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TANGANYIKA

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TANGANYIKA

Annual Report of the Medical Department for the year 1953

PART I

I.—GENERAL REVIEW

There were no material changes in the administrative structure of the Medical Department during 1953. The Department is one of the group of social service departments, and is headed by the Director of Medical Services with his headquarters in Dar es Salaam. Administratively the territory is divided into four medical regions, each consisting of two provinces. Each region is under the charge of an Assistant Director of Medical Services to whom the Director delegates a considerable degree of authority. Responsible to the Assistant Directors are district medical officers appointed to local areas, usually administrative districts or groups of districts.

2. Despite continuing shortages of Senior Service staff all the existing services were maintained during 1953, and there was a moderate expansion of activity; notably in the extension of hospital facilities, training of local staff and rural health work. Expenditure on medical services as shown by the territorial budget figures increased as is shown below :—

	Recurrent		Special		Total	
	1952	1953	1952	1953	1952	1953
	£	£	£	£	£	£
Medical Department ...	895,434	1,122,052	45,280	45,515	940,714	1,167,567
Local Authorities (Health Services in Townships)	45,500	47,709	10,500	18,775	56,000	66,484
Total ...	940,934	1,169,761	55,780	64,290	996,714	1,234,051
Total Territorial Estimates	11,420,380	12,162,635	321,730	648,448	11,742,110	12,811,083

The provision for health services represented 9·6 per cent of the recurrent expenditure and 9·9 per cent of special expenditure in the 1953 territorial budget, compared with 8·2 per cent and 17·5 per cent respectively in 1952. In addition, £26,000 was allocated in the Public Works Extraordinary Estimates for improvements to medical buildings, £130,000 in the Development Estimates for capital works, and £227,138 for public health services in the Native Treasury Estimates, compared with £26,600, £271,720 and £152,821 respectively in 1952.

3. The maintenance of some services and the expansion of others was achieved despite a reduction in staff—particularly in Senior Service Officers—as compared with 1952.

4. There were no serious epidemics during the year. A small outbreak of poliomyelitis occurred in the Singida District, and investigation of the cases reported provided additional evidence that poliomyelitis in this country is of Africans affected are attacked in infancy or childhood, and so far as one can judge these attacks are usually mild. Relapses are rare and residual deformities relatively uncommon.

5. Smallpox caused a number of administrative problems in that special measures had to be taken with regard to certain labour recruits for sisal estates, who entered Tanganyika from neighbouring territories bringing the infection with them. The control measures which were instituted were successful in preventing any major outbreak.

6. A widespread epidemic of a dengue-like disease transmitted by domestic breeding mosquitoes, probably *aedes aegypti*, occurred on the Makonde plateau of the Southern Province during the latter part of 1952 and the first half of 1953. Between 60 per cent and 80 per cent of the population in the affected areas caught the disease, but there were no deaths. Clinically, the disease resembled classical dengue very closely, but there were some minor points of difference. The area was visited by a team of investigators from the Virus Research Institute, Entebbe. Detailed investigations were carried out in the field and subsequently at Entebbe. Virus was isolated from acute phase sera, from aedes, culex and anopheles, and also from bed bugs. A serological relationship was demonstrated between this Makonde plateau ("Chikungunya") virus and two known strains of dengue virus.

7. There has been further progress in the control and treatment of certain of the non-epidemic communicable diseases. A marked extension of tuberculosis work took place during the year. In addition to the work of Kibongoto tuberculosis hospital an increased number of beds were set aside for the treatment of tuberculosis patients at the infectious diseases hospitals at Dar es Salaam and Tanga. At Kongwa hospital a new tuberculosis block to accommodate twenty cases was opened, and at the Benedictine Mission hospital at Ndanda in the Southern Province a ward was constructed and set aside for the treatment of some thirty cases of this disease. .

8. Although not in itself a communicable disease, reference should be made here, by reason of its association with tuberculosis, to the progress made in 1953 in the investigation of pneumoconiosis in Tanganyika. It has been thought for some time that this disease might be more widely prevalent than was apparent. Between 1947 and 1952 at least three cases of silicosis (a form of pneumoconiosis) were diagnosed among gold mine employees and it is probable that other cases have occurred without coming to the notice of the medical authorities. There is also the question of a possible dust hazard productive of pulmonary disease in cotton ginneries and sisal processing factories. The problem was discussed first with Dr. J. H. Middlemiss, Director of Radiology of the United Bristol Hospitals, who visited Tanganyika as a Nuffield Panel Visitor during 1953, and subsequently at the Conference of Directors of Medical Services held at Entebbe in July. It was generally

agreed that before a costly comprehensive investigation was undertaken, an approximate idea of the nature and extent of the problem might well be obtained by carrying out a small preliminary survey. Accordingly, in the early part of October portable Watson M.X.2 machines were used to take chest X-rays of employees at two gold mines in the Lake Province. A total of 512 persons were examined in this manner, and the X-ray plates dispatched to the United Kingdom for examination by Dr. Middlemiss with the assistance of the Pneumoconiosis Research Unit, South Wales, and of the Ministry of Health. Dr. Middlemiss reported that of 471 unspoiled films examined, nine showed evidence of well established silicosis and nineteen more of probable early silicosis; that is to say, a total of just under six per cent. In the opinion of the experts this figure was considered to be remarkably low having regard to the conditions of exposure to dust containing silica. In the words of the report, the incidence "can probably be regarded as little more than the normal hazard from any source in an occupation that is recognized as having certain hazards". The probable reason for this is the rapid turnover of labour, giving too short a period of exposure to silica dust to allow silicotic lung changes to develop on a widespread scale. Nevertheless, the situation must be watched closely and attention given to means whereby risks may be reduced.

9. A fresh step has been taken in the campaign against leprosy by the extension of organized out-patient treatment facilities; notably in Tanga District. Here, a full-time medical officer has been posted with the task of organizing a leprosy treatment scheme primarily on an out-patient basis. After a somewhat hesitant beginning because of the distrust and prejudice of the local inhabitants, the scheme rapidly became popular. At present, about 1,000 cases are being treated in Tanga District, and it is hoped that similar facilities will in due course become available elsewhere. This will naturally depend on the availability of trained staff and, equally important, on the results of the evaluation of the newer sulphone drugs which are at present being investigated by a medical specialist.

10. Progress was made during the year in the field of nutrition with the formation of a widely representative Central Advisory Committee on Nutrition under the chairmanship of the Member for Social Services. The terms of reference and functions of this Committee are described in Section VII. The first meeting was held in July, when the discussion was largely concerned with the manner in which the various departments represented could best contribute to the problem. The failure of the rains during 1953 resulted in a widespread shortage of food in the Central Province. The Committee was concerned as to the probable effect of this shortage on the nutrition of the population, and a series of nutrition surveys in the areas most severely affected was consequently advised. Dr. Cecily Williams, an expert in child health, visited Tanganyika during December and reported on conditions at Dodoma. She found that the very old and the very young were the chief sufferers from the effects of food shortage. She considered that in many cases, particularly in infants, the malnutrition was not only due to actual shortage of food. Unsuitability, indigestibility or lack of proper preparation might be equally, if not more, to blame. Dr. Williams could find little evidence of protein deficiency, at least in its generally recognized form. This finding was supported by the District Medical Officer, Singida, who was engaged on a nutritional survey in this district. In this survey, the investigation was mainly

confined to school children, among whom no gross deficiency states were discovered. Nevertheless, a high percentage of children showed evidence of ill-defined deficiencies in relatively minor degree, and it was observed that there was an apparent shortage and lack of variety and quality in the foods consumed, especially in the southern parts of the district.

11. The Tanganyika Nurses and Midwives Council, set up under an Ordinance to provide for the training and registration of nurses and midwives which became law on 3rd December, 1952, held its first meeting in March, 1953, and a register of qualified nurses and midwives was opened. Two other meetings of the Council were held during the year. Although registration is not at present compulsory, the number of applications received shows that the nursing profession in Tanganyika fully appreciates the value of registration and also the efforts of the Council to raise professional standards. The Council revised the training regulations and syllabi for nurses, midwives and public health nurses, and took over the conduct of their examinations. Supervisory authorities for registered midwives were appointed.

12. During the year consideration was given to the manner in which maternity and infant health services should best be developed. It is considered that the principal emphasis should be placed on extension of institutional ante-natal, post-natal and infant care facilities; the majority of beds in maternity clinics being reserved for abormal cases. The development of domiciliary midwifery for straightforward cases is to be encouraged, both in townships and in rural areas. Amongst other advantages, this will help to reduce the pressure of public demand for beds at maternity centres and hospitals. Urban and peri-urban areas are specially favourable for the economical development of domiciliary midwifery. In sparsely populated areas, especially where communications are poor, relatively greater emphasis will have to be placed on institutional midwifery until such time as an effective home visiting service can be built up.

13. The rate of development of both institutional and domiciliary maternity services must depend on the availability of trained professional and supervisory staff. The uncontrolled development of maternity clinics staffed with unqualified persons inadequately supervised must be resisted. For many years to come, however, midwifery in Tanganyika, especially in backward rural areas, will be mainly in the hands of traditional tribal midwives. The organization of elementary courses for this type of midwife is to be encouraged on the lines of the training which has been developed so successfully in Bukoba District.

14. The first health nurses to be trained at Tukuyu took their final examinations in December, 1953, and were then posted to stations where they are to work under the supervision of health visitors. Their duties will comprise the teaching of hygiene and nutrition in the home, institutional work (including the conduct of maternity and child health clinics), general health teaching and school health supervision. It is not intended that the health nurses should undertake routine confinements, but with the expansion of training facilities and the consequently larger output of midwives and village nurses, it will be possible to post health nurses and midwives together. Their work will be entirely complementary.

15. The former Overseas Food Corporation training school at Kongwa which was taken over by the Medical Department in 1953 has proved a valuable addition to the Government facilities for the training of staff. The Nurses Training School is at present confined exclusively to the training of male nurses, and will enable the annual output of male nurses to be doubled.

16. The first batch of health orderlies passed out from the Kongwa Health Training School at the end of December after a twelve months' course of instruction followed by an examination. They are to be posted for duties under the supervision of district medical officers.

17. Increasing attention was paid during 1953 to the health of school children. District medical officers were encouraged to spend as much time as they could spare on school health work, including the medical inspection of school children, whilst a senior officer of the Department was appointed to advise on matters affecting health in schools.

18. There has been some progress in the field of vital statistics, although there is at present little sign of any widespread extension of the systematic registration of births and deaths of the indigenous population. This question was discussed at the Conference of East African Directors of Medical Services held in Entebbe in July, and the desirability of general registration was endorsed in principle. Rules governing the registration of births and deaths were approved by the Handeni Native Authority early in 1953, whilst the Chagga Council has approved rules governing the registration of births in the area under its jurisdiction. The Native Authority of Pare District has also considered the feasibility of initiating general registration of births and deaths, and it is reported that the Authority intends to introduce appropriate regulations early in 1954.

19. A detailed analysis of infant deaths in a community in Nzega District, among whom statistical records have been maintained for some years by a Roman Catholic Mission, was prepared by a medical student of Makerere College who lives in this area. The result of his investigations was published in the *East African Medical Journal* (No. 1, Vol. 31, 1954). The results are revealing. The registers show that in the years 1941 to 1952 the total recorded live births were 2,534. During that period, 782 infants died during their first year of life. This is equivalent to an infant mortality rate of 315 per thousand live births; the corresponding figures for the United Kingdom being a little over forty per thousand. Of 990 live births between and including the years 1941 and 1945 only 372 children—or less than 38 per cent of the total live births—lived to the age of eight years; the remainder died. It is not unreasonable to suppose that these figures are indicative of the level of infant mortality in rural areas throughout the territory.

20. The extension and improvement of hospital buildings continued steadily throughout the year. The new 100-bed hospital at Korogwe and the maternity wing at the Ocean Road Hospital, Dar es Salaam, were opened, whilst the new 75-bed hospital at Lindi is progressing rapidly and should be finished during the first half of 1954. Additional wards were built at Mirembe Mental Hospital, Dodoma, and the building of the new Nzega Hospital proceeded steadily. In addition, a large number of additions to existing hospitals were completed, including wards, kitchens, offices, laundries and sanitary annexes.

21. The total number of rural dispensaries maintained by native authorities during 1953 was 474 as compared with 443 in 1952. Of this number, only 189 were staffed by qualified rural medical aids, the remainder being in the charge of tribal dressers who have received no systematic training.

22. Many native authorities continue to press for the extension of their dispensary system, frequently without sufficient attention to availability of staff and the practicability of effective supervision. It is still perhaps not generally realized that treatment centres alone, whether hospitals or rural dispensaries, cannot in themselves improve the health of the people or influence the general incidence of disease in the community. It is proper that the curative system should be developed by providing a network of efficient treatment centres, not only as a means of gaining the confidence of the people and relieving human suffering, but because of its contributory value (in the community sense) in the prevention of many prevalent communicable diseases. It is vitally important, however, that a proper balance be maintained between, on the one hand, the popular demand for more hospitals and dispensaries and, on the other, the need for conserving the slender resources available for the extension of preventive services. Only by this means can it be ensured that the best results will be obtained in terms of health and productivity. This means that increasing attention must be paid to the training and suitable employment of public health staff, the development of maternity, infant and school health services, health education, public sanitation and environmental control of communicable diseases. It is proposed to build up and extend these preventive services on and around the existing dispensary system. Some native authorities are indeed beginning to appreciate the value of this development. From the Lake Province it is reported that increasing interest is being shown in enlarging the scope of dispensaries by attaching to them public health staff for rural health work, including the development of maternity and child health services. This growing interest promises well for the future.

23. When planning health programmes it is to be remembered that the great majority of ill-health in this country is but a symptom of prevailing poverty and ignorance. The campaign for better health can scarcely be expected to succeed, therefore, unless associated with measures for the reduction of poverty and improvement in living standards generally. It must also be associated with education in right living, for right living means healthy living.

24. There was an increase in the medical work of the missions during 1953 as evidenced by the appointment of additional qualified medical and nursing staff for work in hospitals and dispensaries, and the development of medical and nursing training centres. Government grants-in-aid to medical missions amounted to over £67,000 during 1953, compared with £58,000 in 1952. These grants were divided between 105 hospitals and dispensaries and twelve training centres. As foreshadowed in last year's report, agreement has been reached regarding the future subsidization of mission rural dispensaries by native authorities, and no further grants to these dispensaries will be paid by the central government.

25. The Assistant Director of Medical Services, Central Region, and the Acting Chief Health Inspector were appointed in 1953 to conduct a survey of the sanitary conditions in representative townships and minor settlements throughout the territory and to present a report and recommendations for consideration by Government. The survey was commenced in November and is still in progress.

26. During 1953 legislation was enacted (the Medical Practitioners and Dentists (Amendment) Ordinance, 1953) which will enable medical graduates of Makerere College who have qualified after completing the seven years' course and the prescribed period of internship to become eligible for local registration as medical practitioners in East Africa. Provision has also been made whereby those who graduated before the introduction of the full seven years' course may obtain local registration by passing a special examination, conducted by Makerere College, or, in certain circumstances, on the recommendation of a specially appointed Board of Assessors. Subsequent to amendment of the Ordinance, the Medical Practitioners (Conditions Pre-requisite to Registration) Regulations, 1953, were published. These prescribe conditions regarding the acquisition of post-graduate experience which must be fulfilled before any medical practitioner may be registered.

27. With the co-operation of the Tanganyika Branch of the British Red Cross Society, a system has now been evolved for the provision of inexpensive locally-made "peg legs" for Africans. These are of simple type and are made in a small workshop at the Sewa Haji Hospital, Dar es Salaam, under the supervision of a surgical specialist. Agreement as to procedure for compensation cases has been reached with the Commissioner of Labour, and the majority of local authorities have set aside sums for the provision of limbs for non-industrial cases. Applicants are dealt with in rotation on application to the Secretary of the Tanganyika Branch of the British Red Cross Society. The Society hopes shortly to extend the scheme to include the provision of appliances for crippled patients such as those who have suffered from poliomyelitis.

28. With the retirement early in 1953 of the surgical specialist responsible for the administration of the newly-established radium unit, it was necessary to suspend temporarily the activities of this unit. Arrangements have been made for the medical officer in charge of the Ocean Road Hospital, Dar es Salaam, to undergo a special course in radium therapy during 1954, and it is expected that the unit will function again on his return from the United Kingdom.

II.—STAFF

29. The following Senior Service staff recruitment took place in 1953: six medical officers, thirteen nursing sisters, one health inspector, one health visitor, one pharmacist, one woman administrative assistant, one stenographer, one physiotherapist, two malaria field officers, one male mental nurse and one sister tutor. This increase was more than offset by losses due to such causes as retirements, sickness and resignations, and towards the end of the year it was necessary to reduce staff at several stations in order to keep essential services running. Whilst many vacancies were filled by temporary employees, the number of Senior Service staff on the strength at the end of 1953 was less than at the end of 1952.

30. There was an improvement in the specialist services following the promotion of a medical officer to the post of Anaesthetist, and the appointment of another medical officer to act as Psychiatrist. The posts of Radiologist and Malariologist were unfilled during the whole of 1953.

31. There was a serious deterioration during the latter half of the year in the number of nursing sisters and health visitors in the service owing to the fact that in these categories there were no arrivals on first appointment

between the end of May and the beginning of December. On the other hand, there were many resignations; almost all on marriage. The recruitment of the sister tutor already referred to, together with the appointment to another post of sister tutor of a nursing sister who had obtained the appropriate diploma on study leave, enabled training programmes to be maintained.

32. In the Junior Service the main shortage was in assistant medical officers, medical and medical ancillary assistants and nurses, both male and female. Recruitment was almost entirely restricted to those who qualified from the departmental training centres. Owing to shortage of training and hostel accommodation it will be many years before the Department is able to produce from its own centres medical and nursing staff in the requisite numbers.

33. The clerical situation improved towards the end of 1953 following the appointment of several students on completion of the one-year clerical course, but generally speaking the shortage remains acute. Consequently, professional officers still tend to spend over much of their time on routine clerical work.

PART II.—PUBLIC HEALTH

III.—COMMUNICABLE DISEASES

34. In the following paragraphs a brief description is given of the commoner communicable diseases reported during the year. In the case of smallpox, relapsing fever, poliomyelitis, sleeping sickness and plague the figures given are drawn from all available sources. The leprosy figures are taken from mission as well as Government returns, whilst in the remaining diseases only those returns received from Government and mission hospitals with resident doctors have been used.

35. Diseases among in-patients have been classified in accordance with a modification of the Intermediate List of the 1948 International Statistical Classification of Diseases and Causes of Death. Morbidity in out-patients has been recorded in conformity with a shortened list.

(A) Direct Infections

36. *Smallpox (Variola)*

TABLE I

Reported Incidence, 1949-1953

	1949	1950	1951	1952	1953
Cases	1,045	6,390	885	370	1,200
Deaths	169	1,345	139	34	54
Case Mortality per cent	16·1	21·04	16·3	9·19	4·5

37. Smallpox is endemic in the territory, but from time to time epidemic outbreaks occur. It is extremely difficult to present accurate statistics of the total number of smallpox cases actually occurring; many attacks are so mild that the sufferers are scarcely inconvenienced, and therefore do not report for medical treatment. This results in the reporting of a disproportionately large number of severe cases, and for this reason the recorded case mortality is much higher than it would be if all cases were reported.

38. During the past year two major outbreaks occurred, one in Sukumaland where 524 cases with 31 deaths were reported, and the second in Ufipa, with 310 cases and 2 deaths. Control measures were made difficult by the wide area over which these outbreaks were scattered, and by the continued movement of population in search of food and water for their cattle. Only vigorous measures on the part of the staff concerned enabled the outbreaks to be brought under control.

39. The disease also appeared in Mbeya, Chunya, Bukoba, Kiserawe and Ulanga Districts. At no time did any of these outbreaks assume major proportions. The Kiserawe outbreak in the Ruvu area is interesting in that the original case occurred in an immigrant labourer who had been in contact with smallpox in Portuguese East Africa and who had avoided vaccination on entry into Tanganyika. From this one case a total of twenty-five were eventually traced.

40. With a view to supplying even remote stations with viable vaccine, a number of "Viable Vaccine Storage Depots" equipped with deep-freeze refrigerators have been established at major centres. The benefit of these depots was illustrated in the Sukumaland outbreak by reports of a very high percentage of successful primary vaccinations. In the absence of satisfactory cold storage facilities vaccine lymph deteriorates very rapidly, and this has hitherto been a serious hindrance to the success of vaccination campaigns.

41. *Poliomyelitis*

TABLE II

REPORTED INCIDENCE 1949-1953

	1949	1950	1951	1952	1953
Cases	63	14	24	90	153
Deaths	6	–	5	10	24
Case Mortality per cent	9·5	–	20·8	11·1	15·6

42. The year 1953 again shows an increase in the number of cases of poliomyelitis reported.

43. In the Singida District a small epidemic occurred, in which about one hundred cases, all Africans, were notified. Complete investigations were made into the majority of these cases, and showed that approximately ninety per cent occurred in children under five years of age. The inference is that the majority of the population over the age of five is already immune. Precautionary measures, including the isolation of contacts and the spraying of bomas and houses with residual insecticide, were applied, and a marked decline in the number of cases was noted early in the second half of the year. The outbreak now appears to have subsided.

44. An increase in the number of cases reported in the Tanga Province was spread evenly over the whole year and, whilst there was never any question of an epidemic, each case was carefully followed up in view of the danger of spread among the many estates in the affected districts.

Dengue

45. During the first five months of the year there was a widespread epidemic of a disease resembling dengue on the Makonde plateau in the Newala District of the Southern Province. Dengue had not been reported from this area before, and none of the inhabitants could remember an epidemic resembling this disease. It was described by one of the investigating medical officers as clinically indistinguishable from dengue provided that allowances were made for the inherent variability of the disease. Owing to the distinct severity of the joint pains a local name was rapidly coined, and it became known as "chikungunya", meaning "that which bends up".

46. The Makonde plateau is about forty miles across, at an average height of 2,200 feet above sea level and standing 1,000 feet above the surrounding plain. The population of the plateau is approximately 155,000, living in small adjacent villages or groups of houses, separated by agricultural land or bush. During the dry season of May to December water has to be fetched from the bottom of the plateau and is stored in pots deeply embedded in the floors of the houses. Thus the pots are very rarely completely emptied, and these domestic reservoirs make ideal breeding places for aedes and culex mosquitoes which abound.

47. The epidemic actually began in October, 1952, although a few scattered points had been affected previously. There is no explanation of its origin. Once the outbreak got under way the spread was rapid and involved sixty to eighty per cent of the population of each village within two or three weeks from the occurrence of the first case. The incubation period varied from three to twelve days. The onset was typically sudden with no prodromal symptoms. The pain incapacitated some within a few minutes, others within several hours. There was a rapid rise in temperature to a level varying from 102° to 105°F., occasionally accompanied by a rigor. The pyrexia continued from one to six days and was followed by an apyrexial period of one to three days; the majority of patients then showed a secondary rise in temperature from 99° to 101°F., although this was by no means constant. Pain in the joints was extremely severe, completely immobilizing many patients and preventing sleep. It was localized in the large joints and was aggravated by movement. Morphia was the only adequate analgesic. Headache was often present, but there were no eye symptoms. In 80 per cent of the cases there was an irritating maculo-papular rash, mainly on the trunk and extensor surfaces of the limbs, which usually accompanied or followed the secondary rise in temperature. There was usually some tachycardia in association with the initial rise in temperature. There was no general glandular enlargement or tenderness. As a late effect apyrexial recurrence of joint pains without other evidence of ill-health was common, and in some persons continued for up to four months after the original illness. There were no deaths directly attributable to the epidemic.

48. The greatest differences in the clinical picture between this epidemic and most other epidemics of dengue lie in the absence of adenopathy, the lack of eye symptoms and the long continuance of chronic joint pains. The total picture of the epidemic, however, closely resembles that of an epidemic of dengue, the diagnosis being strengthened by the rapid spread of the disease amongst a people who provide breeding places in their houses for very large numbers of aedes mosquitoes.

49. In February the area was visited by a team of investigators from the Virus Research Institute, Entebbe, who collected sera from patients in the acute phase, from three geni of mosquitoes (aedes, culex and anopheles), and from bed bugs which were very abundant. The Institute subsequently isolated virus from the acute phase sera, the three types of mosquitoes and from the bed bugs. The determination of the status of the "chikungunya" virus has proved unexpectedly difficult. A serological relationship has been shown between two known strains of dengue (the Hawaian and the New Guinea B.) and the "chikungunya" virus, but there are also sharp

serological differences between all three. The investigations continue. Investigations were also undertaken to determine the existence of an animal virus reservoir.

Leprosy

50. Cases of leprosy in Government and mission institutions at the end of the year totalled :—

Government	...	...	976
Mission	...	...	3,792

It is well known that these numbers represent a very small proportion of the total number of cases in the territory, which the Interterritorial Leprologist has estimated as being as high as 100,000 cases of active infection.

51. During the past year measures were intensified to ensure that the best use is made of the accommodation available for the treatment of leprosy patients. In general, only those cases likely to benefit from institutional treatment were retained in the leprosaria; the burnt out or untreatable cases being discharged to their homes wherever possible.

52. There are seventeen leprosaria in Tanganyika where specific anti-leprosy treatment is given. Five of these are administered by Government (either central or local), and the other twelve by missions. British Empire Leprosy Relief Association staff work at the two principal Government leprosaria, Makete and Chazi, and at two mission stations, Mngehe and Lulindi. The largest leprosaria are those run by the Benedictine Mission at Peramiho and Ndanda in the Southern Province, the Augustana Lutheran Mission at Mkalama in the Central Province and the Africa Inland Mission at Kolandoto in the Lake Province. Other large settlements are those maintained by Government at Chazi in the Eastern Province and Makete in the Southern Highlands, by the Universities Mission to Central Africa in the Southern Province and by the Church Missionary Society in the Central Province. Further information relating to Government leprosaria will be found in Section XII of this report. Statistical details are set out in Appendix XII.

53. Treatment of leprosy with sulphone drugs continued on a large and increasing scale. Results are encouraging, although during the year certain centres have reported a number of relapses among patients who had previously undergone sulphone treatment. Drugs are issued free of charge to all approved centres, including mission centres where treatment can be given by experienced staff under qualified supervision.

54. The Medical Department employed two medical officers on whole-time leprosy duties during 1953. Since it is impossible to provide in-patient treatment for all cases, increasing emphasis is being given to encouraging the development of out-patient leprosy services.

