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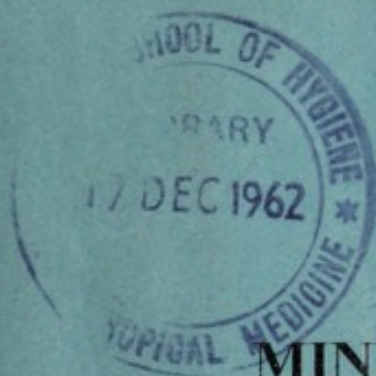
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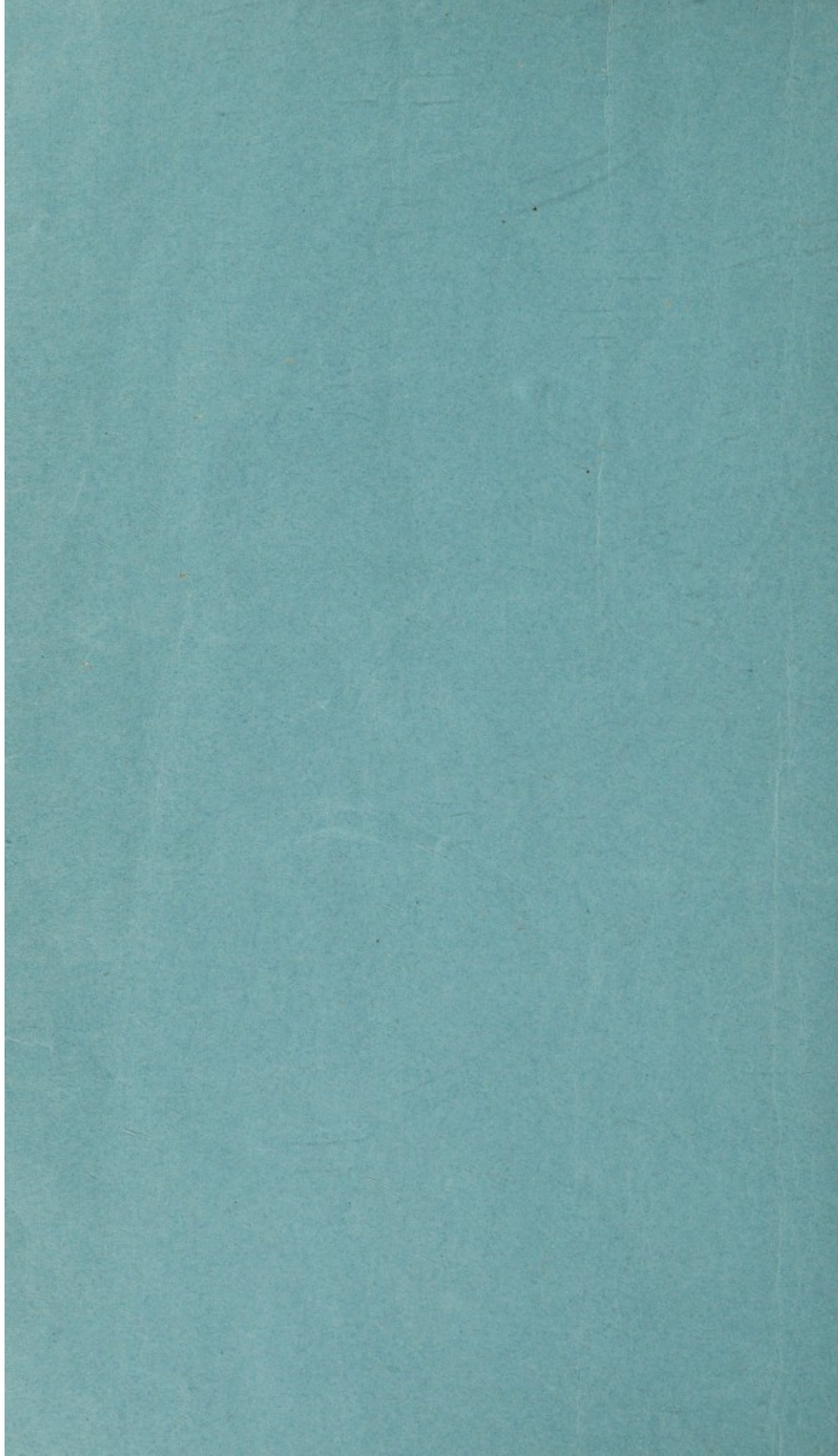


COLONY AND PROTECTORATE OF KENYA



**MINISTRY OF HEALTH
AND SOCIAL AFFAIRS
ANNUAL REPORT
1961**

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MINISTRY OF HEALTH AND SOCIAL AFFAIRS ANNUAL REPORT, 1961

INTRODUCTION

The practice of medicine today is divided into three main branches—curative, preventive and promotive. The first warrants no comment, its need being but too obvious in Kenya; the second branch, preventive medicine, requires to be subdivided into two aspects—primary prevention and secondary prevention. "Primary prevention" encompasses such procedures as improvement in environmental conditions and immunization to prevent illnesses from occurring. "Secondary prevention" deals with the early discovery and hence early treatment of incipient diseases to prevent them becoming serious.

Promotive medicine is more difficult to define, but it represents a radical departure from the concept which expresses the objectives of a health service as "to add years to life at one end of the scale and life to years at the other end of the scale". Its objective is total health, not "merely the absence of disease or infirmity" but "a state of complete physical, mental and social well-being".

Such a definition of health opens up a new vista of work for health services for it involves recognition of the ecological approach—that health is the outcome of a complete sympathy between man and his total environment. Although man attaches great importance to health it is more often appreciated in its absence than in its presence—a statement that applies equally to communities and to individuals, and when it comes to making a decision that will involve the disbursement of money there are many strong and competing voices.

In the more developed countries of Europe some 4 per cent of gross income is a recognized figure for health expenditure, and even in some of the newly emergent countries of Africa such as Ghana, expenditure is 3.8 per cent of the gross national income. In Kenya, less than 2 per cent is spent on health services; to put the matter in another way, expenditure per head of population in the United Kingdom is Sh. 320 per year; in Ghana some Sh. 20 per year and in Kenya Sh. 10 per year.

The evidence of national sickness is expressed in such figures as an infant mortality rate of some 170 deaths per 1,000 live births, as against a figure of under 30 for developed countries; a life expectancy of between 35 and 40 years as against 70 years in advanced countries; a crude death rate of some 24-26 per 1,000 against 10 or less in more developed countries; a tuberculosis incidence of over 100,000 cases; leprosy, 35,000 cases; trachoma, said to affect nearly 100 per cent of the children in certain areas. These are the lessons of mortality and morbidity data but there is yet another aspect of our ill-health which has been defined as the social pathology of disease; the symptoms are crime, delinquency, prostitution, illiteracy and starvation, symptoms that are a reflection of poverty and the lack of both health and social education.

As yet there is no single composite index that can express the health status of the community, nor any single index that can express the level of living, and we are left to attempt to interpret the state of health from a multiplicity of figures that relate to man—his heredity, his environment and the causative agents of disease—that is, his total ecological background.

Throughout the years improvements in health status can be demonstrated, and since man's heredity has altered but little, such improvements can be said to be due to the attack upon the specific agents of disease and to the improvements effected in his environment—and to health educating him to an awareness of his problems.

It is upon this ecological approach to health that the policies of this Ministry are framed, a comprehensive approach to health with integrated curative, preventive and promotive measures, directing its activities primarily to the family in its home setting. To achieve these aims we need to develop three main aspects or three main activities: services to the people, a training programme for health staff, and a research programme directed towards Kenya's needs, upon which future development must depend.

LEGISLATION

During the year the undermentioned legislation was dealt with by the Ministry:—

(a) Bills

FOOD, DRUGS AND CHEMICAL SUBSTANCES BILL

The final departmental draft was completed and the Bill received the highest priority for legal drafting. The Bill has been designed as an enabling Ordinance with a view to placing the responsibility for the implementation of standards and safety of food, drugs, medical substances and devices in the hands of local authorities, subject to control by a Statutory Board.

THE CHILDREN AND YOUNG PERSONS BILL

The final draft of this Bill was completed.

THE RADIATION BILL

At the end of the year the Radiation Bill was in the hands of the Government Printer. This Bill is designed to control the import, export, possession and use of radio-active substances and irradiating apparatus.

THE NURSES, MIDWIVES AND HEALTH VISITORS BILL

The departmental draft was circulated to interested parties for comment.

THE MEDICAL AUXILIARIES BILL

Draft legislation to control the practice, standards and training of certain categories of medical auxiliaries and to protect them was circulated to local authorities and professional associations.

(b) Amendments to Existing Legislation

MENTAL TREATMENT ORDINANCE

Amendments to this Ordinance to bring legislation up to date and remove certain anomalies were completed during the year and will shortly be drafted.

MEDICAL PRACTITIONERS AND DENTISTS ORDINANCE

Amending legislation to bring this Ordinance up to date was ready for final drafting at the end of the year.

(c) Subsidiary Legislation

The following subsidiary legislation under the Public Health Ordinance was made:—

- (i) The Public Health (Condensed Milk) Rules, 1961.

The following subsidiary legislation was drafted and is awaiting publication:—

- (i) The Public Health (Nursing Homes) Regulations.
- (ii) The Public Health (Ice Cream) Regulations.
- (iii) The Public Health (Holiday Camps) Regulations.

STATUTORY BOARDS AND COUNCILS

Medical Practitioners and Dentists Board

The Board met quarterly under the chairmanship of the Director of Medical Services.

The Board dealt with two disciplinary cases. There were no erasures.

A complete list of registered and licensed medical practitioners and registered dentists was published in the Kenya Gazette Special Issue, Vol. LXIII No. 24 dated 2nd June, 1961. It was appreciated that the register was not up to date and a notice was despatched to all practitioners on the register in an effort to delete the names of those no longer in practice in Kenya.

During the year 60 medical practitioners were registered and 12 licensed. Corresponding figures for 1960 were 57 registered and 15 licensed.

Pharmacy and Poisons Board

Four meetings of the Board were held in 1961. The Standing Pharmacists Committee, which deals with much of the detailed work of the Board, met on numerous occasions during the year. Amongst matters of importance dealt with by the Board was a revision of the Poisons List, and amendments to the Schedules of the Poisons Rules.

The Drugs Inspectorate continued to be active and a number of convictions for breaches of the Ordinance were obtained. It is hoped to increase the inspectorate in the near future to deal with the special problems of control necessary with increasing use in agriculture of organophosphorous compounds and other poisonous substances. Inspections were carried out regularly in all accessible areas in the Colony.

During the year 21 pharmacists were licensed.

The Post-Graduate Training Board

The Board continued to meet quarterly during the year and held an Extraordinary Meeting in November for the purpose of interviewing candidates for the post of Surgical Registrar at the King George VI Hospital.

During the year the Examining Board of England accepted King George VI Hospital as a hospital giving suitable experience for the Diploma in Laryngology and Otology.

Lectures continued to be arranged by the Senior Medical Officer in charge Training.

The Board laid down rules for the conduct of examinations in medicine and surgery held under its auspices.

Two candidates in medicine successfully passed the Board's examination, but only one candidate in surgery passed whilst two failed the examination.

One of the Board's trainees who proceeded to Britain successfully completed the primary and final fellowship at the Royal College of Surgeons, England and Edinburgh. Another candidate was successful in obtaining the membership of the Royal College of Physicians, Edinburgh, within a few months of proceeding to the United Kingdom. Yet another candidate was successful in passing the primary and final fellowship examinations of the Royal College of Surgeons, Edinburgh.

Nurses and Midwives Council of Kenya—1961

During the year there has been a very considerable increase in the work of the Council.

General nursing examinations for the register and rolls are now held three times a year instead of only twice a year. The first preliminary examination for students taking the new training course for enrolled assistant nurses was held in January, 1961. Reports from the hospitals indicate that the general standard of assistant nurses has much improved. Better selection of students is now possible as greatly increased numbers of candidates of the required educational standard are presenting themselves for training. In September for the first time a preliminary examination was held for students taking the two-year course for assistant midwives. During the year 49 students started the course for Kenya Registered Nurse training at the two recognized training schools.

In July Miss Marjorie Houghton, O.B.E., again visited Kenya on behalf of the General Nursing Council for England and Wales. Miss Houghton attended a special meeting of the Council when a most interesting and helpful discussion took place. As a result of Miss Houghton's visit and recommendations the General Nursing Council for England and Wales agreed to continue the recognition previously granted to King George VI Hospital, Nairobi, in respect of Kenya Registered Nurses. The General Nursing Council also accepted Miss Houghton's recommendation that recognition be granted in respect of Kenya Registered Nurses trained at the Princess Elizabeth Hospital, Nairobi.

It would appear that fewer nurses and midwives are entering Kenya as the year has shown a further decrease in the numbers registered. This year 143 nurses and 30 midwives registered compared with 174 nurses and 83 midwives during 1960.

SOCIAL SERVICES

Welfare and Voluntary Organizations

GENERAL

The main achievement during 1961 was the establishment of a national advisory council on social affairs with a view to co-ordinating the activities of Government, local government and voluntary agencies in the field of welfare. The formation of this body was discussed at a public meeting of all parties concerned and it was agreed to amend the constitution of the Kenya Council of Social Services in order to implement the proposal for a national council and accordingly that body has changed its name to the Kenya Advisory Council on Social Affairs and has agreed to adopt terms of reference conforming with

Government policy and to accept changes in the Management Committee to make this possible. The Council has now been recognized as being advisory to the Minister of Health and Social Affairs.

Under the Kenya Advisory Council four working parties have been formed; their purpose being to investigate all the problems arising in specific fields, namely child welfare, relief of distress amongst the aged and infirm, the welfare and status of women, and the problems of the physically handicapped.

RED CROSS FIELD ORGANIZATION

There are still two Field Officers in the Fort Hall district, where nutritional centres have been established under the direction of the Medical Officer of Health. The Red Cross field officers in the remaining districts of the Central Province have been withdrawn owing to shortage of funds with which to maintain the service.

ST. JOHN AMBULANCE ASSOCIATION

The St. John Ambulance Association has been as busy as ever in the training of first-aiders. The Ministry through its Medical Training Centre have provided courses of instruction for lay lecturers. The instructor was Dr. E. A. Trim.

THE CHILD WELFARE SOCIETY OF KENYA

The Society has continued to extend its activities throughout the Colony and during the year a new branch of the Society was opened at Bungoma in the Elgon Nyanza District, and another branch is now contemplated at Kericho.

The Society has recently undertaken the organization of study groups with the ultimate object of training social workers in the field. The first such study group made a survey of prostitution in the Nairobi area.

The Society has also made proposals to the Ministry for undertaking a training course for case workers to replace Probation Officers in the field, whose service might shortly have to be withdrawn.

THE EDELVALE HOME FOR GIRLS

The Government has made a grant of land upon which this home was established on a temporary basis, and in addition has made a 45 per cent capital grant for the extension of the home in permanent buildings. The first phase of these buildings is now completed, and consists of additional dormitory accommodation.

The home began as a rehabilitation centre for female children who were potential prostitutes, but has been used increasingly as an orphanage and the infant population is now greater than that of the adolescents. The home at present caters for about 70 children and by increasing the accommodation still further, the trustees hope substantially to increase the numbers.

DR. BARNARDO'S HOMES

Dr. Barnardo's Homes has established a home, the first of its kind overseas, in Nairobi. The home has been erected with the aid of capital supplied by Dr. Barnardo's Homes, assisted to a small extent by the Government, on Crown land granted on a long lease. The home follows the accepted pattern and principles of Dr. Barnardo's Homes and although it is designed to be non-racial in character in practice a majority of Africans is accepted. The Organization intends to concentrate largely however on children of mixed racial origin, of which an increasing number is becoming evident in this generation.

AFRICAN WELFARE SOCIETIES

There is evidence of increasing interest in welfare matters by the African population at large. Several new voluntary societies have been formed and registered. Some of these are essentially local, some on a tribal basis and some purporting to be Colony-wide. On the whole these societies suffer from lack of adequate funds, and have nearly all applied to the Ministry for some form of assistance, which at present is almost impossible of achievement. A list of existing African Voluntary Societies is as follows:—

- Wanga Mukulu Welfare Society.
- Bumuyonga Clan Welfare Association.
- Sotik African Welfare Association.
- New Akamba Union.
- Luo Union.
- Meru Welfare Association.
- Abalhuya Association.
- Masai Education and Welfare Association.
- Mijikenda Association.
- Kalenya Union.
- Taita Taveta Union.
- Young Somali Association.
- Kenya African National Welfare Association.
- Kenya African Disabled People's Union.
- Kenya African Moral Welfare Association.

OTHER VOLUNTARY BODIES

Other voluntary bodies which are supported and encouraged by the Ministry are:—

- The Kenya Society for Deaf and Dumb Children.
- Kenya Society for the Physically Handicapped.
- The Kenya Society for the Blind.
- The Kenya Society for the Prevention of Tuberculosis.

The Kenya Council of Social Services—this body which has been inactive for the last year or so is being reorganized on the basis of an Advisory body to the Government, and Working Parties have been formed to undertake detailed research into various aspects of social life. These Working Parties are autonomous in that the intention is that they should report directly to the Ministry so that action may be taken where possible without delay.

GENERAL

The Ministry has been pressing for the enactment of the Children and Young Persons Bill under which improved administrative provisions would enable the voluntary societies to increase their scope.

Discussions have been held with the United Nations Bureau of Social Affairs with a view to extending the aid, at present given through UNICEF in the community development and public health fields, to approved bodies working in the field of family social service. One of the resulting proposals is that the Ministry should establish a training centre for social work with the aid of a U.N. Special Adviser who would undertake the training of employees of voluntary societies and local authorities, particularly in case work, which is the most urgent present need in the rapid social development of the rural areas.

Social Services Section

The activities of the social services section during 1961 may be described under four headings; community development, community services, training and sports. At the beginning of 1961 this section was housed in the office of the Chief Secretary but with the reallocation of portfolios in the middle of the year it was transferred to the Ministry of Health and Social Affairs.

Community Development Officers continued to work to District Commissioners as members of the district teams and to be assisted by subordinate staff employed by local authorities.

Financial stringencies in the 1961/62 Colony budget caused severe cuts to be made in the expenditure on social services. This naturally had a restrictive effect on all aspects of the work. The post of Commissioner for Social Services was abolished in July and the establishment of Community Development Officers was reduced from 47 to 25 posts.

Responsibility for the Jeanes Schools, Kabete and Maseno, was removed, from the social services section. The former centre was closed and the site taken over by the Provincial Administration to be used as the Kenya Institute of Administration, a training centre for administrative officers. The Maseno Jeanes School continued to run as a Nyanza Province Adult Education Centre under the control of the Provincial Administration. That section of the Jeanes School, Kabete, which had been used previously for community development training, was retained as part of the social services branch within the Ministry of Health and Social Affairs.

The transfer of the social services section caused a post of Assistant Secretary (Community Development) to be established. The Assistant Secretary and the Assistant Commissioner for Social Services formed the headquarters staff of the section. These officers served as advisers to Government departments and other agencies on community development.

The headquarters section was responsible for the preparation of schemes of international assistance and the implementation and supervision of Ministerial community development policy in the field. It also was responsible for the management of community development localization and in-service training projects.

