseases	European			Total Deaths	Asian			Total Deaths	African			Total Deaths
			Admission				Admission				Admission			
			Male	Female	Total		Male	Female	Total		Male	Female	Total	
		NEW GROWTHS												
	A.													
140–148	44	Malignant Neoplasm of Mouth and Pharynx	—	—	—	—	—	—	—	—	35	10	45	2
150	45	Malignant Neoplasms of Oesophagus ..	—	—	—	—	—	—	—	—	27	8	35	8
151	46	Malignant Neoplasm of Stomach ..	—	—	—	—	—	1	1	—	24	16	40	21
152, 153	47	Malignant Neoplasm of Intestine.. ..	—	—	—	—	—	—	—	—	13	8	21	9
154	48	Malignant Neoplasm of Rectum ..	—	—	—	—	—	—	—	—	16	1	17	3
161	49	Malignant Neoplasm of Larynx	—	—	—	—	—	—	—	—	6	6	12	1
162, 163	50	Malignant Neoplasm of Trachea, Bronchus and Lung not Specified as Secondary ..	1	—	1	—	—	—	—	—	16	8	24	7
170	51	Malignant Neoplasm of Breast	—	2	2	—	—	—	—	—	—	63	63	4
171	52	Malignant Neoplasm of Cervix Uteri ..	—	—	—	—	—	—	—	—	—	99	99	12
172, 174	53	Malignant Neoplasm of other Unspecified Parts of Uterus	—	—	—	—	—	—	—	—	—	42	42	7
177	54	Malignant Neplasm of Prostate	—	—	—	—	1	—	1	1	28	4	32	7
190, 191	55	Malignant Neoplasm of Skin	—	—	—	—	—	—	—	—	58	60	118	7
196, 197	56	Malignant Neoplasm of Bone and Connected Tissue	—	—	—	—	—	—	—	—	45	21	66	15
155	57	Malignant Neoplasm of Liver and Bile Passage (Primary)	—	—	—	—	3	—	3	2	94	45	139	38
N.O.S. 156–199	57	Malignant Neoplasm of all other and Unspecified Sites	—	—	—	—	10	1	11	2	210	117	327	60
204	58	Leukaemia and Aleukaemia	—	—	—	—	2	2	4	1	20	17	37	9
200–203, 205	59	Lymphosarcoma and other Neoplasm of Lymphatic and Haematopoietic Systems	—	—	—	—	—	1	1	—	46	9	55	16
210–239	60	Benign Neoplasms and Unspecified Neoplasms	—	2	2	—	3	5	8	2	241	232	473	10
		ALLERGIC, METABOLIC AND BLOOD DISEASES												
250, 251	61	Non-toxic Goitre	—	—	—	—	—	1	1	—	5	23	28	—
252	62	Thyrotoxicosis	—	—	—	—	—	—	—	—	3	6	9	—

RETURN OF DISEASES—IN-PATIENTS, 1957—(*Contd.*)

Code	List No.	Diseases	European			Total Deaths	Asian			Total Deaths	African			Total Deaths
			Admission				Admission				Admission			
			Male	Female	Total		Male	Female	Total		Male	Female	Total	
		ALLERGIC, METABOLIC AND BLOOD DISEASES—(*Contd.*)												
	A.													
260	63	Diabetes Mellitus	2	2	4	—	14	9	23	2	99	34	133	17
280	64	Beri-Beri	—	—	—	—	—	—	—	—	6	2	8	—
281	64	Pellagra	—	—	—	—	1	—	1	—	112	75	187	4
282	64	Scurvy	—	—	—	—	—	—	—	—	14	16	30	—
286.6	64	Kwashiorkor	—	—	—	—	1	—	1	—	595	493	1,088	211
283–286	64	Other Deficiency States	—	—	—	—	4	1	5	—	293	229	522	64
290	65	Pernicious and other Hyperchromic Anaemias	—	—	—	—	3	4	7	1	93	71	164	11
291	65	Iron Deficiency Anaemias	1	1	2	—	—	1	1	—	179	196	375	34
292, 293	65	Other Anaemias	—	1	1	—	4	7	11	1	297	424	721	79
241	66	Asthma	1	2	3	—	5	3	8	—	642	329	971	16
N.O.S. 240–299	66	Other Allergic, Endocrine, Metabolic and Blood Diseases	—	1	1	1	12	6	18	—	195	127	322	14
		DISEASES OF NERVOUS SYSTEM AND SENSE ORGANS												
300–309	67	Psychoses	23	32	55	—	27	13	40	—	699	283	982	6
310–324, 326	68	Psychoneuroses and Disorders of Personality	2	5	7	—	1	—	1	—	134	98	232	3
325	59	Mental Deficiency	—	—	—	—	—	—	—	—	161	124	285	3
330–334	70	Vascular Lesions Affecting Central Nervous System	—	—	—	—	38	2	40	—	53	24	77	18
340.0	71	Meningitis due to H. Influenza	—	—	—	—	4	1	5	1	12	6	18	9
340.1	71	Meningitis due to Pneumococcus	—	—	—	—	1	—	1	1	162	102	264	78
340.2	71	Meningitis due to Other Organisms except Tuberculosis and Syphilitic	—	—	—	—	—	—	—	—	164	118	282	77
340	71	Meningitis (except Meningococcal and Tuberculous)	1	—	1	—	1	—	1	—	166	126	292	52
345	72	Multiple Sclerosis	—	1	1	—	—	—	—	—	1	—	1	1
353	73	Epilepsy	—	—	—	1	1	—	1	—	210	103	313	13
370–379	74	Inflammatory Diseases of Eye	1	—	1	—	11	7	18	—	490	377	867	1

