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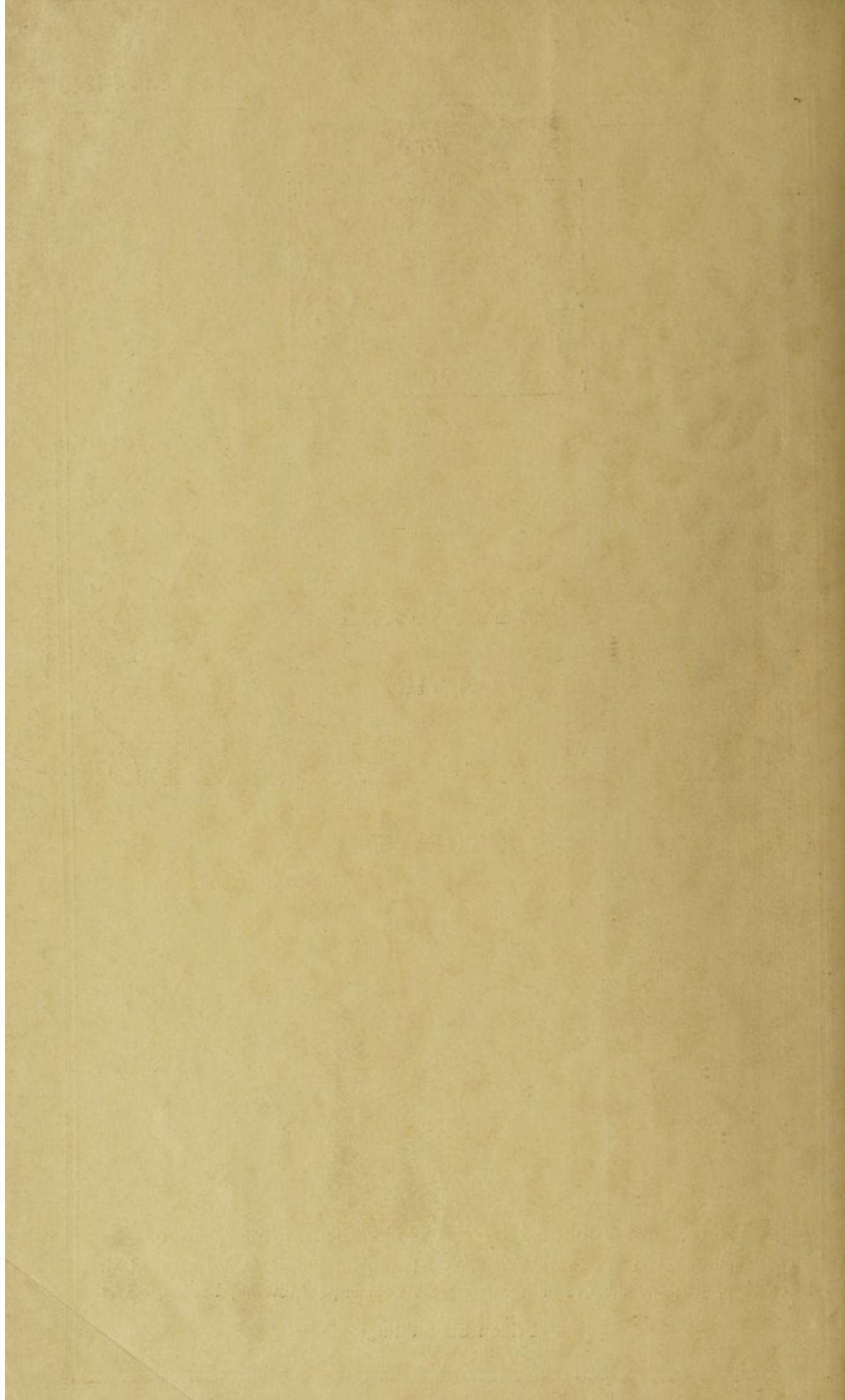


NIGERIA

REPORT
ON THE
MEDICAL SERVICES
FOR THE YEAR
1938

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FOREWORD.

In area Nigeria is the largest of the non-self-governing Dependencies of the British Empire. It is nearly four times as large as the United Kingdom, and one and a half times the size of France. Its population exceeds twenty millions, though the white population is very small, totalling only about 5,500, of whom some 2,000 are officials.

Though lying wholly within the tropics, its southern seaboard being 5° north of the Equator and its northern borders reaching to 14° N., Nigeria offers a wide range of climatic and vegetation types, and an infinite variety of peoples, local customs and scenery, offering rich fields of study as yet unexplored for the specialist in every branch of science.