55. The most notable progress in the development of out-patient facilities for the treatment of leprosy was in Tanga District. Here, the small Government leprosarium at Mtindiro was the centre of a district-wide system of out-patient treatment posts visited on regular days by the medical officer in charge of the scheme. When treatment was first offered very few patients appeared.

Infectious Diseases Hospital, Dar es Salaam

Occupational therapy amongst lepers by Red Cross Workers

Inquiry revealed that they were afraid of being compelled to enter Mtindiro leprosarium. There was also a widely held conviction that leprosy could not be successfully treated. When it became clear that avlo-sulphone did favourably affect the course of leprosy there was a dramatic increase in the number of persons offering themselves for treatment, and patients began to appear even in places where, during his preliminary investigations, the medical officer had been assured that no leprosy existed.

56. In spite of the bad roads and difficult weather conditions the medical officer was able to visit each centre weekly. Apart from treating leprosy, he spent much time advising patients on their diet owing to the widely-held belief that a person suffering from leprosy should eat only such food as decayed meat, porridge made from old grain, and wild vegetables. Fresh corn, salt, sugar and oil are denied him, and this abstinence frequently causes severe malnutrition. The progress of the work was greatly helped by the interest and assistance rendered by the nursing sisters employed by various sisal estates visited. In addition, African dressers from various native authority dispensaries assisted in bringing in new patients. By the end of the year approximately 1,000 patients were under regular treatment.

57. *Tuberculosis*

TABLE III

RECORDED INCIDENCE OF PULMONARY AND NON-PULMONARY TUBERCULOSIS, 1953

Pulmonary Tuberculosis:	
Out-patients	2,168
In-patients...	2,191
Deaths (In-patients)	263
Case Mortality per cent (In-patients)	12·0
Non-pulmonary Tuberculosis:	
Out-patients	3,262
In-patients...	636
Deaths (In-patients)	39
Case Mortality per cent (In-patients)	6·16

58. The Tuberculosis Hospital, Kibongoto (230 beds) and the Infectious Diseases Hospital, Dar es Salaam (seventy tuberculosis beds), were, until 1953, the only two centres which specialized in the treatment of tuberculosis. During 1953 a small tuberculosis unit was opened at Kongwa, and the Tanga Hospital Group began the treatment of a limited number of male patients suffering from tuberculosis at the Infectious Diseases Hospital. Associated with both the Tanga and Dar es Salaam schemes are follow-up clinics which use the services of a health visitor.

59. Elsewhere, a limited number of patients suffering from tuberculosis were treated in the isolation wards of district hospitals, although as many suitable cases as possible were transferred to Kibongoto. At district hospitals a certain amount of follow-up work was undertaken at stations where health visitors are posted. During the past few years an increasing number of tuberculosis patients have been treated at the Benedictine Mission Hospital at Ndanda in the Southern Province, and in 1953 a ward was specially reconstructed for the accommodation of approximately thirty in-patients. This development will prove a valuable addition to the medical resources of the Province, for there is undoubted need for tuberculosis treatment facilities in this part of the territory.

60. A brief description of the work of the Kibongoto Tuberculosis Hospital is given in Section XII (C) of this report.

61. *The Dysenteries and Enterics*

TABLE IV

REPORTED INCIDENCE 1953

Amoebic Dysentery:	
Out-patients	1,434
In-patients...	897
Deaths (In-patients)	33
Case Mortality per cent (In-patients)	3·7
Bacillary Dysentery:	
Out-patients	3,479
In-patients...	1,022
Deaths (In-patients)	42
Case Mortality per cent (In-patients)	4·1
Undefined Forms of Dysentery:	
Out-patients	8,515
In-patients...	1,149
Deaths (In-patients)	38
Case Mortality per cent (In-patients)	3·3
Enteric Fevers:	
Out-patients	–
In-patients...	591
Deaths (In-patients)	71
Case Mortality per cent (In-patients)	12·0

62. These two groups of diseases are characteristically associated with and are the result of bad sanitation and polluted water supplies.

63. In the Western Region, where typhoid has previously been reported relatively infrequently, concern was caused by the occurrence of many scattered sporadic cases of the disease. The most serious of these was at the Roman Catholic Mission Girls' School, Sumve, where thirty-five cases occurred as a result, it is thought, of the girls having taken water from a polluted source.

64. During the early part of the year a minor epidemic of typhoid was reported from Korogwe, where forty-seven cases were notified. No large-scale outbreaks of bacillary or amoebic dysentery were reported during the year, but in Iringa District the medical officer observed that the dysenteries accounted for approximately six per cent of all admissions to Iringa Hospital.

65. *Venereal Diseases and Yaws*

TABLE V

REPORTED INCIDENCE, 1953

Syphilis:	
Out-patients	37,370
In-patients...	2,852
Gonorrhoea:	
Out-patients	25,960
In-patients...	4,785
Other Venereal Diseases:	
Out-patients	5,726
In-patients...	290
Yaws:	
Out-patients	25,008
In-patients...	1,186

66. It is impossible to estimate the territorial incidence of venereal disease since a large proportion, possibly the majority, of infected persons do not attend hospital. Even when they do attend, very few complete a full course of treatment.

67. The venereal disease control campaign in Bukoba District, to which reference was made in the Annual Report for 1952, has proceeded slowly, largely because of staff shortages. Additional clinics have, however, been established by the Church of Sweden Mission at Ndolage and Rwantege.

68. It will be recollected that the Bukoba venereal disease scheme was begun because the view had been held for many years that the decline in the numbers of the Bahaya was related in some way to the known high incidence of venereal disease. Statistics compiled during the initial survey are not yet available, but the original belief concerning the part played by venereal disease among the Bahaya does not appear to be supported by the facts so far obtained. Meanwhile, it is impossible to say with any confidence how far venereal disease is responsible for undermining the health of the Bahaya. It should be remembered that in other areas where the incidence of venereal disease is quite as high as in Bukoba the population is increasing rapidly.

69. Some indication of the extent of syphilis and gonorrhoea among the Bahaya may be gleaned from an analysis of a number of persons examined and diagnosed at Bukoba general out-patients' clinic. Of 545 men examined, 1·5 per cent were found to be suffering from active (clinical) syphilis and 6·8 per cent from gonorrhoea. Among 235 women, the percentage of active syphilis was 4 per cent and of gonorrhoea 1·35 per cent.

70. Another indication of the extent of syphilitic infection among rural communities may be found in the table below which records the percentage Kahn tests of 1+ and over (i.e. including doubtful positives) discovered among persons living in certain villages of Sukumaland :—

Muruka	M. 45%	...	F. 41%
Gera	M. 33%	...	F. 36%
Nyakato	M. 31%	...	F. 35%
Kwimba	M. 23%	...	F. 36%

71. Yaws continued to be very prevalent in many districts, particularly in those where medical facilities are relatively undeveloped. A complete re-organization of the yaws clinic in Buha was undertaken by the District Medical Officer in order to ensure more accurate returns of numbers treated, and more correct and adequate treatment. During the year, 16,323 new cases were reported from this area. A successful small-scale experiment in yaws treatment was begun in Morogoro district in which school children and infants were treated with penicillin bought from a grant by the Morogoro Native Authority.

(B) Vector Borne Infections

72. *Plague*

TABLE VI

Reported Incidence 1949-1953

	1949	1950	1951	1952	1953
Cases	18	Nil	263	573	12
Deaths	14	Nil	40	100	3
Case Mortality per cent	77·77	Nil	15·21	17·45	25·0

73. Following the epidemics of 1951 and 1952, and perhaps partly in consequence of the vigorous measures taken to combat them, only twelve cases of plague were notified during 1953. All these occurred near Singida in the Central Province, and all were notified in the first quarter of the year. Thereafter, although there were rumours of an unusual mortality among rats from areas as widely separated as Maswa (Lake Province) and Kiserawe (Eastern Province), no cases of the disease in humans came to light.

74. *Sleeping Sickness* (Human Trypanosomiasis)

TABLE VII

REPORTED INCIDENCE 1949-1953

	1949	1950	1951	1952	1953
Cases	1,412 ...	974 ...	477 ...	346 ...	756

75. There was a marked increase in the number of new cases of sleeping sickness reported during the year, nearly all of them being reported from the Western Province. In this Province alone, over 500 new cases were discovered, including 160 from Kagunga on Lake Tanganyika.

76. The Kagunga outbreak is noteworthy for the fact that the cases were of the *T. gambiense* type, whereas the type almost invariably met with elsewhere in Tanganyika is *T. rhodesiense*. It was hoped that this outbreak might be controlled by bush clearing with consequent elimination of the vector *Glossina palpalis*. This proved impossible owing to the rapid regeneration of the bush, and towards the end of the year a campaign of mass prophylaxis using pentamidine isothionate was begun. By the use of this drug the Belgian medical authorities successfully controlled a similar outbreak in Ruanda-Urundi.

77. Elsewhere in the Western Province, Tabora has seen the greatest number of new cases (over 200), nearly all of whom acquired the disease in the fly-infested hunting and fishing grounds to which they had been attracted by reason of the drought and consequent food shortage.

78. This increase in sleeping sickness in the Western Province was associated with a rise in the tsetse fly population. In the opinion of the Sleeping Sickness Specialist this increase in the disease and its vector may herald a more general rise in the number of cases of sleeping sickness throughout Tanganyika, the upward trend of which should reach its peak between 1956 and 1958. In view of this possibility every effort is being made to ensure that control measures are as efficient as possible.

79. As a result of an investigation of a report of an unusual number of deaths in the Sengwa area, fifty miles south-west of Masasi in the Southern Province, an outbreak of sleeping sickness was discovered. Fortunately, this has not proved to be as extensive as was at first feared, and only thirteen cases were diagnosed up to the end of the year. Extraordinary hazards are anticipated in connection with the proposed extension of the Southern Province railway to Lumesule Juu. The country through which the line will pass is heavily infested with tsetse fly and there is an active focus of sleeping sickness in the locality of Lumesule. Full precautionary measures are being taken.

TABLE VIII

REPORTED INCIDENCE, 1953

Malaria:	
Out-patients	125,670
In-patients...	17,390
Deaths (In-patients)	370
Case Mortality per cent (In-patients)	2·1
Blackwater Fever:	
Out-patients (treated in quarters)	9
In-patients...	22
Deaths (In-patients)	7
Case Mortality per cent (In-patients)	31·8

81. Anti-malarial measures are supervised by the staff of the Tanganyika Malaria Unit with its headquarters at Amani. The Unit continued to benefit from the advice of the Inter-territorial Malariologist and his staff who are also stationed at Amani. Field duties of the Tanganyika Unit were maintained despite the setback caused by the death of one malaria field officer, the resignation of another, and the absence on leave for part of the year of two others.

82. The primary duty of the Unit is the control of malaria, but it also assists when required in the investigation of other vector borne diseases. In the field of malaria control progress was made in the establishment of new schemes in a number of smaller settlements. These and existing control schemes are closely supervised by the malaria field officers in co-operation with district medical officers. It is hoped eventually to maintain a field officer in each of the four medical regions.

83. The second duty of the Unit is that of training African staff in malaria control. The training programme had to be somewhat curtailed because of staff difficulties to which reference has already been made, and because of similar difficulties experienced by the East Africa Malaria Unit with which the territorial unit is closely associated in training matters. Nevertheless, a new class of trainees received an initial course of lectures and laboratory training prior to being posted for practical training in the field.

84. The value of improved methods of malaria control is now becoming increasingly obvious, and reports from two Assistant Directors of Medical Services illustrate a growing feeling of optimism. It should, nevertheless, be borne in mind that anti-malarial measures are at present almost entirely confined to townships and minor settlements. Several factors, not the least of which is expense, militate against the extension of malaria control to rural areas.

85. Throughout the territory reports indicate the comparative rarity of blackwater fever. In the Central and Southern Highlands Provinces no cases were reported; elsewhere the distribution was scattered. The following table gives the distribution and incidence of cases of blackwater fever treated at Government and mission hospitals during 1953:

Blackwater Fever

Province	European		Asian		African	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Central	–	–	–	–	–	–
Eastern	1	–	2	1	1	–
Lake	2	–	–	–	3	–
Northern	1	1	–	–	2	1
Southern	–	–	1	–	2	–
Southern Highlands ...	–	–	–	–	–	–
Tanga	1	–	1	–	2	1
Western	–	–	1	–	5	1
Dar es Salaam	3	–	1	1	2	1
Total ...	8	1	6	2	17	4

86. *Relapsing Fever*

TABLE IX

REPORTED INCIDENCE, 1953

Out-patients	1,620
In-patients...	1,355
Deaths (In-patients)	41
Case Mortality per cent (In-patients)	3·0

87. Tick-borne relapsing fever is endemic in all parts of the territory, but it is most evident in the Western Medical Region. Here, an overall reduction in the number of notifications was reported in 1953, but this reduction did not extend to Sukumaland, where there was an increase of nearly five hundred cases over the number notified in 1952. It is interesting to note that whilst Shinyanga District continued to be the worst affected area, not one case was seen in Shinyanga Township. This was probably the result of the routine tick eradication measures carried out by dusting houses with B.H.C. powder.

88. Tick eradication measures are carried out as a routine in many townships and some rural areas. In the rural areas surrounding Songea the insecticide is supplied free to householders by the Native Authority, and a combination of re-plastering and insecticidal treatment of houses produces immediate and very popular results.

89. In the recent past one of the main centres of relapsing fever was Morogoro township, one of the most important distributing points for sisal estate labour. As a result of vigorous spraying and dusting with B.H.C. the disease has been virtually eliminated from the township; only five cases were seen during 1953.

90. Dr. G. A. Walton has continued his survey of ornithodorus ticks under the sponsorship of the Medical Research Council. He is investigating the entomological aspects of relapsing fever in East Africa, and having completed his tick survey in the Usambara Mountains, to which reference was made in the 1952 report, he has during the year completed a survey of the Lake Province. His investigations in that Province show that forty-eight per cent of all the huts examined were infested with *Ornithodorus moubata*. Evidently the inhabitants have acquired a high degree of immunity against relapsing fever. If this were not so the incidence of the disease would be very much higher.

(C) Helminthic Infestations

91. *Schistosomiasis and Ankylostomiasis*

TABLE X

Reported Incidence, 1953

Schistosomiasis:	
Out-patients	20,576
In-patients	2,520
Deaths (In-patients)	18
Case Mortality per cent (In-patients)	0·7
Ankylostomiasis:	
Out-patients	29,747
In-patients	6,192
Deaths (In-patients)	64
Case Mortality per cent (In-patients)	1·03

92. Like so many communicable diseases in East Africa schistosomiasis and ankylostomiasis are closely associated with low standards of living and hygiene, and any significant reduction in their incidence must be dependent on improvement of those standards. Treatment alone has no effect on incidence because reinfestation almost always occurs as soon as the cured patients return to their home environment.

93. The actual infestation rates of these two diseases is of course very much higher than is indicated by the return of hospital cases. There is evidence that moderate infestations are less deleterious to health and efficiency than might be expected. The heavy infestations are undoubtedly responsible for serious illness, and the presence in the community of these helminthiases must certainly be regarded as prejudicial to health and efficiency.

94. Knowing as we do that the spread of bilharzia and hookworm can be prevented by the use of sanitary latrines and sanitary personal habits, it is encouraging to learn that, as a result of health propaganda by the Medical and Social Development Departments in the Arusha District, considerable public interest in latrine provision is being evinced, and an earth augur for boring latrines is in steady demand.

95. Under the direction of the Water Development Department an extensive programme of dam building has been in hand in Sukumaland and in Musoma District. Agreement in principle has been reached between this and other Departments concerned on the need for protecting the dams from infestation with the snail hosts of schistosoma. Wherever possible, the water from these dams is piped to protected water points in order to reduce the risk of pollution of the main supply.

IV.—MATERNITY AND CHILD HEALTH

TABLE XI

Summary of Maternity work, 1952-1953

Government and Native Authority Centres:	Confinements		Ante-Natal Attendances	
	1952	1953	1952	1953
Central Region	2,447	2,711	2,320	5,266
Eastern Region	520	577	673	1,182
Northern Region	3,116	3,547	6,415	8,314
Western Region	4,634	5,043	11,999	10,687
Dar es Salaam	1,414	1,731	1,906	2,498
Totals	12,131	13,609	23,313	27,947

TABLE XI (*contd.*)

Mission Centres:	Confinements		Ante-Natal Attendances	
Central Region ...	2,855	3,437	3,565	3,751
Eastern Region	1,663	2,088	3,264	4,452
Northern Region	2,166	2,502	7,650	6,847
Western Region	4,234	4,762	8,975	8,759
Totals	10,918	12,789	23,454	23,809

97. The public demand for skilled help in childbirth was maintained, and attendances at maternity and child health clinics continued to increase. Ante-natal and child health clinics were held in as many centres as possible, and unqualified attendants with some practical experience were encouraged to improve their knowledge. The campaign to extend the scope of domiciliary midwifery in the larger towns continued.

98. In Dar es Salaam and Tanga the large attendances reflected the popularity of the African maternity hospitals. In the bigger district hospitals maternity and child health work was carried out as part of the service provided by the general hospital. Unfortunately, the shortage of senior nursing staff during the greater part of the year prevented further extension of these services.

99. The first batch of trained health nurses qualified at the end of 1953. It is therefore too early to assess the value of these workers, but it is hoped that they will assist in the extension of female health education and ante-natal and child care. They will at first work under the immediate supervision of health visitors, and later on will be sent to rural centres under less direct supervision. The annual output of ten to twelve health nurses is far below the needs of the territory, but it would be impolitic to increase the output without regard to the supervisory capacity of the Senior Service staff.

100. The training of village nurses continued. These girls are of a much lower standard of basic education than health nurses. The course, which is of two years duration, follows the syllabus for health nurses, but with a much more practical bias and with greater emphasis on practical midwifery. Some fifteen of these girls were in training by the end of the year, all at mission centres. Two completed their training at the U.M.C.A. Hospital, Newala, and are now working as village nurse-midwives.

101. The output of certificated midwives increased slightly but training capacity is at present seriously limited by lack of sufficient hostel accommodation in Dar es Salaam. Efforts are being made to find suitable alternative accommodation pending the building of the new training centres and hostels at Dar es Salaam and Tabora for which financial provision has been made in the development programme.

102. The training of a limited number of "practical" (i.e. uncertificated) midwives for maternity work at the major district hospitals was continued during the year.

V.—SCHOOL HEALTH

103. Increased attention was paid by district medical officers to the health of school children and school health problems generally during the year under review. Their work included the medical examination of children attending Government and Government-aided schools, and advice on the hygiene of school premises.

104. Arrangements were made for an ophthalmic specialist to visit schools in the course of touring the territory, and to extend the scope of his activities by advising, in consultation with Assistant Directors of Medical Services, on all matters relating to school health, including school sanitation, health education, physical education, the medical examination and treatment of pupils, school dispensaries, medical supplies, diet and nutrition. As a result, the Department prepared, in consultation with the Department of Education, a comprehensive circular on school health for the guidance of teaching staff and inspecting officers of the two departments.

105. Throughout the year school health services in Dar es Salaam were under the care of a woman medical officer and a school health visitor. Under the guidance of the medical officer the service has been modelled on the system current in the United Kingdom. Relatively less emphasis is placed on therapy and more on the discovery of defects or incipient defects which are referred where necessary to the appropriate organization for more detailed investigation and treatment. Frank under-nourishment or specific food deficiencies were not marked amongst the school population, although in about one-sixth of the children examined there were signs that the nutritional state was not entirely satisfactory. It is noteworthy that no cases of malnutrition were discovered in Government African boarding schools. Of all the children examined, about one-half were found to be suffering from some form of clinical defect. About a third suffered from dental caries in greater or less degree, which suggests that there is need for the introduction of a school dental service.

106. As reported in past years, the health of children at boarding schools, and particularly their state of nutrition, is better than that of children attending day schools. No case of gross malnutrition in schools was reported from any district, but the Assistant Director of Medical Services, Arusha, reported that some malnutrition is to be found among the native authority primary schools in the Masai country.

107. There were no major outbreaks of communicable disease in schools. A number of cases of typhoid fever occurred at Sumve Mission Girls' School in Mwanza District, and at Buyonga African School on Ukerewe Island.

108. The European primary schools at Arusha and Lushoto, together with the Hellenic school at Arusha, all had mild outbreaks of chickenpox and mumps. In addition, a few cases of scarlet fever were reported at the Hellenic School, Arusha, during the September term.

VI.—HEALTH EDUCATION

109. The dissemination of health education in schools is primarily the responsibility of the Department of Education. It is, however, also regarded as an important function of the district medical staff, and instruction in the healthy way of living is given whenever the occasion presents itself. In the villages, education in hygiene can only be developed with the close co-operation of administrative and departmental officers and with the active support of the local government authorities. Increasing emphasis is being placed on the use of the mobile cinema in health education, and with the larger number of health films now available it will be possible to reach a greater number of people through this medium.

110. One result of the increased activity in the field of health education is the mounting number of requests from the more advanced communities for the posting of health staff to their areas. It will only be possible to meet these requests when the output of trained public health nurses and assistant health inspectors from the Tukuyu and Kongwa training centres gets into full stride. The "Radio Doctor" talks given over the Dar es Salaam radio were continued during the first half of the year, and were followed by a series of monthly talks given by a health visitor. These talks were aimed principally at the African mother and were intended to show her, in very simple language, how best to take care of her children. Whilst written primarily for the town dweller, and particularly for those living in Dar es Salaam, these broadcast talks reach a large up-country audience and there is evidence that they arouse considerable interest.

VII.—NUTRITION

111. The failure of the rains in 1953 led to a widespread shortage of food in most parts of the territory. Famine conditions were declared in some areas, although as a result of organized food distribution signs of advanced nutritional deficiency have been rare except in isolated areas. The area most severely affected appears to have been the Central Province. This Province was visited by Dr. Cicely Williams, expert in child welfare and a member of the staff of the World Health Organization, who reported on the conditions she found there at the end of the year. She stated that the main brunt of the famine had fallen on the aged and on children, many of whom showed signs of severe malnutrition and could not be expected to make an early recovery unless vigorous measures were taken. On the general question, Dr. Williams pointed out that although there might be a sufficiency of food as such, malnutrition still occurred as a result of using inappropriate or improperly prepared food. She recommended that the present measures in health education should be strengthened so that mothers could be taught how to feed their children and what to feed them on.

112. Dr. Williams noted little evidence of lack of protein, a finding which was confirmed in the interim report of the District Medical Officer, Singida, on his investigation into nutrition in the Singida District. Here 500 school children were examined and no specific food deficiency was discovered, although it was noted that the children of the Wanyaturu tribe get neither enough to eat, nor a sufficient variety of food. They exist mainly on a diet of sorghum and spinach and are definitely thin and of poor physique.

113. In the district of Handeni signs of malnutrition were reported, largely attributable to the replacement of the maize staple by cassava. This has been noted previously in other areas.

114. From time to time outbreaks of pellagra have been observed among the prison population. Kingolwira Prison was mainly affected in 1953, and during the year 139 cases of pellagra were seen compared with forty in 1952. Most of these cases were amongst recent arrivals, but a few were noticed in old inhabitants and some were relapsed cases. The cases seen came from all parts of the territory, and are believed to be due mainly to a combination of the over-reliance on maize as a staple, a marginal diet in ordinary life, and seasonal food shortages. An experiment in prophylaxis by supplementing the diet of new arrivals with nicotinic acid is in progress at a cost of 79 cents per head per week. Other experiments are also being carried out with dietary variations to determine the most economical way of preventing this disease.

115. The occurrence of endemic goitre in the Njombe district was reported during the year. The area is a mountainous one, varying from 5,000 ft. to almost 7,000 ft., with the Luana Valley running through it from north to south. It is separated from Lake Nyasa by the Livingstone Mountains which are over 7,000 ft. in height. The condition was particularly prevalent in the Luana Valley itself, the local tribe being the Wapangwa. The population of the Upangwa chiefdom is estimated as being approximately 29,000.

116. During an investigation into the reported incidence of goitre, 789 children and 432 adults living in this chiefdom were examined. Unfortunately the adults appearing for examination were by no means typical of the population, in spite of preliminary propaganda, the majority being chronic sick or elderly. The figures for goitre among these adults are therefore so unreliable as to be unworthy of consideration. On the other hand, the 789 children examined were of varying ages and represented approximately all the children in school at the time.

117. Of the children seen, a total of 21 per cent were suffering from goitre. The incidence amongst males was 20 per cent and amongst females 23 per cent. The enlargement of the gland in both children and adults was usually of the parenchymatous type, frequently bilateral. The size of the enlargement varied, but roughly 70 per cent were obvious on inspection without palpation. A few gross cases of enlargement were seen in adult women. It was noteworthy that only 7 out of 272 cases of enlarged thyroid seen showed adenomata, and there was a complete absence of any evidence of Graves disease. There was an occasional case of mild dyspnoea owing to the size of the gland. The youngest case with marked thyroid enlargement, obvious without palpation, was about six years of age.

118. The diet in this part of the country consists very largely of maize, beans, some peas, and a few potatoes in the mountainous districts, and of maize, beans, cassava and a few bananas in the valleys. There are some cattle in the north; very little fish comes into the area from Lake Nyasa owing to the haul over the Livingstone Mountains.

119. It has been suggested that the goitre is caused by a lack of iodine, but the curious feature of this particular occurrence is the fact that although there is a large amount of goitre even in school children, there is no record whatever of cretinism or congenital idiocy. Both these conditions are normally found in areas where true iodine deficiency goitre exists, but the medical officer responsible for the investigation saw no child with either defect.

120. Almost all the salt used in this area is sea salt from Dar es Salaam which, on analysis, has been found to contain two parts per million of iodine. A concentration of two parts per million is normally considered sufficient as a prophylactic against endemic goitre, on the basis of a consumption of about ten grammes per day.

121. The formation of a Central Advisory Committee on Nutrition was announced during the year. This Committee sits under the Chairmanship of the Member for Social Services, and includes the Director of Medical Services, the Director of Agriculture, the Director of Veterinary Services, the Director of Education, the Commissioner for Social Development, the Specialist in Industrial Health, the Medical Specialist, Lady Twining, and a medical officer as secretary. The Committee has wide terms of reference and is mainly an advisory and policy-making body. Close liaison with other similar

committees throughout the colonies is maintained through the Applied Nutrition Unit in London, a joint venture organized and managed in collaboration between the Colonial Office and the London School of Hygiene and Tropical Medicine. Towards the end of the year one meeting of the Committee was held, and certain specific problems needing investigation were defined. Unfortunately the Department is still without a qualified nutrition officer.