RETURN OF DISEASES—IN-PATIENTS, 1957—(*Contd.*)

Code	List No.	Diseases	European			Total Deaths	Asian			Total Deaths	African			Total Deaths
			Admission				Admission				Admission			
			Male	Female	Total		Male	Female	Total		Male	Female	Total	
		Diseases of Nervous System and Sense Organs—(*Contd.*)												
	A.													
385	75	Cataract	—	—	—	—	9	4	13	—	246	100	346	—
387	76	Glaucoma	—	—	—	—	2	—	2	—	17	9	26	—
390	77	Otitis Externa	3	1	4	—	26	8	34	—	79	58	137	—
391–393	77	Otitis Media and Mastoiditis	1	—	1	—	25	8	33	—	333	244	577	4
394	77	Other Inflammatory Diseases of Ear	—	—	—	—	8	3	11	—	73	35	108	—
N.O.S. 341–369 395–398	78	All other Diseases of Nervous System, Sense Organs and Auditory System	5	2	7	—	10	2	12	—	221	135	356	39
N.O.S. 380–389	78	All other Diseases and Conditions of Eye	—	—	—	—	2	—	2	—	355	156	511	—
		Circulatory Diseases												
400–401	79	Rheumatic Fever	2	—	2	—	—	—	—	—	275	195	470	7
402	79	Chorea	—	1	1	—	2	1	3	—	19	7	26	—
410–416	80	Chronic Rheumatic Heart Disease	—	—	—	—	12	8	20	3	120	77	197	51
420–422	81	Arteriosclerotic and Degenerative Heart Disease	4	1	5	2	41	10	51	4	56	35	91	30
430–434	82	Other Diseases of Heart	2	—	2	—	12	4	16	8	263	186	449	142
440–443	83	Hypertension with Heart Disease	4	—	4	—	10	3	13	—	42	12	54	13
444–447	84	Hypertension without Mention of Heart	1	—	1	—	2	1	3	—	22	10	32	1
450–456	85	Diseases of Arteries	2	1	3	2	—	—	—	—	20	10	30	8
460–468	86	Other Diseases of Circulatory System	12	3	15	—	7	2	9	2	196	77	273	19
		Respiratory Diseases												
470–475	87	Acute Upper Respiratory Infections	12	5	17	—	31	30	61	—	774	586	1,360	8
480–483	88	Influenza	2	3	5	—	19	10	29	—	3,159	1,922	5,081	22
490	89	Lobar Pneumonia	3	2	5	—	10	1	11	3	4,570	2,590	7,160	379
491	90	Bronchopneumonia	6	—	6	—	8	1	9	4	4,456	4,080	8,536	1,155
492, 493	91	Primary Atypical, other and Unspecified Pneumonia	—	2	2	—	5	1	6	1	1,514	964	2,478	147
500	92	Acute Bronchitis	5	5	10	—	9	4	13	2	3,227	2,987	6,214	46

RETURN OF DISEASES—IN-PATIENTS, 1957—(*Contd.*)