The duties of Community Development Officers may vary considerably and, to a large extent, depend on the direction of district policy as initiated by the District Commissioner and supported by his team of technical officers. The recognized function of Community Development Officers, however, is to stimulate people to plan and to participate in self-help activities which will improve the economic and social conditions in rural areas.

The promotion of sports and other community activities such as youth centres, women's groups, nursery centres and adult education programmes served a recognized and vital need in the districts. Community Development Officers are registered supervisory officers of youth centres of the Kenya Association of Youth Centres and also serve the *Maendeleo ya Wanawake* Organization in an advisory capacity. These two registered societies are referred to in more detail in the section describing the work of voluntary organizations. Women Community Development Officers were stationed at various district training centres and combined training with extension projects in the field.

Real achievement was seen in several areas during 1961; others were handicapped by the shortage of staff and supporting finances. The following are some notes of interest from a few districts.

Approximately 2,500 people, men and women, participated in some 380 self-help groups in Elgon Nyanza during 1961. They co-operated in a variety of projects ranging from pasture improvement and harvesting crops to road making, building bridges and spring protection. Locational teams, with representatives from all specialist departments, are being formed and it is intended that these teams will give direction to the development plans prepared at divisional level, settling details and formulating a plan of campaign after studying the problems on the ground.

In North Nyanza, Community Development Assistants, under the supervision of the Community Development Officer, divided their attentions mainly between self-help groups and youth centres. More than 600 self-help groups are now formed and each group has an average of 25 members who work together two or three days a week. Many of these groups have been formed on their own initiative, and while their work has been supported by Chiefs and departmental assistants working with Community Development Assistants, the motivating force has come from the group members who have come to appreciate the achievements that can be obtained from collective effort. The work undertaken has included building, road making, clearing and planting of land, and the preparation and care of springs, dams and roads of access.

Group activity in Central Nyanza has gained in support during the latter part of 1961. For example in one sublocation, nearly eight miles of roads, feeder and access, have been put in during this period and in this location 30 springs have been protected during the year. Twenty-seven groups are active on this, in addition to work on enclosure. In the neighbouring location of Samia similar progress has been made. Much of the top part of Samia has been consolidated on a voluntary basis. In 11 sublocations voluntary land enclosure has reached the stage where holdings can be considered for registration under the Ordinance. In these areas self-help groups are concentrating on revision and planning.

It has become apparent in Nandi District, that if group activity is to have a lasting effect, it must show a financial advantage. With this in view it has been policy to encourage communities to concentrate and co-ordinate their efforts on particular schemes such as the production of sugar cane, milk products or sisal. During 1961 over 170 acres of sugar cane have been planted in Chemase. A co-operative society has now been registered and it is anticipated that by 1963 something like Sh. 200,000 should be coming into the area each year. Community Development Assistants and Health Assistants have worked with women leaders to improve housing. In many areas raised fireplaces have now replaced the traditional fireplace, which was such a menace to children in every house. Women have been encouraged to work together on their *shambas* and as a result vegetable cultivation, and home consumption of vegetables, have gone up very considerably.

Much useful work has been accomplished, particularly in the upper areas of Meru. Voluntary groups during the latter part of 1961 concentrated their efforts on the repair of bridges and roads, and general rehabilitation of damage caused by the heavy rains. House building campaigns have been launched in several areas. The purpose is to build improved houses where previous housing was washed away or damaged by severe flooding. The Gitoro training centre has been expanded and it is hoped that the completion of training and trade testing sixty-five Meru boys of K.A.P.E. standard will result in the establishment of village industries in the district. Successful candidates will be eligible for loans to purchase tools and will be established in village and market centres.

In other parts of Central Province, Community Development Officers were engaged principally with the extension of youth centres. There have been indications of some self-help projects, but generally speaking, these have been spasmodic and enthusiasm has not been sustained. In Kandara division of Fort Hall, group activity has been promoted through the *Maendeleo ya Wanawake* clubs. The establishment of a community development training centre in Embu has acted as a stimulus to community development activities.

Constructive effort has been made in Taita towards encouraging the people to make sustained use of their traditional tendency to undertake group activity in relation to specific work. In the upper areas a number of self-help groups have been working on the improvement of *shambas*, the promotion of cash crops, building improved housing and protecting springs.

In Machakos, as in many other districts, community development personnel, during the latter part of 1961, were heavily involved with famine relief. Soup kitchens were organized through *Maendeleo ya Wanawake* clubs, and youth centre members made numerous dresses and shirts from famine relief maize-bags for distribution to needy children.

Training for community development was given particular attention during 1961. Despite staff changes caused by postings, retirement or leave, a total of 120 students passed through the Community Development Training Centre at Kabete. Introductory and reorientation courses were held for Community Development Assistants employed by local authorities, as well as courses in specialized aspects of community services. A course for agricultural instructors in the principles and techniques of community development was also given. UNICEF stipends covered the maintenance of students on these courses.

With the arrival of a second agency for international assistance community development training specialist, a programme for professional training of Community Development Officers was developed. Staff training was undertaken in preparation for the first community development localization course scheduled for early 1962. A.I.D. also has provided finance and facilities for overseas training and study tours for serving community development personnel. Two locally appointed Community Development Officers and one member of the training staff were sent on courses during 1961. A study tour in India and the Philippines was also arranged for the Assistant Commissioner.

In the field of sports, 1961 began with Nyandika Maiyoro being declared the "Sportsman of the Year" at a dinner sponsored by one of Kenya's national newspapers. With Mr. Maiyoro's retirement from the track, following the 1960 Olympic Games in Rome, Arere Onentia, a fellow Kisii, and Seraphino Antao of Mombasa, most successfully upheld Kenya's reputation overseas and were invited to visit Israel for the Seventh International Festival and Finland for the World Games. Antao won the 100 metres in Tel Aviv in 10.3 seconds—his best performance ever and also in Helsinki. Arere finished third in Helsinki over 10,000 metres and ran three miles in Dublin in 13 minutes 29.6 seconds—five seconds better than Nyandika's best performance. These two athletes also competed in London, Cardiff and the North of England.

The Kenya A.A.A. Championships were staged in Mombasa for the first time, and resulted in Rift Valley Province regaining the Erskine Shield from the Army by five points. The following week-end at Nakuru, Kenya retained the Dundas Shield for the thirteenth successive year. This was the first occasion on which the Interterritorial Meeting was organized outside the respective capitals.

In the U.S.A. Stephen Misati, another Kisii athlete and one-time East African mile champion, steadily built up a reputation for himself at Cornell University. Towards the end of the year, Mr. Longinus Owiye, Provincial Sports Officer, Rift Valley Province, represented the Kenya A.A.A. in Accra at the inaugural meeting of the All African Amateur Athletic Association.

With the disbandment of the Sports Association of Kenya, previously known as the Arab and African Sports Association, the F.A. of Kenya amended its constitution and assumed control of all football in the country. The season proved to be very full with visits from Mohun Bagan F.C. (India) and to Addis Ababa to play Ethiopia, and the "Africa" and "Uhuru" Cup competitions in addition to the annual Gossage, Remington and F.A. Cup games. The Remington Cup went to Mombasa who defeated their visitors, North Nyanza, in the final. Kenya successfully defended the Gossage Cup for the fourth successive year, won the "Uhuru" Cup and narrowly lost to the Uganda in the "Africa" Cup.

The Amateur Boxing Association of Kenya had another successful year despite losing narrowly to Uganda in the Millington-Drake Tournament. Highlights of the year were the visits to Kenya of a small London A.B.A. team and a party of American boxers.

The third Annual African Hockey Tournament was contested by a record number of 14 teams—many more would have competed but for the expense involved and other commitments. The winners were the Royal College who defeated Siriba College in the final by the odd goal in three.

Courses held at the Jeanes School—now the Kenya Institute of Administration—during the first half of 1961, in addition to boxing, were for Athletics Officials in collaboration with the Kenya A.A.A. and in football coaching in preparation for the visit of Mohun Bagan. The newly appointed K.I.A. Sports Officer conducted a course in hockey whilst the Provincial Sports Officers in Nyanza, Rift and the Coast organized courses in the various sports.

Phase I of the "Kenya National Stadium" was started towards the end of the year. This Kenya A.A.A. project involves the establishment of adequate land drainage over the area, which necessitates the removal of 40,000 cubic yards of black cotton soil and the supplying, laying and consolidation of 20,000 cubic yards of broken rock.

The provision of attractive facilities is only one essential in a plan to create "opportunities for all". During the year, the Colony Sports Organization has endeavoured to stimulate interest. Beginners have been encouraged and coaching offered to the "rabbits" as well as the "stars".

INTERNATIONAL AGENCIES

ASSISTANCE FROM INTERNATIONAL ORGANIZATIONS

During 1961 the health services continued to benefit greatly from international aid. In particular, help was received from the World Health Organization in the form of technical assistance and travel fellowships, and from the United Nations Children's Fund with equipment, supplies and training stipends. These two organizations work in the closest co-operation, the United Nations Children's Fund only supporting projects which have the approval of the World Health Organization. The following is a summary of the support given by these two organizations to projects in Kenya.

WORLD HEALTH ORGANIZATION

1. *The Tuberculosis Survey and Chemotherapy Trials Project*—(Kenya 4).—This project has a staff of five W.H.O. personnel. In addition we have received assistance from the W.H.O. Regional Co-ordination centre for tuberculosis which is situated in Nairobi.

2. *Environmental Sanitation* (Kenya 2).—The World Health Organization sanitary engineer stationed in Kenya advises on all W.H.O./UNICEF assisted environmental sanitation projects.

3. *Nutritional Survey* (Kenya 9).—The work of the nutritional survey team, which was formed in 1961 and includes a Senior Medical Officer and a non-medical nutritionist, will be described in the section on Nutrition (page 16).

4. *Fellowships*.—The World Health Organization grants fellowships to officers in the Medical Department in connexion with all these schemes. These fellowships have enabled officers to travel all over the world to study similar projects being carried out in different countries.

UNITED NATIONS CHILDREN'S FUND

1. The tuberculosis survey was started in 1958. The total amount of aid received so far is \$70,000 of which \$20,000 was received in 1961.

2. *Environmental Sanitation*.—This project commenced in 1960 with an allocation of a total of \$167,000 for the period 1960-1963, of which \$57,000 was provided during the period 1960-1961.

3. The Nutritional Survey was initiated in 1961 and the first allocation of \$23,000 has been provided to continue the project during 1962 and 1963.

4. *Maternal and Child Welfare* (Kenya 7).—The United Nations Children's Fund assistance in the field of Maternal and Child Welfare was the first aid received, starting as long ago as 1954; by the end of 1961 a total of \$448,600-worth of equipment and supplies had been received, of which \$50,000-worth was allocated in 1961. During 1961 equipment for 25 rural health centres was received and eight vehicles were provided for use by government and local government authorities. Every year supplies of dried milk have been sent for distribution to children and nursing mothers. In 1961 we received 300 tons.

The aid received from these international organizations is to continue and in many cases it will be substantially increased. It is appreciated by the international organizations and the Ministry of Health that any expansion of rural health services in Kenya requires considerable assistance from outside agencies to augment the limited funds and self-help of the local health authorities.

In June, 1961, Dr. Frank Mortara from the World Health Organization Headquarters in Geneva visited Kenya, and approved proposals for the expansion of health services in the country; he assisted in preparing the plan of operations for the World Health Organization and United Nations Children's Fund aid in the field of Maternal and Child Welfare for the period 1962-1963. The new programme is intended as an all-embracing project in the field of Family Health and Social Services and has been renamed "Family Health and Child Care Services".

This new programme includes provision of equipment for Medical Training Schools, run by central government and the missions, including the new proposed National Reference Health Centre, which is intended as a post-graduate training school for health centre staff throughout the country. It is proposed to equip a total of 39 rural health centres, 29 health sub-centres, and to upgrade eight

health sub-centres to rural health centres; these all coming under the control of central and local government authorities. In addition equipment will be provided for 11 mission training hospitals, 14 mission hospitals which function as maternal and child welfare centres and 27 other maternal and child welfare centres under the control of the missions.

A large number of vehicles will be provided for use by health centres and other units, and a total of 12 vehicles will be equipped for use as mobile health units. The United Nations Children's Fund has given its approval to the assistance of measures to control, and possibly in some areas, to eliminate diseases—the main projects are—

- (a) free supply of triple vaccine for the prevention of whooping cough, tetanus and diphtheria;
- (b) supply of drugs and ointments for the treatment of trachoma;
- (c) the provision of one million doses of BCG vaccine, equipment and vehicles to mount a campaign of BCG vaccination in areas where tuberculosis is highly prevalent;
- (d) the supply of drugs, equipment and vehicles for a campaign against leprosy.

Training stipends amounting to \$83,000 (approximately) are expected to be received during the period 1962/63.

PUBLIC HEALTH

International Health

The Public Health (Port, Airport and Frontier Health) Rules, 1960, operated successfully during the year, enabling this Ministry to carry out its obligations under the International Sanitary Regulations.

MOMBASA PORT

One thousand and seventy-one vessels of over 4½ millions registered tonnage landed 36,321 passengers at Kilindini. The number of vaccinations was high (9,260), due to prevalence of smallpox in countries of origin. One case of smallpox on a ship from India was detected and all precautions instituted. This service was successful in preventing the introduction of the disease through the port.

Deratization measures were strict, both in the destruction of rats (over 4,000) and in the examination for *Pasteurella pestis*; no *P. pestis* were found.

Routine anti-malarial work was carried out and the number of *Aedes aegypti* mosquitoes remained low, the index for the year being 0.48.

New berths were opened at Kipevu, and general improvements included new canteens, and alterations at the Docks Dispensary.

NAIROBI AIRPORT

During the year the Ministry's vaccination certificate requirements were enforced in respect of aircraft on international flights arriving from areas infected with smallpox, yellow fever and cholera. An examination of passengers from 283 regular flights, plus the occasional charter flight, revealed a small percentage without the required certificates. The year was a particularly anxious one in view of the yellow fever epidemic in Ethiopia, smallpox in the sub-continent of India, and traffic with the Congo.

Construction on extensions to the airport facilities and runway necessitated strict control of contractors, works and housing. The pilot oxidation sewage ponds, disposal having proved entirely efficient, were extended by the construction of a third pond.

Routine mosquito control continued and the *Aedes* index remained below 1 per cent, throughout the year.

International Quarantinable Diseases

CHOLERA

Although no epidemic of cholera has affected East Africa for well over 50 years, the recent upsurge in India and the Far East has caused concern, in view of the high speed of modern transport. The establishment of an epidemic in the East Africa of the 1960's seems unlikely, but constant vigilance is maintained at sea and air ports, and on the national frontiers; it is recorded that the 1869-71 epidemic was imported into Kenya from Ethiopia, and the last epidemic occurred just at the end of the century.

PLAGUE

Recent advances in our understanding of the feral epidemiology of plague have produced changes in control measures—the use of vaccine has been suspended, and vigorous case-finding and isolation, drug prophylaxis of contacts, and D.D.T. dusting of affected villages and homes, are now our principal weapons.

A close watch is kept on sea-ports for possible rat and human importation.

SMALLPOX

The smallpox situation in Kenya in 1961 is discussed in the section on communicable diseases. From the port health viewpoint, close scrutiny is kept on all travellers at sea-ports, airports and frontier posts, to check the validity of vaccination certificates. The Ministry is acutely aware of the dangers involved in a lax attitude towards this problem. Outbreaks have occurred recently, as a result of index cases crossing the northern and southern frontiers.

YELLOW FEVER

Very close scrutiny is kept on the Northern Province frontier posts and main roads, in view of the recent devastating epidemic of yellow fever in southern Ethiopia, to the north of Lake Rudolf, where a case-fatality rate of 85 per cent occurred.

New rules have been formulated and enforced to govern the handling of monkeys from enzootic areas of jungle yellow fever, during transit through Kenya, *en route* to the United Kingdom or U.S.A. for research or vaccine manufacture.

Industrial Health Services

Health staff of Central and Local Governments, with the assistance of the Ross Institute of Hygiene, Kampala, have been active in developing health services within industry. Personal, preventive, and promotive health services have improved, resulting in better housing, sanitation and personal hygiene, especially in food factories. Major employers are becoming more aware of the need to ensure a healthy staff, living in a suitable environment.

The Industrial Health Services fall into two main divisions; the rural, connected with agricultural services, and urban, connected with industries and food manufacture. The latter aspect is of growing concern and importance.

Environmental Sanitation

Improvement in man's environment has been in the past, a struggle against apathy, disease and illiteracy. With the advance in education, both in the schools and in the adult world, we are faced with a real public demand for environmental progress. All over the country people are now receptive to advice from our field staff on improvements to basic sanitation in rural homesteads and villages.

With 85 per cent of the population living in rural areas, employment of local staff has been found to be effective and economical. Local Health Authorities sponsor candidates for Health Assistant training, and when this is completed the officer returns to his home district to deal with his own people in a location or sub-location. This has the benefit of the individual being acquainted with the local customs and traditions which he can turn to his advantage rather than cutting across such beliefs through ignorance. Local Health Authorities often wish to retain the services of Government seconded staff for longer periods than formerly, in order to provide continuity of effort with the field staff in practical projects. A most important function of the field staff is to train health students from the medical training centre in the practical application of their academic knowledge.

Special attention was given to the following aspects of environmental sanitation:—

WATER

Health staff in rural areas have since their inception assisted communities by protecting springs and digging wells to provide safe water for the community. In later years, hydraulic rams and rock and roof catchments have been provided to add to the amenities and reduce the arduous work being performed by the women. It is hoped that the time saved will be devoted to more effective care of the family. Dams and sub-surface dams, in co-operation with ALDEV (African Land Development) have been provided, and potable water, after settlement and filtration, made available. Not only safe drinking water has been provided, but also laundry facilities, cattle troughs, and in some cases bath-houses. There is great competition to obtain protected water supplies and African District Councils are demanding these services more and more.

Three current projects assisted by W.H.O. and UNICEF are:—

1. *The Zaina Scheme* in the North Tetu Location of Nyeri is a pilot scheme which has been developed in co-operation with the Nyeri A.D.C. and ALDEV (Ministry of Agriculture). The scheme consists of an intake of river water in the Zaina Forest, thence water is distributed by gravity through pipelines into a 20,000-gallon reservoir, chlorination taking place before the reservoir through an automatic hypochlorinator. Distribution is through large tanks to 100-gallon domestic concrete cisterns on the individual farms. The system, with a total capacity of 64,800 gallons per day, supplies water for over 4,000 inhabitants living on 782 farmsteads, four villages, and five schools. Showers and aqua-prives have been constructed in the schools: sanitation and ablution/laundry facilities provided in the villages.

The remaining field work will be completed in 1962, together with an additional programme outside the scheme. A survey was initiated to appraise nutrition, health and environmental sanitation of the people, which will serve as the baseline for assessing requirements in the future.

2. *The Elgeyo-Marakwet Scheme* with assistance from the A.D.C. is now proceeding well, and the following work has been completed:—

One sub-surface dam and two water points comprising shower, cattle trough, clothes-washing slab, and tap stands.

Four 10,000-gallon reinforced concrete tanks, various water points and spring protections with two pump supplies.

One brick tank and two blocks of showers and stand pipes for schools.

3. *The Tana River Scheme* could not be initiated owing to the flood disaster and difficulties in transport from the Coast. However, the rehabilitation of the villages now includes provision of wells and sanitation—and the UNICEF material will be utilized for the benefit of the inhabitants.