VIII.—ENVIRONMENTAL HYGIENE

(A) Urban Housing and Sanitation

122. The increased tempo of urban housing development which has been noticeable in recent years has apparently been maintained, except in a few localities. One important outcome of this has been that in most townships plots available for building are proving insufficient in number and inadequate in size. In consequence overcrowding is becoming a serious problem, especially in the high density residential and commercial areas.

123. A noteworthy development in Dar es Salaam has been the erection under Government contract of considerable numbers of standard type dwellings for Africans at a rental which is both economic to Government and within the means of the average African. Elsewhere the picture is less encouraging, and there is evidence that in certain townships some Government and township authority houses have remained unoccupied because of the inability of the African to pay the required rent.

124. In many parts of the territory multi-storey buildings are being erected, frequently in the place of single storeyed ones. In the absence of a public sewerage system this is leading to difficulty in the proper disposal of sewage on the plot. The condition is aggravated by inadequate machinery for emptying cesspits and septic tanks before they cause nuisance.

125. In the smaller townships and minor settlements pit latrines are usually used, and despite problems of siting on very small plots, they are the most suitable form of sanitation provided they can be made sufficiently deep.

126. In Dar es Salaam the new sewerage system was virtually completed during the year, and it is anticipated that the system will be brought gradually into operation from the end of February, 1954. In preparation for this, a number of private property owners have started the reconstruction of existing house drainage systems. Progress was made in the provision of storm-water drainage in Dar es Salaam, and by the end of the year about 60 per cent of the area to be drained under the current programme had been completed, including the twin outfalls through the dock area to the harbour.

127. The Public Health (Sewerage and Drainage) Ordinance, 1953, was enacted during the year. This brings up to date and consolidates a Drainage Ordinance enacted in 1950 which it now replaces. It is anticipated that Rules under this Ordinance will come into operation early in 1954.

128. The new Public Health Bill to which reference was made in the annual report for 1952 still awaits legislative approval. A committee appointed to draft new Building Rules to be introduced under the Public Health Ordinance when enacted, has commenced its work.

(B) Rural Sanitation

129. Little solid progress can be reported in rural hygiene. Not only has there been an actual reduction in the number of public health staff available, but the increasing tempo of urban development has made it more difficult for the staff to devote as much attention as could be desired to rural work.

130. It is encouraging to note that an increasing receptiveness among rural communities to the teaching of village hygiene is reported in certain districts—notably in Newala, around Kilimanjaro, in Sukumaland and in the Rungwe District. Unfortunately, shortage of staff resulted in the withdrawal of a health inspector posted for rural work among the Wapare in Same District, where much useful work had been done.

131. In December the first health orderlies completed their training at the Health Training Centre, Kongwa, and those who were successful in their examinations were posted to Districts. Health orderlies are trained for work primarily in rural areas, and with the increasing numbers expected to become available each year, much useful work in the rural field should soon become possible.

(C) Food Hygiene

132. The campaign for higher standards of purity and cleanliness in the food trades makes steady if slow progress in the face of apathy, ignorance and occasional obstruction.

133. Some evidence of improvement is reported in the quality of milk supplied to certain townships, but conditions generally are by no means satisfactory. There is little incentive for the native producer to improve the quality of his milk, and this is aggravated by the fact that the supply is insufficient to meet the demand. In this connection, the Assistant Director of Medical Services, Morogoro, writes: "Milk production is usually only part of the vendor's business, and the threat of action not infrequently prompts the owner to stop production completely."

134. The standard of hygiene of markets and slaughter-houses still leaves much to be desired, but improvements are gradually being effected. It is reported that certain slaughter-houses serving major centres of population have no direct connection with a piped water supply, and the purity of the water used is open to grave suspicion.

135. Control of imported food in the Dar es Salaam port area is operating smoothly under the supervision of the Port Health Office staff. During the year nearly 9,000 articles of food were voluntarily surrendered by their owners, and in only one instance was it necessary to seize a consignment for condemnation by a magistrate.

(D) Water Supplies

136. Good progress was reported during the year in increasing or improving the supply of water to townships and other areas.

137. An excellent piped water supply is now available in Newala, and the question of extending the system to supply the greater part of the plateau is under consideration. In Sukumaland (Lake Province) the minor settlements of Nansio, Geita, Ngudu, Malya and Shanwa now have good piped supplies. Other minor settlements in this area are less well served. Some supplies are derived from dams which, although less hygienically desirable than boreholes, are frequently more practicable by reason of their relative cheapness.

138. The water supply at Tanga has been supplemented by the sinking of four new boreholes. Because of delay in the delivery of pumping machinery, they are not yet in use, but it is expected that when they are ready for service the additional output will be ample for the current needs of the town.

139. The new water supply for Dar es Salaam was brought into operation in June, and the former supplies and booster station were closed. The present water is derived from the Mzinga Creek and its tributaries and is subjected to sedimentation, filtration and chlorination before being distributed. The resulting water is softer and of a much higher standard of purity than the old supply.

IX.—INDUSTRIAL HEALTH

(A) The Health of Labour

140. In general, the health of labour was reported to be satisfactory during 1953, although the standard of health of recruits was somewhat low, especially amongst those coming from Urundi. It is now widely accepted by employers that a period of "building up" of recruits before they are put on full employment results in a considerable increase in output, and it has been noted that the physique of employees who have engaged for a second period of service is markedly better than that of newly attested recruits.

141. As in previous years all attested recruits were medically examined to determine their fitness for employment. During the year 2,407 were rejected as unfit out of a total of 27,119 recruits. This rejection rate is somewhat higher than in 1952, when 2,051 recruits were rejected out of a total of 25,816.

142. Despite the fact that many recruits came from areas where communicable diseases exist in endemic or epidemic form, few instances of the spread of disease can be traced to the migration of labour. Movement of labour was restricted only to a small degree during the year and the only disease of importance which was encountered in this connection was smallpox. This disease occurred in epidemic form in Ufipa during the latter part of the year and necessitated, for a short time, a complete ban upon the recruitment of labour in the affected areas.

143. During the year action was taken in conjunction with the Department of Labour to standardize the procedure to be followed by each Department on the occurrence of an epidemic of serious communicable disease. The new procedure appears to be working smoothly.

144. Following reduction of the work of the Overseas Food Corporation and the consequent closure of a number of dispensaries maintained by the Corporation, there has been a slight decrease in the number of dispensaries provided for the treatment of labour. No dispensaries were closed whilst labour was still employed, and there has therefore been no proportionate decrease in available medical facilities.

(B) Industrial Diseases

145. Thirteen cases of anthrax, none of which proved fatal, were reported during the year. All cases occurred in workers engaged in the hides and skins industry. No cases of other occupational diseases scheduled under the Workmen's Compensation Ordinance were reported.

146. As described in Section I, paragraph 8 of this report a pilot survey of the incidence of silicosis in mineworkers was undertaken at two gold mines. The resultant figures were reported as showing a surprisingly low rate of incidence.

(C) The Housing of Labour

147. The steady progress noted in 1952 in the improvement of standards of housing provided for native labour by most of the larger employing concerns has been maintained. In the sisal industry efforts have been mainly directed towards the completion of schemes already in hand before the fall in the price of sisal, whilst in some other areas poor crops have occasioned some reluctance on the part of employers to commit themselves to further substantial housing programmes.

148. Efforts have been made by officers of the Department of Labour to convince certain smaller employers that the provision of permanent accommodation is cheaper in the long run than the provision of temporary accommodation. Experience is in fact teaching many that the cost of maintaining temporary buildings to the minimum standards required by the Master and Native Servants' (General Care) Regulations is considerably greater than the cost of maintenance of permanent accommodation.

149. Following discussions with employers' associations, certain amendments were made to the Master and Native Servants (General Care) Regulations which have the effect of permitting the erection of terraced houses for families. It is expected that this modification will permit the provision of a better standard house for any given expenditure.

(D) The Feeding of Labour

150. The establishment of a Central Advisory Committee on Nutrition has been reported in Section VII. It is hoped that this Committee may be able to advise on the nutritional aspects of the feeding of labour.

151. Despite the food shortage due to drought in various parts of the territory, there was little evidence of any breakdown in the arrangements made by employers for the supply of food to their labour forces. It is encouraging to note that the number of African workers receiving food rations from their employers is now nearly four times as great as the number drawing cash in lieu of rations. It is evident that two factors are working together to produce this result : employers are to a greater extent realizing the advantages to be gained by providing a balanced diet for their workers, and the workers themselves are overcoming their long standing preference for ready money rather than rations.

X.—INTERNATIONAL AND PORT HEALTH

152. The year under review has been the first complete year of operation of the International Sanitary Regulations. Certain reservations have been made by this Government which await consideration and ratification by the World Health Organization, but although Tanganyika is not yet bound by the Regulations the health administration had based its actions upon them and no difficulties in operation have been encountered. The co-operation of air, shipping and travel agents has been freely given despite occasional misunderstandings arising from the varying health requirements of different transport companies which are not always identical with the official Regulations.

153. The scheme for the clearance of incoming vessels, whereby the pilot acts on behalf of the Port Health Officer in the matter of clearing ships which have no communicable disease on board, continued to operate smoothly and

was extended, with some modifications, to the other ports of the territory. This scheme is much appreciated by the shipping agents and stevedoring firms as it enables them to commence work as soon as the vessel has anchored. The year saw an increase in the number of sea-going ships and local trading vessels entering territorial ports, but the decline in the number of dhow arrivals which had become apparent in recent years continued.

154. With the exception of one locally infected case of smallpox which occurred in Dar es Salaam during the latter part of the year, no outbreaks of internationally important diseases were reported from territorial ports. On five occasions during the year quarantine restrictions in consequence of smallpox outbreaks in Tanganyika were imposed by the Egyptian health administration upon persons leaving specified provinces bound for Egypt. In two instances representations were made by the Department that no cases of quarantinable diseases had in fact occurred in the provinces to which the restrictions had been applied, and on both occasions the restrictions were withdrawn.

155. The Agreement on frontier health control between the Governments of this territory and of the Belgian Congo (including Ruanda-Urundi) continued to work smoothly, and close liaison was maintained between the medical authorities of the territories. During the year a conference on sleeping sickness was held at Usumbura and was attended by the Sleeping Sickness Specialist.

156. Of considerable interest to Tanganyika was the inclusion of Zanzibar during 1953 in the African Yellow Fever Endemic Zone. This was agreed by the World Health Organization as a result of representations made by the Government of Zanzibar. As a result, no certificates of vaccination against yellow fever are now required of persons travelling from Tanganyika to Zanzibar, and in consequence the number of yellow fever vaccinations given during 1953 showed a sharp decline over previous years.

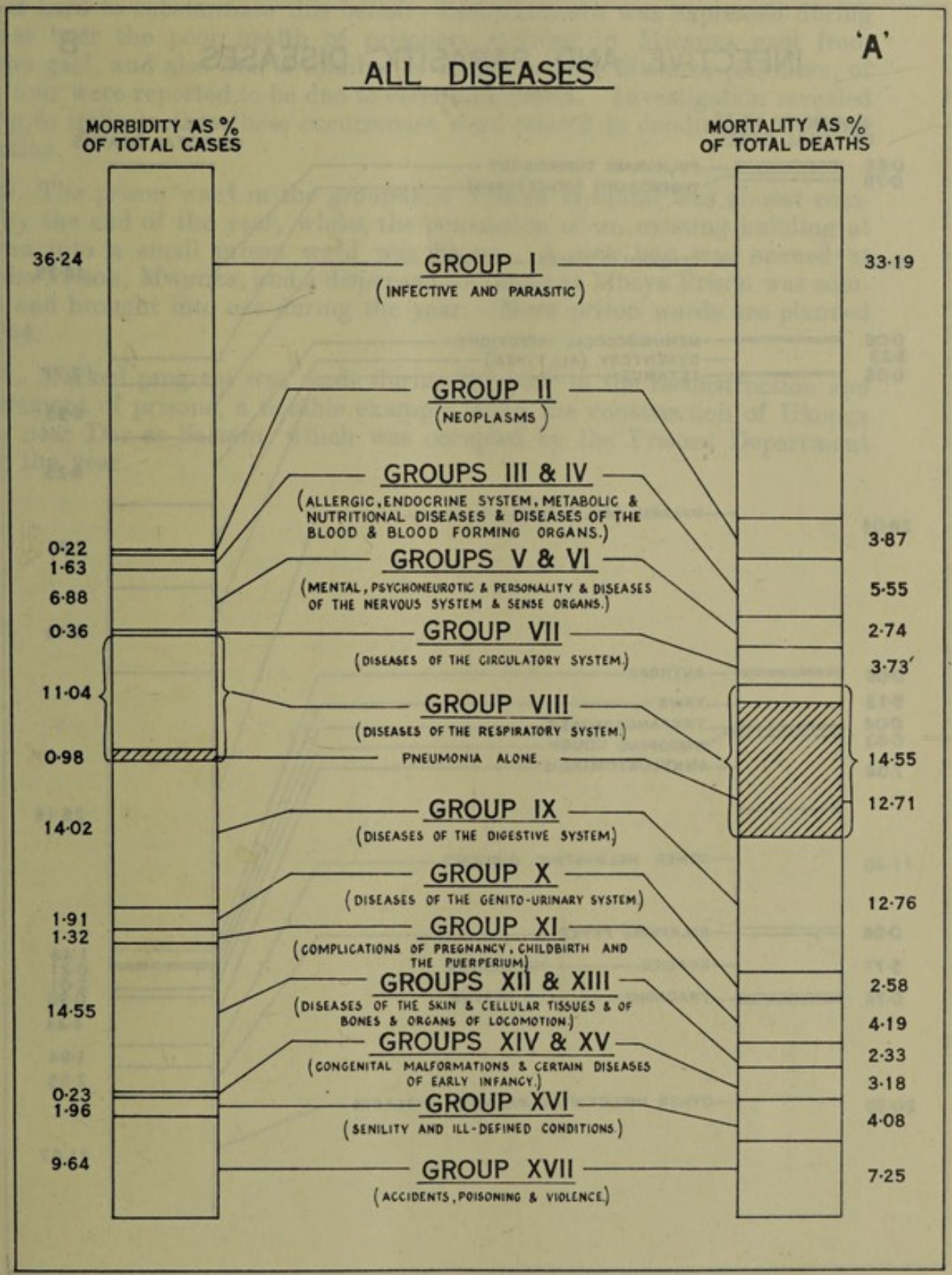
XI.—PRISON HEALTH

157. In general, prisoners throughout the territory have had a satisfactory health record despite the widespread shortage of food occasioned by a prolonged drought in the central area during the latter part of the year. Prison diets and the state of nutrition among prisoners generally were under special scrutiny during the year, but except at Kingolwira specific food deficiency disease does not seem to have occurred, at any rate on a significant scale. The standard prison diet is regarded as adequate when available but from time to time shortages of specific items occur, particularly fresh vegetables, and medical officers are usually asked by the prison authorities to advise on substitutes. Shortages occurred during the year at many prisons, particularly at Dodoma, which was in the centre of the famine area.

158. An increase in the number of cases of pellagra was observed at Kingolwira prison, where 139 cases were diagnosed, compared with 40 during 1952. The daily average of prisoners at Kingolwira was 1,010 in 1953 compared with 1,060 in 1952. Most of the cases of pellagra occurred among newcomers, although there were a few among the older inmates and occasional relapses were treated. The pellagra situation at Kingolwira is being closely investigated, and a special report by the prison medical officer on the incidence, cause and prevention of this condition is awaited.

'A'

ALL DISEASES



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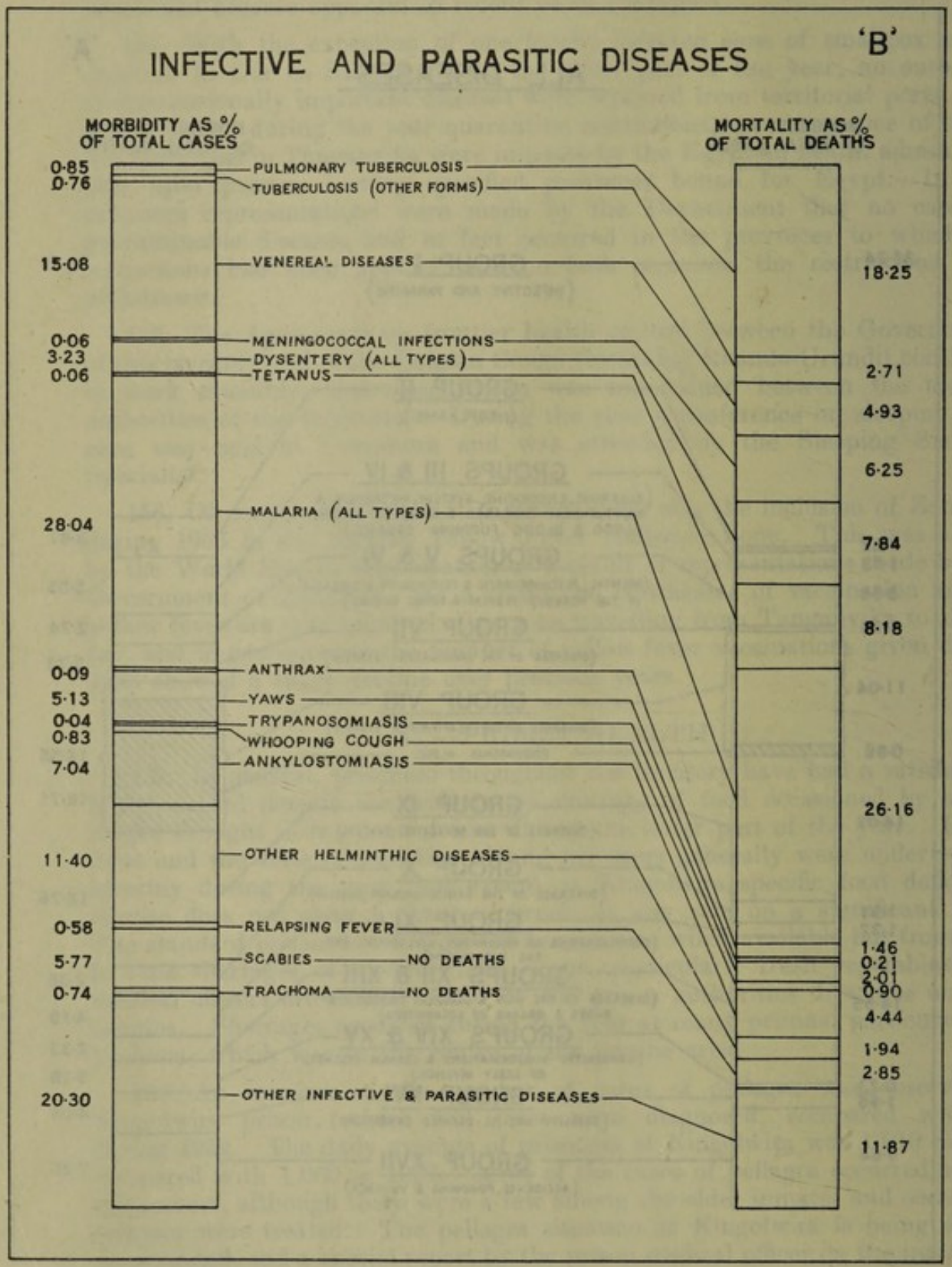
'B'
INFECTIVE AND PARASITIC DISEASES
MORBIDITY AS % OF TOTAL CASES
MORTALITY AS % OF TOTAL DEATHS
0·85
0·76
15·08
0·06
3·23
0·06
28·04
0·09
5·13
0·04
0·83
7·04
11·40
0·58
5·77
0·74
20·30
PULMONARY TUBERCULOSIS
TUBERCULOSIS (OTHER FORMS)
VENEREAL DISEASES
MENINGOCOCCAL INFECTIONS
DYSENTERY (ALL TYPES)
TETANUS
MALARIA (ALL TYPES)
ANTHRAX
YAWS
TRYPANOSOMIASIS
WHOOPING COUGH
ANKYLOSTOMIASIS
OTHER HELMINTHIC DISEASES
RELAPSING FEVER
SCABIES
NO DEATHS
TRACHOMA
NO DEATHS
OTHER INFECTIVE & PARASITIC DISEASES
18·25
2·71
4·93
6·25
7·84
8·18
26·16
1·46
0·21
2·01
0·90
4·44
1·94
2·85
11·87

159. Morbidity among prisoners has also been carefully watched and there has been no evidence to show that the morbidity experienced in prisoners is any higher than the apparent morbidity of the general population. It is, in fact, probable that morbidity in prisoners is lower than the true morbidity of the general population, although the difficulties in assessing the latter would make it hard to substantiate this belief. Some concern was expressed during the year over the poor health of prisoners arriving in Mwanza gaol from Musoma gaol, and also over a number of deaths among Mwanza prisoners, of which four were reported to be due to cerebral malaria. Investigation revealed nothing to indicate that these occurrences were related to conditions at either institution.

160. The prison ward in the grounds of Tabora Hospital was almost complete by the end of the year, whilst the conversion of an existing building at Musoma into a small prison ward was begun. A sick bay was opened at Butimba Prison, Mwanza, and a dispensary building at Mbeya Prison was completed and brought into use during the year. More prison wards are planned for 1954.

161. Marked progress was made during the year in the reconstruction and improvement of prisons, a notable example being the construction of Ukonga Prison near Dar es Salaam, which was occupied by the Prisons Department during the year.

PART III.—CURATIVE SERVICES

XII.—HOSPITALS

(A) Dar es Salaam Hospitals Group

162. Four main hospitals comprise the Dar es Salaam Hospitals Group. These are the Ocean Road Hospital (68 beds), the Sewa Haji Hospital (269 beds), the Infectious Diseases Hospital (164 beds) and the African Maternity Hospital (40 beds). In addition, the small Msasani Hospital was set up during the early part of the year for the treatment of cases of mental disease. It has accommodation for twenty-five patients. The Group is administered by a Board of Management under the chairmanship of a Senior Medical Officer; a Superintendent of Hospitals serves as secretary to the Board of Management and executive officer to the Group.

163. The new maternity wing attached to the Ocean Road Hospital, which had stood empty for some months pending the installation of essential fixtures, was opened in August. It is proving an efficient and popular wing, although it is as yet still incomplete in that the installation of air conditioning is awaited. There is no doubt that this unit cannot remain indefinitely without air conditioning as the main bulk of the Ocean Road Hospital stands between it and the sea breezes. The transfer of the maternity beds to the new wing has permitted several internal alterations in the main block. A children's ward has now been provided and additional consulting rooms for medical officers attached to the hospital. This rearrangement has now made it possible to separate the out-patients' department from the main hospital. Furthermore, it is anticipated that the additional accommodation provided at the out-patients' department will mean that the contemplated rebuilding of this end of the hospital will not be necessary for the next few years.

164. The end of the year saw the completion of an extension to the Sewa Haji Hospital built on a vacant plot of land opposite the main building. The extension consists of a large ward designed for approximately twenty beds for the treatment of long-term orthopædic cases. On the same plot an ophthalmic unit, providing examination rooms, a treatment room and a dark room, was built simultaneously. This unit is intended to increase the scope of the ophthalmic work at the Sewa Haji Hospital, and also to serve as the headquarters of an eye diseases survey which it is proposed to undertake, at first in the Dar es Salaam area and subsequently throughout the territory.

165. In September a new Röntgen IV X-ray unit, acquired from the Overseas Food Corporation surplus stores, was installed in the Sewa Haji Hospital. It is proving a most valuable asset, eliminating as it does the waste of time and money formerly expended in transporting African and Asian patients to the Ocean Road Hospital X-ray unit. It is expected that this new machine will ultimately be transferred to the new Group Hospital X-ray department when this is completed.

166. Work at the Infectious Diseases Hospital continued to increase—particularly in regard to the number of patients attending for the treatment of the kitchen for leprosy cases and additional ablutions for the female leprosy for the treatment of tuberculosis under the immediate care of one of the medical specialists, whilst sixty-one more beds are reserved for leprosy cases and the balance for other infectious cases such as anthrax, smallpox, etc., under the care of the other medical specialist. Minor improvements to the buildings were made during the year, including the enlargement and extension of the kitchen for leprosy cases and additional ablutions for the female leprosy patients.

167. The work of the African Maternity Hospital and of the ante-natal and child welfare clinics associated with it has increased steadily during the year, drawing patients from well outside the municipal boundary. The average number of deliveries in hospital per month was slightly over 116, with the result that many patients had to be sent home very soon after delivery, having had little if any opportunity to learn how to handle and care for their babies. Little can be done about this state of affairs until it is possible to organize a more extensive domiciliary midwifery service run in association with the hospital. This would reduce the pressure of work on the hospital itself. Attendance at the clinics is inclined to vary greatly at different periods of the year, and is markedly lower during rainy weather and at times of festivals. An appointments system is maintained at both the ante-natal and child welfare clinics. It is satisfying to be able to record that during the year there was a noticeable decline in the number of women admitted to hospital for delivery without prior attendance at the ante-natal clinic. There were only eighty such cases out of a total of 1,444.

168. In past years the Msasani Mental Hospital has stood in the grounds of the Msasani Prison, and came under the immediate supervision of the officer in charge of the prison. With the evacuation of Msasani Prison, the Mental Hospital was obliged to find new quarters nearby, and its administration was incorporated in the Dar es Salaam Hospitals Group. There is a resident nursing staff with daily visits by a medical officer from the Group, and frequent visits from the Specialist Psychiatrist. The present accommodation at Msasani is temporary pending the construction of a permanent block for the treatment of mental disease in the grounds of the new Group Hospital.

169. The Tanganyika Branch of the British Red Cross Society maintained a number of valuable services in the four principal hospitals at Dar es Salaam and it is a pleasure to record the Department's appreciation. At the Ocean Road Hospital the training of British Red Cross nursing aids was continued. A blood donor service and small blood bank—the latter for non-Africans—was organized and maintained during the year. Other activities included a library and a shopping service for hospital patients, diversional handicrafts and various comforts. The Society also maintained an organization for providing sea-water bathing and rehabilitation for children with paralysis and orthopædic defects, and dried milk was supplied to the Maternity and Child Health Hospital free or at reduced rates. A Christmas party was held in each of the hospitals.