The climatic and vegetation types may be broadly described as a gradual transition from the near-Saharan conditions of the extreme north, with a rainfall as low as twenty-four inches per year, and a landscape characterised by low thorny scrub, to the high-forest belt stretching across the lower Niger Delta, with a rainfall of over 100 inches per year, merging finally into the narrow coastal strip of mangrove swamp.

The people, too, may be very broadly divided into several main tribal and linguistic groups. In the Northern Provinces Hausa is the *lingua franca* of some three and a half millions, who, with about two millions of scattered Fulani, have long been subjected to the levelling influence of Mohammedanism. The South-western Provinces are mainly populated by the three million Yorubas, whose highly-organised society, characterised by its large towns, contrasts strikingly with the small thickly-scattered villages of the equally numerous Ibos and Ibibios of the central and South-eastern Provinces.

Within these groups are contained innumerable sub-divisions, varying in their languages and their customs, each with its special problems for the administrator, the medical officer, or the educationist.

THE HISTORY OF THE UNITED STATES

The first part of the history of the United States is the history of the colonies. The colonies were founded by Englishmen, and they were at first governed by the British. The colonies were at first governed by the British, and they were at first governed by the British.

The second part of the history of the United States is the history of the Revolution. The Revolution was fought between the colonies and the British. The colonies won the Revolution, and they became independent.

The third part of the history of the United States is the history of the Constitution. The Constitution was written by the Founding Fathers. The Constitution is the law of the United States, and it is the basis of the government.

The fourth part of the history of the United States is the history of the Civil War. The Civil War was fought between the North and the South. The North won the Civil War, and the South became a part of the United States.

The fifth part of the history of the United States is the history of the Reconstruction. The Reconstruction was the period after the Civil War when the South was brought back into the Union.



Report on the Medical Services for the Year 1938-

I.—ADMINISTRATION.

A.—STAFF.

Dr. G. B. Walker was appointed Deputy Director of Health Service on the 28th of January, Dr. J. Cauchi, Assistant Director of Health Service on the 1st of April, and Dr. M. Morrison, Assistant Director of Medical Service on the 16th of September. Two officers were transferred to Nigeria during the year, one on promotion, and there were six new appointments. Eight officers retired or resigned, and three were transferred to other dependencies, two on promotion. Of the establishment of sixty-three Nursing Sisters, six resigned or retired and one was transferred. Thirteen new appointments were made.

2. The deaths of Drs. J. Crawford and N. S. Williams are recorded with deep regret.

3. The drastic reduction in the number of administrative posts during the years of depression 1931-35 resulted in a serious deterioration in the organisation of the Department. Provincial Medical Administration disappeared and the mass of detail which had thus to be dealt with direct by the staff at Headquarters left little time for inspection of outstations and for the study of major problems.

4. During the year therefore proposals were approved for dividing Nigeria into eight medical administrative divisions, each with a Senior Medical Officer in charge. The Senior Medical Officer represents the Director of Medical Services in his division. He is in close touch with Residents in charge of provinces and with officers of other Departments, and knows his own territory intimately. He is therefore in a position to take quick decisions on routine matters and in emergencies, and is able to advise the Director of Medical Services on the medical problems affecting his area. He has been relieved of part of his routine clinical duties by the posting of additional junior officers to outstations.

5. Provincial control of the Health Service of the Department still rests with the Senior Health Officers of the Northern and Southern Provinces.

6. A valuable report by Major R. C. Sykes, of the Public Works Department, revealed faulty methods of storekeeping and put forward proposals for their correction. These are now being put into practice under the supervision of the Inspecting Pharmacist, whose post is a new one, created during the year.

B.—FINANCIAL.

7. The continued prosperity up to the end of 1937 was reflected in an increase of £33,293 in the expenditure Estimates for 1938-39 as compared with 1937-38. Extra equipment and diets, necessitated by the ever-expanding work of hospitals and dispensaries, and the higher standard of treatment aimed at in recent years, accounted for some £15,000 of the increase.

8. Unfortunately by April it was clear that the period of prosperity was at an end, and to meet the falling revenues of Government, the estimates of expenditure under "Other Charges" were cut by seven and a half per cent.