SEWERAGE AND SEWAGE DISPOSAL

The successful introduction of oxidation ponds for reasonable-cost sewage disposal has enabled water-borne sanitation to be provided to towns, trading centres and institutions that would not have been able to afford the cost of conventional disposal methods. Oxidation ponds are now working or under construction at:—

Nairobi Airport, Bungoma, Athi River, Galole, Ngong, Eldoret, Nanyuki, Molo Housing Estate, Lanet Camp (Nakuru), Highland School (Eldoret), Homa Bay, St. Joseph's School (Trans Nzoia), Gilgil Camp.

Oxidation channels have been designed for Meru and certain other areas are under consideration for oxidation ponds. Tanganyika and Uganda have adopted this idea for certain towns and even Durban is interested in our schemes. The introduction of this method is a direct result of travelling fellowships granted by W.H.O. to officers of this Ministry and demonstrates their value.

HOUSING

Since the introduction of land consolidation and the consequent improvements in economic productivity of agriculture, health personnel have been able to raise housing standards. In rural areas improvements in existing indigenous dwellings have been achieved by provision of raised floors, improved windows, ventilation, cooking facilities, sanitation and composting of refuse. Where the dwellings have outlived their usefulness, new houses of improved design have been built. Galvanized iron roofs with rainwater tanks are a common feature in the A.D.C. areas.

Although rental housing is in demand the Central Housing Board, on which this Ministry is represented, has been able to persuade several local authorities to start tenant-purchase schemes. The provision of plans and technical assistance from the Board has enabled health departments to assist local authorities to build good standard housing so that slums and old dwellings can be demolished.

This Ministry has consistently advocated building reasonably priced family housing, with suitable standards of water supply and hygiene, and members of our staff have given many talks and film shows featuring such family housing. Recently the Ministry has advocated pilot projects of self-aided housing schemes.

The Public Health (Division of Lands) Board—Central Authority

During the year, the Public Health (Division of Lands) Board met on five occasions and considered a total of 26 applications.

With the coming into force of the Development and Use of Land (Planning) Regulations, 1961, on 21st September, 1961, the Public Health (Division of Lands) Ordinance was repealed and the Central Authority became the approving authority for all applications previously considered by the Public Health (Division of Lands) Board.

In addition to the areas previously falling within the purview of the Public Health (Division of Lands) Ordinance the Development and Use of Land (Planning) Regulations, 1961, also required any change of use falling within the 400 ft. strip on either side of trunk roads within the special areas to be approved by the Central Authority.

Since the new regulations came into force, the Central Authority has met on three occasions and considered a total of 19 applications.

HEALTH CENTRES

During 1961, 14 health centres were completed, together with five health sub-centres, making a total for the country of 149 centres. This expansion was achieved in the face of very difficult financial conditions, which strained the resources of the local health authorities, both in finding new capital, and funds for recurrent expenditure. Of particular interest was the construction of health sub-centres in Trans Nzoia and Uasin Gishu. These are being constructed at Government expense with the aim of assisting these two counties to become local health authorities, a step which they were finding difficult due to the lack of existing rural health facilities.

In the African District Council areas health centres continued to be the mainspring of the integrated health services to the public. The efficiency of these centres is dependent to a large extent on the standard of training of the personnel who run them. For this reason great hopes are entertained that the impact of courses to be held at the Reference Health Centre, Karuri, when it is completed next year, will be felt throughout Kenya.

NUTRITION

The year 1961 saw a series of natural phenomena each one of which played its part in producing famine conditions in many districts. At the beginning of the year, in Turkana in particular, there was drought as a legacy of poor rains in 1960. The long rains were patchy and were accompanied by a plague of Army Worms which devastated young corn and grazing alike. This disaster was accentuated by drought affecting most areas of the country. Lastly the short rains were phenomenally heavy and caused generalized flooding which was at its worst in the Tana River basin.

In Turkana very heavy losses of stock left the people below their normal level of bare subsistence. As a relief measure camps were established so that the people could be fed. At the end of the year these camps were still full. It was estimated that 2½ million small stock and 75,000 cattle had died. Prompt famine relief measures undoubtedly saved very heavy losses of human life. In the camps a reasonable standard of nutrition was maintained.

The loss of cattle in Kajiado District was estimated at 350,000 head. This was the worst affected district in Southern Province. Famine relief was easier than in Turkana except during the floods at the end of the year when ground transport was immobilized and the Masai were entirely dependent on air drops.

Other areas badly affected were the lowlands to the east of Mount Kenya and parts of Machakos and Kitui districts, while at the end of the year the Tana River basin was involved due to floods destroying crops.

The organization of famine relief was entrusted to the National Famine Relief Committee to which this Ministry gave expert advice on nutritional requirements. The success of this committee gave impetus to the formation of a permanent National Advisory Council on Nutrition, which will fill a long-felt need.

The W.H.O. Nutrition Survey team started work on a nutritional survey of Kenya which will probably take about four years to complete. During the year they were several times diverted from their routine duties to help assess the effects of the famine in different areas. This expert aid was of great assistance in planning famine relief. However, despite these interruptions nutritional surveys were made in Embu, Machakos, Nyeri and Taita districts in pursuance of the plan of operations. Early results have tended to show that maximum signs of dietary deficiency are shown in the age group 7-9 years and that this is also the age group with the highest incidence of calorific and protein deficiency. The survey on the Zaina scheme in Nyeri district showed a surprisingly high rate of endemic goitre among school children.

In Fort Hall district three nutritional centres were opened during the course of the year. The object of these centres is not only to feed undernourished children but also to teach mothers to make the best use of locally available foodstuffs, and correct cooking. These centres have made a very good initial impact, and if enthusiasm is maintained, should be a useful weapon in the fight against malnutrition.

In order to back the W.H.O. team with a counterpart officer a medical officer was sent on a W.H.O. travelling fellowship to study nutrition. On his return to Kenya he will be posted to the Ministry to assist with nutritional programmes.

HEALTH EDUCATION

The work of the Division continued much as usual during the year.

The Unit is still housed in the old corrugated iron buildings which have served for so many years but there are hopes that money may be made available during 1962/63 for rehousing the Unit in new buildings.

The Photographic Section was again to the fore at the Mitchell Park Show in October when it carried off a prize, this time the Second Prize for the best Government Stand. The coloured photographs exhibited fulfil a double function in that they are not only useful aids to teaching in themselves but coloured filmstrips can be produced from them.

A considerable amount of training in the principles, methods and techniques of Health Education was carried out during the year, not only at the Medical Training Centre, but amongst Community Development workers in training at the Kenya School of Administration and in other agencies.

The mobile unit together with its team spent a good deal of time on campaigns in the field. It visited Baringo District, Nakuru, Meru, Machakos and the Coast for periods ranging from two weeks to two and a half months.

Assistance was given with several Medical Department stands in the course of the year and in addition to the Royal Show at Mitchell Park exhibitions were mounted at Jeanes School and at Nakuru.

COMMUNICABLE DISEASES

SMALLPOX

The year 1961 saw a rise in the incidence of variola minor over 1960, but apart from 1960 the incidence was the lowest since 1955. A total of 287 cases of variola minor occurred, mainly due to outbreaks in three districts, Embu and Meru in Central Province and Kitui in Southern Province; in fact this was one small epidemic as the three districts are contiguous and the cases all occurred over the same period of time.

Two suspected cases of variola major occurred, both of them in the Trans Nzoia district of Rift Valley Province. In view of the increasing epidemicity of smallpox in countries such as India, Pakistan, the United Kingdom and the Republic of the Congo (Leopoldville), a major drive will be conducted during 1962 to bring the smallpox vaccination state in Kenya back to the figure of 80 per cent which is considered a safe level in the face of possible epidemic conditions. The policy of this Ministry is not one of periodic mass vaccination campaigns but to maintain a continuing effort to keep up the 80 per cent safety level.

POLIOMYELITIS

Following the dramatic decline of the major epidemic of poliomyelitis by May/June, 1960, the incidence continued at the usual low endemic levels expected in inter-epidemic years in Kenya, for the first 11 months of 1961.

With the three-year cycle of epidemicity that is now apparent in Kenya a further sharp rise in incidence was not expected until the end of 1962.

However, during the last month of 1961 and at the time of writing (early 1962) an abnormal, and so far unexplained, situation has developed, whereby the incidence of poliomyelitis has risen to a level roughly midway between that expected in epidemic and inter-epidemic years.

ENTERIC DISEASES—TYPHOID

The typhoid position in Kenya remained static during 1961, 1,081 cases occurring as compared with 998 in 1960 and 1,115 in 1959.

The dramatic upsurge in the incidence of typhoid produced by the Emergency has thus disappeared and the disease continues to persist at endemic level.

Once again Central Province accounted for the majority of cases—652 out of a total of 1,081 occurred there, giving an incidence rate of 34 per 100,000 against 15 per 100,000 for the Colony as a whole.

The pattern for 1960 and 1959 is thus repeated almost exactly.

TUBERCULOSIS

This disease is at long last beginning to show a slight decrease in the annual number of primary cases reported, 5,167 cases of pulmonary tuberculosis being notified in 1961 as compared with 6,604 in 1960 and 6,868 in 1959. Once more the highest incidence was in Central Province, the next highest incidence being in Coast Province.

The drug trials continue under the aegis of the Medical Research Council of Great Britain, and it is hoped that with the expansion of rural health services over the country as a whole, and with more efficient follow-up treatment of defaulters and the closer watch which expanded public health services can keep on contacts, the incidence of the disease will decline steadily in the future.

With the generous assistance of UNICEF, plans are being laid to reinforce the attack on the present pool of infection in tuberculosis by a large-scale long-term BCG preventive campaign to protect the younger population.

CEREBROSPINAL MENINGITIS

The total number of cases reported during 1961 was 570 as compared with 561 in 1960. Distribution between provinces was rather different as can be seen by comparing the distribution table given below with that in the 1960 Annual Report. There was an increase in the incidence in Central and Rift Valley Provinces; Nyanza Province showed a fairly sharp decline and the position in Coast, Southern and Northern Provinces and Nairobi City remained static.

Province	No. of Cases	Population	Attack-rate per 100,000 per year
		<i>million</i>	
Central	147	1.86	7.90
Rift Valley	207	.85	24.35
Nyanza	185	2.45	7.55
Southern	22	.80	2.75
Coast	7	.70	1.00
Northern	0	.25	0.00
Nairobi City	2	.27	0.74

LEPROSY

One thousand, three hundred and forty-three cases were notified in 1961 as compared with 1,470 in 1960. Once again, the great majority, 1,079, occurred in Nyanza Province, Central Nyanza District accounting for 772 of these as against 724 in 1960.

The problem of leprosy in Kenya presents three distinct facets:—

1. The infectious leper.
2. The active leper.
3. The burnt-out case.

From the national health aspect the attack must be concentrated on the infectious case excreting bacilli through open lesions on his skin, potentially infecting others. The active, but non-infectious case, is primarily a matter for regular treatment and surveillance. The burnt-out case presents a problem of physical and psychological rehabilitation; this type of patient is extremely likely to become a permanent burden on the community unless active steps are taken to ensure that he is capable of doing some sort of useful work, and that he recovers his pride in himself as a human being.

In recent years in Kenya there has been a radical change from the old policy of isolating leprosy patients, and in allowing the disease to be regarded with horror. The principles on which management is now based are more humane in that the infectious case is if feasible treated in conditions of isolation

in his own home, just as are open cases of pulmonary tuberculosis. The active but non-infectious leper is treated, but allowed to lead his normal daily life, without any attempts at isolation. The burnt-out case is, as has been previously said, mainly a problem of physical and psychological rehabilitation.

It is the policy in Kenya that leprosy, in common with other special diseases, shall be managed through the general public health services, specialist advice and assistance being called in when necessary. UNICEF has generously agreed to provide a considerable quantity of drugs for the local treatment campaigns; the savings to the local health authorities resulting from this action are to be applied in expanding follow-up services for contacts and tracing of defaulters.

SCHISTOSOMIASIS

This subject was dealt with fully in the 1960 Annual Report and the situation in 1961 remained much the same.

However, three research projects of great potential interest to Kenya have been started and the results emerging from them will be watched very carefully.

- (a) Trials of the new drug TWSb 4, are being carried out by the Bilharzia Research Unit of the Medical Research Council of Great Britain. Preliminary results indicate that six consecutive monthly injections of this drug, although not eliminating adult worms from the patient, may break the transmission cycle. This appears to be due to the fact that infected patients receiving TWSb 4, void eggs which hatch out miracidia incapable of infecting snails. This obviously offers possibilities of a control programme without the necessity for the lengthy and complicated treatment necessary to eliminate adult worms from all bilharzia patients, or to eliminate snails from every potentially infected water point.
- (b) The East African Institute for Medical Research at Mwanza, Tanganyika, is carrying out detailed studies to determine exactly what effect schistosomiasis does have on rural populations in East Africa. This work, being carried out under the auspices of the Rockefeller Foundation and the Ross Institute, is clearly of immense importance to Kenya, as debate has raged for years over the question of whether or not this disease exerts any deleterious effects upon the indigenous population.
- (c) The Mwanza team is also carrying out valuable work on the ecology of snails likely to act as intermediate hosts, particularly with a view to improving methods of control and eradication.

MALARIA

Following upon the catastrophic floods which afflicted Kenya in October/November, 1961, and the famine which resulted from them, a sharp increase was experienced in the incidence of malaria in the last few weeks of 1961. It is expected that this increased incidence will continue into the early months of 1962.

KALA-AZAR

Kala-azar has emerged in Kenya as a disease of importance since World War II. The major epidemic occurred in 1953, mainly in the Kitui district. This was followed by a steady decline, but from 1955 onwards the incidence built up again and reached another peak in 1960 when over 1,000 cases occurred in the country, 581 in the Kitui district. Maximum incidence was also recorded in 1960 in Meru, Elgeyo-Marakwet and West Pokot districts.

It would thus appear that the disease in East Africa is following the seven-year cycles of epidemicity which are so clearly documented in reports of Indian kala-azar.

The control of kala-azar has presented many problems, and despite ten years of intensive research, the vector is still not definitely established, nor has it been shown whether the disease in Kenya is a zoonosis, or not.

SLEEPING SICKNESS

The pattern of Gambian sleeping sickness in East Africa since the beginning of the century has shown a ten-year periodicity in the cycle of the epidemics, in contradistinction to the much longer 20-25-year cycles seen in West Africa.

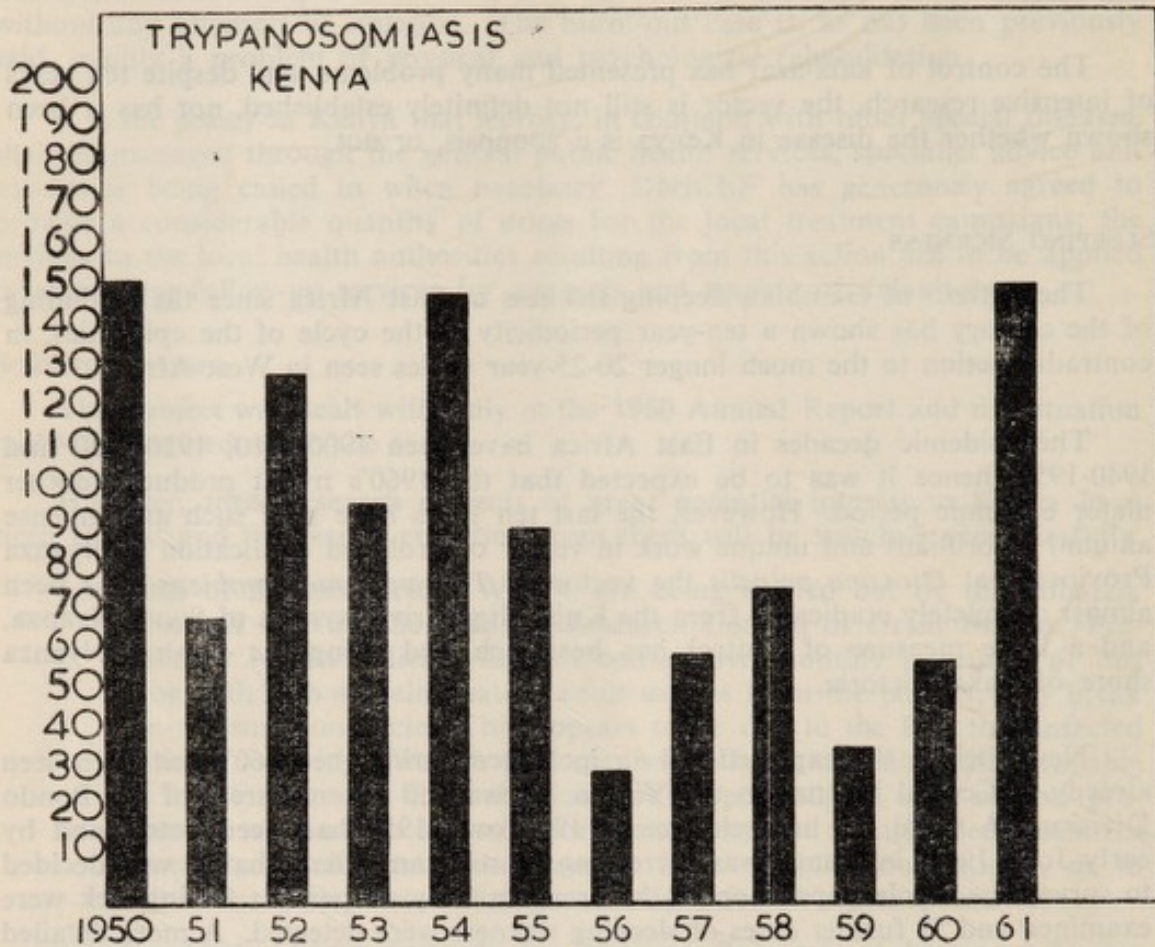
The epidemic decades in East Africa have been 1900-1910, 1920-1930 and 1940-1950, hence it was to be expected that the 1960's might produce another major epidemic period. However, the last ten years have seen such an immense amount of brilliant and unique work in vector control and eradication in Nyanza Province that *Glossina palpalis* the vector of *Trypanosoma gambiense* has been almost completely eradicated from the Kuja-Migori river system of South Nyanza, and a large measure of control has been achieved along the Central Nyanza shore of Lake Victoria.

Nevertheless, the expected rise in incidence during the 1960's has been seen already in Central Nyanza in the Yimbo, Sakwa and Uyoma areas of the Bondo Division. A slight rise in incidence in 1960 over 1959 had been noted, and by early July, 1961, incidence was increasing to such an extent that it was decided to survey the whole population of the area. Initially all persons feeling sick were examined and 57 further cases of sleeping sickness were detected. A more detailed survey was then carried out, in which the whole population of the area was examined and 13 further cases were detected out of 8,754 people examined. Immediately after this work had been done the incidence of the disease declined sharply, and this decline has continued into the early weeks of 1962. This episode illustrates the need for continuous vigilance and case-finding services in this disease.

Rhodesian sleeping sickness presents a much more difficult problem, since the two principal vectors, *G. swynnertoni* and *G. pallidipes* are widely spread over enormous areas of bush country in the Nyanza, Southern and Coast Provinces of Kenya, and effective control measures for these vectors are not yet available at reasonable cost.