170. In the earlier part of the year there was a temporary increase in the number of nursing sisters in the Dar es Salaam Hospitals Group. It was not

possible to maintain these numbers, however, and towards the end of the year the staff situation again became unsatisfactory.

(B) District Hospital Services

Eastern Region

171. Hospitals administered by registered or licensed medical practitioners are at Morogoro, Kilosa, Mahenge, Utete and Bagamoyo in the Eastern Province, and at Lindi, Nachingwea, Mtwara, Songea, Kilwa and Tunduru in the Southern Province.

172. At Morogoro the general hospital and the non-African wing were especially busy during the year. Major surgery in general, and orthopædic surgery in particular, were greatly increased as the result of the posting to the station of a Special Grade Medical Officer with a surgical qualification. Improvements to buildings comprised the addition of six more beds to the non-African wing (divided into three wards), the installation of basins with running water in the general hospital wards, and the incorporation of small cubicles at the ends of main wards to provide additional privacy for selected patients.

173. The hospital at Kilosa was filled to capacity throughout the year. A beginning was made on the installation of an electricity supply for the hospital, paid for by public donation, mainly from local sisal interests. The work should be completed early in 1954.

174. Mahenge hospital was less busy in 1953 following the departure on vacation leave of the district medical officer, for whom it was not possible to find a temporary relief. This falling off was, however, more than compensated for by the extraordinary popularity of the rural dispensaries in the vicinity of the hospital, whose standard of work is reported as being the best in the province. The hospital has a large garden which makes a valuable contribution to the patients' food supplies, producing quantities of maize, beans, bananas and muhogo.

175. At Utete the quality of the buildings is generally poor. During the year, a new twelve-bed ward was completed and made ready for occupation. In addition work was started on a new house for the sub-assistant surgeon in charge.

176. Bagamoyo hospital is an old building dating back to the days of the German occupation; the hospital proper is on the ground floor and the sub-assistant surgeon's flat on the first floor. During the year the structure of the main building became unsafe and it was decided to remove the flat above and re-roof the hospital as a single-storey building, at the same time providing new quarters for the sub-assistant surgeon in the hospital grounds. This will be carried out in 1954. The hospital was much busier during 1953 than previously, and the recently established maternity section has done good work despite the shortage of trained staff.

177. At Lindi, work on the new seventy-five-bed hospital progressed steadily, and by the end of the year it was well on the way to completion.

The standard of construction is excellent, and it is anticipated that the hospital will be in full occupation by the middle of 1954.

178. At the beginning of the year the Department took over the large hospital at Nachingwea formerly maintained by the Overseas Food Corporation. This hospital was originally planned for a very much larger unit, but the building programme was not completed, with the result that such buildings as have been constructed are widely scattered, making administration difficult. The approved bed capacity at Nachingwea is at present seventy-seven, including seven beds for non-Africans. During 1953 Nachingwea served as the main surgical centre for the Southern Province and a special grade medical officer with surgical qualifications was posted there. With the completion of the new Lindi hospital it will be more convenient for the principal surgical work in the Province to be undertaken at Lindi.

179. At Mtwara Hospital a new two-roomed office block was built, and minor improvements to the sluice room in the European wing were carried out.

Northern Region

180. Hospitals in the Northern Region at which registered or licensed medical practitioners are normally stationed are at Arusha, Moshi, Mbulu, Monduli and Oldeani in the Northern Province, and at Tanga, Korogwe, Lushoto, Muheza and Pangani in the Tanga Province.

181. During the year in-patients admitted to Arusha Hospital frequently exceeded the official bed establishment, and there was a large increase in the amount of surgical work undertaken. There was a particularly sharp rise in the number of European in-patients, from 428 in 1952 to 495 in 1953.

182. Moshi Hospital, too, was extremely busy. European and Asian work remained at approximately the 1952 level, but the African section was almost continuously overcrowded. There was a daily average of just over 168 in-patients, with only 165 beds.

183. Mbulu Hospital was almost entirely destroyed by an earthquake in May. Temporary accommodation was rapidly completed and plans were put in hand for a new hospital of "Arcon" prefabricated construction which is relatively resistant to earth tremors. Standard plans were modified to suit the special method of construction, and by the end of the year everything was in readiness to begin construction.

184. At Monduli Hospital there was an increase of 11 per cent in in-patient and 58 per cent in out-patient attendances. It is an encouraging sign that the Masai, generally relunctant to take advantage of western medicine, are beginning to develop an increasing interest in their hospital.

185. At Oldeani Hospital there was also an increase in the number of patients treated, there being a rise of 10 per cent in in-patients and 34 per cent in out-patients compared with the previous year. It was originally intended to enlarge and improve the existing unsatisfactory hospital, but a former school became available during the year which, with the addition of one or two small buildings, is eminently suitable for conversion to an efficient little hospital. The work of conversion and construction began at the end of November.

186. Tanga Hospital is the largest and most important hospital in the Region. Although no specialists are now stationed at this hospital, there are two special grade medical officers, one with surgical and the other with medical post-graduate qualifications. There was a small increase in the numbers of patients treated during the year, but the number of operations performed (1,800) was slightly less than in the previous year. There was a substantial increase in tuberculosis work at the Infectious Diseases Hospital. A gymnasium was added to the physiotherapy department of the hospital and considerable improvements were made to the maternity and child welfare clinic in the town with funds remaining from a donation in 1952. The foundations of a new out-patients' clinic at Ngamiani adjacent to the maternity and child welfare clinic were laid in December.

187. The sisters' mess, consisting of thirty small flats in three blocks with central messing facilities, was completed and occupied. The design is proving extremely satisfactory.

188. The new 100-bed hospital at Korogwe was opened in May. In anticipation of future township development the hospital is four miles from the present township, but in spite of this it has become extremely popular. Residual work on the European and Asian wards at the hospital was almost completed by the end of the year, and a new X-ray plant was installed and is expected to be in use early in 1954.

189. A small hospital block containing three single bed wards, with its own kitchen, laundry and sanitary annexe, was built at Lushoto during the year for the use of European and Asian patients. It is excellently built in a number of different types of wood and is very well furnished. It was the gift of Mr. Grewal Singh, a local business man, who himself was responsible for its construction. It was opened by Lady Twining in April, and twenty-seven patients had been admitted by the end of the year. Preparations were made during the year for the housing of an X-ray set at Lushoto, which is expected to be installed early in 1954.

190. A portion of the Muheza Hospital is now used for the in-patient treatment of infectious cases of leprosy or cases of leprosy complicated by other diseases. This work is part of the leprosy control scheme in Tanga District described in Section III of this report.

191. A new maternity clinic was completed at Pangani during the year and the general hospital was kept busy.

Central Region

192. Hospitals of the Central Region staffed by registered or licensed medical practitioners are at Mbeya, Iringa, Tukuyu and Chunya in the Southern Highlands Province, and at Dodoma, Singida, Kongwa, Kondoa and Mpwapwa in the Central Province.

193. During the year there was no significant increase in the number of cases treated at hospitals in the Region, although there were individual exceptions. There was a small rise in the Central Province which may be attributed to the inclusion of Kongwa Hospital statistics for the first time.

194. At Mbeya there was a marked increase in the number of out-patients. Although the in-patient admissions were less than in 1952, the daily average number of patients in hospital was higher and there was often a shortage of beds. A permanent dental unit was established at Mbeya early in the year.

195. Singida Hospital continues to be overcrowded and plans for its re-building have again had to be postponed.

196. Construction of a new out-patient department at Dodoma was started during the year and will be completed in 1954. This will release space for a few additional beds which are badly needed.

197. At the beginning of the year the Overseas Food Corporation hospital at Kongwa was transferred to Government. Subsequently a small tuberculosis section of about twenty beds was opened at this hospital.

Western Region

198. In the Western Region hospitals in the charge of registered or licensed medical practitioners are at Mwanza, Bukoba, Musoma, Shinyanga, Biharamulo and Shanwa in the Lake Province, and at Tabora, Kigoma, Nzega, Kahama, Kibondo and Sumbawanga in the Western Province. There has been an improvement in the facilities available at various centres in the Region.

199. Extensions to the laboratory and dispensary store at Mwanza, which were begun last year, were completed. Improvements to the operating theatre were started in order to provide a separate sterilizing annexe. A small building in the hospital grounds, formerly used by the East African Filariasis Research Unit as a laboratory, was lent to the hospital and is at present used as a small isolation block for tuberculosis cases. The surgical work at Mwanza is still increasing.

200. The hospital at Bukoba worked at full capacity throughout the year. Improvements began with the construction of a new health office, after which the old health office was converted to provide a new labour ward. Minor improvements were carried out to the new maternity ward built last year, whilst the conversion of the old maternity ward into a European/Asian ward was well advanced by the end of the year.

201. Musoma remains a very busy hospital and there is increasing need for a second medical officer. Surgical work at the hospital increased during the year. A new health office was completed and the old health office is now being converted into a small prison ward.

202. At Biharamulo, the new block containing a female ward, maternity ward, labour room and theatre ward was completed and equipped. The old female ward was re-conditioned and converted into an out-patients' department and dispensary.

203. The new isolation ward at Tabora was completed, as was the superior African patients' ward, but both await the arrival of equipment before they can be opened. A new prison ward was almost finished before the end of the year. The very unsatisfactory drainage system of the African hospital broke

down at the beginning of the year and was replaced by a completely new system. The water supply to the hospital remains poor and plans to enlarge the supply mains have not yet been carried out. A number of improvements were made to other parts of the hospital, including the installation of hot water boilers. Work on the new laundry was completed.

204. The extensions to Kigoma Hospital out-patients' department, on which work was proceeding in 1952, were completed early in 1953, and the new department was brought into use, greatly improving the hospital facilities. A new maternity ward has been opened and is proving very popular. This was provided by the conversion of the old health office and store, the health inspector moving into accommodation in the district headquarters offices. An excellent small building originally intended as an emergency holding ward for Europeans and Asians, but until now unused, was put into commission during the year after a water supply and latrine accommodation had been provided.

205. The rebuilding of Nzega Hospital proceeded steadily. By the end of the year two twenty-six-bed wards, an isolation block and a theatre had been completed and foundations had been laid for the administration/out-patients and kitchen/laundry blocks. In addition, quarters for two African female nurses were completed and occupied. The Nzega maternity clinic continues to do magnificent work and there is continual pressure on all available bed space.

206. A new theatre block and a new kitchen/laundry block were begun at Kahama Hospital, but were not completed by the end of the year.

207. In order to assist in dealing with the tremendous increase in work resulting from the posting of a medical officer to Kikondo, temporary improvements to the district hospital have been met, or are being met, from local funds pending the building of a new hospital for which there is provision in the development programme. The temporary improvements consist of a new out-patients' hut, a new rondavel intended for use as a mortuary, and a new hut for isolation cases.

208. A medical officer was posted to the hospital at Sumbawanga towards the end of the year. There was unfortunately an inexplicable delay in the construction of the medical officer's house which was originally planned to be completed before the end of December. Two new thirteen-bed wards were almost completed by the end of the year.

(C) Special Hospitals

209. Two special hospitals, Kibongoto Hospital for tuberculosis, and Mirembe Hospital, Dodoma (formerly known as Dodoma Mental Hospital), function independently of the regional administrative system. Each is under the direction of the appropriate specialist.

Tuberculosis Hospital, Kibongoto

210. In his annual report the Tuberculosis Specialist states that the permanent accommodation at Kibongoto now comprises 230 beds, of which 200 are for Africans and 30 for Asian patients. Nevertheless, the daily average of in-patients for whom accommodation was provided in one way or another totalled 256 (Asians 25, Africans 231).

211. Active interest has been maintained in the most up-to-date methods of treatment and the investigation of new techniques. The Specialist in charge reports that the year 1953 has been the most successful in the hospital's history, and adds that whilst this is due partly to the much more extensive use of the latest drugs, including streptomycin and isoniazid, most of the credit should go to the higher standard of examination, treatment and nursing which it was possible to maintain during the year. Although new buildings must have helped in this respect, much of the credit must go to the unremitting efforts of the staff.

212. The system of satellite dispensaries to provide out-patient supervision and treatment of tuberculosis patients continues as an integral part of the service provided by the hospital and is steadily becoming more popular.

213. The patients admitted to Kibongoto continued to come from all parts of the territory and occasionally from beyond the borders of Tanganika. The following tables show the distribution of in-patients treated in relation to their place of origin (Table XII) and the number of patients admitted, discharged and dying during 1953 (Table XIII).

TABLE XII

TERRITORIAL DISTRIBUTION OF IN-PATIENTS

Africans:			
Wachagga	337		
Other Tribes, Northern Province	211		
Central Province...	18		
Eastern Province	4		
Lake Province	22		
Southern Province	9		
Southern Highlands Province	15		
Tanga Province	106		
Western Province	18		
Total Tanganyika ...		740	
Kenya	51		
Northern Rhodesia	5		
Nyasaland	9		
Belgian Congo	16		
Other African Territories	5		
Total Other Africans ...		86	
Non-Africans		66	
Total In-patients ...			892

TABLE XIII

ADMISSIONS, DISCHARGES AND DEATHS

Total cases admitted		599
Pulmonary T.B. cases discharged	460	
Non-pulmonary T.B. cases discharged	125	585
Deaths from pulmonary T.B.	40	
Deaths from non-pulmonary T.B.	5	45
In-patients remaining at 30th November		262

Mirembe Hospital, Dodoma

214. The name of this hospital has now been changed from "Mental Hospital, Dodoma" to "Mirembe Hospital". Accommodation at the end of the year totalled 322 beds, there being twenty-seven beds for Europeans and Asians and 295 beds for Africans. Pressure on the accommodation at Mirembe

remains acute in spite of the completion in the first half of the year of a twenty-six-bed general ward and a twelve-bed admission ward and the maintenance of an average of twenty chronic patients at Msasani Hospital in Dar es Salaam. Admissions rose steadily during the year, whilst at the same time the total number discharged and transferred fell. The number of deaths remained approximately the same.

215. The most serious problem during 1953 was the water shortage in Dodoma, the result of widespread drought throughout Central Tanganyika. During the early part of the shortage the hospital was provided with water for only one hour a day. Fortunately the economy in the use of water did not lead to any significant increase in the incidence of fly-borne diseases within the hospital, although the risk was always present. Eventually it was possible to resume a continuous water supply to the hospital. The drought seriously affected the food supply, making staple foods not only expensive, but difficult to obtain. Following the prolonged food shortage there was an outbreak of pellagra in February which was swiftly dealt with. Otherwise the general health of the patients was good.

216. Mirembe is essentially a hospital for the treatment of acute psychoses : accordingly its work is considerably hampered by the problem of the disposal of chronic, senile or epileptic patients who would, in Europe, be accommodated and treated in their homes or in the homes of relatives. In this country, however, it frequently happens that cases such as this have no homes to go to and therefore remain a burden on the hospital. In 1953 they represented thirty-five per cent of the total number of patients accommodated, and their number is steadily increasing.

217. There was considerable building activity during the year. In addition to the completion of the two new wards already mentioned, a new ward for the accommodation of Polish patients (paid for by the United Kingdom Government) was begun, as well as two new European staff quarters. During 1954 it is planned to enlarge the hospital still further by the construction of three more twenty-six-bed general wards and an occupational therapy block.

218. Among the special forms of treatment used electro-convulsive therapy and insulin coma are the commonest. The latter proved very disappointing, a little under twenty per cent of the patients so treated being cured. It is thought that this was mainly due to the fact that the cases arrived too late for successful treatment, the insulin method being most successful on patients who reach hospital within six months after the onset of illness. Electro-convulsive therapy was far more successful, and increasing experience with this technique seems to suggest that it is the method of choice in certain psychotic states among Africans.

219. Occupational therapy was spread over a wide field, the general policy being to concentrate on those forms of occupation which would be of benefit to the patient on his return home. The vegetable and fruit farm was inevitably a failure owing to lack of rain. Sheep and poultry have been kept in past years and in 1953 pigs were also added to the stock. Minor improvements throughout the hospital were carried out by the patients. These included filling in areas of erosion in the hospital compound, covering of the hospital roads with murram, construction of small stone and cement bridges and the building of a children's playground for the European children of the staff. In addition, a small porter's lodge was built at the main entrance gate out of

materials provided by the Public Works Department, the work once more being carried out by the patients. This latter experiment in building was particularly successful in that it showed that the building of houses is well within the capabilities of patients of this type, who enjoyed the work immensely. Loudspeakers were installed in all the wards and wired to an efficient radiogram providing broadcasts in English, Gujerati and Kiswahili, as well as music on gramophone records. This new innovation is extremely popular with patients, who gather round the loudspeakers in large groups. They are always quiet and well-behaved during these entertainments and music seems to make the more excitable patients relax.

TABLE XIV

ADMISSIONS, DISCHARGES AND DEATHS

In-patients resident at 1st December, 1952	229
Patients admitted during the year	211
Patients discharged during the year	103
Deaths	42
In-patients resident at 30th November, 1953	295

220. The Acting Specialist Psychiatrist states that an analysis of the admissions to Mirembe Hospital during 1953, carried out in the light of the World Health Organization monograph "The African Mind in Health and Disease, 1953", showed that the incidence of mental disorder in Tanganyika is much the same as in other parts of Africa. Interesting facts which emerged from this analysis were the large number of schizophrenics (37 per cent); the relatively low rate of psychoneurosis and psychopathy (4·8 per cent); and the absence of mongolism among the mental defective group. Insanity due to organic disease, infections, avitaminosis, etc., was found to be as high as 17 per cent of the total number of admissions.

Leprosaria

221. There are now four Government leprosaria: at Makete (Southern Highlands Province), Chazi (Eastern Province), Njoro Chini (Northern Province) and Mtindiro (Tanga Province). The last named, previously a derelict colony for burnt-out cases and maintained by the local Native Administration, was taken over by the Medical Department on the 1st May, 1953, and is being developed and reconditioned as a small leprosarium for about 100 patients.

222. At Makete, construction of the new hospital donated by the British Red Cross Society continued throughout the year. The maternity block was completed in October and the wards are nearly completed. The laundry/kitchen block and the mortuary were being roofed at the end of the year and good progress had been made on the administrative block. It is expected that the hospital will be in use well before the end of 1954.

223. Negotiations were completed during the year for about five square miles of land at Makete to be taken over for the leprosarium under a legal right of occupancy on payment of compensation to the patients and others at present resident thereon. When the transfer is completed it will be possible to ensure that the land is used to the best advantage of the leprosarium.

224. The year has seen the re-introduction of intra-dermal injections of hydnocarpus oil in conjunction with the standard sulphone treatment. This combined treatment appears to be more effective than treatment by sulphones alone. Since September the creche at Makete has been in continuous use.

Earlier attempts to get it going were unsuccessful because infected mothers were reluctant to part with their children. One hundred and thirteen patients absconded during the year, and it is thought that the chief reason for this was the patients' dislike of the newly-introduced system of complete segregation, whereby non-infected relatives of patients are forbidden to live with them in the leprosarium. A resident medical officer was stationed at Makete throughout the year, assisted by a lay manager and male and female leprosy nurses seconded by the British Empire Leprosy Relief Association. At the end of the year a total of 439 patients remained under treatment at Makete.

225. Chazi leprosarium in the Eastern Province is managed by a lay worker seconded by the British Empire Leprosy Relief Association. The medical officer in charge is the District Medical Officer, stationed at Morogoro. Although a fairly large institution (it could accommodate over 400 patients) it is still inadequate for the work it is called upon to do. Fit patients are expected to cultivate the land in order to provide their own food, and all patients are given a minimum of an acre and a half of land for this purpose. A few are insufficiently fit for this work and others are lazy. Those who are unable to produce sufficient food for themselves are assisted with the issue of maize meal. Facilities are still very primitive and a large amount of building remains to be done before the unit can attain full efficiency. During the year four new staff houses were completed, together with the new school and a teacher's house.

226. Mtindiro was a leprosy "dump" when taken over by the Department in 1953. There were sixty-nine persons in residence, most of whom were destitutes from distant parts of the territory who had nowhere else to go. The leprosarium is being reorganized, and an African dresser who acts as supervisor is in charge. Overall supervision is exercised by the medical officer responsible for the organization of out-patient leprosy work in Tanga District. The number of patients accommodated is at present nearly 100.

227. The small leprosarium at Njoro Chini in Moshi District has now been entirely rebuilt in permanent materials and comprises an attractive group of buildings. Although small in capacity (it can accommodate thirty-seven patients) it performs a most useful service, and being on the outskirts of Moshi Township and near the district hospital it is conveniently administered as part of that hospital.

228. A fifth leprosarium which is not administered by the Medical Department, but in which the Department maintains a close interest, is the new native administration leprosarium at Mkunya in Newala District which is now in the course of erection. Here, a leprosarium is being built for 200 patients with the assistance of a capital grant from the British Empire Leprosy Relief Association but financed mainly by contributions from native treasuries in the area.

229. An account of the work of the mission leprosaria, together with a description of progress during the year, is given in Section III of this report.

XIII.—DISPENSARY SERVICES

230. Table XV below summarizes the number and distribution of Government dispensaries (both central and native authority) with their attendance records.

TABLE XV

Region	No. of N.A. and Government Dispensaries		Total No. of attendances recorded	
	1952	1953	1952	1953
Central:				
Central Province	44	48	504,390	521,249
S. Highlands Province ...	53	60	816,266	847,025
Eastern:				
Eastern Province	80	87	487,663	636,170
Southern Province	36	36	259,368	263,254
Northern:				
Northern Province	53	52	411,637	431,509
Tanga Province	42	49	438,051	255,420*
Western:				
Lake Province...	104	107	1,558,328	1,605,987
Western Province	61	64	639,196	579,292
Totals ...	473	503	5,115,899	5,139,906

*=Incomplete recordings

231. The figures incorporate twenty-one bedded dispensaries and eight out-patient dispensaries directly maintained by the Medical Department and under the charge of certificated medical staff. The definition of a "dispensary" includes a wide variety of buildings and standards of medical care. The best of them are equipped with one or more wards and a variable number of beds for in-patient treatment and are under the charge of qualified medical assistants. These are known as "bedded dispensaries" and are in effect small rural hospitals, except that they are not staffed by qualified medical practitioners. All the bedded dispensaries are maintained by the Medical Department.

232. There is a large intermediate group of "Grade 'A' " dispensaries staffed by medical assistants or rural medical aids. These are out-patient dispensaries; they are adequately equipped and the structure of the buildings is reasonably good. Occasionally there are one or two emergency or "holding" beds intended for patients awaiting transport to the district hospital. There are at present 189 Grade "A" dispensaries.

233. The most primitive type of dispensary (the Grade "B" dispensary) is staffed by a tribal dresser who has received no systematic course of medical training other than, in many cases, a varying period of practical experience and instruction at a district hospital. The equipment of the Grade "B" dispensaries is of the simplest and the buildings are frequently of primitive construction. There are 285 Grade "B" dispensaries.

234. The great majority of the out-patient dispensaries (Grade "A" and "B" dispensaries) are financed and maintained by native authorities, although under the direct supervision of district medical officers. The demand by local authorities for a greater output of trained staff for rural dispensaries is insistent. The present annual output is admittedly insufficient to meet present and growing needs, but the training capacity of the Medical Department is fully extended, and it is unlikely that the output will be able to meet and keep pace with expansion for a long time to come.

235. In all regions intensive efforts are being made to improve the standard of supervision. In the Eastern Region routine monthly visits are made wherever possible. It is hoped that by instituting regular visits the staff in charge of dispensaries will be able to arrange for the attendance of difficult cases for examination by the visiting medical officer. Refresher courses were held at Morogoro Hospital for all tribal dressers in the Eastern Region.

236. In the Western Region, district medical officers, as well as visiting their dispensaries more regularly and attempting to spend a longer time at each dispensary, attempted where possible to arrange courses of instruction for the staff both at the dispensaries themselves and at the parent hospitals.

237. The other two regions also report an improvement in the standard of supervision. Occasionally, staff outside the Medical Department is employed by native authorities to assist in the supervision of rural dispensaries. A Makerere qualified licensed medical practitioner is employed by the Chagga Council in Moshi District, whilst the Singida Native Authority employed a European lay supervisor of clinics and dispensaries. In some cases the mission doctors assisted in the work of supervision.

238. With the publication early in 1953 of the official "Tanganyika Formulary", standardized lists of drugs and equipment were approved for both Grade "A' and Grade "B" dispensaries.

XIV.—MORBIDITY AND MORTALITY EXPERIENCE IN GOVERNMENT AND MISSION HOSPITALS

239. The numbers of in-patients and deaths at Government and mission hospitals with resident doctors are recorded in Appendix V of this report, whilst the number of out-patients in the same hospitals are to be found in Appendix VI. Attendances at dispensaries are given in Appendices VIII and IX. In all cases statistics for this year are calculated from 1st December, 1952, to 30th November, 1953, inclusive.

240. Figures given in Appendices V and VI have been combined under their respective headings, each group or combination of groups then being calculated as a percentage of the whole and expressed diagramatically in illustration "A" (facing this page). It is thus possible to observe the significance of any group in relation to other groups and also in relation to overall morbidity and mortality. At the same time, the diagram illustrates the relationship between morbidity and mortality within individual groups.

241. As in the past the largest group of diseases is that caused by infection (Group I—Infective and Parasitic Diseases). This comprises 36·24 per cent of all sick persons attending hospital, and 33·19 per cent of all deaths occurring in hospital. Amongst the other groups neoplasms as usual occur relatively rarely, but are responsible for a high proportion of deaths. On the other hand, as might be expected, Groups XII and XIII (Diseases of skin, bones, etc.) account for a large number of patients but comparatively few deaths. In spite of modern therapeutic methods pneumonia still remains a significant cause of mortality, and for this reason it has been given special treatment in diagram "A". It will be seen that although pneumonia comprises only a small proportion of the number of cases in Group VIII (Diseases of the Respiratory System), it is responsible for the greater proportion of deaths in this Group.

242. In view of its importance as a cause of morbidity and mortality, Group I (Infective and Parasitic Diseases) has itself been subdivided and its composition illustrated in diagram "B" (facing this page). Malaria maintains its position as the largest cause of morbidity and mortality, with figures of 20·04 per cent and 26·16 per cent respectively. The serious significance of pulmonary tuberculosis is well shown; there is a morbidity rate of only 8·5 per cent which nevertheless gives rise to a mortality rate of 18·25 per cent. Similarly, meningococcal infections and tetanus give rise to a mortality quite out of keeping with their morbidity. On the other hand, it will be seen that venereal diseases, yaws, ankylostomiasis and other helminthic diseases, though all of a considerable significance as a cause of morbidity, are less significant as a cause of mortality.