9. The estimated and actual expenditure by Government on Medical Services for the last nine years has been:—

Year.	Approved Estimate.	Actual Expenditure.
	£	£
1930-31	527,855	485,940
1931-32	523,118	441,590
1932-33	433,816	384,743
1933-34	432,756	391,340
1934-35	401,711	384,722
1935-36	386,956	377,671
1936-37	392,467	387,600
1937-38	480,318*	462,629
1938-39	513,611	

10. In addition the Native Administrations provide a considerable sum of money each year for medical and sanitary purposes as the following figures taken from the Native Administration Estimates for 1938/39 show:—

	Total N.A. expenditure.	Expenditure for medical and sanitary purposes.
	£	£
Southern Provinces ...	677,034	46,508
Northern Provinces ...	1,041,947	67,405
	£1,718,981	£113,913

11. The actual Government revenue of Nigeria for the year ending 31st March, 1938 was £7,342,450 (compared with £6,259,547 for the previous year) and the estimate of revenue for the succeeding year was £6,576,835.

II.—PUBLIC HEALTH.

A.—GENERAL REMARKS.

12. The Fourth Conference of senior members of the West African Medical Service was held in Lagos in November and was attended by delegates from all the British West African Dependencies. The proceedings have been published separately.

13. During 1938 the Nigeria Medical School awarded its licence in medicine, surgery and midwifery for the first time. The licence entitles holders to registration as Medical Practitioners in Nigeria and gives them the same legal status as Medical Practitioners with British qualifications. Five Medical Assistants obtained the licence and were promoted to the grade of Assistant Medical Officer. Locally trained Assistant Medical Officers should in time prove a valuable addition to the staff of the Department, as they will be able to relieve Medical Officers of many routine duties and so allow them scope for more frequent inspections of their districts.

14. In response to numerous requests, a Register of Nurses was opened in April. Registration, except in the case of Government-trained Nurses, is voluntary, as the lack of uniformity in standards of education and in training facilities rendered compulsory registration inadvisable. During the year 220 Government, ten Native Administration and forty-three Mission Nurses were registered.

15. To be eligible for recognition as a training centre for nurses, a hospital must conform to definite requirements laid down by the Department. Recognition has been accorded to one Native Administration and to five Mission hospitals.

* Artificial increase of £38,000 due to change in form of Estimates. First year of grant of £19,000 from Colonial Development Fund.

16. In most parts of Nigeria there are not enough Medical Practitioners to treat certain mass diseases of public health importance, notably sleeping sickness, yaws, syphilis and leprosy, and trained but unqualified personnel has to be employed to give routine treatment which usually entails the administration of specific drugs by injection.

17. These unqualified persons are licensed to give injections under the Medical Practitioners and Dentists (Amendment) Ordinance, 1937, and 567 injection licences were issued during 1938. Of these licences, 192 were for personnel of the Sleeping Sickness Service and 161 for other personnel of the Medical Department and Native Administrations, while 205 were granted to medical missions and nine to plantation staff.

18. Before any licence was granted the Medical Practitioner responsible for the work of the applicant was required to show that circumstances warranted the employment of unqualified staff, that the person to be licensed had been sufficiently trained, that there would be satisfactory supervision of his work and that treatment would not be given for profit.

19. Four cases of manslaughter, in which death was the result of injections given by unqualified and unlicensed persons, came before the Courts during the year, and two private dispensers were fined £30 and £20 respectively for administering drugs by injection in contravention of the Medical Practitioners and Dentists Ordinance.

20. Missionary permits were granted during the year in respect of 229 lay missionaries. Permits allow the holders to undertake simple dispensing, and, in areas where qualified practitioners are not available, the routine treatment of common diseases and ailments. Permits are only granted when proof is given that the applicant has received a specified amount of training abroad.

21. Notable progress in the housing of labourers was made during the year on the banana, cocoa, rubber and oil palm plantations scheduled as Labour Health Areas under the Labour Ordinance of 1929. The plantations are situated mostly in the southern part of the Cameroons Province and in the Sapele and Calabar Districts; and some 15,000 labourers with their dependents live on them. Early in 1937 steps were taken under the Ordinance to induce the plantation owners to adopt a five year programme for replacing unsatisfactory and temporary labourers' lines by well planned lines of permanent construction, consisting of blocks of ten or twelve rooms, each room provided with a kitchen. The minimum floor area per room is 120 square feet.

22. One Trading Company has set a fine example by the provision of playing fields for adult labourers, and playgrounds, schools and a crèche for children.

23. Improvement in the medical and sanitary conditions for labourers in the minesfields of the Northern Provinces has been more difficult to bring about, but a Medical Officer of Health and a Sanitary Superintendent were appointed to these areas and there are indications that as the result of the efforts of the past two years a policy acceptable to the mining companies and to the administrative and health authorities will be agreed upon in the near future.