There was a sharp outbreak of suggested Rhodesian sleeping sickness in the Kasigunga area of South Nyanza District in 1961. Initially five cases of the disease were reported to the District Medical Officer as the result of the vigilance services maintained by the local health centre. The whole population was immediately subjected to examination and six further cases were found among 3,800 people examined. Rat inoculation suggested that the outbreak was caused by *T. rhodesiense*; transmission was by *G. pallidipes*. There were several unusual features in the outbreak, most notably a clinical syndrome resembling chronic Gambian sleeping sickness rather than the usual more acute Rhodesian form of the disease. Papers published in 1961 indicate that this changing pattern of the disease has been observed in other countries after Rhodesian sleeping sickness has been established there for some years.

Histogram No. 1 shows the incidence of sleeping sickness in Kenya from 1950 to 1961.



Histogram 1 showing notifications of Trypanosomiasis in Kenya from 1950 to 1961

ANTHRAX

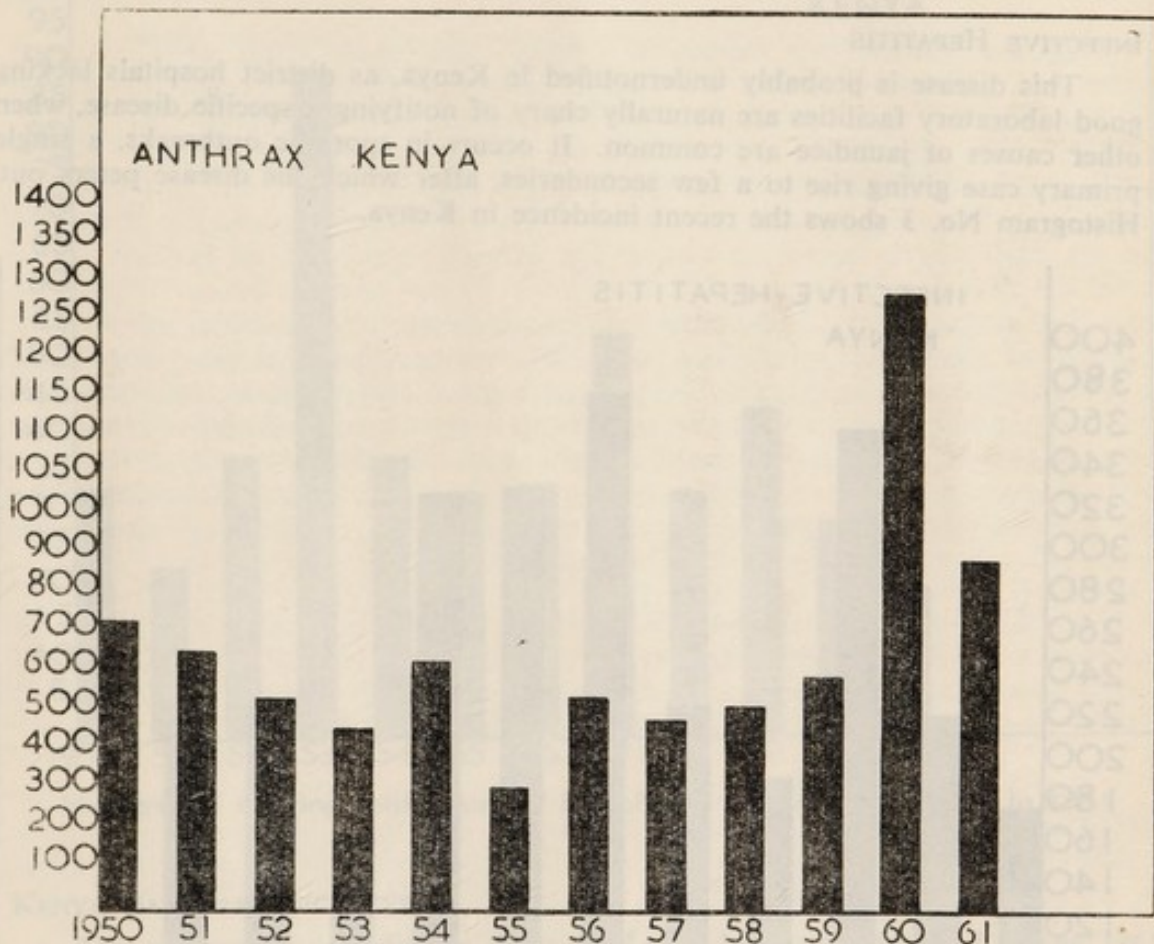
This disease has not been discussed in detail in previous Annual Reports. Some 903 cases occurred in 1961 the majority of them among cattle-herding pastoralist tribes. Most reported cases of the disease are of the minor intestinal form and occur sporadically as a result of eating meat from the carcasses of animals which have died from anthrax.

Cutaneous anthrax occurs from time to time as a result of handling the hides of such animals. The incidence of cutaneous anthrax among workers in a hides and skins godown in Mombasa has varied from nil to 10 cases per annum among 60-80 workers over the last ten years. In 1961 there were ten cases notified from a labour force of 60.

Treatment with penicillin and sulphonamides, together with the appropriate public health measures, is effective in bringing these sporadic outbreaks under control but a number of the outbreaks do result in one or two deaths if they occur in remote areas and are not promptly reported to the local health authority.

With the ingrained and very understandable attitude of poor cattle-herding peoples not to waste the carcasses of animals which have died from disease, it is felt that prolonged health education must be our principal weapon against anthrax. It seems that in certain parts of Kenya people believe that "immunity" develops as a result of continued and regular contact with anthrax. This illustrates one of the many difficulties of health education amongst backward peoples.

Thus it will be seen that although outbreaks can be controlled once they have started, it is very difficult to prevent the start of such outbreaks. As a result of this experience contact has been made with American research workers who are currently engaged in trying to develop a vaccine for anthrax; it is recognized that vaccines only provide a temporary holding period in the control of the disease and that ultimate progress depends on improvements in animal husbandry, the physical environment of the people at risk, and in their general level of education. Histogram No. 2 shows the incidence of anthrax in Kenya over the last 12 years.



Histogram 2 showing notifications of Anthrax in Kenya from 1950 to 1961

TRACHOMA

The three most important eye diseases in Kenya were onchocerciasis oculis, trachoma and cataract. The former has been eradicated and attention is now being turned to trachoma. This disease is widespread over Kenya and in certain areas the incidence rate is said to approach 100 per cent.

Thanks to the generous assistance of the Kenya Society for the Blind a sustained attack is now being mounted on trachoma in certain of the most severely affected areas; a hospital assistant, specially trained in ophthalmic work, has been equipped with a motor bicycle and thus enabled to get out into the remote areas where trachoma is hyperendemic. Again contact has been made with research workers engaged in the production of a vaccine, in the hopes that such a vaccine will be effective in Kenya. Future plans include a request to UNICEF for drug supplies to intensify the attack on this disease.

Other Diseases

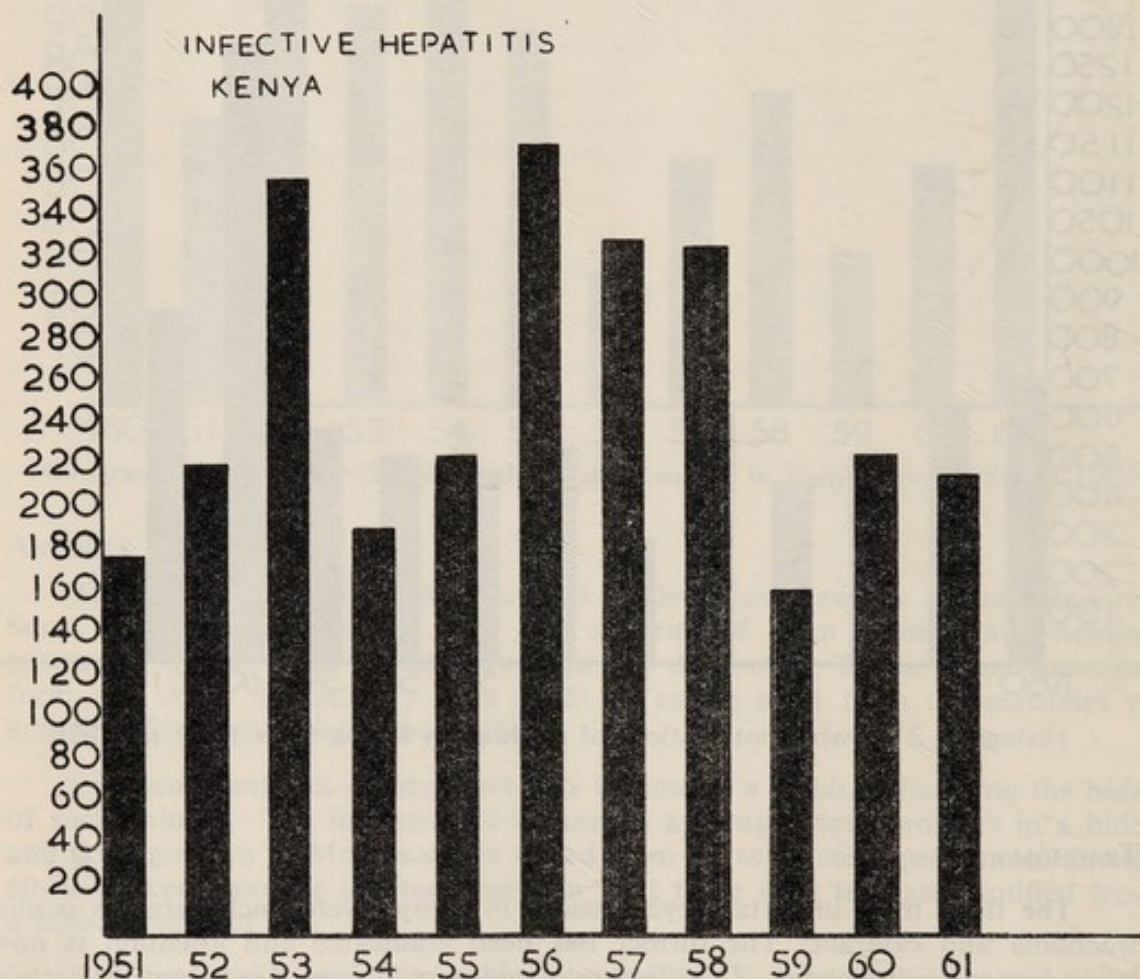
TETANUS

Eight hundred and thirty-six cases were reported during the year, with 385 deaths.

The tetanus toxoid campaign mentioned in the 1960 Annual Report, has so far met with a most disappointing response; efforts to achieve active immunization of those most at risk will continue into 1962.

INFECTIVE HEPATITIS

This disease is probably undernotified in Kenya, as district hospitals lacking good laboratory facilities are naturally chary of notifying a specific disease, when other causes of jaundice are common. It occurs in sporadic outbreaks, a single primary case giving rise to a few secondaries, after which the disease peters out. Histogram No. 3 shows the recent incidence in Kenya.



Histogram 3 showing notifications of Infective Hepatitis in Kenya from 1951 to 1961

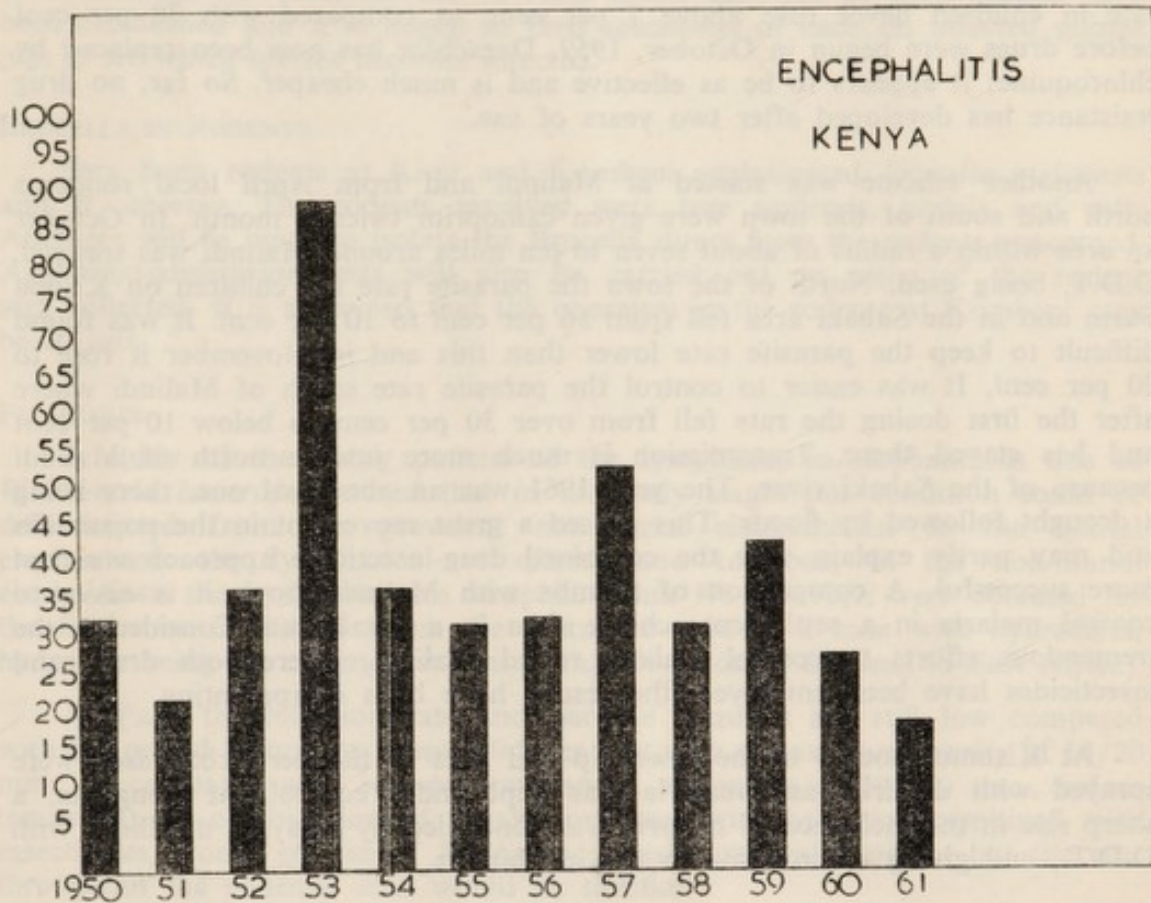
DIPHTHERIA

Fifteen confirmed cases occurred in 1961, seven in Mombasa, the rest scattered widely over the country. A number of clinically suspicious cases, some needing tracheotomy, also occurred, from which *Corynebacterium diphtheriae* could not be isolated. With only a very small proportion of indigenous children in Kenya protected against diphtheria, it offers a potential threat to the country in the future, particularly with the growth of urbanization.

ENCEPHALITIS

Twenty sporadic cases occurred in 1961, 11 of them in Rift Valley Province; the possibility of this being an arthropod-borne virus infection is being studied.

Histogram No. 4 shows the notifications in Kenya for the past 12 years.



Histogram 4 showing notifications of Encephalitis in Kenya from 1950 to 1961

KENYA HAEMORRHAGIC FEVER

This apparently new disease entity in Kenya has been described during 1961 in Rift Valley Province by Dr. L. Nevill. Investigations are proceeding to demonstrate its cause; no virus isolation has yet been achieved, and work on possible causative rickettsiae continues.

DIVISION OF INSECT-BORNE DISEASES

MALARIA

Human malaria.—At Shimba where a control project in a Settlement Scheme is being studied, malaria is still being controlled by drugs alone; the parasite rate in children never rose above 7 per cent, as compared with 70 per cent before drugs were begun in October, 1959. Darachlor has now been replaced by chloroquine; it appears to be as effective and is much cheaper. So far, no drug resistance has developed after two years of use.

Another scheme was started at Malindi and from April local residents north and south of the town were given camoprim twice a month. In October an area within a radius of about seven to ten miles around Malindi was sprayed, D.D.T. being used. North of the town the parasite rate for children on Kisima Farm and in the Sabaki area fell from 56 per cent to 10 per cent. It was found difficult to keep the parasite rate lower than this and in November it rose to 20 per cent. It was easier to control the parasite rate south of Malindi where after the first dosing the rate fell from over 30 per cent to below 10 per cent and has stayed there. Transmission is much more intense north of Malindi because of the Sabaki river. The year 1961 was an abnormal one, there being a drought followed by floods. This caused a great movement in the population and may partly explain why the combined drug-insecticide approach was not more successful. A comparison of Shimba with Malindi shows it is easier to control malaria in a settlement scheme than in a rural area. Considering the tremendous efforts to control malaria round Malindi, where both drugs and insecticides have been employed, the results have been disappointing.

At Kisumu, houses in the township and huts in the peri-urban area were sprayed with dieldrin, and malaria was kept under control. At Bungoma, a sharp rise in the incidence of malaria was controlled by spraying dwellings with D.D.T., and giving chloroquine to the inhabitants.

Our experiments on the Kenya coast show how difficult it is to eradicate malaria in holo-endemic areas in Africa. Schemes for massive malaria eradication in Africa look well on paper but must be examined in detail against a background of available services, existing circumstances and for their wider implications on the total health of the population.

MONKEY MALARIA

Nearly ten years of work, in which the division has collaborated with Professor P. C. C. Garnham, was crowned with success in 1961. *Culicoides adersi* was shown to be the vector of *Hepatocystis* (= *Plasmodium*) *kochi*; oocysts were present in the haemocoel, usually near the ganglia in the head, and not at the expected site on the stomach wall.

LEISHMANIASIS

With the aid of Dr. D. B. Wijers, Commonwealth Research Fellow, *Leishmania* have at last been isolated from a *Synphlebotomus* in nature. The strain behaves like *L. donovani*, and it must be shown whether or not it is pathogenic to man. The sandfly is believed to be *Phlebotomus martini*.

Sandflies are evidently very difficult to infect from patients; it may be necessary to feed them on patients with parasites in the blood, rather than in the skin.

RICKETTSIOSES

Attempts are being made to discover why murine typhus, though present in urban *Rattus*, is usually absent from those caught in villages. It may be because *X. cheopis*, the main flea on urban *Rattus*, is a better vector of *R. mooseri* than *X. brasiliensis* the chief rat flea in rural areas. Colonies of both species have been established and it is hoped to feed specimens of each on infected guinea pigs to see which species becomes infected.

BRUCELLA IN RODENTS

Sera from rodents at Kitui and Kombeni agglutinated *Brucella melitensis* and *B. abortus*. The rodents involved were tree squirrels, gerbils and rats. Attempts will be made to isolate the *Brucella* direct from the rodents concerned. Agglutinin-absorption tests will also be carried out on some of the rodent sera collected. It is suspected that the organism in the rodents at Kombeni may be *B. suis*.

FILARIASIS

A study of the X-ray pattern of the lymphatics in elephantiasis due to *Wuchereria bancrofti* showed that in the early stages this condition could be differentiated from the prevalent non-filarial elephantiasis. In the filarial elephantiasis the lymphatics are dilated and tortuous; in the non-filarial elephantiasis the lymphatics are atrophic. Adult *W. bancrofti* were obtained for the first time in Kenya (from the spermatic cord in a case with hydroceles, hydrocele being the commonest clinical manifestation of filariasis in East Africa).