XV.—SPECIALIST SERVICES

(A) Medical

243. Two medical specialists were stationed in Dar es Salaam throughout the year. The post of Radiologist has not yet been filled, with the result that one of the medical specialists continued to be responsible for the radiological work at the Dar es Salaam Hospitals Group. The same officer tended to concentrate on diseases of the heart and chest and assumed responsibility for the tuberculosis beds at the Infectious Diseases Hospital. The other medical specialist devoted special attention to neurology, gastro-enterology, nutrition and the supervision of drugs, and was responsible for the leprosy section of the Infectious Diseases Hospital. Teaching duties were undertaken by both officers.

244. Most of the larger district hospitals, and many of the smaller ones, were visited by one or other of the medical specialists during the year.

245. The specialists report little change in the type of case requiring treatment at the Ocean Road Hospital where non-Africans were treated. Last year it was noted that nervous and psychogenic disorders played an important part in the work of the hospital. There is no evidence of any decrease in this type of case. Malaria, although continuing to decrease in importance, still remains a problem. Experiments are made on the latest anti-malarial drugs as they come out, but there is little evidence to date that the newest drugs are, in the long run, more effective than the more well-established ones. Thus, it is still to be shown whether pyrimethamine (daraprim) is an improvement on proguanil hydrochloride (paludrine), and it is open to doubt whether chloroquine is any more effective in the initial stages of an acute attack of malaria than is quinine. On the other hand there were three cases of pulmonary amoebiasis in which the response to treatment with chloroquine was dramatic. This gives rise to the thought that this disease is more common than had been supposed.

246. Owing to the poor results obtained in the treatment of dysentery with sulphaguanidine an investigation into the efficiency of orally administered streptomycin was begun. The experiment is not yet complete, although the impression has been gained that treatment by streptomycin is very much more effective.

247. At the Sewa Haji Hospital pneumonia predominated and continued to respond well to penicillin, although a proportion of patients showed delayed resolutions and even lung abscesses.

248. Typhoid fever continued with regrettable regularity (there being an average of one new case a week), and remained a serious therapeutic problem because the only effective drug at present is chloramphenicol which is inordinately expensive.

249. Malaria continued to be diagnosed frequently at the Sewa Haji Hospital, although on closer investigation it was evident that a number of the cases were either not malaria at all or a malaria parasitaemia brought about by some other pathological condition.

250. Stress diseases such as duodenal ulcer were frequently encountered.

251. Studies were carried out in the treatment of intestinal and extra-intestinal amoebiasis, folic acid absorption and the relationship between anaemia and infestation with hookworm.

252. Tuberculosis was treated at the Infectious Diseases Hospital by rest and nursing, collapse therapy and chemo-therapy with streptomycin and isoniazid. Leprosy cases at the Infectious Diseases Hospital were the subject of an investigation into the value of combined forms of therapy begun in 1952 and continued throughout 1953.

(B) Surgical

253. Although there are two surgical specialist posts, one remained unfilled until the beginning of December. Prior to the appointment of the second specialist a special grade medical officer with surgical qualifications assisted in the surgical work in Dar es Salaam.

254. The surgical specialist devoted special attention to orthopaedic and plastic work. He was in charge of the physiotherapy department and organized a regular fracture clinic. In addition to his share of the general surgery, the special grade medical officer was responsible for ear, nose and throat surgery as well as gastric and thoracic surgery. Surgery of the chest has not previously been attempted in Dar es Salaam to any great degree. A total of twenty-four patients were operated upon with encouraging results.

255. A total of 4,472 operations were performed at the Dar es Salaam Hospitals Group. Of these, 440 were undertaken at the Ocean Road Hospital and the remainder at the Sewa Haji Hospital.

256. Orthopaedic and traumatic surgery continued to provide the bulk of the surgical work at the Sewa Haji Hospital where, once again, there was a very high incidence of compound fractures. The large amount of emergency surgery made it impossible to deal with more than a limited number of cases requiring emergency operations such as hernia. At the Ocean Road Hospital, gynaecological and obstetrical operations, including hysterectomies and caesarian sections, numbered more than half of the operative procedures. In general surgery, operations for appendicitis and hernia predominated.

(C) Ophthalmic

257. There are two ophthalmic specialists, both stationed in Dar es Salaam. During 1953 one of them was absent on vacation leave between February and September.

258. At the Sewa Haji Hospital 5,121 new cases were seen, with a total of 13,281 attendances. At the Ocean Road Hospital 798 cases were seen. One of the specialists spent 102 days on safari during the year and visited all the principal medical centres in the territory. Altogether, 936 cases were brought to him for examination whilst on tour.

(D) Dental

259. The work of the unit was seriously hampered by the resignation of one dental officer in May and of another in September, for whom as yet no replacements have been forthcoming. The year began well with the opening of a new dental unit at Mbeya in March, but unfortunately the Mwanza unit had to be closed on the resignation of the dental officer in May.

260. Tours were undertaken to the main territorial centres, particularly in the earlier part of the year. In the latter half the staff shortage necessitated a drastic reduction in the amount of travelling. At certain centres the services of private dental practitioners continued to be utilized for the treatment of officials and their families.

261. The attendances by Africans at the daily dental clinic in the Sewa Haji Hospital continued to increase, the monthly attendances averaging approximately 650 cases. The services of medical assistants proved invaluable in this clinic. In many of the cases attending, the incidence of dental caries was very severe, even in young people. The Senior Dental Surgeon is of the opinion that caries in Africans progresses more rapidly than in Europeans. There appears to be little doubt that dental caries in the African is increasing and that the hope of coping adequately with this enormous problem on a basis of conservation only is at present remote. Some discussion took place during the year on the possibility of preventing caries by adding small quantities of fluorine to urban water supplies. This technique is now widespread in America, and has recently been recommended by a select committee for adoption in the United Kingdom.

262. During the year the unit dealt with 20,502 attendances as compared with 17,377 last year. The number of X-rays taken rose from 422 to 444, and repairs to dentures rose from 205 to 291. In addition, 33 cases of jaw injuries were treated as compared with 20 last year.

(E) Mental Health

263. An acting specialist psychiatrist was appointed during the year; he is resident at Mirembe Hospital, Dodoma, and was directly responsible to the Director of Medical Services for the administration of the Hospital. During the year he made periodic visits to Lutindi and Msasani Mental Hospitals.

264. An account of the work at Mirembe Hospital will be found in paragraphs 214 to 220 of this report.

(F) Anaesthetics

265. Since the appointment of a full-time anaesthetist there has been, naturally, an increase in the scope of the more radical forms of surgery. Reference has already been made to the new venture into thoracic surgery and there has also been an advance in the field of major abdominal surgery. Both in the type of anaesthesia and in the variety of anaesthetics available, a high standard of service has been achieved by the Anaesthetics Unit in Dar es Salaam.

266. During the year a start was made in the training of students and medical assistants in the simpler forms of anaesthetic administration.

(G) Tuberculosis

267. The Senior Specialist in Tuberculosis was resident at Kibongoto throughout the year. Although he carried out most of his work at Kibongoto, he was available for consultation elsewhere when required. The activities of the Tuberculosis Hospital at Kibongoto are described in Section XII of this report.

(H) Sleeping Sickness

268. The Sleeping Sickness Specialist was stationed at Tabora throughout the year. He carried out a number of tours of sleeping sickness areas and has now visited all the main sleeping sickness districts in the territory. In addition, he attended a sleeping sickness and general health conference in Usumbura, Ruanda-Urundi, in June. Accounts of sleeping sickness, including research, are to be found in Sections III and XIX of this report.

PART IV.—ANCILLARY AND RELATED SERVICES

XVI.—LABORATORY SERVICES

269. A detailed account of these services is given in the Annual Report of ıe Medical Laboratory which is published separately.

270. The laboratory services are administered by the Senior Pathologist ho is responsible to the Director of Medical Services for the provision of:

(a) a clinical pathology service for Government and non-Government hospital and practitioner services;

(b) epidemiological diagnostic and control facilities for Government and local health authorities;

(c) medico-legal pathological and technical laboratory facilities;

(d) an organization for the supply, storage and issue of all vaccines and sera in use throughout the territory;

(e) training organization for laboratory staff and training facilities for medical assistant students;

(f) research into problems of local interest.

271. During the year all the facilities of the Laboratory Division were in state of expansion under pressure of demand. This has been a continuous rocess for many years, but the rate of expansion has shown a marked accelera- ion during recent years, particularly in respect of clinical pathology. This is artly due to an increase in the demands made upon the hospital and practi- ioner services, but also to the wider application of clinical pathology to medical iagnosis.

272. As with all branches of the Medical Services, the general policy is o make the best use of the staff and funds available. In the case of the aboratory Division this precludes the possibility of a full scale laboratory ervice in all parts of the territory. What has been established is an efficient linical diagnosis and public health laboratory service based on the headquarters aboratory in Dar es Salaam. This service is available to all hospitals, Govern- ıent and non-Government, and to all medical practitioners in the territory. Vith regard to up-country facilities, there are eight small laboratories at the ıain medical centres, staffed and equipped for the provision of essential medical aboratory technology. These are known as "B" laboratories; at present each s staffed by two or more laboratory assistants. Outside these centres, attached o the smaller district hospitals, are the "C" laboratories staffed by laboratory uxiliaries or microscopists. They correspond in their scope to the clinical side ooms of the ordinary large hospital; that is to say they provide for essential outine investigations such as the examination of blood slides, urine and faeces.

273. The principal difficulty experienced is maintaining efficiency in "B" nd "C" laboratories is the maintenance of a steady flow of supplies. In ddition, there is a further difficulty in maintaining microscopes and other deli- ate equipment in good order. The quantity of such equipment on charge hroughout the territory is large, and most of it must be returned periodically o the medical stores for servicing.

274. During the year the supply and maintenance organization was overhauled and a carefully revised schedule of equipment was introduced.

XVII.—MEDICAL TRAINING

275. During the past two years there has been considerable progress in implementation of the programme for medical, public health and nursing training. This can be seen particularly in the increased output of qualified nurses and midwives both from Government and from mission training centres, and in the rapid development of public health training.

276. All training is now regulated and supervised by two bodies. The Tanganyika Medical Training Board, set up in November, 1951, controls the training of medical and public health staff, whilst the training and professional standards of nurses and midwives are controlled by the Nurses and Midwives Council which was appointed in February, 1953, under the Nurses and Midwives Ordinance, 1952. The syllabi and regulations for the various courses have been under constant review by these bodies with the object of raising gradually the standards of training of all medical, nursing and public health workers. During 1953, the syllabi of training for nurses and for midwives were revised, and detailed arrangements were made for the conduct of all qualifying examinations. Each body maintains its respective registers of qualified and approved persons.

277. The agreed programme drawn up in 1951 included provision for a new medical and nursing training school with hostel accommodation for 500 in Dar es Salaam, a maternity training school at Tabora, a school for the training of health nurses at Tukuyu, extension to the school for rural medical aids at Mwanza, and a health training school at Kongwa.

278. The health training centre at Kongwa opened in January, 1952, with its first intake of student assistant health inspectors for a three-year course of training. A one-year course for health orderlies was inaugurated in 1953, and fourteen of the seventeen students completed the course successfully at the end of the year. The school for health nurses opened at Tukuyu in 1952, and the first health nurses qualified at the end of their two-year course in December, 1953. The Nurses Training Centre at Kongwa, previously operated by the Overseas Food Corporation, was taken over by Government in January, and accommodation at the medical training centre for rural medical aids at Mwanza was doubled during the year to allow for a maximum intake of twenty students. Plans for a hostel to accommodate eighty midwifery and nursing students have been approved, and building will start in the second half of 1954; this is the first phase of the programme for the provision of a training school for 500 students in Dar es Salaam. Staff quarters required in connection with the proposed midwifery training school at Tabora were started in 1953, but some years will probably elapse before the school is functioning.

279. The following courses for medical, nursing and public health personnel are held in Government training centres :—

(a) *Medical Assistants.*—A three-year course at the Medical Training Centre, Dar es Salaam, covering elementary medicine, surgery, nursing, public health, pathology and pharmacy, followed by a qualifying examination. Medical assistants are employed at hospitals and some of the larger dispensaries for general medical duties.

Nursing Training Centre, Mweka, Near Moshi
Practical demonstration

(b) *Ancillary Medical Staff.*—These include laboratory assistants, pharmaceutical assistants and hospital stewards' assistants. The courses, which cover two years in the case of hospital stewards' assistants and three years in the case of laboratory and pharmaceutical assistants, are held at the Medical Training Centre, Dar es Salaam.

(c) *Rural Medical Aids.*—A two-year course in elementary medicine, first aid, microscopy and rural hgyiene. The course, which is held at the Medical Training Centre, Mwanza, has a marked rural and public health bias, and the qualified rural medical aids are employed in rural dispensaries.

(d) *Nurses and Midwives.*—Nurses are trained at Mweka in the Northern Province and at Kongwa in the Central Province. The school for midwives is in Dar es Salaam. The course for nurses covers three years, and there is a two-year course for midwives who are not already trained nurses. Those who have qualified as nurses can qualify as midwives after a further twelve months' training. Nurses and midwives who pass the qualifying examinations held under the auspices of the Nurses and Midwives Council are eligible for registration under the Nurses and Midwives Ordinance, 1952.

The training centre at Mweka now has an annual intake of fifty students. At present the number of male and female students is approximately equal, but the recruitment of female students is being increased gradually as more girls with the requisite standard of education become available. Training is organized on the "block" system, with periods of theoretical teaching interspersed with practical work in hospitals. The female students are resident at Mweka for the first eighteen months of the course, during which time they get their practical experience at Moshi Hospital. For the second part of their training they are posted to Dar es Salaam and Tanga as resident students. The male students receive their practical training in district hospitals. Only male students are at present trained at Kongwa, where they follow the same syllabus as the Mweka students.

(e) *Assistant Health Inspectors.*—Students follow a three-year course at the Health Training Centre, Kongwa. The training centre was opened at the beginning of 1952 and the first students will sit the qualifying examination at the end of 1954. The syllabus covers hygiene and public health subjects, including building construction and sanitation, drainage, sewerage disposal, rural sanitation, diseases of public health importance, food inspection and nutrition. Special emphasis is given to the importance of public health education of rural communities.

(f) *Health Nurses.*—The first of a series of courses for health nurses at Tukuyu in the Southern Highlands finished in December. The training covers two years and includes instruction in hygiene, nutrition, midwifery, ante- and post-natal care, child care and homecraft. The qualified health nurses will be employed on domestic and village hygiene and maternity and child health in rural areas.

(g) *Health Orderlies.*—Training of health orderlies started at the Health Training Centre, Kongwa, in January. The course is of twelve months' duration, and students receive elementary teaching in public health subjects, emphasis being placed on practical work with a view to the employment of the health orderlies mainly in rural areas.

(h) *Malaria Assistants.*—Two-year courses in mosquito control are held at the Malaria Unit at Amani under the direction of the Inter-territorial Malariologist. Training includes instruction in the identity and bionomics of mosquitoes and details of the methods of control.

280. There are now ten mission hospitals which are approved as medical or nursing training centres and subsidized by Government. In these hospitals students are trained for the examinations conducted by the Nurses and Midwives Council or the Tanganyika Medical Training Board. £9,342 was disbursed on training grants during 1953, and a further mission nursing training school was approved to start training in 1954. Several missions have recently started the training of village nurses—a two-year course designed to train women for health work in rural areas. This training is also subsidized, either by the central Government or by the native authorities.

281. Particulars of the centres, both Government and mission, where training is at present taking place, with an indication of the type of training given and the numbers of students who qualified in 1953, will be found in Appendix XIII.

XVIII.—MISSION MEDICAL SERVICES

TABLE XVI

MISSION MEDICAL UNITS

	Units	Beds
Hospitals with resident doctors	30	2,377
Units with more than twenty beds, but without resident doctors	40	1,725
Units with twenty beds or less (Dispensaries)	36	524
Total Beds		4,626

Maternity and child health clinics (the majority of these are attached to the general hospitals or dispensaries)	69
Leprosaria	11

282. The majority of the units included in Table XVI are grant-earning. In addition, there are many dispensaries without qualified staff which are not subsidized by Government.

283. The total sum paid in grants-in-aid for mission medical work and training increased in 1953; grants allocated during the year amounted to £63,859 as compared with a total of £55,800 in 1952. The revised Medical (Grants-in-Aid to Missions) Regulations, published at the end of 1952, provided for grants at enhanced rates for the larger mission hospitals. The grants are based on the number of qualified medical and nursing staff employed, and the increase in 1953 payments reflects the appointment of additional staff and consequent improvement of existing hospitals and dispensaries, rather than the opening of new medical units. In particular, the development of mission medical and nursing training centres has resulted in an increase in the number of qualified African staff employed by missions.

284. In conformity with the policy that the payment of grants to mission rural dispensaries should cease to be the responsibility of the central Government, native authorities were invited during 1953 to take over the subsidization of those dispensaries whose work is primarily concerned with the treatment of out-patients. As a result, a number of these dispensaries will in future be subsidized by native treasuries and will cease to receive grants from the central Government.

285. There has been considerable building activity during 1953. At Masasi, the U.M.C.A. has completed and occupied a new hospital with eighty-one beds, and the hospital built by the Seventh Day Adventist Mission near Kasulu was opened during the year. Good progress was made by the Mennonite Mission in the erection of their hospital at Shirati in North Mara District, and a start has been made in the rebuilding of the Capuchin Mission Hospital at Ifakara in Mahenge District. At Ndolage, near Bukoba, the Native Authority has completed the buildings required for the opening of a new training centre for nurses, and extensions to their nursing training centre have been carried out by the White Fathers Mission at Sumve near Mwanza. At a number of other hospitals new wards and other buildings have been erected, notably at Ndanda Benedictine Hospital in the Southern Province, where a new ward for thirty tuberculosis cases has been opened, and at the White Fathers hospital at Kagunguli on Ukerewe Island, where the addition of a forty-five-bed ward for Africans and a twenty-bed ward for Asians has raised the capacity of the hospital to ninety-five beds.

286. The missions have continued to do particularly good work in the field of maternity and child health. Ten thousand, five hundred and seventy-three confinements were recorded in mission hospitals and clinics in 1953, and reported attendances at ante-natal and child health clinics totalled 87,173 and 124,750 respectively. The missions also play an important part in the care and treatment of leprosy patients. At the end of the year there were nearly 4,000 patients undergoing active treatment in mission leprosaria, as well as a large number of out-patients. Further expansion of accommodation for leprosy patients is being carried out at several centres with financial assistance from native treasuries or the central Government.

287. Mention has already been made of the development of the mission medical and nursing training centres. Further particulars will be found in Appendix XIII.

TABLE XVII

GRANTS-IN-AID TO MISSIONS, 1953

Mission	Grants for Medical work £	s.	Grants for Training £	Total £	s.
Universities Mission to Central African (Zanzibar Diocese)	7,998	3	2,430	10,428	3
Church Missionary Society...	6,146	5	2,368	8,514	5
Universities Mission to Central Africa (Masasi Diocese)	5,190	0	740	5,930	0
Lutheran, Usambara Area	3,680	0	1,440	5,120	0
Benedictine, Peramiho	4,237	10	250	4,487	10
Benedictine, Ndanda	3,100	0	1,080	4,180	0
White Fathers, Mwanza	2,437	10	700	3,137	10
Church of Sweden Mission	2,748	15	–	2,748	15
Moravian Mission	2,688	15	–	2,688	15
Augustana Lutheran	2,262	10	250	2,512	10
Capuchin	2,025	0	–	2,025	0
Mennonite	1,825	0	–	1,825	0
Africa Inland	1,737	10	–	1,737	10
Universities Mission to Central Africa (Diocese of South-West Tanganyika) ...	1,662	10	60	1,722	10
Lutheran, Northern Area	1,550	0	–	1,550	0
Swedish Evangelical	1,303	3	–	1,303	3
Catholic, Ndareda	1,137	10	24	1,161	10
White Fathers, Kigoma	1,125	0	–	1,125	0
Seventh Day Adventist	775	0	–	775	0
White Fathers, Bukoba	650	0	–	650	0
Lutheran, Uzaramo Area	137	10	–	137	10
Norwegian Lutheran	100	0	–	100	0
Totals ...	54,517	11	9,342	63,859	11

XIX.—RESEARCH

Sleeping Sickness

288. In the report for 1952 reference was made to an investigation being carried out by the Sleeping Sickness Specialist in the use of Friedheim's Mel.B. in the treatment of sleeping sickness, particularly in late and relapsed cases suffering from the rhodesian form of infection. This experiment was completed in April. The reactions of three small groups of "incurable" patients were investigated. The first group was treated with Friedheim's Mel.B., and the other two groups with two separate batches of arsobal, the French equivalent of Mel.B. Of the first group, consisting of eight patients, seven were alive and well with normal or near-normal cerebro-spinal fluids eighteen months after treatment, although it is thought that by the end of that time one of these cases was showing early signs of relapse.

289. The second and third groups comprised altogether twenty-five patients. Of these it was possible to follow up the progress of twenty-one cases; the majority for a period of four to eight months after treatment. Of these twenty-one, two died before completing the course of treatment. It is considered that the drug cannot be held responsible owing to the fact that the patients were in a very late stage of the disease when treatment was begun. Out of the nineteen cases left, there were three relapses, all occurring approximately six months after treatment. The other sixteen patients remained well. The dosage (the same in both forms of the drug) used for all except five of the patients was a very low one (1·8 milligrams per kilogram of body weight), and this was used in all cases in the first group.

290. On the occurrence of relapses the dose was doubled, so far without adverse effect. It is clear that additional investigation and experience is necessary before a satisfactory range of dosage can be arrived at which will prevent relapses and yet be reasonably safe.

291. As a result of this experiment, the conclusion was reached that Mel.B. and its equivalents were too dangerous to use for early cases of sleeping sickness; for these antrypol continues to be the drug of choice. But for the treatment of patients hitherto classed as incurable, Mel.B. and arsobal show great promise and give greater cause for hope than any other drug yet tried.

292. After the close of the controlled experiment referred to above, the treatment of selected cases with Mel.B. continued throughout the year, and more than seventy patients previously regarded as incurable have now been treated with this preparation. Experience with the drug subsequent to the experiment supports the conclusions reached in the experiment.

293. At the end of the year an additional quantity of Mel.B. was obtained from a British pharmaceutical firm who are now producing sufficient quantities for experiment at the request of the Tsetse and Trypanosomiasis Committee of the Colonial Office. It is anticipated that the supply will improve steadily as a result, and more extensive trials with the assistance of district medical officers may soon be possible.

294. A supply of Melarsen sodium (May and Baker) was also received for trial, but had not been extensively used by the end of the year. In the few cases in which it was tried it promised results comparable with those obtained with Mel.B.

295. Towards the end of October a number of cases in various stages of the disease were treated with spirotrypan and sulpha-containing arsenobenzene produced by Fabwerke Hoechst AG. Whilst the drug has some trypanocidal action relapses have been frequent and further trials are not contemplated.

Malaria

296. A number of experiments in connection with malaria were carried out during the year under the supervision of the Inter-territorial Malariologist, Amani.

297. *Prophylaxis of hyper-endemic malaria with pyrimethamine.*—Monthly prophylaxis treatment using pyrimethamine in a typical hyper-endemic malarious village community resulted in an initial decrease in parasite rates from 64·3 per cent to 20 per cent four weeks after the first treatment. Subsequently, the rates rose until at the end of six months of treatment the rate was 58·1 per cent. This suggests the development of resistance by *plasmodium falciparum.*

298. *Curative drug trials.*—Clinical curative drug trials were carried out in two hospitals, using standardized courses of various drugs. Results of a few cases so far investigated showed that pyrimethamine produced consistently negative blood slides in an average of thirty-five hours after commencing treatment, quinine in forty-nine hours and mepacrine hydrochloride and chloroquine sulphate in about fifty-five hours.

299. *Larvicidal trials.*—Experiments against the larvae of the *anopheles gambiae* were performed under laboratory conditions, using D.D.T. and Dieldrin Formulation in an endeavour to establish techniques for use in the field. Experiments are not yet complete, but the results already obtained have permitted the scientific application of Dieldrin as a larvicide under field conditions. The results of both trials of Dieldrin are as yet incomplete, although a decrease in the anopheline incidence has been noted.

300. *Experiments in the use of residual insecticides.*—Control of epidemic malaria in the non-immune uplands of Mbulu by means of B.H.C. residual spraying of the 1,700 houses in the Mbulu valley commenced in 1952. Three six-monthly impregnations in March and October, 1952, and in March, 1953, just prior to the expected peaks of malaria incidence, resulted in a virtual elimination of the vector mosquito *Anopheles gambiae*, and a reduction in spleen and parasite rates. The beneficial result of the spraying was greatly helped by dry weather.

301. B.H.C. was also used in February to spray 1,000 houses on the sugar estate at Arusha Chini. After the completion of the treatment a considerable increase in *anopheles gambiae* and in the parasite rates took place. In June and September the houses were treated with D.D.T. insecticide in a concentration of twelve ounces to the gallon. After these two treatments the mosquito catches decreased.

General

302. The Headquarters Medical Laboratory continued to investigate matters of local interest during the year. All such research work is recorded in the Medical Laboratory Annual Report, which is published separately. One of the more fruitful studies undertaken in this laboratory during the year was that of

the differential diagnosis between hookworm anaemia and anaemia in the hookworm carrier, a very common clinical problem in this country. It has now been shown that a simple clinical side room test without preliminary diet, namely the Gregerson modification of the benzidine test for occult blood, will elucidate the problem. In hookworm disease the Gregerson test is invariably positive and becomes negative within two or three days of deworming. In the case of the much more common hookworm carrier, the test is negative, unless some other cause of blood loss to the bowel is present.

XX.—MEDICAL STORES

303. There was no change in the organization of the Medical stores during the year. The Chief Pharmacist remained in charge, and in general supplies of items in common use were maintained at a satisfactory level. With a few exceptions it was possible to fill all indents immediately from stock.

304. The beginning of the year saw great improvements in the supply of sulpha drugs and there is now little difficulty in maintaining adequate stocks. Shipping delays in the earlier part of the year caused some shortage of enamel ware, but the position improved at the end of the year.