Code	List No.	Diseases	European			Total Deaths	Asian			Total Deaths	African			Total Deaths
			Admission				Admission				Admission			
			Male	Female	Total		Male	Female	Total		Male	Female	Total	
		Respiratory Diseases—(*Contd.*)												
	A.													
501, 502	93	Bronchitis, Chronic and Unqualified ..	2	—	2	—	3	—	3	—	2,229	1,675	3,904	13
510	94	Hypertrophy of Tonsils and Adenoids ..	38	18	56	—	48	32	80	—	588	421	1,009	2
518, 521	95	Empyema and Abscess of Lung	—	—	—	—	2	—	2	—	89	32	121	17
519	96	Pleurisy (other than Tuberculous) ..	2	—	2	—	31	20	51	—	197	125	322	7
523	97	Pneumoconiosis	1	—	1	—	9	6	15	—	41	28	69	—
N.O.S. 511–527	97	All other Respiratory Diseases	2	1	3	—	5	1	6	—	349	271	620	13
		Alimentary Diseases												
530	98	Dental Caries	5	—	5	—	9	—	9	—	151	70	221	—
531, 535	98	All other Diseases of Teeth and Supporting Structures	—	3	3	—	29	30	59	—	150	126	276	—
540	99	Ulcer of Stomach	—	—	—	—	2	—	2	—	87	46	133	3
541	100	Ulcer of Duodenum	5	2	7	—	4	—	4	—	80	29	109	3
543	101	Gastritis and Duodenitis	4	3	7	—	3	—	3	—	340	349	689	3
550–553	102	Appendicitis	11	8	19	—	46	37	83	—	149	66	215	8
560, 561, 570	103	Intestinal Obstruction and Hernia ..	1	1	2	—	43	7	50	1	930	125	1,055	123
571.0	104	Gastro-Enteritis and Colitis between Four Weeks and Two Years	1	2	3	—	10	4	14	3	2,345	1,637	3,982	499
571.1	104	Gastro-Enteritis and Colitis, Ages Two Years and over	16	10	26	—	16	8	24	4	1,660	1,152	2,812	132
572	104	Chronic Enteritis and Ulcerative Colitis ..	4	1	5	—	—	—	—	—	99	112	211	8
581	105	Cirrhosis of Liver	—	—	—	—	—	—	—	—	233	112	345	91
584, 585	106	Cholelithiasis and Cholecystitis	1	1	2	—	1	1	2	—	24	16	40	1
536–587	107	Other Diseases of Digestive System ..	12	10	22	—	45	20	65	1	1,201	896	2,097	37
		Genito-Urinary Disease												
590	108	Acute Nephritis	—	—	—	—	9	1	10	—	105	74	179	17
591–594	108	Chronic, other and Unspecified Nephthritis	—	1	1	—	—	—	—	—	140	108	248	45
600	110	Infections of Kidney (Other than Tuberculous)	—	4	4	—	7	1	8	1	57	127	184	15

RETURN OF DISEASES—IN-PATIENTS, 1957—(*Contd.*)

Code	List No.	Diseases	European			Total Deaths	Asian			Total Deaths	African			Total Deaths
			Admission				Admission				Admission			
			Male	Female	Total		Male	Female	Total		Male	Female	Total	
		GENITO-URINARY DESEASES—(*Contd.*)												
	A.													
602, 604	111	Calculi of Urinary System	2	1	3	—	1	—	1	—	23	5	28	—
610	112	Hyperplasia of Prostate	1	—	1	—	1	4	5	—	91	5	96	4
620, 621	113	Diseases of Breast (not Neoplastic) ..	—	—	—	—	—	4	4	—	4	423	427	—
613	114	Hydrocele	—	—	—	—	2	—	2	—	276	—	276	—
634	114	Disorders of Menstruation	—	5	5	—	—	46	46	—	—	906	906	—
N.O.S. 601–617	114	Other Diseases of Genito-Urinary System and Male Genital Organs	8	—	8	—	77	5	82	1	928	67	995	15
N.O.S. 622–637	114	Other Diseases of Uterus and Female Genital Organs	—	44	44	—	—	112	112	—	—	2,273	2,273	17
		DISEASES OF PREGNANCY PUERPERIUM												
640–641 681/2/4	115	Sepsis of Pregnancy, Childbirth and the Puerperium	—	—	—	—	—	35	35	1	—	311	311	13
642, 652, 685, 686	116	Toxaemias of Pregnancy and the Puerperium	—	—	—	—	—	31	31	—	—	269	269	4
643, 644	117	Haemorrhage of Pregnancy and Childbirth	—	4	4	—	—	2	2	—	—	317	317	18
650	118	Abortion without Mention of Sepsis or Toxaemia	—	5	5	—	—	25	25	—	—	2,538	2,538	3
650	119	Abortion with Sepsis	—	—	—	—	—	3	3	—	—	296	296	6
660	120	Delivery without Complications	—	52	52	—	—	162	162	—	—	12,171	12,171	—
N.O.S. 645–689	120	Other Complications of Pregnancy, Childbirth and Puerperium	—	26	26	—	—	35	35	—	—	2,348	2,348	151
		SKIN AND MUSCULO-SKELETAL DISEASES												
690–698	121	Infections of Skin and Subcutaneous Tissue	21	4	25	—	24	3	27	—	1,970	1,152	3,122	16
720–725	122	Arthritis and Spondylitis	4	1	5	—	—	—	—	—	601	312	913	1
726–727	123	Muscular Rheumatism and Rheumatism, Unspecified	—	2	2	—	—	3	3	—	634	562	1,196	4
730	124	Osteomyelitis Periostitis	1	—	1	—	25	5	30	—	410	179	589	3

RETURN OF DISEASES—IN-PATIENTS, 1975—(*Contd.*)