At Faza the infection rate and parasite densities are still low compared with the period before treatment (10.5 per cent with a maximum density of 14/20 mm.; as compared with 36.6 per cent and a maximum of 296/20 mm., before treatment). A combination of yearly treatment with hetrazan, combined with insecticides, would get rid of *W. bancrofti* as a medical problem but the cost throughout the endemic area would be terrific.

Man is the only known host of *W. bancrofti* and no animals have been infected in the laboratory. We failed to infect bush babies although these animals are susceptible to *Brugia patei*.

Various other filarial species have been studied in animals on the coast and elsewhere in Kenya. Animals infected include cattle, donkeys, wild pigs, dogs, cats, monkeys, baboons, hyenas, jackals, leopard, bush buck, reed buck, kongoni, zebra, water buck, buffalo, spring hare, three species of rodent and several birds. Some of these filariae are new. A few have been described, including their life cycles.

The most important laboratory studies on animal filariae were made on *Setaria labiato-papillosa* of the cow. *Aedes aegypti* were infected, using several new techniques including feeding on monkeys which were infected either by transplanting adult worms into their peritoneal cavities or injecting them intravenously with uterine microfilariae extracted from adult worms. Mosquitoes were also infected by feeding them on suspensions of uterine microfilariae through membranes, or by direct inoculation of uterine microfilariae into the thorax. The very large infective larvae are being used for experiments to try and establish cerebrospinal nematodiasis in monkeys.

Following a report from India that bed bugs had been found naturally infected with *W. bancrofti* and *B. patei*, a series of experiments was carried out feeding adults and nymphs on man and infected cats. Although numerous microfilariae were ingested none developed to the infective stage.

ONCHOCERCIASIS

A detailed study was made of the morphological characters of the infective larvae of *Onchocerca volvulus* in *Simulium neavei*. The larvae were compared with larvae of non-human filariae also seen in *S. neavei*. A paper describing "Identification of infective filarial larvae in Simuliidae" was presented at the Onchocerciasis conference in Brazzaville in June.

With the abundant material of *Onchocerca* infective larvae from *S. neavei* fed on man on Mount Elgon it was decided to try and infect laboratory animals. Dogs, pigs, hamsters, monkeys, bush babies, rabbits, baboons, rats and guinea pigs were inoculated; none have so far become infected.

O. gutturosa and *O. armillata* were found to be common in cattle at Kisumu. In the absence of laboratory animals susceptible to *O. volvulus* a great deal could be learnt from a study of the related species in cattle and a record noted where facilities exist, e.g. the United Kingdom. Their vectors in Africa are unknown. Various Simuliids were dissected but none were infected.

No *S. neavei* have been found in the eradication area of South and North Nyanza but *S. neavei* have returned to the Malakisi area after the campaign against *S. neavei* on Mount Elgon by the Uganda Medical Department.

TRICHINOSIS

Two new foci of trichinosis were found during the year, one in the Rift Valley near Rongai, and the other near Kericho; the human infections were very heavy.

SCHISTOSOMIASIS

Surveys have been carried out at Nyandiwa near Kisumu and at Machakos. At Nyandiwa *S. mansoni* ova were found in 158 out of 387 people whereas only 22 had hookworms. Malaria parasites were seen in 134 out of 191 aged 0-10 years and 44 out of 205 aged over 10. In view of the low hookworm incidence it looks as though the very low mean haemoglobins are due either to *S. mansoni* or malaria. Further investigations are being undertaken to try and assess the significance of bilharzia as a cause of morbidity in this village.

At Machakos a rural area was selected where it was hoped to try and eliminate *S. mansoni* transmission by controlling the vectors. Preliminary surveys showed that transmission was confined to only a few foci. School children were examined and *S. mansoni* was found in 208 out of 1,986. Only six foci of *Biomphalaria* were found in the whole area. These are being treated with molluscicides or controlled by drainage. This detailed survey shows that control of transmission in rural areas is not necessarily an insuperable problem.

No vector snails have been recorded on the Perkerra and Galole schemes but periodic surveillance is required in these schemes in order to ensure their continued freedom from infestation.

At Mwea-Tebere mass molluscicidal programmes have been abandoned in favour of focal application. Six hundred snail "habitats" are examined monthly; breeding places are dealt with immediately with sodium pentachlorophenate pellets. There is very little if any transmission in the irrigation area. No infected snails were found during the year on the scheme, but a few were seen in canals outside the scheme.

PERSONAL HEALTH SERVICES

The number of doctors registered in Kenya during 1961 showed a slight increase in comparison with 1960. The number in private practice in the large towns remained adequate although the number of dentists showed a decrease, particularly in Nairobi. There is still room for medical and dental practitioners in the rural areas.

OUT-PATIENT SERVICES

For the first time in four years the number of out-patients attending Government hospitals and dispensaries has not shown a marked increase. This is most probably due to two factors; first, an increase in fees and secondly the inability of the patient to get to hospital due to the unprecedented flooding present in many parts of the country for nearly three months.

NEW AFRICAN OUT-PATIENT ATTENDANCES

1958	..	..	..	894,411
1959	..	..	..	992,652
1960	..	..	..	1,117,488
1961	..	..	..	1,125,454

1961 was heralded by drought which, in large areas of the country, caused famine and an increase in metabolic diseases. The latter part of the year was notable for the tremendous flooding which, again, caused great damage to crops and unavailability of food to many people. These facts are reflected in the morbidity returns, both out-patient and in-patient. Much famine relief was dispensed in Southern Province amongst the Masai, in the Northern Province amongst the Turkana, Coast Province amongst the Pokomo and Giriama and isolated pockets in Central Province.

The population continued to use the local authorities personal health services which remained as popular as ever. The major causes of out-patient morbidity remained the same; diseases of the respiratory tract heading the list followed by general infectious and parasitic diseases and diseases of the alimentary tract. These three groups accounted for nearly 60 per cent of the total out-patient attendances. Trauma was again fourth.

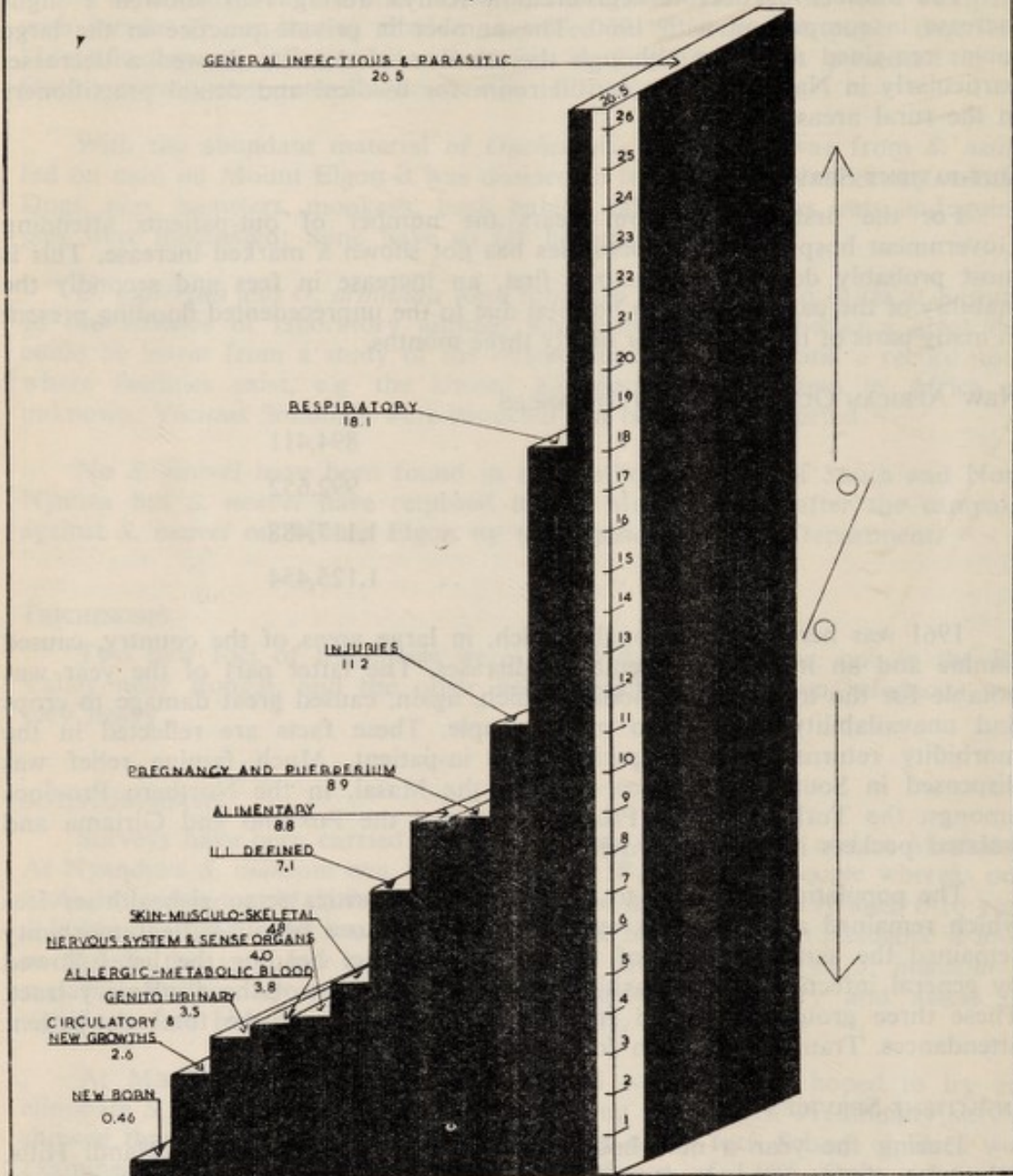
IN-PATIENT SERVICES

During the year a new hospital of 30 beds was opened at Nandi Hills, otherwise there was no expansion in hospital beds. The total number of admissions fell in 1961 by approximately 5 per cent. This again was almost certainly due to the increase in in-patient fees during the year and the lack of communications in many parts during the flooding.

ADMISSIONS—HOSPITAL

				European	Asian	African	Total
1958	..	..	..	958	3,593	150,721	155,272
1959	..	..	..	798	2,792	150,132	153,722
1960	..	..	..	832	3,050	152,992	156,874
1961	..	..	..	718	2,701	145,406	148,825

A HISTOGRAM SHOWING BY DISEASE GROUPS PRINCIPAL CAUSES OF MORBIDITY AMONG IN-PATIENTS
IN GOVERNMENT HOSPITALS
1941



Histogram 5

The disease pattern of hospital admissions is indicated in histogram No. 5. There has been little change in the pattern of hospital admissions since last year. Again, there was a considerable decrease in the number of normal deliveries undertaken in Government hospitals. A fall occurred from 10,294 to 6,553. This also may have been due to an increase in fees by most local authorities and to the state of the roads. Broncho-pneumonia remained the highest cause of death, with infantile gastro-enteritis again taking second place. The number of deaths due to tuberculosis rose slightly; this may also be associated with famine conditions during the year. It is interesting to note that for the first time diseases of the heart were responsible for more than 200 hospital deaths.

In spite of the flooding it will be noted that the number of admissions due to malaria showed a considerable decrease from the 1960 level; however, the number of out-patient attendances increased during the last quarter.

Trauma deserves special mention and is shown in histogram No. 5 still in ~~fourth~~ ^{third} place as a cause of admission to hospital. The pattern remains the same in spite of considerable health education in connexion with burns and scalds occurring in children due to unprotected fireplaces.

LABORATORY SERVICES

CLINICAL PATHOLOGY AT THE MEDICAL RESEARCH LABORATORY AND AT PROVINCIAL HOSPITALS

In common with most branches of the Medical Services the demands on the laboratory for examinations have expanded until the service is working to its full capacity, or beyond this point. This is due to the considerable advances in laboratory diagnosis in the last ten years, to the extension of our clinical services and to the training of young doctors. Work demand has increased at a more rapid rate than the supply of staff or facilities. In Nairobi, effective liaison has been established with King George VI Hospital, and a member of the laboratory staff sits on the Management Committee of the Hospital and control of laboratory requests has been possible. This co-operation is being encouraged at all hospitals in the country.

PUBLIC HEALTH BACTERIOLOGY

At our request the World Health Organization sent Dr. James Gear from the South African Institute of Medical Research to investigate the possibility of establishing a virus laboratory at the Medical Research Laboratory, Nairobi. Dr. Gear produced an admirable report which was of great assistance, but it was made obvious that the establishment of such a laboratory is beyond our financial means for the present.

A plan for the reorganization of the laboratory services was submitted in April, 1961, and this was mainly designed to make possible an extended Public Health Laboratory Service.

This is badly needed to lay down standards of food and water control and to investigate communicable disease. As much of the responsibility for public health control lies with local authorities, and they at the moment have to pay *pro rata* for any examinations, the use made of the laboratory will depend partly on the finances available to local health authorities; it will also depend on the availability of staff to cope with demands.

RESEARCH

In Kenya it is difficult to define basic research problems from the information obtained from routine and necessary clinical observations, and therefore every application for assistance from our clinicians for a special series of investigations is considered very sympathetically. However, the main research projects are still carried out by or supported by visiting teams.

The World Health Organization and Medical Research Council Tuberculosis Units have taken over the sensitivity tests for tubercle for the whole Colony and this division now restricts its tubercle work to routine clinical examinations. This was at the request of the special unit as the sensitivity tests being performed were more properly part of their research activities.

The Medical Research Laboratory Bilharzia Research Team moved to Kilifi Hospital to be nearer clinical material.

Doctors Foy and Kondi of Wellcome Foundation returned to Kenya and are continuing their work on the haematological problems of helminthic diseases. The chemotherapy team of the Sloane Kettering Institute has received considerable support from this division. The team was augmented, during the year, by Dr. F. Shipkey and Dr. Alice Moore, to study the possible virus aetiology of malignant lymphoma of the jaw in Africans. They were followed by Dr. Gilbert Dalldorf for a stay of six months to conduct a more extensive study of this problem.

The cancer register was continued throughout the year and has already yielded basic information on incidence to support a Kaposi symposium of the Unio Internationalis Contra Cancrum and various scientific papers by our own and visiting workers. This work continues to receive support from the British Empire Cancer Campaign and has, on Professor Davies' retirement from Makerere, been separated from the University's Cancer Programme and placed at the disposal of the Kenya Cancer Council.

VACCINE SECTION

The production of this section is shown in Table 1 and is essentially similar to previous years except that plague vaccine production has now been discontinued as its use in the control of epidemics has been outmoded by antibiotics and insecticides.

Mr. Doust, who founded this section, retired in the latter part of the year. He was succeeded by Mr. King who has worked for 15 years with Mr. Doust.

It is clear that vaccine production at the Medical Research Laboratory is being carried out under difficult circumstances, but it is considered that continuation of this section is essential until commercial vaccines become cheaper. Disbandment of the vaccine section could entail an expenditure of some £100,000 per year for the purchase of commercial preparations.

TABLE 1—VACCINE SECTION ANNUAL REPORT, 1961

	REVENUE EARNED FROM OTHER SOURCES				
	Vaccine Lymph	T.A.B. Vaccine	Anti-Rabic Vaccine	Plague Vaccine	Total
	£	£	£	£	£
Tanganyika	3,955	7	40	Nil	4,002
Uganda	5,600	682	580	6	6,868
Zanzibar	147	33	Nil	Nil	180
Somali Republic ..	135	3	84	Nil	222
E.A. Command ..	1	Nil	Nil	Nil	1
M.O.H. Nairobi ..	210	43	Nil	Nil	253
R.A.F.	5	Nil	Nil	Nil	5
Congo Republic ..	Nil	10	Nil	Nil	10
United Nations ..	Nil	Nil	2	58	60
TOTAL .. £	10,053	778	706	64	11,601

BLOOD TRANSFUSION SERVICES

The Transfusion Centre in Nairobi has typed all blood, except Emergency "bleeds", collected in the Nairobi area, and has investigated any reactions reported. This centre is under the control of an experienced technologist who has visited similar centres in Great Britain, and he has attempted to standardize techniques suitable for our restricted donor service. The donor service is efficiently organized by the executive officers, but response from some communities is still poor.

The Asian Blood Bank has been removed to the Aga Khan Hospital as this is more convenient for doctors using the bank and it is hoped that this change will result in a better donor response.

A survey of all hospitals in the Colony carrying out blood transfusion work has been made by technologists from the Medical Research Laboratory in an attempt to standardize techniques and introduce the Eldon Cards method. This method is proving satisfactory elsewhere, is admirably suited for hospitals performing a limited number of transfusions, and can be performed by doctors or laboratory staff with little experience. It is hoped to complete this change of method in early 1962.

PROVINCIAL AND DISTRICT HOSPITAL LABORATORIES

Due to a shortage of technologists several provincial laboratories have been run by senior laboratory assistants. It has been our policy to maintain the highest standards at the Medical Research Laboratory as the reference centre for the Colony and the clinical laboratory for King George VI Hospital.

Visits have been made by technical staff to all the district laboratories, and the work load and working efficiency of the assistants concerned assessed.

RADIOLOGICAL SERVICES

There was little expansion in the radiological services during 1961. A new department was opened at Kitui. The buildings for the new X-ray department at the rehabilitation unit, King George VI Hospital were completed during the year but equipment has not yet been installed. A start was made on construction of a new X-ray department at Bungoma. At Coast Province General Hospital, the process of re-equipment was completed to the satisfaction of all concerned. This unit is now very well equipped and should be able to cope with all demands for some time to come.

At King George VI Hospital the volume of work is approaching the maximum capacity of the department. Practice of the more erudite radiological aids to diagnosis has increased with a concomitant demand on the radiologists' time. Cardiac catheterization and percutaneous splenic portal venography are two examples of such examinations. Neuro-radiological examinations are performed by the honorary consultant radiologist.

Outside Nairobi nearly all the X-ray departments were busy. The mobile unit continued its useful service to the hospitals on the periphery of Nairobi. There is no doubt that, although the progress in any one year may not be spectacular, a comprehensive service of a very reasonable standard is gradually being achieved.

ADMINISTRATION

DEVELOPMENT

Development expenditure on capital works during the financial year 1960-61 was £196,807.

There were a considerable number of works under construction in January which were completed during the course of the year.

- (1) The new Cottage Hospital at Nandi Hills was completed in August. It is a very fine little unit which, if required, can be expanded cheaply.

- (2) At Kitui District Hospital an X-ray unit and housing for the staff thereof were completed.
- (3) Cubicles for the children's wards at King George VI Hospital were completed by the end of the year.
- (4) At the Central Province General Hospital, Nyeri, the double operating theatre suite was completed early in the year. Building fell a long way behind schedule but the end result is a very good unit.
- (5) At Kerugoya Hospital in Embu District the much needed new theatre and out-patient department were completed in April.
- (6) At the Coast Province General Hospital conversion of the spare kitchen to a staff canteen was completed. Conversion of the serving kitchen for steam-cooking was nearing completion at the end of the year.

Only three major new works were started during the year.