305. The new pharmaceutical laboratory was taken over during the year. A few items still remained to be installed, particularly the distillation plant which, it is anticipated, will be completed early in 1954. In the meantime the manufacture of certain galenicals is temporarily in abeyance, whilst the production of distilled water is satisfactorily maintained with temporary apparatus.

306. The instrument mechanic appointed in 1952 was kept fully occupied. It has been possible to obtain more equipment for his workshop during the year, and there is no doubt that the demands on his time would justify at least one assistant.

The New Medical Stores, Dar es Salaam

Preparing a consignment for despatch to an up-country Station

APPENDIX I

ESTABLISHMENT AND STRENGTH

	Establishment—1953		Permanent Staff (a) Strength—31st Dec. 1953		Permanent Staff (a) Strength—31st Dec. 1952	
	Senior Service	Junior Service	Senior Service	Junior Service	Senior Service	Junior Service
I.—Headquarters and Administration						
Director of Medical Services, Deputy Director and Assistant Directors	7	—	7	—	6	—
Matron-in-Chief	1	—	1	—	1	—
Secretary	1	—	1	—	1	—
Accountant and Assistant Accountant	2	—	2	—	2	—
Women Administrative Assistants	6	—	4	—	6	—
Stenographers, Librarian, Clerks and Telephone Operators	8	128	5	108	4	86
II.—Stores and Pharmaceutical Services						
Chief Pharmacist and Pharmacists	6	—	6	—	5	—
Chief Storekeeper	1	—	—	—	—	—
Stores Accountant, Stores Assistants and Head Packer	1	7	1	4	1	4
Instrument Mechanic	1	—	1	—	1	—
Pharmaceutical Assistants	—	3	—	3	—	2
III.—Hospital and Health Services						
Senior Specialist, Specialists, Senior Medical Officers, Special Grade Medical Officers and Medical Officers	96	—	70	—	74	—
Matrons, Nursing Sisters and Male Nurses	135	—	82	—	87	—
Physiotherapists	4	—	3	—	4	—
Senior Assistant Surgeons, Assistant Surgeons, Senior Sub-Assistant Surgeons, Sub-Assistant Surgeons and African Assistant Medical Officers	—	80	—	60	—	70
Nurses	—	200	—	139	—	116
Nutrition Officer and Nutrition Auxiliaries	1	1	—	—	—	—
Medical Assistants	—	159	—	119	—	117
Senior Compounders, Compounders and Pharmaceutical Assistants	—	27	—	24	—	20
Superintendents of Hospitals, Sister Housekeepers, Housekeepers, Hospital Stewards, Hospital Stewards' Assistants and Motor Drivers	10	28	7	20	8	15

(a) A number of apparent vacancies are filled by Temporary Staff.

ESTABLISHMENT AND STRENGTH

	Establishment—1953		Permanent Staff (a) Strength—31st. Dec. 1953		Permanent Staff (a) Strength—31st Dec. 1952	
	Senior Service	Junior Service	Senior Service	Junior Service	Senior Service	Junior Service
III.—Hospital and Health Services						
Chief Health Inspector, Health Inspectors and Assistant Health Inspectors	39	9	33	5	34	3
Health Visitors	20	—	15	—	20	—
Sanitary Inspectors	—	66	—	60	—	68
IV.—Specialist Services						
A. Dental:						
Senior Dental Surgeon and Dental Surgeons	6	—	4	—	5	—
Senior Dental Mechanic, Dental Mechanic and Dental Assistants	2	7	2	—	2	—
Dental Auxiliaries	—	2	—	1	—	1
B. Industrial Health:						
Specialist	1	—	1	—	1	—
Medical Officer	1	—	—	—	—	—
C. Leprosy:						
Medical Officers	2	—	2	—	1	—
D. Malaria:						
Malariologist	1	—	—	—	—	—
Entomologists	2	—	2	—	1	—
Malaria Field Officers	5	—	5	—	3	—
Supervisor, Anti-Mosquito Measures and Malaria Assistants	—	14	—	14	—	9
Laboratory Auxiliaries	—	3	—	—	—	—
Draughtsman	—	1	—	1	—	1
Malaria Auxiliaries	—	19	—	19	—	4
E. Mental:						
Specialist	1	—	1	—	—	—
Chief Male Mental Nurse, Male and Female Mental Nurses and Male and Female Nurses	12	4	8	3	10	2

(a) A number of apparent vacancies are filled by Temporary Staff.

APPENDIX I (*contd.*)
ESTABLISHMENT AND STRENGTH

	Establishment—1953		Permanent Staff (a) Strength—31st Dec. 1953		Permanent Staff (a) Strength—31st Dec. 1952	
	Senior Service	Junior Service	Senior Service	Junior Service	Senior Service	Junior Service
IV.—Specialist Services						
E. Mental:						
Handicraft Instructor	—	1	—	—	—	—
Medical Assistants	—	2	—	2	—	2
F. Tuberculosis:						
Specialist	1	—	*—	—	1	—
Medical Officer	1	—	1	—	1	—
Industrial Instructor	1	—	1	—	1	—
Nursing Sister	1	—	1	—	1	—
Assistant Surgeon	—	1	—	—	—	—
Medical Assistants	—	3	—	3	—	3
G. Sleeping Sickness:						
Specialist	1	—	1	—	1	—
Medical Officer	1	—	—	—	—	—
H. Laboratory Services:						
Senior Pathologist and Pathologists	3	—	3	—	2	—
Laboratory Superintendents and Laboratory Assistants	4	41	3	41	3	32
Laboratory Auxiliaries	—	15	—	15	—	9
I. X-Ray:						
Radiologist	1	—	—	—	—	—
Radiological Technician	1	—	1	—	1	—
Radiographers and Radiographic Assistants	3	4	2	—	2	1
J. Medical Education:						
Medical Officers	2	—	2	—	1	—
Medical Instructor	1	—	1	—	1	—
Sister Tutors and Medical Assistants	6	3	6	3	4	2
Wardens	2	—	2	—	2	—

(a) A number of apparent vacancies are filled by temporary staff. *Filled by Senior Specialist.

APPENDIX II

PROMOTIONS

Name	From	To	Effective
H. N. Davies, O.B.E....	Specialist	Senior Specialist	1.1.53
H. C. Foster	Senior Medical Officer ...	Assistant Director of Medical Services	5.7.53
D. E. Thompson ...	Medical Officer	Senior Medical Officer ...	1.1.53
A. G. Farr, M.B.E. ...	Medical Officer	Senior Medical Officer ...	5.7.53
J. G. Peacock ...	Medical Officer	Specialist Anaesthetist ...	1.1.53
J. P. Lane	Medical Officer	Specialist Surgical ...	10.9.53
E. A. W. Lewis ...	Chief Office Superintendent	Secretary	1.1.53
Miss I. L. Bastable ...	Nursing Sister	Matron Grade II	11.3.53

APPENDIX III

HONOURS

A. T. Howell	Director of Medical Services	C.B.E.
Gerald Malakileke Mwasuka ...	Medical Assistant	Certificate of Honour and Badge.
Mzee Yusufu	Nursing Orderly	Certificate of Honour and Badge.

In addition 28 members of the staff were awarded the Coronation Medal.

APPENDIX IV

BEDS—GOVERNMENT GENERAL AND SPECIAL HOSPITALS AND DISPENSARIES

	No. of Hospitals	No. of Wards	Number and Category of Beds						Allocation			
			General	Obstetrics	Tuberculosis	Infectious	Mental	Total	European	Asian	African	Total
I.—General Hospitals												
Central Region												
Central Province:												
Dodoma		11	98	10	–	5	–	113	–	8	105	113
Kondoa		10	33	3	–	10	–	46	–	–	46	46
Kongwa		4	79	6	20	10	–	115	15	2	98	115
Mpwapwa		3	26	–	–	–	–	26	–	–	26	26
Singida		7	42	–	–	2	–	44	–	2	42	44
Southern Highlands Province:												
Mbeya		18	70	11	–	2	–	83	8	4	71	83
Chunya		14	33	2	–	6	–	41	7	3	31	41
Iringa		7	93	13	3	–	–	109	7	4	98	109
Tukuyu		6	68	7	–	6	–	81	–	–	81	81
Eastern Region												
Eastern Province:												
Morogoro		18	144	22	4	26	–	196	9	9	178	196
Bagamoyo		6	30	5	–	4	–	39	–	2	37	39
Kilosa		7	76	3	–	11	–	90	–	4	86	90
Mahenge		10	78	–	–	–	–	78	–	–	78	78
Utete		2	33	–	–	–	–	33	–	–	33	33
Southern Province:												
Mtwara		4	40	–	–	–	–	40	4	–	36	40
Kilwa		5	30	–	–	6	–	36	–	–	36	36
Lindi		11	75	4	–	12	–	91	5	4	82	91
Nachingwea		6	77	–	–	–	–	77	7	–	70	77
Songea		4	50	–	–	–	–	50	–	–	50	50
Tunduru		5	24	–	–	–	–	24	–	1	23	24

APPENDIX IV (*contd.*)

BEDS—GOVERNMENT GENERAL AND SPECIAL HOSPITALS AND DISPENSARIES

	No. of Hospitals	No. of Wards	Number and Category of Beds						Allocation			
			General	Obstetrics	Tuberculosis	Infectious	Mental	Total	European	Asian	African	Total
I.—General Hospitals												
Northern Region												
Northern Province:												
Arusha		14	122	14	–	6	–	142	12	4	126	142
Mbulu		3	29	7	–	4	–	40	–	–	40	40
Monduli		3	34	–	–	–	–	34	–	–	34	34
Moshi		16	154	14	–	14	–	182	9	8	165	182
Oldeani		9	50	5	–	12	–	67	5	–	62	67
Tanga Province:												
Tanga		21	283	7	–	–	–	290	20	18	252	290
Korogwe		7	112	–	–	4	–	116	4	4	108	116
Lushoto		10	42	6	–	2	–	50	1	2	47	50
Muheza		8	84	–	4	10	–	98	–	–	98	98
Pangani		10	18	6	–	–	–	24	–	–	24	24
Western Region												
Lake Province:												
Mwanza		27	158	17	3	8	–	186	8	9	169	186
Bukoba		11	119	12	4	5	–	140	–	2	138	140
Biharamulo		5	34	8	–	–	–	42	–	–	42	42
Musoma		16	118	4	–	4	–	126	3	3	120	126
Shanwa		3	24	4	–	2	–	30	–	–	30	30
Shinyanga		5	62	4	–	2	–	68	–	4	64	68
Western Province:												
Tabora		14	168	18	–	4	–	190	12	8	170	190
Kahama		5	46	15	–	–	–	61	–	–	61	61
Kibondo		3	38	–	–	2	–	40	–	–	40	40
Kigoma		7	54	6	–	2	–	62	2	2	58	62
Nzega		7	44	–	–	–	–	44	–	–	44	44
Sumbawanga		2	25	–	–	–	–	25	–	–	25	25

APPENDIX IV (*contd.*)

BEDS—GOVERNMENT GENERAL AND SPECIAL HOSPITALS AND DISPENSARIES

	No. of Hospitals	No. of Wards	Number and Category of Beds						Allocation			
			General	Obstetrics	Tuberculosis	Infectious	Mental	Total	European	Asian	African	Total
I.—General Hospitals												
Dar es Salaam												
Ocean Road Hospital		29	51	14	–	3	–	68	52	16	–	68
Sewa Haji Hospital		11	269	–	–	–	–	269	–	23	246	269
Total General Hospitals ...	44	404	3,337	247	38	184	–	3,806	190	146	3,470	3,806
II.—Special Hospitals												
Central Region												
Mirembe Mental Hospital, Dodoma...		24	–	–	–	–	322	322	11	16	295	322
Northern Region												
Tuberculosis Hospital, Kibongoto ...		6	–	–	230	–	–	230	–	30	200	230
Infectious Diseases Hospital, Tanga...		9	–	–	12	–	–	12	–	–	12	12
Maternity Hospital, Tanga		–	–	11	–	–	–	11	–	–	11	11
Western Region												
Maternity Hospital, Nzega		4	–	30	–	–	–	30	–	–	30	30
Dar es Salaam												
Infectious Diseases Hospital ...		26	–	–	77	87	–	164	–	4	160	164
Maternity Hospital		4	–	40	–	–	–	40	–	–	40	40
Mental Hospital		3	–	–	–	–	22	22	–	–	22	22
Total Special Hospitals ...	8	76	–	81	319	87	344	831	11	50	770	831
III.—Dispensaries												
Central Region												
Central Province:												
Itigi		3	8	–	–	–	–	8	–	–	8	8
Manyoni		2	16	–	–	–	–	16	–	–	16	16
Southern Highlands Province:												
Kyela		2	20	–	–	–	–	20	–	–	20	20
Malangali		5	23	–	–	–	–	23	–	–	23	23
Njombe		3	20	–	–	2	–	22	–	–	22	22

APPENDIX IV (*contd.*)

BEDS—GOVERNMENT GENERAL AND SPECIAL HOSPITALS AND DISPENSARIES

	No. of Hospitals	No. of Wards	Number and Category of Beds						Allocation			
			General	Obstetrics	Tuberculosis	Infectious	Mental	Total	European	Asian	African	Total
			III—Dispensaries									
Eastern Region												
Eastern Province:												
Kingolwira		2	40	–	–	6	–	46	–	–	46	46
Mafia		5	11	1	–	–	–	12	–	1	11	12
Southern Province:												
Liwale		4	23	–	–	–	–	23	–	–	23	23
Mikindani		1	4	–	–	–	–	4	–	–	4	4
Northern Region												
Northern Province:												
Magugu		2	10	–	–	–	–	10	–	–	10	10
Mwika		–	8	8	–	–	–	16	–	–	16	16
Tanga Province:												
Handeni		6	24	–	–	–	–	24	–	–	24	24
Same		2	30	–	–	–	–	30	–	–	30	30
Usangi		5	36	–	–	4	–	40	–	–	40	40
Western Region												
Lake Province:												
Murongo		3	14	–	–	–	–	14	–	–	14	14
Ngara		2	23	–	1	–	–	24	–	–	24	24
Ngudu		2	16	–	–	–	–	16	–	–	16	16
Tarime		1	10	–	–	–	–	10	–	–	10	10
Western Province:												
Kabungu		1	4	–	–	–	–	4	–	–	4	4
Kakonko		2	28	–	–	–	–	28	–	–	28	28
Kasulu		3	17	–	–	–	–	17	–	–	17	17
Total Dispensaries ...	21	56	385	9	1	12	–	407	–	1	406	407
Territorial Total ...	73	536	3,722	337	358	283	344	5,044	201	197	4,646	5,044

APPENDIX V

DISEASES

In-Patients—Government and Mission Hospitals

(Hospitals with resident doctors only—1st December, 1952 to 30th November, 1953)

	GOVERNMENT HOSPITALS						MISSION HOSPITALS						TERRITORIAL					
	Cases			Deaths			Cases			Deaths			Total Cases	Total Deaths	Group Totals		Percentage Morbidity in Group	Percentage Mortality in Group
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total			Cases	Deaths		
GROUP I																		
Infective and Parasitic Diseases																		
Tuberculosis of the respiratory system ...	1,339	483	1,822	180	51	231	241	128	369	21	11	32	2,191	263			4·17	18·25
Tuberculosis of meninges and central nervous system	18	6	24	6	1	7	9	3	12	—	1	1	36	8			0·07	0·55
Tuberculosis of intestines, peritoneum and mesenteric glands	25	14	39	6	2	8	14	16	30	2	2	4	69	12			0·13	0·83
Tuberculosis of bones and joints ...	136	51	187	5	—	5	21	24	45	3	—	3	232	8			0·44	0·55
Tuberculosis, all other forms	181	87	268	5	5	10	22	9	31	1	—	1	299	11			0·57	0·76
Congenital syphilis	172	88	260	9	4	13	93	190	283	5	3	8	543	21			1·03	1·46
Early syphilis (Primary and Secondary)	678	271	949	3	1	4	291	265	556	—	1	1	1,505	5			2·86	0·35
Tabes dorsalis	3	1	4	—	—	—	50	70	120	—	2	2	124	2			0·23	0·14
General paralysis of insane	5	—	5	—	—	—	—	—	—	—	—	—	5	—			0·01	—
All other syphilis...	335	148	483	12	6	18	83	109	192	4	—	4	675	22			1·28	1·53
Gonorrhoea, genito-urinary	1,090	547	1,637	4	1	5	1,119	1,238	2,357	2	3	5	3,994	10			7·61	0·69
Gonococcal infection of the eye ...	95	50	145	4	—	4	93	84	177	—	—	—	322	4			0·61	0·28
Other gonococcal infections	225	58	283	2	—	2	144	42	186	1	2	3	469	5			0·89	0·35
Typhoid fever	341	82	423	42	10	52	47	48	95	8	5	13	518	65			0·98	4·51
Paratyphoid fever and other Salmonella infections	14	6	20	—	—	—	18	35	53	—	6	6	73	6			0·14	0·42
Cholera	—	—	—	—	—	—	—	—	—	—	—	—	—	—			—	—
Brucellosis (undulant fever)	17	2	19	1	—	1	1	—	1	—	—	—	20	1			0·04	0·07
Bacillary dysentery	561	158	719	20	12	32	104	199	303	3	7	10	1,022	42			1·94	2·91
Amoebiasis	394	100	494	20	4	24	182	221	403	1	8	9	897	33			1·71	2·29
Other unspecified forms of dysentery ...	529	234	763	25	9	34	230	156	386	3	1	4	1,149	38			2·20	2·64
Scarlet fever	1	9	10	—	—	—	19	4	23	—	—	—	33	—			0·06	—
Streptococcal sore throat	72	47	119	1	2	3	60	77	137	—	1	1	256	4			0·50	0·28
Erysipelas...	4	—	4	—	—	—	28	12	40	1	—	1	44	1			0·08	0·07
Septicaemia and pyaemia	18	11	29	9	9	18	44	36	80	3	—	3	109	21			0·21	1·46
Diphtheria	3	1	4	2	1	3	4	9	13	1	1	2	17	5			0·03	0·35
Whooping Cough...	93	100	193	2	3	5	100	169	269	3	5	8	462	13			0·88	0·90
Meningococcal infections	97	60	157	46	27	73	73	26	99	10	7	17	256	90			0·49	6·25
Plague	5	3	8	1	1	2	2	1	3	—	—	—	22	2			0·02	0·14
Leprosy	254	45	299	8	1	9	44	50	94	2	—	2	393	11			0·75	0·76
Tetanus	121	83	204	53	38	91	45	13	58	17	10	27	262	118			0·50	8·18
Anthrax	165	96	261	12	9	21	18	6	24	—	—	—	285	21			0·54	1·46
Acute poliomyelitis	32	24	56	3	1	4	16	20	36	2	—	2	92	6			0·17	0·42
Acute infectious encephalitis	2	2	4	2	—	2	4	—	4	—	—	—	8	2			0·01	0·14
Late effects of acute poliomyelitis and acute infectious encephalitis ...	26	9	35	—	—	—	13	17	30	—	—	—	65	—			0·12	—

APPENDIX V (*contd.*)

DISEASES

IN-PATIENTS—GOVERNMENT AND MISSION HOSPITALS

(Hospitals with resident doctors only—1st December, 1952 to 30th November, 1953)

	GOVERNMENT HOSPITALS						MISSION HOSPITALS						TERRITORIAL					
	CASES			DEATHS			CASES			DEATHS			TOTAL Cases	TOTAL Deaths	GROUP TOTALS		Percentage Morbidity in Group	Percentage Mortality in Group
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total			Cases	Deaths		
Variola major	10	6	16	—	—	—	—	—	—	—	—	—	16	—			0·03	—
Variola minor	48	3	51	—	—	—	2	4	6	—	—	—	57	—			0·11	—
Measles	148	148	296	—	1	1	135	178	313	1	—	1	609	2			1·16	0·14
Yellow fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—			—	—
Infectious hepatitis	86	46	132	7	4	11	73	66	139	2	—	2	271	13			0·51	0·90
Rabies	1	1	2	—	—	—	—	—	—	—	—	—	2	—			0·01	—
Louse-borne epidemic typhus	—	—	—	—	—	—	—	—	—	—	—	—	—	—			—	—
Flea-borne endemic typhus	—	—	—	—	—	—	—	—	—	—	—	—	—	—			—	—
Tick-borne typhus	7	1	8	—	—	—	—	—	—	—	—	—	8	—			0·02	—
Mite-borne typhus	—	—	—	—	—	—	—	—	—	—	—	—	—	—			—	—
Typhus unspecified and other rickettsial diseases	10	1	11	1	—	1	66	115	181	16	6	22	192	23			0·36	1·60
Vivax malaria (benign tertian)	736	519	1,255	9	9	18	613	285	898	10	1	11	2,153	29			4·11	2·01
Malariae malaria (quartan)	497	99	596	1	6	7	64	71	135	—	—	—	731	7			1·41	0·49
Falciparum malaria (Malignant tertian)	1,801	1,209	3,010	67	51	118	682	973	1,655	16	14	30	4,665	148			8·88	10·26
Blackwater fever	11	5	16	5	2	7	5	1	6	—	—	—	22	7			0·04	0·49
Other and unspecified forms of malaria	4,405	2,119	6,524	86	49	135	1,366	1,951	3,317	15	36	51	9,841	186			18·73	12·90
Schistosomiasis vesical (S. haematobium)	881	260	1,141	5	—	5	626	438	1,064	—	2	2	2,205	7			4·20	0·49
Schistosomiasis intestinal (S. Mansoni)	126	61	187	4	—	4	29	28	57	2	—	2	244	6			0·46	0·42
Schistosomiasis pulmonary (S. japonicum)	2	—	2	—	—	—	—	35	35	—	—	—	37	—			0·07	—
Other and unspecified schistosomiasis	19	1	20	—	—	—	5	9	14	5	—	5	34	5			0·06	0·35
Hydatid disease	2	4	6	1	—	1	—	65	65	—	—	—	71	1			0·13	0·07
Filariasis (bancrofti)	119	12	131	1	—	1	68	17	85	—	—	—	216	1			0·41	0·07
Onchocerciasis	—	—	—	—	—	—	3	26	29	—	—	—	29	—			0·05	—
Other filariasis	117	9	126	1	—	1	46	157	203	1	—	1	329	2			0·62	0·14
Ankylostosomiasis	2,035	804	2,839	45	9	54	1,766	1,587	3,353	7	3	10	6,192	64			11·78	4·44
Tapeworm and other cestode infestations	325	169	494	1	—	1	95	58	153	—	—	—	647	1			1·23	0·07
Ascariasis	484	224	708	1	—	1	296	275	571	1	1	2	1,279	3			2·43	0·21
Guinea worm (dracunculosis)	1	—	1	—	—	—	—	—	—	—	—	—	1	—			0·01	—
Other diseases due to helminths	62	25	87	—	1	1	110	60	170	—	1	1	257	2			0·47	0·14
Lymphogranuloma venereum	34	11	45	—	—	—	9	19	28	—	—	—	73	—			0·14	—
Granuloma inguinale, venereal	27	2	29	—	—	—	8	10	18	—	—	—	47	—			0·09	—
Chancroid and other unspecified venereal diseases	132	16	148	—	—	—	13	9	22	2	—	2	170	2			0·32	0·14
Food poisoning infection and intoxication	30	12	2	—	—	2	21	18	39	—	—	—	81	2			0·15	0·14
Relapsing fever	694	387	1,081	10	11	21	138	136	274	15	5	20	1,355	41			2·57	2·84
Leptospirosis icterohaemorrhagica (Weil's disease)	49	18	67	—	—	—	105	—	105	—	—	—	172	—			0·33	—
Yaws	361	213	574	1	—	1	334	278	612	1	1	2	1,186	3			2·26	0·21
Chickenpox	477	72	549	1	—	1	23	11	34	—	—	—	583	1			1·11	0·07
Mumps	98	7	105	—	—	—	5	15	20	—	—	—	125	—			0·24	—

APPENDIX V (*contd.*)

DISEASES

IN-PATIENTS—GOVERNMENT AND MISSION HOSPITALS

(Hospitals with resident doctors only—1st December, 1952 to 30th November, 1953)

	GOVERNMENT HOSPITALS						MISSION HOSPITALS						TERRITORIAL					
	CASES			DEATHS			CASES			DEATHS			TOTAL Cases	TOTAL Deaths	GROUP TOTALS		Percentage Morbidity in Group	Percentage Mortality in Group
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total			Cases	Deaths		
Dengue	3	—	3	—	—	—	50	70	120	—	—	—	123	—			0·23	—
Trachoma	60	44	104	—	—	—	135	165	300	—	—	—	404	—			0·77	—
Sandfly fever	2	—	2	1	—	1	—	—	—	—	—	—	2	1			0·01	0·07
Leishmaniasis	—	—	—	—	—	—	3	—	3	1	—	1	3	1			0·01	0·07
Trypanosomiasis gambiensis	6	—	6	—	—	—	6	4	10	1	—	1	16	1			0·03	0·07
Trypanosomiasis rhodesiensis	58	9	67	14	1	15	39	2	41	1	—	1	108	16			0·21	1·10
Other and unspecified trypanosomiasis	37	12	49	8	3	11	7	1	8	—	1	1	57	12			0·11	0·83
Dermatophytosis	27	6	33	—	—	—	56	22	78	—	—	—	111	—			0·21	—
Scabies	336	135	471	—	—	—	180	201	381	—	—	—	852	—			1·62	—
All other diseases classified as infective and parasitic	269	63	332	1	1	2	72	129	201	1	1	2	533	4	52,545	1,441	1·01	0·28
GROUP II																		
Neoplasms																		
Malignant neoplasm of buccal cavity and pharynx	9	10	19	3	1	4	6	4	10	1	1	2	29	6			1·72	3·57
Malignant neoplasm of oesophagus	3	1	4	1	—	1	—	1	1	—	—	—	5	1			0·30	0·60
Malignant neoplasm of stomach	9	7	16	4	5	9	7	8	15	4	2	6	31	15			1·83	8·93
Malignant neoplasm of intestine, except rectum	17	8	25	6	1	7	6	7	13	1	5	6	38	13			2·25	7·74
Malignant neoplasm of rectum	5	1	6	3	1	4	1	1	2	—	—	—	8	4			0·47	2·40
Malignant neoplasm of larynx	1	4	5	—	1	1	—	1	1	—	—	—	6	1			0·36	0·60
Malignant neoplasm of trachea, and of bronchus and lung not specified as secondary	5	3	8	2	2	4	4	—	4	1	—	1	12	5			0·71	2·98
Malignant neoplasm of breast	—	17	17	—	—	—	—	8	8	—	1	1	25	1			1·48	0·60
Malignant neoplasm of cervix uteri	—	55	55	—	4	4	—	27	27	—	4	4	82	8			4·87	4·76
Malignant neoplasm of other and unspecified parts of uterus	—	45	45	—	9	9	—	23	23	—	—	—	68	9			4·03	5·36
Malignant neoplasm of prostate	8	—	8	1	—	1	6	—	6	2	—	2	14	3			0·83	1·78
Malignant neoplasm of skin	18	11	29	—	—	—	5	1	6	3	—	3	35	3			2·08	1·78
Malignant neoplasm of bone and connective tissue	35	15	50	6	1	7	8	9	17	4	3	7	67	14			3·99	8·33
Malignant neoplasm of liver and biliary passages	36	11	47	17	6	23	18	9	27	4	5	9	74	32			4·39	19·05
Malignant neoplasm of all other and unspecified sites	84	70	154	19	3	22	34	31	65	2	1	3	219	25			13·00	14·87
Leukaemia and aleukamia	8	—	8	2	—	2	9	6	15	5	3	8	23	10			1·37	5·95
Lymphosarcoma and other neoplasms of lymphatic and haematopoietic system	22	7	29	3	—	3	—	7	7	—	—	—	36	3			2·13	1·78
Benign neoplasms and neoplasms of unspecified nature	246	402	648	4	9	13	57	208	265	—	2	2	913	15	1,685	168	54·19	8·92