Code	List No.	Diseases	European			Total Deaths	Asian			Total Deaths	African			Total Deaths
			Admission				Admission				Admission			
			Male	Female	Total		Male	Female	Total		Male	Female	Total	
		Skin and Musculo-Skeletal Diseases—(*Contd.*)												
	A.													
737,745–749	125	Ankylosis and Acquired Musculo-skeletal Deformities	6	8	14	—	1	—	1	—	55	28	83	—
715	126	Chronic Ulcer of Skin	2	2	4	—	12	6	18	—	1,497	991	2,488	8
700–714, 716	126	All other Diseases of Skin	6	1	7	—	2	8	10	—	580	350	930	2
731/736, 738–744	126	All other Diseases of Musculo-skeletal System	11	3	14	—	8	2	10	—	441	163	604	2
751	127	Spina Bifida and Meningocele	—	—	—	—	—	1	1	—	22	20	42	7
754	128	Congenital Malformations of Circulatory System	—	—	—	—	1	—	1	—	12	5	17	1
N.O.S. 750–759	129	Other Congenital Malformations	—	—	—	—	2	—	2	—	65	50	115	5
		Diseases of Newborn												
760–761	130	Birth Injuries	—	—	—	—	1	1	2	1	20	48	68	8
762	131	Post-natal Asphyxia and Atelectasis	—	—	—	—	—	—	—	—	7	9	16	4
764	132	Diarrhoea of New Born (under Four weeks)	—	—	—	—	1	—	1	—	101	51	152	9
765	132	Ophthalmia Neonatorum	—	—	—	—	2	2	4	—	5	4	9	1
763, 766–768	132	Other Infections of New Born	—	—	—	—	—	—	—	—	18	9	27	13
770	133	Haemolytic Disease of Newborn	—	1	1	—	—	—	—	—	3	7	10	5
769, 771, 772	134	All other defined Diseases of Early Infancy	—	—	—	—	—	—	—	—	101	79	180	23
773, 776	135	Ill-defined Diseases Peculiar to Early Infancy, and Immaturity, Unqualified	—	2	2	—	—	—	—	—	47	52	99	32
		Ill-Defined Diseases												
794	136	Senility without Mention of Psychosis	—	1	1	—	—	—	—	—	62	34	96	24
788.8	137	Pyrexia of Unknown Origin	46	16	62	—	36	4	40	—	4,708	3,462	8,170	94
793	137	Observation, without need for further medical care	19	18	37	—	42	12	54	—	703	1,167	1,870	10
N.O.S. 780–795	137	All other ill-defined Causes of Morbidity	3	3	6	—	11	22	33	—	551	376	927	63

RETURN OF DISEASES—IN-PATIENTS, 1957—(*Contd.*)

Code	List No.	Diseases	European			Total Deaths	Asian			Total Deaths	African			Total Deaths
			Admission				Admission				Admission			
			Male	Female	Total		Male	Female	Total		Male	Female	Total	
	A.N.	Injuries												
N.800-N.804	138	Fracture of Skull	—	—	—	—	5	4	9	3	249	66	315	72
N.805-N.809	139	Fracture of Spine and Trunk	1	1	2	—	5	—	5	1	181	40	221	16
N.810-N.829	140	Fracture of Limbs	6	3	9	—	30	11	41	—	3,133	1,085	4,218	22
N.830-N.839	141	Dislocation without Fracture	—	—	—	—	42	5	47	—	589	260	849	—
N.840-N.848	142	Sprains and Strains of Joints and Adjacent Muscle	—	1	1	—	2	2	4	—	650	276	926	—
N.850-N.856	143	Head injury (excluding Fracture)	1	1	2	—	15	3	18	—	508	149	657	32
N.860-N.869	144	Internal Injury of Chest, Abdomen and Pelvis	—	—	—	—	—	2	2	—	172	61	233	42
N.870-N.908	145	Laceration and Open Wounds	5	4	9	—	121	20	141	1	4,903	1,836	6,739	30
N.910-N.929	146	Superficial Injury, Contusion and Crushing with Intact Skin Surface	—	1	1	—	11	4	15	—	1,752	663	2,415	7
N.930-N.936	147	Effects of Foreign Body Entering through Orifice	—	—	—	—	9	4	13	—	345	234	579	4
N.940-N.949	148	Burns	—	1	1	—	16	6	22	2	1,264	807	2,071	123
N.960-N.979	149	Effects of Poisons	4	—	4	1	7	4	11	1	292	171	463	21
N.950-N.959 N.980-N.999	150	All other and Unspecified Effects of External Causes	1	—	1	—	4	2	6	—	1,044	519	1,563	32
		Total	482	430	912	12	1,485	1,041	2,526	78	88,928	79,924	168,852	7,083

G.P.K. 1517—470—6/58