- (1) The Rehabilitation Centre at King George VI Hospital, Phases I and II. Phase I consists of a three-storey 100-bed ward block, the ground floor of which is temporarily used for consulting rooms and physiotherapy. Phase II is a single-storey X-ray department, plaster room and stores. The cost of the two phases was £42,727. Due to shortage of funds, beds are at present restricted to 40, the number in the old ward which has now been handed over to the Medical Training Centre for dormitory accommodation.
- (2) The National Reference Health Centre, Karuri, Kiambu District. There was some delay in starting work on this institution but by the end of the year construction of staff housing was under way. The project which is estimated to cost £40,000 is being financed by the Rockefeller Foundation with a contribution from the Kiambu African District Council.
- (3) At Mathari Hospital work on a new 86-bed ward block was delayed due to the heavy rains. However at the end of the year the block of flats to accommodate the staff was progressing (and a quagmire marked the site of the ward!).

Very little money was available for staff housing. A few new quarters were built and the policy of building additional quarters for any staff required for new works was followed strictly.

The policy of assisting non-Government hospitals and Local Health Authorities with capital grants was continued. Grants totalling £8,000 were made to Mission hospitals, £26,000 to private hospitals and £500 to Local Authorities.

FLOOD DAMAGE

Against this building programme must be reported the total loss of the old Garissa Hospital. The hospital wards and service buildings were completely destroyed by the floods in December. The patients were evacuated before the damage to a school and will be housed temporarily in an empty domestic/commercial building in the village. Fortunately the new out-patient department built in 1960 was sited on higher land. It was surrounded by water but not damaged.

FINANCE

The gross recurrent expenditure of the Medical Department during the year ended 30th June, 1961, amounted to £2,626,216, as compared with £2,195,444 in 1959/60. Expenditure during 1960/61, however, included a sum of £47,538 for passages and leave expenses (an item which previously had not been charged to the Department), the full cost of the Flemming Salary Revision increase for the period 1st April, 1960, to 31st March, 1961, and expenses of the Ministry, which were previously borne from a separate Vote.

Revenue for the year amounted to £516,806.

The following are summaries of expenditure and revenue during the year:—

<i>Year Ending</i> 30th June, 1960	EXPENDITURE	<i>Year Ending</i> 30th June, 1961
£		£
1,276,383	Personal Emoluments	1,566,365
—	Passages and Leave Expenses	47,538
30,775	House Allowances	36,223
78,814	Travelling Expenses	81,307
305,051	Medical and Surgical Stores and Equipment ..	338,621
168,548	Maintenance and Upkeep of Medical Establishments	177,604
90,570	Grants-in-Aid	57,793
90,044	Grants to Hospital Fund Authorities ..	117,992
4,927	X-ray Equipment	7,412
147,822	Miscellaneous Other Charges	174,993
1,347	Compensation and <i>ex gratia</i> Payments ..	2,710
1,163	Losses of Cash	328
—	British Red Cross	11,391
—	Nuffield Foundation Grant	5,939
£2,195,444		£2,626,216
<i>Year Ending</i> 30th June, 1960	REVENUE	<i>Year Ending</i> 30th June, 1961
£		£
	CAPITATION FEES—	
12,798	E.A. High Commission	12,903
52,637	E.A. Railways and Harbours	50,656
13,229	E.A. Posts and Telecommunications	13,888
1,485	E.A. Land Forces Organization	—
659	Miscellaneous	986
	FEES FOR SERVICES RENDERED—	
148,301	Hospitals and Dispensaries	182,468
4,580	X-ray	4,255
157	Massage and Physiotherapy	58
18,484	Laboratory	19,111
	SALES OF STORES AND OTHER MATERIALS—	
94,946	Stores and Equipment	94,027
3,143	Artificial Limbs	3,560
689	Health Education Materials	498
205	Occupational Therapy Products	247
20,437	Polio Vaccine	6,957
	REIMBURSEMENTS—	
4,413	Learners for Boarding Fees	1,659
536	Rations	396
26,171	Public Health Authorities for Seconded Staff ..	30,662
76,399	Public Health Authorities for Health Services	76,807
4,004	Other Ministries for Seconded Staff	—
—	NUFFIELD FOUNDATION GRANT	5,939
6,190	MISCELLANEOUS	11,729
£489,463		£516,806

TRAINING

Courses of training were carried out at the Medical Training Centre, Nairobi, as in previous years, but there were several modifications and innovations.

There was a considerable increase in the number of Kenya Registered Nurses under training, 62 being in training at the end of the year. The Kenya Registered Nurse is recognized by the General Nursing Council as the equivalent of the expatriate State Registered Nurse, thus the increase in the number of such students is an important localization measure.

In May, 1961, 19 individuals of K.A.P.E. standard commenced a one-year course of training in microscopy at the Medical Training Centre, Nairobi. They are intended for employment in the smaller district hospitals, where laboratory assistants with their higher grade four-year training would be hardly necessary.

In June, ten Graded Dressers started a one-year course in mental nursing at Mathari Mental Hospital. This course is related to the proposed construction of mental units at the Provincial Hospitals. These students should qualify as a new category of "Assistant Mental Nurse". It is considered that the training course is higher than the standard of that of the Assistant Mental Nurse of the United Kingdom. Since they are already Assistant Nurses, it is not necessary to teach them nursing and hence there is a much larger mental element in their training than in the United Kingdom syllabus.

A promotion course for Hospital Assistants in clinical medicine and surgery was started at the Rift Valley Province General Hospital, Nakuru, in October. This is a pilot scheme with only five Hospital Assistants and it is intended that it should be of one year's duration. Its purpose is to train selected Hospital Assistants to take more responsible positions in the hospital service.

Various miscellaneous courses were run during the year:—

- (1) A course in Hygiene for Cadet Prison Officers between 21st March, 1961, and 21st April, 1961.
- (2) Lay Lecturers' Courses for the St. John Ambulance Association in May and November.
- (3) Parties of Health Inspector Students from Uganda and Zanzibar were accommodated for about one month in each case and conducted on instructional visits to factories and similar establishments.

Table No. 2 gives the number of students qualifying in 1961 and those in training at the Medical Training Centre at the end of the year.

TABLE 2.—A Table to show the number of students in training in December, 1961, qualified in 1961 and estimated output for 1962.

Category of Student		No. of Students in training at December 1961	No. Students qualified in 1961	Estimated No. students qualifying in 1962
NURSING FACULTY				
Student Hospital Assistants	..	M. 55 F. 9 } 64	M. 21	M. 29 F. 2 } 31
Enrolled Assistant Nurses	..	M. 115	—	—
Medical Training Centre	..	F. 16 } 131	—	—
Districts		M. 125 F. 82 } 207	—	—

TABLE 2—(Contd.)

Category of Students	No. of Students in training at December 1961	No. Students qualified in 1961	Estimated No. students qualifying in 1962
NURSING FACULTY—(Contd.)			
Dressers— <i>Medical Training Centre</i>	M. 8	M. 21 } 25 F. 4 }	8
<i>Districts</i>	M. 10 } 13 F. 3 }	M. 47 } 65 F. 18 }	M. 10 } 13 F. 3 }
Pre-Trainees— <i>Medical Training Centre</i>	M. 15 } 52 F. 37 }		
<i>Districts</i>	M. 121 } 214 F. 93 }		
Kenya Registered Nurses ..	M. 4 F. 58 (Asian 21; African 37)	F. 7 (Asian 5; African 2)	F. 4 (Asian 3; African 1)
FACULTY OF RADIOGRAPHY			
Assistant Radiographer	M. 10 F. 5 (Asians)	M. 1	M. 3
Dark Room Assistants	5	2	5
FACULTY OF PHYSIOTHERAPY			
Physiotherapy/Occupational Therapy Assistants	M. 3 F. 2 (Asians)	— —	— —
FACULTY OF LABORATORY TECHNOLOGY			
Laboratory Assistants	10	10	—
Microscopists	16	—	16
FACULTY OF PHARMACY			
Dispensers	11	3	5
FACULTY OF HYGIENE			
Health Inspectors (E.A.)	7	4	14
Health Assistants	61	41	51
Storekeepers	7	—	3
	888	179	153
*Midwifery Training	21 (9 Kisumu; 12 Fort Hall)		
Health Visitor Training	22 (12 Kisumu; 10 Embu)		
Mental Training	6		
GRAND TOTAL ..	937		

TRAINING OUTSIDE KENYA

At the end of the year 55 officers from the Medical Department were taking courses outside Kenya. This prodigious exodus which, as can be seen from Table 3, deprived the Ministry of the services of many professional officers is a measure of our wholehearted participation in the localization programme. Although it placed great demands on the officers in the field, who were at times short staffed while themselves executing an increased local training programme, it was accepted as essential to progress and there was no deterioration in the service.

TABLE 3

SUMMARIZED DETAIL OF OFFICERS UNDERTAKING OVERSEAS COURSES AS AT 31-11-61

Kenya Government Funds

Nine Medical Officers (one F.F.A., one M.R.C.P., (E) (Anaesthetics), three D.P.H., three M.R.C.P., one Surgical Apprenticeship (Paris)).

One Health Inspector undertaking Sanitary Engineering Course, Durham.

One Assistant Health Inspector on Social Welfare Course, Swansea.

British Society for the Blind Scholarship, U.K.

One Medical Officer on D.O. Course.

C.D. and W. Funds, U.K.

Two Nursing Sisters—Sister Tutor Diploma.

Commonwealth Fellowship Plan—New Zealand Scholarship

One Medical Officer—F.R.C.S.

Canadian Technical Assistance Scheme

Two Medical Officers—D.P.H. Toronto University.

U.N., E.P.T.A. Funds

Two Officers on Medical Course at Hadassah Medical School, Jerusalem, Israel.

Kenya Development and Training Scholarships

Six Medical Officers (four D.P.H., one F.R.C.S., one Surgical Registrar).

One Assistant Medical Officer (L.M.S. (E.A.)).

Six K.R.N.s on S.C.M. Course, U.K.

Six Laboratory Assistants (A.I.M.L.T.).

One Assistant Radiographer (M.S.R.).

Seven Health Inspectors (E.A.) (Overseas Health Inspector Course—two at Salford, five at Mbale).

Two K.R.N. on Mental Nursing Course, U.K.

One Orthopaedic Assistant on Course for Hospital Welfare Administration, U.K.

American Government Funds

One Medical Officer—Public Health Administration, U.S.A.

Voluntary Courses

- One Medical Officer (M.R.C.O.G.).
- Three Assistant Surgeons (L.A.H. Dublin).

W.H.O. Fellowship

- One Health Senior Inspector—M.P.H. Course, University of Minnesota, U.S.A.

RECRUITMENT

The supply of staff from overseas during the year almost ceased except for one medical officer, one health visitor and one nursing sister recruited from the United Kingdom, two on contract and one on pensionable terms.

Vacancies in the Medical Officer and Nursing Sister cadres were filled by temporary officers to such an extent that at the end of the year there were 29 temporary medical officers and 59 temporary nursing sisters employed in this Ministry.

The recruitment of candidates for the Medical Training Centre was adversely affected by the continuation of the pocket money system which did not attract the best recruits and there was a tendency to regard the Centre as a free source of lodging while looking for something better to turn up.

The experiment of recruiting individuals, who had sat the Cambridge School Certificate in January instead of waiting till publication of the results at the end of February was tried in the Hygiene Faculty. In January, 16 students were recruited, but by the end of March, the number had dropped to seven. Losses were due to:—

- (a) failure in the Cambridge School Certificate examinations;
- (b) students being offered Form V and VI;
- (c) students going to other employment, principally in commerce and industry.

Thus, though the experiment was not a success, it did result in a small class in Hygiene, whereas in 1959 and 1960, there was an absolute failure of recruitment. Recruitment in January is being tried again in 1962 for the Faculties of Hygiene and Pharmacy.

VISITORS

The following visitors from overseas were shown various aspects of the work of the Ministry:—

- Dr. L. C. KERCHER, Western Michigan University.
- PROFESSOR IAN JACKSON, London University.
- MR. AND MRS. KIRBY, California, U.S.A.
- K. C. DENBY, ESQ., Secretary Society of Radiographers.
- E. L. HUTCHINSON, ESQ., Past President, Society of Radiographers.
- PROFESSOR F. C. ORMEROD, Professor of Surgery, London University.
- DR. G. H. NEWNS, C.B.E., Gt. Ormond Street, London.
- DR. G. F. HAMILTON, UNICEF, Paris.
- DR. HELEN WALLACE, U.S. Children's Bureau, Washington, U.S.A.
- DR. DOWLING, W.H.O. Malaria Adviser.
- DR. N. GIAGUINTO, W.H.O. Geneva.
- DR. MORTARA, W.H.O. Maternity Child Health Consultant.
- DR. SHUJI HASEGAWA, Professor, Tokyo University.

- MR. K. D. LUKE, British Embassy, Washington.
- DR. ALICE E. MOORE, Sloane Kettering Institute, New York.
- DR. FREDERICK SHIPKEY, Sloane Kettering Institute, New York.
- LT.-GENERAL H. E. KNOTT, C.B., O.B.E., Director-General of Army Medical Services.
- MISS M. HOUGHTON, M.B.E., General Nursing Council for England and Wales.
- DR. C. MANI, Regional Director W.H.O., S.E. Asia.
- DR. F. CAMBOURNAC, Regional Director W.H.O. for Africa.
- DR. D. MACKAY HART, Deputy Chairman, Central Midwives Board of Scotland.
- MISS PHYLLIS BURNS, U.N. Bureau of Social Affairs, New York.
- DR. JOAN F. HEFFERNAN, Medical Research Council Tuberculosis Research Unit.
- MR. W. H. CHINN, Colonial Office Adviser on Social Welfare.
- DR. M. A. VAUCEL, Director-General, Overseas Pasteur Institute, Paris.
- DR. I. V. BURDETT, University of Utah, Salt Lake City.
- MISS LAURA W. YERGAN, W.H.O. Brazzaville.
- PROFESSOR B. KESIC, School of Public Health, Zagreb, Yugoslavia.
- PROFESSOR MICHAELSON, Hebrew University of Jerusalem, Israel.
- DR. R. GJEBIN, Rambam Hospital, Haifa, Israel.
- DR. DALLDORF, Sloane Kettering Institute, New York.
- PROFESSOR R. B. HUNTER, M.B.E., University of St. Andrews, Scotland.
- DR. J. DOUCET, Ivory Coast.
- LORD DULVERTON, Dulverton Trust.

PUBLICATIONS

A glance at the list of publications which follows shows the wide range of research work carried out by members of the Medical Department. The list also reveals that this research is not confined to workers in Nairobi, who have good facilities for such work. A proportion of the work which has been published is field research carried out with marginal resources over and above a very heavy routine work load.

Apart from the publications, mention must be made of two papers delivered by officers at international conferences:—

- (1) *Aided Self-Help Housing* presented by A. H. Taylor, Chief Health Inspector at the C.C.T.A./W.H.O. Symposium on Hygiene and Sanitation in relation to housing held in Niamey.
- (2) *The Luo Culture and Health* presented by Joash Odhalo, Medical Assistant, at UNICEF Seminar on Health Education held at Makerere.

- CATHRO, A. J. M.—Case of congenital pseudarthrosis of the tibia treated by Kuntscher nailing. *E. Afr. Med. J.*, Vol. 38, p. 581.
- CASE, E. M.—A new method for detection of para aminosalicylic acid in urine. *Tubercle*. Vol. 42, p. 531.
- CHAUHAN, P. S.—Rhabdomyosarcoma of the bladder. *E. Afr. Med. J.*, Vol. 38, p. 379.
- CLIFFORD, P., CLIFT, R. A. AND DUFF, J. K.—Nitrogen mustard therapy combined with autogenous marrow infusion. *Lancet*. 1, p. 687.

- CLIFFORD, P.—Malignant disease of the nose paranasal sinuses and post-nasal space in East Africa. *J. Laryng*, Vol. 75, p. 707.
- CLIFFORD, P., OETTGEN, H. F., CLIFT, R. A. AND DUFF, J. K.—Contributions to the treatment of cancer of the head and neck. *E. Afr. Med. J.*, Vol. 38, pp. 491 and 504.
- CLIFT, R. A.—Bone marrow grafts. *E. Afr. Med. J.*, Vol. 38, p. 168.
- FROYD, G., AND CZYSEWICZ, M.—Incidence of multiple infestation with taenia saginata in Kenya. *E. Afr. Med. J.*, Vol. 38, p. 346.
- DUFF, J. K., DENNIS, J., CLIFT, R. A., CLIFFORD, P. AND OETTGEN, H. F.—High dose nitrogen mustard therapy with intermittent aortic occlusion. *Brit. Med. J.*, 2, p. 1523.
- FENDALL, N. R. E.—The spread of kala-azar in Kenya. *E. Afr. Med. J.*, Vol. 38, p. 417.
- FORRESTER, A. T. T., NELSON, G. S. AND SANDER, G.—The first record of an outbreak of trichinosis in Africa south of the Sahara. *Trans. R. Soc. trop. Med. Hyg.*, Vol. 55, p. 503.
- FOY, H., KONDI, A. AND MACDOUGALL, L. G.—Pure red-cell aplasia in marasmus and kwashiorkor treated with riboflavine. *Brit. Med. J.*, 1, p. 937.
- GARNHAM, P. C. C., HEISCH, R. B., MINTER, D. M., PHIPPS, J. D. AND IKATA, M.—*Culicoides adersi* Ingram and Macfie, 1923, a presumed vector of *Hepatocystis* (= *Plasmodium*) *kochi* (Laveran 1899). *Nature*, Vol. 190, p. 739.
- GARNHAM, P. C. C., HEISCH, R. B. AND MINTER, D. M.—The vector of *Hepatocystis* (= *Plasmodium*) *kochi*; the successful conclusion of observations in many parts of tropical Africa. *Trans. R. Soc. trop. Med. Hyg.*, Vol. 55, p. 497.
- GRATTAN, E.—Postgraduate surgical training. *E. Afr. Med. J.*, Vol. 38, p. 308.
- GRATTAN, E. AND HARRIES, J. R.—The surgical treatment of constrictive pericarditis. *E. Afr. Med. J.*, Vol. 38, p. 556.
- GROUND, J. G.—Combined streptomycin and thiacetazone in the treatment of pulmonary tuberculosis resistant to isoniazid and PAS. *Tubercle*, Vol. 42, p. 500.
- HARRIES, J. R. AND LAWES, W. E.—The use of light hypothermia in acute life-threatening poliomyelitis. *Med. & Surg.* Vol. 1, p. 45.
- HARRIES, J. R.—Osteomalacia and rickets. *E. Afr. Med. J.*, Vol. 38, p. 408.
- HEISCH, R. B.—Rodents as reservoirs of arthropod-borne diseases in Kenya. *E. Afr. Med. J.*, Vol. 38, p. 255.
- Useful and useless research. *E. Afr. Med. J.*, Vol. 38, p. 420.
- Putting nature to the question. *E. Afr. Med. J.*, Vol. 38, p. 452.
- Idols of the cave. *E. Afr. Med. J.*, Vol. 38, p. 597.
- MANSON-BAHR, P. E. C.—The leishmanin test and immunity in kala-azar. *E. Afr. Med. J.*, Vol. 38, p. 165.
- Immunity in Kala-Azar. *Trans. R. Soc. trop. Med. & Hyg.*, Vol. 55, p. 550.
- MANSON-BAHR, P. E. C. AND HEISCH, R. B.—Transient infection of man with a leishmania (*L. adleri*) of lizards. *Ann. trop. Med. & Parasit.* Vol. 55, p. 381.

McSHANE, C. B.—A case of concurrent chicken-pox and herpes zoster. *E. Afr. Med. J.*, Vol. 38, p. 466.