APPENDIX V (*contd.*)

DISEASES

IN-PATIENTS—GOVERNMENT AND MISSION HOSPITALS

(Hospitals with resident doctors only—1st December, 1952 to 30th November, 1953)

	GOVERNMENT HOSPITALS						MISSION HOSPITALS						TERRITORIAL					
	CASES			DEATHS			CASES			DEATHS			TOTAL Cases	TOTAL Deaths	GROUP TOTALS		Percentage Morbidity in Group	Percentage Mortality in Group
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total			Cases	Deaths		
GROUPS III AND IV																		
Allergic, Endocrine system, Metabolic and Nutritional Diseases and Diseases of the Blood and Blood-Forming Organs																		
Nontoxic goitre	5	5	10	—	—	—	2	8	10	—	—	—	20	—			0·49	—
Thyrotoxicosis with or without goitre	1	9	10	—	—	—	1	3	4	—	—	—	14	—			0·35	—
Diabetes mellitus	62	23	85	5	2	7	19	14	33	—	—	—	118	7			2·92	2·90
Beriberi	8	6	14	3	2	5	34	11	45	3	—	3	59	8			1·46	3·32
Pellagra	34	1	35	1	—	1	5	14	19	—	—	—	54	1			1·34	0·41
Scurvy	7	6	13	—	2	2	5	—	5	—	—	—	18	2			0·45	0·83
Kwashiorkor	47	34	81	7	4	11	74	59	133	2	3	5	214	16			5·30	6·64
Other deficiency states	215	218	433	23	17	40	152	184	336	11	9	20	769	60			19·04	24·90
Pernicious and other hyperchromic anaemias	41	21	62	4	4	8	16	63	79	—	—	—	141	8			3·49	3·32
Iron deficiency anaemias (hypochromic)	333	136	469	23	6	29	138	285	423	3	1	4	892	33			22·08	13·70
Other specified and unspecified anaemias	327	214	541	45	17	62	93	135	228	1	5	6	769	68			19·04	28·21
Asthma	262	128	390	5	1	6	76	67	143	2	—	2	533	8			13·20	3·32
Other allergic disorders, endocrine, metabolic and blood diseases	194	80	274	18	4	22	84	80	164	6	2	8	438	30	4,039	241	10·84	12·45
GROUP V																		
Mental, Psychoneurotic and Personality Disorders																		
Psychoses	20	22	42	—	2	2	10	35	45	—	—	—	87	2			36·55	40·00
Psychoneuroses and disorders of personality	20	31	51	2	—	2	13	17	30	—	—	—	81	2			34·03	40·00
Mental deficiency	43	21	64	—	1	1	4	2	6	—	—	—	70	1	238	5	29·42	20·00
GROUP VI																		
Diseases of the Nervous System and Sense Organs																		
Vascular lesions affecting central nervous system	34	6	40	12	3	15	14	6	20	4	1	5	60	20			1·14	17·54
Nonmeningococcal meningitis	61	27	88	34	11	45	10	6	16	1	1	2	104	47			1·97	41·23
Multiple sclerosis	3	1	4	—	—	—	—	1	1	—	—	—	5	—			0·09	—
Epilepsy	130	30	160	6	2	8	28	13	41	—	—	—	201	8			3·82	7·02
Inflammatory diseases of eye	661	309	970	3	—	3	574	556	1,130	—	1	1	2,100	4			39·86	3·51
Cataract	78	39	117	—	—	—	114	72	186	—	—	—	303	—			5·75	—
Glaucoma	12	8	20	—	—	—	25	18	43	—	—	—	63	—			1·20	—
Otitis externa	42	24	66	1	1	2	50	38	88	—	—	—	154	2			2·92	1·75

APPENDIX V (*contd.*)

DISEASES

IN-PATIENTS—GOVERNMENT AND MISSION HOSPITALS

(Hospitals with resident doctors only—1st December, 1952 to 30th November, 1953)

	GOVERNMENT HOSPITALS						MISSION HOSPITALS						TERRITORIAL					
	CASES			DEATHS			CASES			DEATHS			TOTAL Cases	TOTAL Deaths	GROUP TOTALS		Percentage Morbidity in Group	Percentage Mortality in Group
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total			Cases	Deaths		
Otitis media and mastoiditis	127	54	181	—	1	1	92	99	191	1	1	2	372	3			7·06	2·63
Other inflammatory diseases of ear ...	60	26	86	1	—	1	52	76	128	—	—	—	214	1			4·06	0·88
All other diseases and conditions of eye	572	170	742	1	1	2	182	204	386	—	—	—	1,128	2			21·41	1·75
All other diseases of the nervous system and sense organs	294	163	457	16	4	20	55	53	108	4	3	7	565	27	5,269	114	10·72	23·69
GROUP VII																		
Diseases of the Circulatory System																		
Rheumatic fever	55	21	76	2	2	4	16	9	25	—	—	—	101	4			7·79	2·47
Chronic rheumatic heart disease ...	17	8	25	2	1	3	4	4	8	1	1	2	33	5			2·54	3·09
Arteriosclerotic and degenerative heart disease	22	7	29	6	3	9	57	51	108	8	3	11	137	20			10·56	12·35
Other diseases of the heart	140	85	225	44	15	59	58	67	125	11	9	20	350	79			26·98	48·77
Hypertension with heart disease ...	39	13	52	7	2	9	9	8	17	—	—	—	69	9			5·32	5·55
Hypertension without mention of heart	19	6	25	2	—	2	4	3	7	—	—	—	32	2			2.47	1.23
Diseases of arteries	13	1	14	3	—	3	5	6	11	—	—	—	25	3			1·93	1·85
Other diseases of circulatory system ...	297	133	430	27	8	35	66	54	120	3	2	5	550	40	1,297	162	42·41	24·69
GROUP VIII																		
Diseases of the Respiratory System																		
Acute upper respiratory infections ...	292	132	424	2	6	8	65	92	157	1	1	2	581	10			4·26	1·58
Influenza	53	59	112	11	1	12	113	194	307	—	1	1	419	13			3·07	2·06
Lobar pneumonia	2,911	1,117	4,028	129	102	231	572	443	1,015	27	22	49	5,043	280			36·95	44·30
Bronchopneumonia	947	716	1,663	99	86	185	341	352	693	28	20	48	2,356	233			17·26	36·87
Primary, atypical, other and unspecified pneumonia	83	42	125	10	2	12	171	246	417	17	10	27	542	39			3·98	6·17
Acute bronchitis	817	403	1,220	3	2	5	273	243	516	1	1	2	1,736	7			12·72	1·11
Bronchitis, chronic and unqualified ...	601	237	838	3	2	5	97	80	177	—	—	—	1,015	5			7·44	0·79
Hypertrophy of tonsils and adenoids ...	194	129	323	2	1	3	34	35	69	—	1	1	392	4			2·87	0·63
Empyema and abscess of lung ...	27	9	36	7	3	10	7	4	11	3	1	4	47	14			0·34	2·22
Pleurisy (other than tuberculous) ...	115	34	149	6	1	7	63	25	88	—	—	—	237	7			1·74	1·11
Pneumoconiosis	19	10	29	—	—	—	10	10	20	—	—	—	49	—			0·36	—
All other respiratory diseases	698	153	851	14	2	16	201	177	378	4	—	4	1,229	20	13,646	632	9·01	3·16
GROUP IX																		
Diseases of the Digestive System																		
Dental caries	126	59	185	—	—	—	83	109	192	—	—	—	377	—			3·79	—
All other diseases of teeth and supporting structures	121	69	190	1	2	3	86	96	182	—	1	1	372	4			3·74	0·72
Ulcer of Stomach	32	11	43	4	1	5	14	8	22	2	1	3	65	8			0·65	1·44
Ulcer of duodenum	38	16	54	2	1	3	2	7	9	—	—	—	63	3			0·63	0·54
Gastritis and duodenitis...	115	34	149	2	3	5	27	20	47	—	—	—	196	5			1·98	0·90

APPENDIX V (*contd.*)

DISEASES

IN-PATIENTS—GOVERNMENT AND MISSION HOSPITALS

(Hospitals with resident doctors only—1st December, 1952 to 30th November, 1953)

	GOVERNMENT HOSPITALS						MISSION HOSPITALS						TERRITORIAL					
	CASES			DEATHS			CASES			DEATHS			TOTAL Cases	TOTAL Deaths	GROUP TOTALS		Percentage Morbidity in Group	Percentage Mortality in Group
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total			Cases	Deaths		
Appendicitis	164	100	264	3	1	4	11	8	19	1	—	1	283	5			2·85	0·90
Intestinal obstruction and hernia	1,482	81	1,563	89	20	109	348	43	391	9	3	12	1,954	121			19·65	21·84
Gastro-enteritis and colitis between four weeks and two years	470	269	739	35	27	62	191	174	365	7	10	17	1,104	79			11·10	14·26
Gastro-enteritis and colitis ages two years and over	964	459	1,423	82	37	119	150	234	384	2	4	6	1,807	125			18·18	22·56
Chronic enteritis and ulcerative colitis	112	26	138	9	2	11	4	—	4	—	—	—	142	11			1·42	1·99
Cirrhosis of the liver	261	88	349	66	17	83	43	21	64	13	—	13	413	96			4·15	17·33
Cholelithiasis and cholecystitis	28	25	53	4	—	4	21	23	44	1	—	1	97	5			0·98	0·90
Other diseases of digestive system	1,782	864	2,646	57	25	82	221	203	424	4	6	10	3,070	92	9,943	554	30·88	16·62
GROUP X																		
Diseases of the Genito-Urinary System																		
Acute nephritis	49	25	74	8	3	11	22	25	47	11	2	3	121	14			1·93	12·50
Chronic, other and unspecified nephritis	69	41	110	16	7	23	32	36	68	2	3	5	178	28			2·84	25·00
Infections of kidney (other than tuberculous)	39	51	90	3	—	3	19	21	40	1	1	2	130	5			2·07	4·46
Calculi of urinary system	52	6	58	2	—	2	7	1	8	1	—	1	66	3			1·08	2·68
Hyperplasia of prostate	45	—	45	5	—	5	22	—	22	2	—	2	67	7			1·09	6·25
Diseases of breast	—	106	106	—	—	—	—	77	77	—	—	—	183	—			2·96	—
Hydrocele	904	2	906	1	—	1	263	—	263	1	—	1	1,169	2			18·53	1·79
Disorders of menstruation	—	418	418	—	—	—	—	153	153	—	—	—	571	—			9·10	—
All other diseases of the genito-urinary system	1,535	1,097	2,632	27	10	37	523	636	1,159	10	6	16	3,791	53	6,276	112	60·40	47·32
GROUP XI																		
Deliveries and Complications of Pregnancy, Childbirth and the Puerperium																		
Sepsis of pregnancy, childbirth and the puerperium	—	84	84	—	9	9	—	68	68	—	4	4	152	13			1·08	7·14
Toxaemias of pregnancy and the puerperium	—	235	235	—	15	15	—	49	49	—	3	3	284	18			2·00	9·89
Haemorrhage of pregnancy and childbirth	—	63	63	—	5	5	—	91	91	—	4	4	154	9			1·09	4·95
Abortion without mention of sepsis or toxaemia	—	878	878	—	5	5	—	318	318	—	1	1	1,196	6			8·53	3·30
Abortion with sepsis	—	105	105	—	5	5	—	37	37	—	1	1	142	6			1·01	3·30
Other complications of pregnancy, child birth and the puerperium	—	917	917	—	85	85	—	933	933	—	36	36	1,850	121			13·17	66·48
Delivery without complications	—	5,795	5,795	—	7	7	—	4,470	4,470	—	2	2	10,265	9	14,043	182	73·13	4·94

APPENDIX V *(contd.)*

DISEASES

IN-PATIENTS—GOVERNMENT AND MISSION HOSPITALS
(Hospitals with resident doctors only—1st December, 1952 to 30th November, 1953)

	GOVERNMENT HOSPITALS						MISSION HOSPITALS						TERRITORIAL					
	CASES			DEATHS			CASES			DEATHS			TOTAL Cases	TOTAL Deaths	GROUP TOTALS		Percentage Morbidity in Group	Percentage Mortality in Group
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total			Cases	Deaths		
GROUPS XII and XIII																		
Diseases of the Skin and Cellular Tissues and Diseases of the Bones and Organs of Movement																		
Infections of skin and subcutaneous tissue	2,159	633	2,792	17	8	25	302	235	537	2	1	3	3,329	28			23·34	27·72
Arthritis and spondylitis	459	124	583	3	—	3	66	49	115	—	—	—	698	3			4·89	2·97
Muscular rheumatism and rheumatism unspecified	533	209	742	3	—	3	150	117	267	—	—	—	1,009	3			7·08	2·97
Osteomyelitis and periostitis	352	104	456	11	1	12	66	33	99	1	—	1	555	13			3·90	12·87
Ankylosis and acquired musculo-skeletal deformities	38	34	72	—	—	—	29	28	57	—	—	—	129	—			0·90	—
Chronic ulcer of skin (including tropical ulcer)	3,933	945	4,878	18	11	29	796	578	1,374	2	3	5	6,252	34			43·84	33·66
All other diseases of skin	714	290	1,004	5	4	9	134	96	230	—	—	—	1,234	9			8·65	8·92
All other diseases of musculo-skeletal system	660	183	843	8	3	11	124	88	212	—	—	—	1,055	11	14,261	101	7·40	10·89
GROUP XIV																		
Congenital Malformations																		
Spina bifida and meningocele	5	3	8	—	1	1	4	4	8	1	2	3	16	4			11·85	17·39
Congenital malformations of circulatory system	5	2	7	2	—	2	2	4	6	1	—	1	13	3			9·63	13·04
All other congenital malformations	45	35	80	5	6	11	15	11	26	2	3	5	106	16	135	23	78·52	69·57
GROUP XV																		
Certain Diseases of Early Infancy																		
Birth injuries	3	2	5	—	—	—	2	8	10	—	8	8	15	8			2·53	6·96
Postnatal asphyxia and atelectasis	—	—	—	—	—	—	2	29	31	10	15	25	31	25			5·22	21·73
Diarrhoea of newborn (under 4 weeks)	18	16	34	2	3	5	11	24	35	1	1	2	69	7			11·62	6·09
Ophthalmia neonatorum	4	9	13	—	1	1	3	8	11	—	—	—	24	1			4·04	0·87
Other infections of newborn	2	2	4	1	—	1	14	13	27	2	1	3	31	4			5·22	3·48
Haemolytic disease of newborn	—	1	1	—	1	1	2	—	2	1	1	2	3	3			0·50	2·61
All other defined diseases of early infancy	15	32	47	1	2	3	52	32	84	2	3	5	131	8	304	56	22·05	6·96

APPENDIX V (*contd.*)

DISEASES

IN-PATIENTS—GOVERNMENT AND MISSION HOSPITALS
(Hospitals with resident doctors only—1st December, 1952 to 30th November, 1953)

	GOVERNMENT HOSPITALS						MISSION HOSPITALS						TERRITORIAL					
	CASES			DEATHS			CASES			DEATHS			TOTAL Cases	TOTAL Deaths	GROUP TOTALS		Percentage Morbidity in Group	Percentage Mortality in Group
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total			Cases	Deaths		
GROUP XVI																		
Symptoms, Senility, and Ill-Defined Conditions																		
Senility without mention of psychosis ...	70	91	161	11	66	17	8	3	11	—	—	—	172	17			2·41	9·60
Pyrexia of unknown origin	3,587	798	4,385	52	18	70	327	279	606	9	9	18	4,991	88			69·90	49·72
Observation without need for further medical care	298	128	426	—	—	—	59	47	106	—	—	—	532	—			7·45	—
All other ill-defined causes of morbidity	761	484	1,245	23	21	44	75	125	200	12	16	28	1,445	72	7,140	177	20·24	40·68
GROUP XVII																		
Accidents, Poisonings and Violence																		
Fracture of skull	109	25	134	29	6	35	17	1	18	5	—	5	152	40			1·28	12·70
Fracture of spine and trunk	140	17	157	16	3	19	17	2	19	1	—	1	176	20			1·48	6·35
Fracture of limbs	1,820	446	2,266	18	8	26	172	68	240	—	1	1	2,506	27			21·07	8·57
Dislocation without fracture	301	60	361	—	1	1	34	19	53	1	—	1	414	2			3·48	0·64
Sprains and strains of joints and adjacent muscles	393	58	451	—	—	—	49	28	77	—	—	—	528	—			4·44	—
Head injury (excluding fracture) ...	274	76	350	10	2	12	43	6	49	2	—	2	399	14			3·36	4·44
Internal injury of chest, abdomen and pelvis	138	24	162	31	3	34	23	9	32	1	1	2	194	36			1·63	11·43
Laceration and open wounds	2,486	338	2,824	12	2	14	321	125	446	—	—	—	3,270	14			27·50	4·44
Superficial injury, contusion and crushing with intact skin surface	1,102	293	1,395	2	—	2	93	37	130	—	—	—	1,525	2			12·83	0·63
Effects of foreign body entering through orifice	65	14	79	1	—	1	17	17	34	—	1	1	113	2			0·95	0·63
Burns	479	254	733	49	34	83	117	80	197	6	3	9	930	92			7·82	29·22
Effects of poisons	151	79	230	7	4	11	31	47	78	6	10	16	308	27			2·59	8·57
All other and unspecified effects of external causes	949	204	1,153	26	2	28	165	58	223	8	3	11	1,376	39	11,891	315	11·57	12·38
Totals ...	63,735	33,383	97,118	2,204	1,160	3,364	20,216	25,672	45,888	507	471	978	143,006	4,342	143,006	4,342		

APPENDIX VI

DISEASES

Out-Patients—Government and Mission Hospitals

(Hospitals with resident doctors only—1st, December 1952 to 30th November, 1953)

	Government Hospitals			Mission Hospitals			Territorial Total	Group Total	Percentage Morbidity in Group
	Male	Female	Total	Male	Female	Total			
GROUP I									
Infective and Parasitic Diseases (and influenza, meningitis and eye diseases)									
Tuberculosis of the respiratory system	1,205	697	1,902	172	94	266	2,168		0·47
Other Tuberculous diseases	420	2,584	3,004	138	120	258	3,262		0·71
Syphilis	18,850	13,639	32,489	2,302	2,579	4,881	37,370		8·16
Gonorrhoea	13,798	6,015	19,813	3,462	2,685	6,147	25,960		5·67
Other venereal diseases	2,239	3,330	5,569	99	58	157	5,726		1·25
Fevers of uncertain origin	45,228	25,465	70,693	3,728	4,154	7,882	78,575		17·16
Bacillary dysentery	1,602	948	2,550	377	552	929	3,479		0·76
Amoebiasis	263	91	354	538	542	1,080	1,434		0·32
Other dysenteries	4,103	2,439	6,542	893	1,080	1,973	8,515		1·86
Diphtheria	5	4	9	3	2	5	14		0·00
Whooping cough	781	894	1,675	873	1,216	2,089	3,764		0·82
Meningitis	10	3	13	6	12	18	31		0·01
Plague	–	1	1	–	–	–	1		0·00
Leprosy	526	262	788	793	713	1,506	2,294		0·50
Tetanus	33	5	38	16	12	28	66		0·02
Anthrax	77	59	136	26	30	56	192		0·04
Relapsing fever	685	420	1,105	254	261	515	1,620		0·35
Yaws	11,663	6,834	18,497	3,411	3,100	6,511	25,008		5·47
Acute poliomyelitis	9	7	16	10	2	12	28		0·01
Smallpox:									
(a) Variola major	22	9	31	6	3	9	40		0·01
(b) Variola minor	9	1	10	–	–	–	10		–
Measles	618	550	1,168	522	531	1,053	2,221		0·48
Chickenpox	793	394	1,187	195	453	648	1,835		0·40
Mumps	495	278	773	46	70	116	889		0·19
Yellow fever	–	–	–	–	–	–	–		–
Rabies	–	–	–	–	–	–	–		–
Trachoma	1,091	787	1,878	688	822	1,510	3,388		0·74
Typhus and other rickettsial diseases	17	2	19	244	265	509	528		0·12

APPENDIX VI (*contd.*)

DISEASES

OUT-PATIENTS—GOVERNMENT AND MISSION HOSPITALS

(Hospitals with resident doctors only—1st December, 1952 to 30th November, 1953)

	Government Hospitals			Mission Hospitals			Territorial Total	Group Total	Percentage Morbidity in Group
	Male	Female	Total	Male	Female	Total			
Malaria:									
(a) Benign Tertian	296	1,092	1,388	4,502	4,514	9,016	10,404		2·27
(b) Quartan	10	1,880	1,890	484	791	1,275	3,165		0·69
(c) Subtertian	23,578	14,730	38,308	2,901	2,631	5,532	43,840		9·58
(d) Unclassified	28,856	14,273	43,129	1,110	14,022	25,132	68,261		14·92
Blackwater fever	5	2	7	–	2	2	9		–
Trypanosomiasis	5	4	9	16	9	25	34		0·01
Schistosomiasis:									
(a) Vesical (haematobium)	10,094	3,929	14,023	2,461	1,824	4,285	18,308		4·00
(b) Intestinal (mansoni)	866	595	1,461	395	412	807	2,268		0·50
Tapeworm	4,481	2,258	6,739	1,253	1,297	2,550	9,289		2·03
Filariasis (bancrofti)	237	38	275	44	23	67	342		0·08
Onchocerciasis	11	4	15	146	2	148	163		0·04
Ankylostomiasis	11,038	7,150	18,188	5,056	6,503	11,559	29,747		6·50
Ascariasis	6,997	7,129	14,126	3,779	4,497	8,276	22,402		4·90
Guinea worm (dracuncolosis)	4	2	6	3	5	8	14		–
Tinea	964	395	1,359	225	258	483	1,842		0·40
Scabies	14,266	9,579	23,845	2,414	2,320	4,734	28,579		6·25
All other infective parasitic diseases	4,678	2,902	7,580	1,507	1,387	2,894	10,474	457,559	2·29
GROUP II									
Neoplasms									
Malignant neoplasms	27	27	54	5	28	33	87		6·26
Non-malignant	317	137	454	65	233	298	752		54·10
Unspecified	246	244	490	24	37	61	551	1,390	39·64
GROUP III									
Allergic, Endocrine system, Metabolic and Nutritional Diseases									
Asthma	1,710	628	2,338	321	201	522	2,860		23·76
Diabetes	61	28	89	23	14	37	126		1·05

APPENDIX VI (*contd.*)

DISEASES

OUT-PATIENTS—GOVERNMENT AND MISSION HOSPITALS

(Hospitals with resident doctors only—1st December, 1952 to 30th November, 1953)

	Government Hospitals			Mission Hospitals			Territorial Total	Group Total	Percentage Morbidity in Group
	Male	Female	Total	Male	Female	Total			
Vitamin deficiency states	1,545	542	2,087	288	386	674	2,761		22·94
Kwashiorkor	131	85	216	59	55	114	330		2·74
Other allergic, endocrine system, metabolic and nutritional diseases	2,985	1,764	4,749	501	711	1,212	5,961	12,038	49·51
GROUP IV									
Diseases of the Blood and Blood-Forming Organs									
All diseases of the blood and blood-forming organs	2,784	1,662	4,446	928	1,510	2,438	6,884	6,884	100·00
GROUPS V AND VI									
Mental, Psychoneurotic and Personality Diseases, and Diseases of the Nervous System and Sense Organs									
Mental disorders	90	45	135	25	24	49	184		0·20
Cerebral haemorrhage	5	2	7	4	5	9	16		0·02
Epilepsy	144	59	203	56	44	100	303		0·33
Other diseases of nervous system	6,538	3,583	10,121	354	412	766	10,887		11·92
Inflammatory and other diseases of the eye and annexa except trachoma	28,575	19,631	48,206	4,870	5,642	10,512	58,718		64·26
Diseases of ear and mastoid	11,690	6,652	18,342	1,536	1,389	2,925	21,267	91,375	23·27
GROUP VII									
Diseases of the Circulatory System									
Diseases of the circulatory system:									
(a) Heart disease	630	109	739	405	551	956	1,695		44·76
(b) Other circulatory diseases	1,127	699	1,826	147	119	266	2,092	3,787	55·24

APPENDIX VI (*contd.*)

DISEASES

OUT-PATIENTS—GOVERNMENT AND MISSION HOSPITALS

(Hospitals with resident doctors only—1st December, 1952 to 30th November, 1953)