MILLER, J. R. M.—The place for conservatism in the treatment of appendicitis. *E. Afr. Med. J.*, Vol. 38, p. 63.

——— Intestinal obstruction (discussion). *E. Afr. Med. J.* Vol. 38, p. 543.

NELSON, G. S., RICKMAN, R. AND PESTER, F. R. N.—Feral trichinosis in Africa. *Tran. R. Soc. trop. Med. & Hyg.*, Vol. 55, p. 514.

NELSON, G. S.—On *Dipetalonema manson-bahri* n. sp., from the spring-hare, *Pedetes surdaster larvalis* with a note on its development in fleas. *J. Helminth*, Vol. 35, p. 143.

TURNER, P. P.—Aetiological aspects of coronary heart disease. *The Indian Physician*, Vol. 14, p. 505.

WHITTAKER, L. R.—On peptic ulceration in Kenya Africans. *E. Afr. Med. J.*, Vol. 38, p. 449.

RETURN OF DISEASES—OUT-PATIENTS, 1961

Code	DISEASES	EUROPEAN			ASIAN		AFRICAN	
		Male	Female	Total	Male	Female	Male	Total
INFECTIOUS AND PARASITIC DISEASES								
001-008	Respiratory Tuberculosis ..	9	3	12	87	65	4,501	7,843
010-019	Other Tuberculosis ..	1	1	2	8	3	1,212	2,108
020-029	Syphilis ..	—	—	—	3	1	1,588	2,685
030-035	Gonorrhoea ..	1	1	2	9	—	10,157	14,562
036-039	Other Venereal Diseases ..	4	—	4	1	—	1,178	1,795
045	Bacillary Dysentery ..	87	90	177	81	106	5,802	9,197
046	Amoebic Dysentery ..	19	12	31	10	2	1,897	3,329
055	Diphtheria ..	—	—	—	5	3	24	34
056	Whooping Cough ..	16	21	37	23	14	7,919	14,814
057, 340	Meningitis (excluding Tuberculosis)	1	1	2	2	—	259	365
058	Plague ..	—	—	—	—	—	—	—
060	Leprosy ..	—	—	—	—	—	563	968
061	Tetanus ..	—	—	—	—	—	211	330
062	Anthrax ..	—	—	—	—	—	216	342
071	Relapsing Fever ..	—	—	—	3	—	52	94
073	Yaws ..	—	—	—	—	—	419	910
080	Acute Poliomyelitis ..	2	2	4	8	4	115	231
084	Varicella Major ..	—	—	—	—	—	16	27
084	Varicella Minor ..	—	—	—	—	—	111	173
085	Measles ..	27	55	82	32	26	6,484	12,325
086	Rubella ..	1	2	3	1	1	5,841	192
087	Chicken-pox ..	39	109	148	29	10	2,998	5,462
088	Herpes Zoster ..	8	4	12	15	14	2,464	1,209
089	Mumps ..	41	80	121	26	16	725	4,340
092	Infectious Hepatitis ..	28	21	49	4	1	2,573	689
095	Trachoma ..	1	—	1	77	21	469	220
110	B.T. Malaria ..	5	2	7	—	—	3,584	5,719
111	O.T. Malaria ..	—	—	—	2	1	1,097	2,134
112	S.T. Malaria ..	83	39	122	36	47	437	605
115	Blackwater ..	—	—	—	—	—	13,450	27,481
121	Trypanosomiasis ..	—	—	—	—	—	—	—
120.0	Schistosomiasis (Haematobium) ..	2	—	2	—	1	78	97
123.1	Schistosomiasis (Mansoni) ..	2	2	4	—	—	3,286	4,955
126	Tapeworm ..	3	3	6	2	—	706	1,361
127	Onchocerciasis ..	1	6	7	7	4	10,445	14,902
129	Ankylostomiasis ..	2	1	3	—	—	45	66
130.0	Ascariasis ..	—	1	1	3	1	3,371	6,007
131	Tinea ..	38	34	72	21	25	6,524	11,950
					49	13	1,605	3,396

RETURN OF DISEASES—OUT-PATIENTS, 1961—(Contd.)

Code	DISEASES	EUROPEAN			ASIAN			AFRICAN		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
135 N.O.S. 036-138	INFECTIOUS AND PARASITIC DISEASES—(Contd.)									
	Scabies	6	5	11	28	16	44	7,892	6,177	14,069
	Other Infective and Parasitic Diseases	55	97	152	196	24	220	3,904	2,919	6,823
140-205 210-239	NEW GROWTHS									
	Malignant Neoplasms	11	9	20	2	1	3	202	206	408
	Benign and other Neoplasms	40	56	96	40	12	52	764	800	1,564
241 286.6 290-293 N.O.S. 240-299	ALLERGIC, METABOLIC AND BLOOD DISEASES									
	Asthma	27	45	72	153	78	231	2,808	1,549	4,357
	Kwashiorkor	—	—	—	3	7	10	2,847	2,394	5,241
	Anaemia	21	75	96	82	117	199	2,287	2,258	4,545
	Other Allergic, Endocrine, Metabolic and Nutritional Diseases	167	223	390	219	165	384	3,548	2,973	6,521
300-326 353 N.O.S. 330-369	DISEASES OF NERVOUS SYSTEM AND SENSE ORGANS									
	Mental Disorder	147	82	229	43	10	53	1,262	530	1,792
	Epilepsy	5	31	36	9	3	12	553	284	837
	Other Diseases of the Nervous System and Sense Organs ..	293	354	647	149	74	223	3,322	1,959	5,281
370 373 389 N.O.S. 371-388 390-398	DISEASES OF EYE AND EAR									
	Conjunctivitis and Ophthalmia	170	225	395	339	104	443	20,347	16,299	36,646
	Stye	28	37	65	90	63	153	2,556	1,252	3,808
	Blindness	8	4	12	20	1	21	807	347	1,154
	Other Diseases of Eye (not Trachoma)	167	185	352	221	101	322	4,898	1,786	6,684
	Diseases of Ear and Mastoid Process	339	440	779	258	301	559	11,839	6,919	18,758
400-447 450-468	CIRCULATORY DISEASES									
	Diseases of the Heart	30	37	67	21	7	28	478	433	911
	Other Circulatory Diseases	168	177	345	110	24	134	1,305	740	2,045

RETURN OF DISEASES—OUT-PATIENTS, 1961—(Contd.)

Code	DISEASES	EUROPEAN			ASIAN		AFRICAN	
		Male	Female	Total	Male	Female	Male	Female
490-493 N.O.S. 470-527	RESPIRATORY DISEASE							
	Pneumonia	39	48	87	73	38	12,213	11,386
	Other Diseases of the Respiratory System (including Coryza, Pharyngitis and Bronchitis)	1,930	2,234	4,164	6,919	3,003	136,915	100,432
530-535 537 536-538 560-561, 570 571.0 571.1 N.O.S. 539-587	ALIMENTARY DISEASES							
	Dental Caries—Other Disease of Teeth and Gums	139	119	258	192	154	15,065	8,892
	Glossitis	6	3	9	3	5	301	417
	Stomatitis and Other Diseases of the Buccal Cavity and Salivary Glands	65	140	205	163	121	10,069	8,425
	Intestinal Obstruction and Hernia	28	7	35	20	2	1,332	588
	Gastro-enteritis under Two Years	61	142	203	132	98	16,953	15,363
	Gastro-enteritis over Two Years	278	320	598	510	222	15,522	11,713
	Other Diseases of Alimentary System	744	741	1,485	1,405	698	36,644	22,972
613 N.O.S. 590-617 636 N.O.S. 620-637 650-652 N.O.S. 640-689	GENITO-URINARY DISEASES							
	Hydrocele	1	—	1	3	—	541	—
	Other Diseases of Genito-Urinary System and Male Genital Organs	256	—	256	153	—	6,428	77
	Sterility (Female)	—	16	16	—	3	—	1,994
	Other Diseases of Uterus and Female Genital Organs	—	876	876	—	327	—	10,922
	Normal Pregnancy	—	674	674	—	113	—	13,209
	Abortion	—	18	18	—	15	—	3,493
	Other Diseases of Childbirth	—	6	6	—	7	—	1,030
690-698 715 N.O.S. 700-716 720-759	SKIN AND MUSCULO-SKELETAL DISEASES							
	Boils, and Infections of Skin and Subcutaneous Tissues	682	661	1,343	755	363	21,695	13,473
	Chronic Ulcers	9	10	19	87	35	24,485	16,560
	Other Diseases of the Skin	302	351	653	568	345	11,221	8,411
	Diseases of Bones, Joints, Muscles and Malformation	625	619	1,244	952	433	25,935	14,695

RETURN OF DISEASES—OUT-PATIENTS, 1961—(Contd.)

Code	DISEASES	EUROPEAN			ASIAN			AFRICAN		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
ILL-DEFINED DISEASES AND INJURIES										
760-776	Neonatal Diseases..	—	1	1	2	1	3	1,097	1,122	2,219
788.8	Pyrexia of Unknown Origin	276	247	523	430	180	610	37,292	45,864	83,156
N.O.S.										
780-795	All Other Ill-defined Causes of Morbidity	631	789	1,420	452	105	557	9,167	4,358	13,525
N.800-N.839	Fractures and Dislocations	142	75	217	149	50	199	6,302	2,907	9,209
N.840-N.848	Sprains	165	96	261	184	64	248	6,870	2,641	9,511
N.930-N.936	Foreign Bodies	77	38	115	112	30	142	3,904	1,980	5,884
N.940-N.949	Burns and Scalds	41	24	65	89	49	138	6,643	5,047	11,690
N.960-N.979	Poisoning	7	3	10	1	—	1	577	234	811
N.O.S.										
N.850-N.999	Other Injuries and Wounds	464	319	783	2,150	588	2,738	52,346	21,668	74,014
Y.00-Y.18	Examination	2,092	1,193	3,285	797	105	902	27,094	4,829	31,923
	Total	11,165	12,343	23,508	18,829	8,641	27,470	653,026	472,428	1,125,454

RETURN OF DISEASES—IN-PATIENTS, 1961

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.	1	Respiratory Tuberculosis ..	8	3	11	—	94	53	147	7	2,893	1,987	4,780	505
	2	T.B. of Meninges and Central Nervous System ..	—	—	—	—	1	1	2	1	212	160	392	133
	3	T.B. of Intestines, Peritoneum and Mesenteric Glands ..	—	—	—	—	5	2	7	—	128	103	231	37
	4	Tuberculosis of Bones and Joints ..	—	—	—	—	—	1	1	—	284	194	478	16
	5	Tuberculosis—All other Forms ..	—	—	—	—	6	—	6	—	615	499	1,114	75
	6	Congenital Syphilis ..	—	—	—	—	—	—	—	—	20	13	33	6
	7	Primary Syphilis ..	—	—	—	—	—	—	—	—	46	11	57	—
	7	Secondary Syphilis ..	—	—	—	—	—	—	—	—	32	23	55	—
	8	Tabes Dorsalis ..	—	—	—	—	—	—	—	—	3	2	5	—
	9	General Paralysis of Insane ..	1	—	1	—	2	—	2	—	12	10	22	11
	10	Cardio Vascular Syphilis ..	—	—	—	—	—	—	—	—	12	4	16	5
	10	All other Syphilis ..	—	—	—	—	—	—	—	—	36	24	60	1
	11	Gonorrhoea, Genito-Urinary ..	—	—	—	—	—	—	—	—	184	119	303	2
	11	Gonococcal Infection of Eye ..	—	—	—	—	—	—	—	—	17	11	28	—
	11	Other Gonococcal Infections ..	—	—	—	—	—	—	—	—	84	72	156	1
	12	Typhoid Fever ..	1	1	2	—	4	1	5	1	588	522	1,110	126
	13	Salmonella Infections ..	2	—	2	—	—	—	—	—	25	9	34	1
	14	Cholera ..	—	—	—	—	—	—	—	—	—	—	—	—
	15	Brucellosis ..	1	—	1	—	—	—	—	—	228	55	283	4
	16	Bacillary Dysentery ..	9	1	10	—	7	3	10	—	1,153	712	1,865	78
	16	Amoebiasis ..	3	—	3	—	5	4	9	—	847	536	1,383	39
	16	Other Unspecified Dysentery ..	—	—	—	—	3	3	6	—	612	331	943	49
	17	Scarlet Fever ..	—	—	—	—	—	—	—	—	—	—	—	—
	18	Streptococcal Sore Throat ..	—	1	1	—	2	—	2	—	44	31	75	—
	19	Erysipelas ..	—	—	—	—	—	—	—	—	10	4	14	—
	20	Septicaemia and Pyaemia ..	1	—	1	—	1	—	1	—	42	30	72	26
	21	Diphtheria ..	—	—	—	—	2	5	7	—	8	13	21	8
	22	Whooping Cough ..	—	—	—	—	—	—	—	—	1,350	1,428	2,778	249
	23	Meningococcal Infections ..	—	—	—	—	—	—	—	—	190	145	335	84
	24	Plague ..	—	—	—	—	—	—	—	—	2	1	3	1
	25	Leprosy ..	—	—	—	—	4	—	4	—	312	88	400	6

6995

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RETURN OF DISEASES—IN-PATIENTS, 1961—(Contd.)

CODE	LIST NO.	DISEASES	EUROPEAN			Total Deaths	ASIAN			Total Deaths	AFRICAN			Total Deaths
			ADMISSION		Total		ADMISSION		Total		ADMISSION		Total	
			Male	Female			Male	Female			Male	Female		
GENERAL INFECTIOUS AND PARASITIC DISEASES—(Contd.)														
A.	26	Tetanus	..	..	..	..	..	..	..	..	..	..	..	..
061	27	Anthrax	..	..	..	..	..	..	..	..	..	..	..	..
062	28	Acute Poliomyelitis	..	..	..	..	..	..	..	..	..	..	..	..
080	29	Acute Infectious Encephalitis	..	..	..	..	..	..	..	..	..	..	..	..
082	30	Late Effects Poliomyelitis and Infectious Encephalitis	..	..	..	..	..	..	..	..	..	..	..	..
081, 083	31	Variola Major	..	..	..	..	..	..	..	..	..	..	..	..
084	31	Variola Minor	..	..	..	..	..	..	..	..	..	..	..	..
084	32	Measles	17	10	27	..	..	..	..	..	..	..	..	..
085	33	Yellow Fever	..	..	..	..	..	..	..	..	..	..	..	..
091	34	Infectious Hepatitis	..	..	..	..	..	..	..	..	..	..	..	..
092	34	Rabies	..	..	..	..	..	..	..	..	..	..	..	..
094	35	Louse Borne Epidemic Typhus	..	..	..	..	..	..	..	..	..	..	..	..
100	36	Flea Borne Epidemic Typhus	..	..	..	..	..	..	..	..	..	..	..	..
101	36	Tick Borne Typhus	..	..	..	..	..	..	..	..	..	..	..	..
104	36	Other Rickettsial Diseases	..	..	..	..	..	..	..	..	..	..	..	..
N.O.S.	36	B.T. Malaria	..	..	..	..	..	..	..	..	..	..	..	..
102-108	37	Qt. Malaria	..	..	..	..	..	..	..	..	..	..	..	..
110	37	S.T. Malaria	..	..	..	..	..	..	..	..	..	..	..	..
111	37	Blackwater Fever	..	..	..	..	..	..	..	..	..	..	..	..
112	37	Other Forms of Malaria	..	..	..	..	..	..	..	..	..	..	..	..
115	37	Schistosomiasis (Haematobium)	..	..	..	..	..	..	..	..	..	..	..	..
N.O.S.	37	Schistosomiasis (Mansoni)	..	..	..	..	..	..	..	..	..	..	..	..
113-117	38	Schistosomiasis (Japonicum)	..	..	..	..	..	..	..	..	..	..	..	..
123.0	38	Other Unspecified Schistosomiasis	..	..	..	..	..	..	..	..	..	..	..	..
123.1	38	Hydatid Disease	..	..	..	..	..	..	..	..	..	..	..	..
123.2	38	Onchocerciasis	..	..	..	..	..	..	..	..	..	..	..	..
123.3	38	Loiasis	..	..	..	..	..	..	..	..	..	..	..	..
125	39	Filaria (Elephantiasis)	..	..	..	..	..	..	..	..	..	..	..	..
127	40	Other Filariasis	..	..	..	..	..	..	..	..	..	..	..	..
127	40	Ankylostomiasis	..	..	..	..	..	..	..	..	..	..	..	..
129	41		..	..	..	..	..	..	..	..	..	..	..	..

RETURN OF DISEASES—IN-PATIENTS, 1961—(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.	42	Tapeworm and other Cestode Infestation	—	—	—	—	—	—	—	—	—	—	—	—
126	42	Ascariasis	—	—	—	—	—	—	—	—	—	—	—	—
130.0	42	Guinea-worm	—	—	—	—	—	—	—	—	—	—	—	—
N.O.S.														
124-130														
036	42	Other Diseases due to Helminths ..	—	—	—	—	—	—	—	—	—	—	—	—
037	43	Chancroid	3	—	3	—	—	—	—	—	—	—	—	—
038	43	Lymphogranuloma Venereum ..	—	—	—	—	—	—	—	—	—	—	—	—
039	43	Granuloma Inguinale	—	—	—	—	—	—	—	—	—	—	—	—
049	43	Other Unspecified Venereal Diseases ..	—	—	—	—	—	—	—	—	—	—	—	—
	43	Food Poisoning, Infective and Toxic (excepting Salmonella Infections) ..	—	—	—	—	—	—	—	—	—	—	—	—
071.0	43	Relapsing Fever (Louse Borne) ..	—	—	—	—	—	—	—	—	—	—	—	—
071.1	43	Relapsing Fever (Tick Borne) ..	—	—	—	—	—	—	—	—	—	—	—	—
072	43	Weil's Diseases	—	—	—	—	—	—	—	—	—	—	—	—
073	43	Yaws	—	—	—	—	—	—	—	—	—	—	—	—
086	43	Rubella	—	—	—	—	—	—	—	—	—	—	—	—
087	43	Chicken Pox	5	5	10	—	—	—	—	—	—	—	—	—
088	43	Herpes Zoster	1	—	1	—	—	—	—	—	—	—	—	—
089	43	Mumps	6	5	11	—	—	—	—	—	—	—	—	—
090	43	Dengue	—	—	—	—	—	—	—	—	—	—	—	—
095	43	Trachoma	—	—	—	—	—	—	—	—	—	—	—	—
096.7	43	Sandfly Fever	—	—	—	—	—	—	—	—	—	—	—	—
120	43	Leishmaniasis	—	—	—	—	—	—	—	—	—	—	—	—
121.0	43	Trypanosomiasis (Gambiense) ..	—	—	—	—	—	—	—	—	—	—	—	—
121.0	43	Trypanosomiasis (Rhodesiense) ..	—	—	—	—	—	—	—	—	—	—	—	—
121.2	43	Other Unspecified Trypanosomiasis ..	—	—	—	—	—	—	—	—	—	—	—	—
131	43	Dermatophytosis (Tinea)	—	—	—	—	—	—	—	—	—	—	—	—
135	43	Scabies	—	—	—	—	—	—	—	—	—	—	—	—
N.O.S.														
054-122	43	Other Infectious and Protozoal Diseases ..	—	—	—	—	—	—	—	—	—	—	—	—
N.O.S.														
132-138	43	Other Parasitic Diseases	—	—	—	—	—	—	—	—	—	—	—	—

RETURN OF DISEASES—IN-PATIENTS, 1961—(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														
140-148 150 151 152, 153 154 161 162, 163 170 171 172-174 177 190, 191 196, 197 155 N.O.S. 156-199 204 200-203, 205 210-239	A. 44 45 46 47 48 49 50 51 52 53 54 55 56 57 57 58 59 60	Malignant Neoplasm of Mouth and Pharynx	—	—	—	—	9	8	17	—	34	26	60	17
		Malignant Neoplasm of Oesophagus	—	—	—	—	5	1	6	1	107	20	127	44
		Malignant Neoplasm of Stomach	—	—	—	—	—	1	1	1	40	18	58	26
		Malignant Neoplasm of Intestine	1	1	2	—	3	1	4	—	25	13	38	9
		Malignant Neoplasm of Rectum	—	—	—	—	31	6	37	—	25	4	29	2
		Malignant Neoplasm of Larynx	—	—	—	—	—	4	4	—	11	8	19	7
		Malignant Neoplasm of Trachea, Bronchus and Lung not Specified as Secondary	—	—	—	—	4	2	6	—	18	9	27	11
		Malignant Neoplasm of Breast	—	—	—	—	—	3	3	—	—	55	55	12
		Malignant Neoplasm of Cervix Uteri	—	1	1	1	—	4	4	—	—	71	71	10
		Malignant Neoplasm of other Unspecified Parts of Uterus	—	—	—	—	—	6	6	—	—	41	41	8
		Malignant Neoplasm of Prostate	—	—	—	—	7	—	7	—	44	—	44	3
		Malignant Neoplasm of Skin	—	—	—	—	11	2	13	—	40	29	69	4
		Malignant Neoplasm of Bone and Connected Tissue	1	—	1	—	9	5	14	—	56	27	83	15
		Malignant Neoplasm of Liver and Bile Passages (Primary)	—	—	—	—	4	3	7	1	110	45	155	56
204 200-203, 205 210-239	57	Malignant Neoplasm of all other Unspecified Sites	—	—	—	—	—	2	2	—	183	139	322	88
	58	Leukaemia and Aleukaemia	—	—	—	—	1	1	2	2	30	25	55	21
	59	Lymphosarcoma and other Neoplasm of Lymphatic and Haematopoietic Systems	—	—	—	—	1	—	1	—	64	36	100	20
	60	Benign Neoplasms and Unspecified Neoplasms	2	9	11	—	1	2	3	—	172	276	448	11
ALLERGIC, METABOLIC AND BLOOD DISEASES														
250, 251 252 260	61	Non-toxic Goitre	—	—	—	—	1	—	1	—	17	49	66	1
	62	Thyrotoxicosis	—	—	—	—	1	3	4	1	2	9	11	—
	63	Diabetes Mellitus	2	—	2	—	23	16	49	1	151	72	223	16

RETURN OF DISEASES—IN-PATIENTS, 1961—(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.	64	Beri-beri	—	—	—	—	—	—	—	—	1	4	5	1
280	64	Pellagra	—	—	—	—	—	2	2	—	32	23	55	3
281	64	Scurvy	—	—	—	—	—	—	—	—	10	6	16	3
282	64	Kwashiorkor	—	—	—	—	—	—	—	—	854	777	1,631	427
286.6	64	Other Deficiency States	—	—	—	—	2	3	5	—	314	259	573	95
283-286	65	Pernicious and other Hyperchromic Anaemias	—	—	—	—	—	—	—	—	59	106	165	28
290	65	Iron Deficiency Anaemias	—	—	—	—	4	4	8	—	199	302	501	63
291	65	Other Anaemias	1	—	1	—	1	12	13	—	467	671	1,138	149
292, 293	66	Asthma	4	—	4	—	19	10	29	1	505	353	858	18
241	66	Other Allergic, Endocrine, Metabolic and Blood Diseases	4	2	6	—	8	2	10	1	237	159	396	14
N.O.S. 240-299	66													
DISEASES OF NERVOUS SYSTEM AND SENSE ORGANS														
300-309	67	Psychoses	13	27	40	—	23	14	37	—	905	461	1,366	—
310-324, 326	68	Psychoneuroses and Disorders of Personality	2	1	3	—	5	4	9	—	76	79	155	—
325	69	Mental Deficiency	—	—	—	—	3	1	4	—	329	285	614	10
330-334	70	Vascular Lesions Affecting Central Nervous System	1	3	4	3	1	—	1	—	63	38	101	29
340.0	71	Meningitis due to H. Influenzae	—	—	—	—	1	—	1	—	36	18	54	8
340.1	71	Meningitis due to Pneumococcus	2	1	3	—	—	—	—	—	152	103	255	93
340.2	71	Meningitis due to Other Organisms except Tuberculous and Syphilitic	—	—	—	—	—	—	—	—	160	75	235	78
340	71	Meningitis (except Meningococcal and Tuberculous)	—	—	—	—	3	—	3	1	195	114	309	77
345	72	Multiple Sclerosis	—	—	—	—	—	—	—	—	3	—	3	—
353	73	Epilepsy	2	—	2	—	12	3	15	—	271	100	371	17
370-379	74	Inflammatory Diseases of Eye	—	—	—	—	14	11	25	—	316	189	505	2
385	75	Cataract	—	—	—	—	17	7	24	—	367	215	582	2
387	76	Glaucoma	—	—	—	—	4	—	4	—	18	9	27	—

RETURN OF DISEASES—IN-PATIENTS, 1961—(Contd.)

CODE	LIST No	DISEASES	EUROPEAN			Total Deaths	ASIAN			Total Deaths	AFRICAN			Total Deaths
			ADMISSION		Total		ADMISSION		Total		ADMISSION		Total	
			Male	Female			Male	Female			Male	Female		
DISEASES OF NERVOUS SYSTEM AND SENSE ORGANS—(Contd.)														
A.		Otitis Externa	—	—	—	—	2	1	3	—	36	16	51	—
390	77	Otitis Media and Mastoiditis	2	6	8	—	—	—	—	—	182	97	279	2
391-393	77	Other Inflammatory Diseases of Ear	—	—	—	—	6	—	6	—	69	40	109	—
394	77													
N.O.S.														
341-369	78	All other Diseases of Nervous System, Sense Organs and Auditory System	3	6	9	—	15	9	24	—	263	170	433	28
395-398														
N.O.S.														
380-389	78	All other Diseases and Conditions of Eye	—	—	—	—	5	—	5	—	323	174	497	1
CIRCULATORY DISEASES														
400-401	79	Rheumatic Fever	—	—	—	—	5	3	8	—	244	179	423	3
402	79	Chorea	—	—	—	—	—	—	—	—	80	87	167	—
410-416	80	Chronic Rheumatic Heart Disease	—	—	—	—	4	2	6	—	109	120	229	43
420-422	81	Arteriosclerotic and Degenerative Heart Disease	—	—	—	—	—	—	—	—	41	35	76	22
430-434	82	Other Diseases of Heart	1	1	2	2	24	11	36	—	288	263	551	169
440-443	83	Hypertension with Heart Disease	2	—	2	—	7	2	9	—	89	46	135	36
444-447	84	Hypertension without Mention of Heart	1	1	2	—	13	4	17	—	62	38	100	7
450-456	85	Diseases of Arteries	—	—	—	—	11	4	15	—	49	18	67	11
460-468	86	Other Diseases of Circulatory System	3	16	21	—	28	2	30	—	176	77	253	39
RESPIRATORY DISEASES														
470-475	87	Acute Upper Respiratory Infections	6	10	16	—	6	2	8	1	840	690	1,530	30
480-483	88	Influenza	3	2	5	—	—	1	1	—	795	514	1,309	1
490	89	Lobar Pneumonia	—	—	—	—	7	1	8	1	2,913	1,661	4,574	261
491	90	Bronchopneumonia	—	2	4	1	7	3	10	1	4,131	3,244	7,375	1,484
492, 493	91	Primary Atypical, other and Unspecified Pneumonia	3	—	3	—	5	6	11	—	1,070	622	1,692	93
500	92	Acute Bronchitis	3	—	3	—	15	1	16	1	2,668	2,273	4,941	62
501, 502	93	Bronchitis, Chronic and Unqualified	4	1	5	—	12	3	15	—	1,190	926	2,116	29
510	94	Hypertrophy of Tonsils and Adenoids	16	8	24	—	159	111	270	—	673	571	1,244	9
518, 521	95	Empyema and Abscess of Lung	—	1	1	—	4	—	4	—	81	35	116	17

RETURN OF DISEASES—IN-PATIENTS, 1961—(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.)														
519 523 N.O.S. 511-527	A.	Pleurisy (other than Tuberculous)	2	3	5	—	2	—	2	—	76	26	102	3
	96	Pneumoconiosis	—	—	—	—	—	—	—	—	22	11	33	1
	97	All other Respiratory Diseases	9	5	14	1	47	14	61	—	794	514	1,308	37
ALIMENTARY DISEASES														
530 531-535 540 541 543 550-553 560, 561, 570 571.0 571.1 572 581 584, 585 536-587	98	Dental Caries	1	—	1	—	3	2	5	—	78	36	114	—
	98	All other Diseases of Teeth and Supporting Structures	1	1	2	—	5	3	8	—	165	89	254	1
	99	Ulcer of Stomach	2	—	2	—	17	—	17	—	194	69	263	8
	100	Ulcer of Duodenum	2	1	3	—	14	3	17	1	565	421	986	6
	101	Gastritis and Duodenitis	6	—	6	—	66	13	79	—	286	130	416	7
	102	Appendicitis	9	6	15	—	70	56	122	—	1,076	306	1,382	12
	103	Intestinal Obstruction and Hernia	9	—	9	—	—	4	4	1	—	—	—	191
	104	Gastro-Enteritis and Colitis between Four Weeks and Two Years	2	—	2	—	14	8	22	4	2,440	1,899	4,339	747
	104	Gastro-Enteritis and Colitis, Ages Two Years and over	3	4	7	—	7	4	11	1	1,073	872	1,945	277
	104	Chronic Enteritis and Ulcerative Colitis	—	—	—	—	1	1	2	—	260	182	442	30
	105	Cirrhosis of Liver	—	—	—	—	2	—	2	—	260	102	362	128
	106	Cholelithiasis and Cholecystitis	—	1	1	—	7	5	12	—	36	29	65	2
	107	Other Diseases of Digestive System	20	22	42	—	24	15	39	1	1,194	925	2,119	79
	GENITO-URINARY DISEASES													
590 591-594 600 602, 604 610 620, 621 613	108	Acute Nephritis	1	1	2	—	4	2	6	—	182	140	322	34
	108	Chronic, other and Unspecified Nephritis	1	—	1	—	3	—	3	—	95	83	178	43
	110	Infections of Kidney (Other than Tuberculous)	3	4	7	—	27	22	49	2	90	108	198	17
	111	Calculi of Urinary System	—	1	1	—	1	1	2	—	43	27	70	2
	112	Hyperplasia of Prostate	—	—	—	—	2	—	2	—	332	—	332	13
	113	Diseases of Breast (not Neoplastic)	—	1	1	—	—	6	6	—	—	188	188	2
	114	Hydrocele	—	—	—	—	10	—	10	—	284	—	284	3

RETURN OF DISEASES—IN-PATIENTS, 1961—(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	
634 N.O.S. 601-617	A.	GENITO-URINARY DISEASES—(Contd.)												
	114	Disorders of Menstruation	—	—	—	—	3	3	—	—	738	738	—	
	114	Other Diseases of Genito-Urinary System and Male Genital Organs	10	—	10	34	—	34	—	704	46	750	46	
	114	Other Diseases of Uterus and Female Genital Organs	—	50	50	—	147	147	—	—	2,025	2,025	16	
640-641, 681/2/4		DISEASES OF PREGNANCY AND PUERPERIUM												
	115	Sepsis of Pregnancy Childbirth and the Puerperium	—	—	—	—	—	—	—	—	349	349	20	
	642, 652 685, 686	Toxaemias of Pregnancy and the Puerperium	—	—	—	—	3	3	—	—	101	101	8	
	643, 644 650	Haemorrhage of Pregnancy and Childbirth Abortion without Mention of Sepsis or Toxaemia	—	10	10	—	37	37	—	—	2,782	2,782	6	
650 660 N.O.S. 645-689	119	Abortion with Sepsis	—	4	4	—	11	11	—	—	450	450	6	
	120	Delivery without Complication	—	47	47	—	68	68	—	—	6,553	6,553	—	
	120	Other Complications of Pregnancy, Childbirth and Puerperium	—	8	8	—	57	57	—	—	2,437	2,437	91	
		SKIN AND MUSCULO-SKELETAL DISEASES												
690-698 720-725 726-727	121	Infections of Skin and Subcutaneous Tissue	15	12	27	25	13	38	—	1,054	671	1,725	21	
	122	Arthritis and Spondylitis	1	5	6	6	5	11	—	480	223	703	14	
	123	Muscular Rheumatism and Rheumatism, Unspecified	—	3	3	4	1	5	—	312	202	514	4	
	124	Osteomyelitis and Periostitis	—	—	—	9	3	12	—	283	127	410	7	
730 737, 745-749	125	Ankylosis and Acquired Musculo-skeletal Deformities	—	1	1	—	2	2	—	86	47	133	—	

RETURN OF DISEASES—IN-PATIENTS, 1961—(Contd.)

CODE	LIST N.O.	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.)															
715 700-714, 716 731/736, 738-744	A. 126	Chronic Ulcer of Skin	—	—	—	—	2	1	3	—	1,240	741	1,981	24	
	126	All other Diseases of Skin.. ..	5	6	11	—	16	14	30	—	516	283	799	11	
	126	All other Diseases of Musculo-skeletal System	1	2	3	—	9	8	17	—	282	157	439	5	
	127	Spina Bifida and Meningocele	—	—	—	—	1	—	1	1	26	30	56	12	
	128	Congenital Malformations of Circulatory System	—	—	—	—	50	—	50	—	29	14	43	8	
N.O.S. 750-759	129	Other Congenital Malformations.. ..	1	1	2	—	3	—	3	1	167	73	240	15	
DISEASES OF NEW BORN															
760-761 762 764 765 763, 766-768 770 769, 771, 772 773, 776	130	Birth Injuries	—	—	—	—	—	1	1	—	8	19	27	4	
	131	Post-natal Asphyxia and Atelectasis	1	—	1	1	—	—	—	—	29	19	48	39	
	132	Diarrhoea of Newborn (under Four weeks)	—	—	—	—	2	—	2	—	145	120	265	65	
	132	Ophthalmia Neonatorum	—	—	—	—	—	—	—	—	15	7	22	3	
	132	Other Infections of Newborn	—	—	—	—	4	1	5	—	12	18	30	9	
	133	Haemolytic Disease of Newborn	—	—	—	—	—	—	—	—	3	1	4	—	
	134	All other defined Diseases of Early Infancy	1	—	1	—	1	2	3	—	80	70	150	26	
	135	Ill-defined Diseases Peculiar to Early Infancy, and Immaturity, Unqualified	1	—	1	1	—	2	2	—	71	61	132	61	
	ILL-DEFINED DISEASES														
	794 788.8 793 N.O.S. 780-795	136	Senility without Mention of Psychosis ..	—	—	—	—	—	—	—	—	41	31	72	23
137		Pyrexia of Unknown Origin	35	13	48	—	18	12	30	—	4,878	3,410	8,288	234	
137		Observation, without need for further medical care	2	3	5	—	18	4	22	—	558	329	887	2	
137		All other Ill-defined Causes of Morbidity	6	—	6	—	23	10	33	1	559	453	1,012	128	

RETURN OF DISEASES—IN-PATIENTS, 1961—(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	
INJURIES														
AN.														
N.800-N.804	138	Fracture of Skull ..	—	—	—	—	18	4	22	3	360	80	440	72
N.805-N.809	139	Fracture of Spine and Trunk ..	2	2	4	—	19	2	21	2	356	88	444	27
N.810-N.829	140	Fracture of Limbs ..	3	3	6	—	82	14	96	—	2,403	837	3,240	22
N.830-N.839	141	Dislocation without Fracture ..	—	—	—	—	16	—	16	—	459	159	618	2
N.840-N.848	142	Sprains and Strains of Joints and Adjacent Muscle ..	—	—	—	—	7	2	9	—	513	159	672	—
N.850-N.856	143	Head Injury (excluding Fracture) ..	2	4	6	1	25	5	30	3	595	154	749	64
N.860-N.869	144	Internal Injury of Chest, Abdomen and Pelvis ..	—	—	—	—	8	1	9	1	175	46	221	40
N.870-N.908	145	Laceration and Open Wounds ..	—	—	—	—	88	19	107	1	3,458	1,136	4,594	28
N.910-N.929	146	Superficial Injury, Contusion and Crushing with Intact Skin Surface ..	—	—	—	—	14	4	18	—	1,265	415	1,680	3
N.930-N.936	147	Effects of Foreign Body Entering through Orifice ..	1	—	1	—	1	2	3	—	210	141	351	—
N.940-N.949	148	Burns ..	—	—	—	—	8	10	18	3	1,092	758	1,850	154
N.960-N.979	149	Effects of Poisons ..	2	4	6	1	10	5	15	1	334	202	536	36
N.950-N.959	} 150	All other and Unspecified Effects of Ex-	3	15	18	—	5	3	8	—	575	237	812	6
N.980-N.999		ternal Causes ..												
		TOTAL ..	332	386	718	15	1,624	1,082	2,706	58	78,767	66,639	145,406	9,365

RETURN OF ACCIDENTS (COMBINED) IN- AND OUT-PATIENTS, 1961

Code	List	ACCIDENTS	EUROPEAN		ASIAN		AFRICAN	
			Cases	Deaths	Cases	Deaths	Cases	Deaths
E810-E835	AE.138	Motor vehicles accidents	29	—	122	6	4,503	77
E800-E802	AE.139	Other transport accidents	30	—	54	—	3,335	30
E840-E866	AE.140	Accidental poisoning	4	—	5	—	579	24
E870-E895	AE.141	Accidental falls	87	—	159	—	9,521	13
E900-E904	AE.142	Accident caused by machinery	1	—	88	—	1,944	7
E912	AE.143	Accident caused by fire and explosion of combustible material	5	—	22	1	4,131	90
E916	AE.144	Accident caused by hot substance, corrosive liquid, steam and radiation	9	—	123	—	3,912	32
E919	AE.145	Accident caused by firearm	1	—	5	1	85	1
E929	AE.146	Accidental drowning and submersion	—	—	—	—	9	—
E920	AE.147	Foreign body entering eye and adnexa	17	—	23	—	1,646	—
E923	AE.147	Foreign body entering other orifice	2	—	43	—	2,673	10
E927	AE.147	Accidents caused by bites and stings of venomous animals and insects	7	—	31	—	5,851	9
E928	AE.147	Other accident caused by animals	1	—	5	—	1,657	11
N.O.S.								
E910-E979	AE.148	All other accidental causes	95	—	743	—	30,788	42
E980-E985	AE.149	Homicide and injury purposely inflicted by other persons (not in war)	3	—	36	—	8,653	36
E990-E999	AE.150	Injury resulting from operations of war	—	—	—	—	—	—
		TOTAL	291	—	1,459	8	78,587	382