	Government Hospitals			Mission Hospitals			Territorial Total	Group Total	Percentage Morbidity in Group
	Male	Female	Total	Male	Female	Total			
GROUP VIII									
Diseases of the Respiratory System									
Pneumonia	2,359	1,518	3,877	1,037	969	2,006	5,883		4·15
Other diseases of respiratory system	76,711	44,886	121,597	6,929	7,416	14,345	135,942	141,825	95·85
GROUP IX									
Diseases of the Digestive System									
Diseases of Teeth and supporting structures:									
(a) Caries	16,836	9,700	26,536	1,524	1,402	2,926	29,462		15·71
(b) Other conditions	5,030	3,075	8,105	577	630	1,207	9,312		4·96
Appendicitis	71	23	94	2	9	11	105		0·03
Intestinal obstruction and hernia	1,120	52	1,172	274	20	294	1,466		0·78
Gastro-Enteritis:									
(a) Between four weeks and two years	6,013	5,364	11,377	1,390	1,477	2,867	14,244		7·60
(b) Two years and over	15,023	6,510	21,533	1,154	1,248	2,402	23,935		12·76
Cirrhosis of the liver	143	63	206	5	118	133	339		0·18
Other diseases of liver and bile passages	430	310	740	244	232	476	1,216		0·65
Other diseases of digestive system	58,751	38,994	97,745	3,789	5,941	9,730	107,475	187,554	57·33
GROUP X									
Diseases of the Genito-Urinary System									
Nephritis	82	54	136	66	59	125	261		1·26
Other diseases of genito-urinary system	8,228	7,196	15,424	958	4,013	4,971	20,395	20,656	98·74
GROUP XI									
Complications of Pregnancy, Childbirth and the Puerperium									
Diseases of pregnancy, childbirth and the puerperal state:									
(a) Toxaemias of pregnancy	–	667	667	–	49	49	716		15·77

APPENDIX VI (*contd.*)

DISEASES

OUT-PATIENTS—GOVERNMENT AND MISSION HOSPITALS

(Hospitals with resident doctors only—1st December, 1952 to 30th November, 1953)

	Government Hospitals			Mission Hospitals			Territorial Total	Group Total	Percentage Morbidity in Group
	Male	Female	Total	Male	Female	Total			
(b) Abortion	–	249	249	–	180	180	429		9·45
(c) Other conditions of the puerperal state ...	–	1,037	1,037	–	1,753	1,753	2,790		61·44
Normal deliveries	–	202	202	–	404	404	606	4,541	13·34
GROUPS XII AND XIII									
Diseases of the Skin and Cellular Tissue, and Diseases of Bones and Organs of Locomotion									
Ulcers	61,971	22,087	84,058	7,035	4,519	11,554	95,612		50·15
Rheumatic conditions	20,730	11,497	32,227	1,527	1,743	3,270	35,497		18·62
Other diseases of bones, skin and musculo-skeletal system	36,539	16,187	52,726	3,618	3,212	6,830	59,556	190,665	31·23
GROUPS XIV AND XV									
Congenital Malformations and Certain Diseases of Early Infancy									
Diarrhoea of the new-born	113	105	218	135	149	284	502		19·76
Ophthalmia neonatorum	98	60	158	31	23	54	212		8·35
Immaturity	10	10	20	11	25	36	56		2·20
All other malformation and diseases of early infancy	168	134	302	687	781	1,468	1,770	2,540	69·69
GROUP XVI									
Senility and Ill-Defined Conditions									
Senility	310	100	410	33	29	62	472		2·31
All other ill-defined causes of morbidity	9,037	5,882	14,919	2,292	2,766	5,058	19,977	20,449	97·69

APPENDIX VI (*contd.*)

DISEASES

OUT-PATIENTS—GOVERNMENT AND MISSION HOSPITALS

(Hospitals with resident doctors only—1st December, 1952 to 30th November, 1953)

	Government Hospitals			Mission Hospitals			Territorial Total	Group Total	Percentage Morbidity in Group
	Male	Female	Total	Male	Female	Total			
GROUP XVII									
Accidents, Poisoning and Violence									
Fractures and dislocations	1,578	507	2,085	196	109	305	2,390		1·93
Injuries by animals and insects	1,377	582	1,959	131	75	206	2,165		1·75
Other wounds and superficial injuries (excluding burns)	33,744	6,910	40,654	2,555	1,291	3,846	44,500		35·94
Burns and scalds	3,678	1,941	5,619	378	338	716	6,335		5·12
Poisons	63	22	85	21	21	42	127		0·10
All other injuries from external causes	18,605	4,455	23,060	1,844	1,177	3,021	26,081		21·06
Examinations	19,961	8,911	28,872	5,511	7,848	13,359	42,231	123,829	34·10
TOTALS ...	668,313	366,865	1,035,178	108,673	121,241	229,914	1,265,092	1,265,092	

APPENDIX VII

In-Patients—Government General and Special Hospitals and Dispensaries

(Excluding Maternity and Child Health Centres)

Figures refer to the twelve-month period 1st December, 1952—30th November, 1953

Medical Region	No. admitted during the year (a)					No. discharged during the year					Deaths					Daily average in hospital				
	European		Non-European		Total	European		Non-European		Total	European		Non-European		Total	European		Non-European		Total
	M	F	M	F		M	F	M	F		M	F	M	F		M	F	M	F	
I. GENERAL HOSPITALS																				
Central Region																				
Central Province ...	119	100	4,620	3,170	8,009	120	100	4,435	3,018	7,673	—	1	201	138	340	1·9	2·6	144·3	87·6	236·4
S. Highlands Province	169	154	3,973	3,541	7,837	165	156	3,846	3,405	7,572	—	2	123	111	236	5·2	4·8	146·3	99·3	255·6
Eastern Region																				
Eastern Province ...	69	51	5,296	1,701	7,117	68	52	5,060	1,642	6,822	1	1	289	83	374	1·1	0·7	241·5	55·5	298·8
Southern Province ...	118	137	3,643	1,581	5,479	118	137	3,523	1,516	5,294	1	3	83	50	137	2·3	4·3	172·0	66·2	244·8
Northern Region																				
Northern Province ...	255	340	10,158	3,830	14,583	253	334	9,748	3,592	13,927	5	2	350	183	540	5·4	6·5	263·3	126·0	401·2
Tanga Province ...	187	172	6,706	2,241	9,306	186	173	6,433	2,114	8,906	3	—	322	108	433	4·8	5·1	321·7	72·9	404·5
Western Region																				
Lake Province ...	86	72	8,430	6,171	14,759	85	71	8,106	5,962	14,224	1	—	300	217	518	0·4	0·2	324·4	147·8	472·8
Western Province ...	70	79	5,099	3,065	8,313	67	78	4,958	2,870	7,973	2	—	256	163	421	1·7	2·4	207·8	110·0	321·9
Dar es Salaam ...	424	416	4,338	1,925	7,103	413	407	4,208	1,833	6,861	12	2	170	79	263	10·6	8·5	165·6	65·9	250·6
Totals General Hospitals ...	1,497	1,521	52,263	27,225	82,506	1,475	1,508	50,317	25,952	79,252	25	11	2,094	1,132	3,262	33·4	35·1	1,986·9	831·2	2,886·6
II. SPECIAL HOSPITALS																				
Central Region																				
Mirembe Mental Hospital, Dodoma...	1	3	169	62	235	2	5	81	38	126	—	—	23	20	43	2·3	6·4	184·2	96·9	289·8
Northern Region																				
Tuberculosis Hospital, Kibongoto	—	—	704	516	1,220	—	—	713	490	1,203	—	—	39	18	57	—	—	175·0	98·0	273·0
Infectious Diseases Hospital, Tanga ...	—	—	64	—	64	—	—	37	—	37	—	—	17	—	17	—	—	12·4	—	12·4
Dar es Salaam																				
Infectious Diseases Hospital	—	—	485	61	546	—	—	456	45	501	—	—	30	3	33	—	—	100·7	20·7	121·4
Msasani Mental Hospital	—	—	40	9	49	—	—	34	7	41	—	—	—	—	—	—	—	23·0	1·3	24·3
Total Special Hospitals ...	1	3	1,462	648	2,114	2	5	1,321	580	1,908	—	—	109	41	150	2·3	6·4	495·3	216·9	720·9

(a) These are the total numbers of patients admitted to hospital, and do not include patients remaining in hospital on 1st December, 1952.

APPENDIX VII (*contd.*)

In-Patients—Government General and Special Hospitals and Dispensaries

(Excluding Maternity and Child Health Centres)

Figures refer to the twelve-month period 1st December, 1952—30th November, 1953

Medical Region	No. admitted during the year (a)					No. discharged during the year					Deaths					Daily average in hospital				
	European		Non-European		Total	European		Non-European		Total	European		Non-European		Total	European		Non-European		Total
	M	F	M	F		M	F	M	F		M	F	M	F		M	F	M	F	
								III DISPENSARIES												
CENTRAL REGION																				
Central Province ...	—	—	434	227	661	—	—	422	224	646	—	—	13	6	19	—	—	12·3	5·1	17·4
S. Highlands Province	—	—	915	910	1,825	—	—	886	888	1,774	—	—	28	15	43	—	—	24·5	19·8	44·3
EASTERN REGION																				
Eastern Province ...	—	—	975	195	1,170	—	—	949	191	1,140	—	—	7	1	8	—	—	21·8	4·2	26·0
Southern Province ...	—	—	128	125	253	—	—	124	122	246	—	—	4	3	7	—	—	6·4	6·8	13·2
NORTHERN REGION																				
Northern Province ...	—	—	356	228	584	—	—	333	225	558	—	—	7	—	7	—	—	15·2	8·5	23·7
Tanga Province ...	—	—	987	589	1,576	—	—	946	580	1,526	—	—	45	27	72	—	—	25·9	17·5	43·4
WESTERN REGION																				
Lake Province ...	—	—	816	738	1,554	—	—	795	716	1,511	—	—	27	20	47	—	—	22·9	14·9	37·8
Western Province ...	—	—	422	255	677	—	—	375	214	589	—	—	27	23	50	—	—	18·5	11·1	29·6
TOTALS DISPENSARIES	—	—	5,033	3,267	8,300	—	—	4,830	3,160	7,990	—	—	158	95	253	—	—	147·5	87·9	235·4
TERRITORIAL TOTALS ...	498	524	58,758	31,140	92,920	1,477	1,513	56,468	29,692	89,150	25	11	2,361	1,268	3,665	35·7	41·5	2,629·7	1,136·0	3,842·9

(a) These are the total numbers of patients admitted to hospital, and do not include patients remaining in hospital on 1st December, 1952.

APPENDIX VIII

OUT-PATIENTS—GOVERNMENT GENERAL AND SPECIAL HOSPITALS AND DISPENSARIES

(Figures refer to the twelve-month period 1st December, 1952 — 30th November, 1953)

Medical Region	Total Attendances					Total New Cases				
	Male		Female		Total	Male		Female		Total
	European	Non-European	European	Non-European		European	Non-European	European	Non-European	
I.—General Hospitals										
Central Region:										
Central Province	1,575	119,880	1,633	91,461	214,549	727	48,703	750	35,623	85,803
Southern Highlands Province ...	1,454	111,560	1,359	73,924	188,297	1,029	59,581	963	36,600	98,173
Eastern Region:										
Eastern Province	801	113,086	504	67,681	182,072	528	50,611	323	27,179	78,641
Southern Province	1,670	126,294	1,593	51,181	180,738	1,058	51,871	940	21,032	74,901
Northern Region:										
Northern Province	2,220	170,578	1,857	80,074	254,729	1,351	70,239	1,103	37,192	109,885
Tanga Province	1,908	137,678	1,178	54,236	195,000	980	52,355	639	21,922	75,896
Western Region:										
Lake Province	1,401	146,123	1,136	89,985	238,645	827	88,743	764	52,740	143,074
Western Province	1,070	147,845	664	103,987	253,566	683	79,049	506	53,895	134,133
Dar es Salaam	3,106	221,179	2,727	70,436	297,448	2,150	44,688	1,738	15,654	64,230
Total General Hospitals ...	15,205	1,294,223	12,651	682,965	2,005,044	9,333	545,840	7,726	301,837	864,736
II.—Special Hospitals										
Central Region:										
Mirembe Mental Hospital, Dodoma	2	12	5	15	34	1	3	2	2	8
Northern Region:										
Tuberculosis Hospital, Kibongoto ...	107	11,857	25	13,720	25,709	14	6,077	3	4,716	10,810
Total Special Hospitals ...	109	11,869	30	13,735	25,743	15	6,080	5	4,718	10,818

APPENDIX VIII (*contd.*)

OUT-PATIENTS—GOVERNMENT GENERAL AND SPECIAL HOSPITALS AND DISPENSARIES

(Figures refer to the twelve-month period 1st December, 1952—30th November, 1953)

Medical Region	Total Attendances					Total New Cases				
	Male		Female		Total	Male		Female		Total
	European	Non-European	European	Non-European		European	Non-European	European	Non-European	
III.—Dispensaries (Including Out-patient Dispensaries)										
Central Region:										
Central Province	—	24,862	—	14,964	39,826	—	7,781	—	4,977	12,758
Southern Highlands Province ...	17	36,872	4	33,055	69,948	15	25,114	4	23,572	48,705
Eastern Region:										
Eastern Province	243	46,768	14	19,579	66,604	87	21,398	6	7,004	28,495
Southern Province	—	35,790	—	18,237	54,027	—	17,416	—	8,187	25,603
Northern Region:										
Northern Province	—	40,299	—	52,386	92,685	—	11,581	—	13,786	25,367
Tanga Province	25	34,718	19	27,989	62,751	8	20,577	4	16,952	37,541
Western Region:										
Lake Province	69	94,616	27	70,782	165,494	24	35,747	11	26,057	61,839
Western Province	—	50,682	—	51,064	101,746	—	29,014	—	25,608	54,622
Total Dispensaries ...	354	364,607	64	288,056	653,081	134	168,628	25	126,143	294,930
Territorial Totals ...	15,668	1,670,699	12,745	984,756	2,683,868	9,482	720,548	7,756	432,698	1,170,484

APPENDIX IX

NATIVE AUTHORITY MEDICAL SERVICES

Medical Region	Number of Dispensaries			Staff			Beds	New Cases during the Year			Total Attendances
	Grade A	Grade B	Total	Medical Assistants	Rural Medical Aids	Tribal Dressers		Male	Females	Total	
Central Region											
Central Province	3	43	46	—	3	44	57	135,388	119,932	255,320	481,423
S. Highlands Province	47	10	57	—	47	20	—	171,159	170,707	341,866	777,077
Eastern Region											
Eastern Province	12	71	83	2	11	83	15	156,308	125,859	282,167	569,566
Southern Province	1	32	33	—	1	38	47	55,359	38,408	93,767	209,227
Northern Region											
Northern Province (*a*)	12	38	50	1	11	58	6	106,813	77,936	184,749	338,824
Tanga Province (*a*)	24	21	45	3	24	26	31	63,051	39,705	102,756	192,669
Western Region											
Lake Province	71	31	102	—	71	61	—	320,136	307,062	627,198	1,440,493
Western Province	17	41	58	—	17	47	—	120,817	120,412	241,229	477,546
Totals ...	187	287	474	6	185	377	156	1,129,031	1,000,021	2,129,052	4,486,825

(a) Records incomplete.

APPENDIX X

MISSION MEDICAL SERVICES

	Number of Hospitals etc.	Beds				In-Patients Admissions	Out-Patients	
		European	Asian	African	Total		Total Attendances	New Cases
I. General Hospitals with Resident Doctors								
Central Region								
Central Province	3	3	—	232	235	3,943	48,484	14,499
S. Highlands Province	2	—	—	80	80	2,049	38,938	19,307
Eastern Region								
Eastern Province	3	—	—	190	190	2,760	161,607	23,127
Southern Province	7	17	45	540	602	8,526	307,434	42,093
Northern Region								
Northern Province	2	1	—	90	91	2,317	17,745	10,200
Tanga Province	4	3	15	395	413	6,956	127,022	50,384
Western Region								
Lake Province	6	8	54	539	601	7,128	163,550	48,728
Western Province	3	1	—	164	165	1,852	44,539	17,072
Totals. General hospitals with resident doctors	30	33	114	2,230	2,377	35,531	909,319	225,410
II. Hospitals without Resident Doctors (Units with more than 20 beds)								
Central Region								
Central Province	3	—	—	107	107	4,058	49,255	8,684
S. Highlands Province	6	8	1	299	308	4,302	103,012	31,178
Eastern Region								
Eastern Province	2	—	—	66	66	755	35,836	11,530
Southern Province	17	16	1	760	777	12,202	280,318	49,730
Northern Region								
Northern Province	1	—	—	28	28	1,196	18,305	8,119
Tanga Province	2	—	—	95	95	1,529	33,245	8,371

APPENDIX X (*contd.*)

MISSION MEDICAL SERVICES

	Number of Hospitals etc.	Beds				In-Patients Admissions	Out-Patients	
		European	Asian	African	Total		Total Attendances	New Cases
Western Region								
Lake Province	3	—	1	114	115	1,222	40,323	20,434
Western Province	6	—	13	216	229	2,651	122,538	50,168
Totals. Hospitals without resident doctors	40	24	16	1,685	1,725	27,915	682,832	188,214
				III. Dispensaries				
Central Region								
Central Province	6	—	—	89	89	1,338	55,768	10,022
Southern Highlands Province	2	—	—	30	30	355	24,991	8,204
Eastern Region								
Eastern Province	4	—	—	42	42	371	93,314	69,172
Southern Province	5	—	—	55	55	239	41,909	3,108
Northern Region								
Northern Province	6	—	—	110	110	1,800	16,463	10,202
Tanga Province	3	—	—	50	50	1,504	35,878	13,171
Western Region								
Lake Province	4	—	—	70	70	1,490	69,355	27,474
Western Province	6	—	6	72	78	225	21,296	9,478
Totals. Dispensaries	36	—	6	518	524	7,322	358,974	150,831
				IV. Special Hospitals				
Northern Region								
Mental Hospital, Lutindi	1	—	—	125	125	10	—	—
Totals. Special hospitals	1	—	—	125	125	10	—	—
Territorial Totals ...	107	57	136	4,558	4,751	70,778	1,951,125	564,455

Note. In addition 518,255 out-patient attendances are recorded from mission out-patient dispensaries.

APPENDIX XI.—MATERNITY AND CHILD HEALTH SERVICES

A. Government Services

	Ante-Natal Clinics		Child Health Clinics									
	First attend-ances	Total attend-ances	First attend-ances	Total attend-ances	Total Confine-ments Attended	Deliveries without compli-cations	Deliveries with compli-cations	Abortions	Live Births	Still Births	Internal Deaths	Deaths Infants
Central Region												
Central Province	484	1,779	143	452	494	394	100	84	466	29	8	15
Southern Highlands Province	1,829	7,587	523	2,571	848	710	138	129	800	76	16	35
Eastern Region												
Eastern Province	707	2,214	–	–	408	334	74	37	361	42	11	19
Southern Province	475	1,314	3,679	4,799	169	138	31	29	157	14	1	1
Northern Region												
Northern Province	1,685	4,627	–	–	1,014	857	157	50	960	81	9	35
Tanga Province	1,398	6,410	929	13,676	577	552	25	23	551	34	3	12
Western Region												
Lake Province	3,851	10,473	2,387	7,573	2,041	1,842	199	182	1,939	104	21	37
Western Province	3,190	10,478	2,200	10,917	1,789	1,567	222	128	1,741	68	19	27
Dar es Salaam	2,498	11,957	1,787	25,068	1,731	1,248	483	49	1,688	74	9	53
Total Government Services ...	16,117	56,839	11,648	65,056	9,071	7,642	1,429	711	8,663	522	97	234

APPENDIX XI.—MATERNITY AND CHILD HEALTH SERVICES (*contd.*)

B. Mission Services

	Ante-Natal Clinics		Child Health Clinics		Total Confinements Attended	Deliveries without complications	Deliveries with complications	Abortions	Live Births	Still Births	Internal Deaths	Deaths Infants
	First attendances	Total attendances	First attendances	Total attendances								
Central Region:												
Central Province	2,175	8,807	845	3,261	2,945	2,736	209	133	2,868	104	18	42
Southern Highlands Province	1,576	3,890	1,636	13,602	492	421	71	37	463	37	9	3
Eastern Region:												
Eastern Province	1,008	1,781	753	3,106	540	514	26	26	518	23	2	6
Southern Province	3,444	20,518	5,311	52,950	1,548	1,335	213	82	1,462	79	12	40
Northern Region:												
Northern Province	1,466	2,633	130	411	778	680	98	49	753	25	3	8
Tanga Province	5,381	27,221	2,721	13,229	1,724	1,480	244	102	1,655	116	15	60
Western Region:												
Lake Province	5,758	12,931	857	2,903	2,377	1,990	387	177	2,255	152	26	110
Western Province	3,001	11,641	7,054	37,743	2,385	2,019	366	132	2,291	120	13	74
Total Mission Services	23,809	89,422	19,307	127,205	12,789	11,175	1,614	738	12,265	656	98	343

APPENDIX XI.—MATERNITY AND CHILD HEALTH SERVICES (*contd.*)

C. Native Authority Services

	Ante-Natal Clinics		Child Health Clinics									
	First attend-ances	Total attend-ances	First attend-ances	Total attend-ances	Total Confine-ments Attended	Deliveries without compli-cations	Deliveries with compli-cations	Abortions	Live Births	Still Births	Internal Deaths	Deaths Infants
Central Region:												
Central Province	1,674	2,456	–	–	1,369	1,342	27	18	1,357	23	–	23
Southern Highlands Province	1,279	2,793	910	2,535	–	–	–	–	–	–	–	–
Eastern Region:												
Eastern Province	–	–	–	–	–	–	–	–	–	–	–	–
Southern Province	–	–	–	–	–	–	–	–	–	–	–	–
Northern Region:												
Northern Province	4,329	7,409	837	1,280	1,425	1,407	18	25	1,417	15	–	16
Tanga Province	902	12,310	–	–	531	504	27	21	527	9	–	31
Western Region:												
Lake Province	1,958	5,891	1,631	3,253	568	500	68	43	537	25	2	16
Western Province	1,688	3,530	1,631	3,109	645	641	4	4	633	13	–	–
Total Native Authority Services ...	11,830	34,398	5,009	10,177	4,538	4,394	144	111	4,471	85	2	86
Territorial Totals ...	51,756	180,659	35,964	202,438	26,398	23,211	3,187	1,560	25,399	1,263	197	663

APPENDIX XII

LEPROSARIA

(Leprosy treatment centres—Government and Mission)

	Number of Leprosaria	Leprosy Patients admitted during year	Discharged	Absconded	Births	Deaths from Leprosy	Deaths from other causes	Leprosy patients resident at 31st December, 1953				Clinical Classification active cases			Cases on Sulphone Therapy			In-patient burnt out cases		Non-lepreus persons resident 31st Dec.	
								Men	Women	Children 14 and under	Total	Lepromatous	Tuberculoid	Indetermi-nate	Men	Women	Children 14 and under	Without deformity	With deformity	Adults	Children 14 and under
CENTRAL REGION:																					
Central Province	2	230	232	75	50	11	36	517	508	91	1,116	215	630	271	188	123	47	134	218	25	84
Southern Highlands Province	1	351	196	113	3	2	4	237	135	67	439	82	270	87	237	135	67	–	–	–	5
EASTERN REGION:																					
Eastern Province	1	265	4	44	25	–	3	218	91	45	354	223	114	17	218	91	45	–	–	6	12
Southern Province	4	550	278	281	49	12	22	810	575	183	1,568	366	1,063	130	683	436	167	67	30	198	257
NORTHERN REGION:																					
Northern Province	1	12	1	1	–	–	2	25	4	–	29	–	–	–	25	4	–	14	11	–	–
Tanga Province	3	59	–	9	–	2	8	146	21	2	169	52	81	37	139	19	–	5	16	–	–
WESTERN REGION:																					
Lake Province	2	311	89	57	16	3	3	439	285	187	911	253	638	20	439	285	187	–	11	60	103
Western Province	2	46	21	7	2	2	1	57	48	22	127	49	54	24	54	41	22	–	9	1	1
DAR ES SALAAM	1	38	27	4	–	–	–	40	15	–	55	33	12	10	40	15	–	–	–	–	–
Totals ...	17	1,862	848	591	145	32	79	2,489	1,682	597	4,768	1,273	2,862	596	2,023	1,149	535	220	295	290	462

In addition to the resident patients, more than 3,000 persons received regular treatment as out-patients.

APPENDIX XIII

MEDICAL TRAINING

Approved Medical and Nursing Training Centres

Category of Student	Training Centre	Training Authority	Length of Course (Years)	Total Students under training during 1953	Students Qualified 1953	Total Qualified in each category in 1953
Medical Assistants	Dar es Salaam	Government	3	41	8	71
	Bumbuli	Lutheran Mission	3	25	9	
Laboratory Assistants ...	Dar es Salaam	Government	3	10	5	5
Pharmaceutical Assistants ...	Dar es Salaam	Government	3	11	4	4
Hospital Stewards Assistants	Dar es Salaam	Government	2	3	–	–
Rural Medical Aids	Mwanza	Government	2	26	6	13
	Minaki...	U.M.C.A.	2	20	7	
Assistant Health Inspectors ...	Kongwa	Government	3	33	–	–
Health Orderlies	Kongwa	Government	1	17	14	14
Health Nurses	Tukuyu	Government	2	25	9	9
Malaria Assistants	Amani	Government	2	11	3	3
Nurses	Mweka (male and female) ...	Government	3	139	33	79
	Kongwa (male)	Government	3	16	6	
	Mvumi (male and female) ...	C.M.S.	3	49	17	
	Peramiho (male and female)	Benedictine	3	26	–	
	Mnero (male)	Benedictine	3	20	6	
	Minaki (male)	U.M.C.A.	3	1	1	
	Magila (female)	U.M.C.A.	3	24	7	
	Lulindi (female)	U.M.C.A.	3	21	6	
	Sumve (female)	White Fathers	3	15	3	
	Kiomboi (male and female)...	Augustana Lutheran ...	3	12	–	

APPENDIX XIII (*contd.*)

MEDICAL TRAINING

Approved Medical and Nursing Training Centres

Category of Student	Training Centre	Training Authority	Length of Course (Years)	Total Students under training during 1953	Students Qualified 1953	Total Qualified in each category in 1953
Midwives	Dar es Salaam	Government	1 or 2	22	18	35
	Mvumi	C.M.S.	1 or 2	10	10	
	Ndareda	Benedictine	2	15	1	
	Magila	U.M.C.A.	1 or 2	6	2	
	Sumve	White Fathers	1 or 2	7	4	
Village Nurses	Berega	C.M.S.	2	2	–	–
	Ndareda	Medical Missionaries of Mary	2	5	–	–
	Kagunguli	White Fathers	2	3	–	–
	Liuli	U.M.C.A.	2	2	–	–
	Newala	U.M.C.A.	2	4	–	–