I.—GENERAL DISEASES.

24. The growth of the hospital work of the Department during the past ten years is indicated by the following summary.

Total cases treated.				1928.	1933.	1938.
<i>European:</i>						
In-patients	...	...	...	1,553	1,030	1,536
Out-patients	...	...	...	8,629	6,058	8,469
<i>African:</i>						
In-patients	...	...	...	29,173	45,233	63,048
Out-patients	...	...	...	354,191	570,607	645,780

25. Among Europeans the most frequent causes for admission to hospital were: malaria, gastro-intestinal complaints, wounds and injuries, tonsillitis, dysentery, boils and carbuncles, dental conditions and psychasthenia, in that order.

26. The commonest causes of admission to hospital among African patients during the year were, in order of frequency, wounds and injuries, ulcers, syphilis, hernias, malaria, normal labours, pneumonias and gonorrhoea; and among hospital out-patients the commonest conditions treated were ulcers, yaws, wounds and injuries, bronchitis, ascariasis, malaria, constipation and chronic rheumatism.

27. A return of diseases and deaths for 1938 classified according to the Detailed International List of Causes of Death (1929) is given in Tables IV and V on pages 34 to 52.

The incidence of certain disease groups is shown in diagramatic form at the end of this Report.

28. The work of the Native Administration dispensaries, which were reorganised in 1931, has also expanded rapidly. 1,088,396 patients were treated in 1938 as compared with 619,188 in 1933.

II.—COMMUNICABLE DISEASES.

1.—MOSQUITO AND INSECT-BORNE.

29. *Malaria*.—The following table shows the hospital figures for malaria and blackwater fever during the past three years:—

				1936.		1937.		1938.	
				Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
EUROPEANS :—									
Malaria ...	...	...		995	4	1,279	4	1,297	5
Blackwater ...	...	...		11	1	14	2	14	4
AFRICANS :—									
Malaria ...	...	...		38,671	55	45,379	45	44,333	75
Blackwater ...	...	...		19	2	10	6	20	3

30. The amount of malaria in Nigeria varies little from year to year as the following figures show. While epidemic waves of the disease are rare there appears to be a small seasonal wave reaching its peak about October but observations over a number of years are required to confirm this statement.

Year.	IN-PATIENTS (AFRICAN).			OUT-PATIENTS (AFRICAN).		
	Total patients treated.	Cases of Malaria.	Percentage of Malaria to Total.	Total patients treated.	Cases of Malaria.	Percentage of Malaria to Total.
1933 ...	45,233	1,879	4.1	570,607	32,720	5.7
1934 ...	47,947	2,164	4.5	594,555	33,287	5.6
1935 ...	52,126	2,193	4.2	667,192	37,315	5.6
1936 ...	60,098	2,246	3.7	650,209	36,425	5.6
1937 ...	60,930	2,606	4.2	651,994	42,773	6.5
1938 ...	63,048	2,729	4.3	645,780	41,604	6.5

31. *Yellow Fever*.—Eight cases with five deaths were recorded among Europeans compared with eighteen cases and eleven deaths the previous year. Further details of these cases are given under Hygiene and Sanitation, at paragraph 59.

32. *Trypanosomiasis*.—The figures for treatments in the hospitals and general dispensaries (as opposed to sleeping sickness dispensaries, the figures for which are given elsewhere) are as follows :—

	EUROPEANS.		AFRICANS.		
	Cases.	Deaths.	In-patients.	Out-patients.	Deaths.
1937	5	—	1,246	2,992	85
1938	3	—	1,250	3,308	65

2.—INFECTIOUS DISEASES

33. An account of the incidence and control of the various infectious diseases is given in Section III.

34. *Yaws and Venereal Diseases*.—The numbers of patients treated in hospitals and dispensaries during the past five years have been as follows :—

Disease.	1934.	1935.	1936.	1937.	1938.
Yaws	119,728	123,803	110,588	90,225	55,401
Syphilis in all forms	13,439	13,361	18,432	19,078	17,708
Gonorrhoea and its complications	16,563	15,514	16,386	17,074	16,609

35. *Cerebro-Spinal Meningitis*.—The epidemic of cerebro-spinal meningitis which caused great havoc in 1937 and disappeared at the onset of the rainy season, reappeared at the end of that year, and continued with even greater severity in 1938 during which period it was responsible for more than 6,000 known deaths. This number refers to cases reported by Medical Officers, but there is every reason to believe that the toll was very much greater, as reports from outlying areas not yet reached by the medical organisation indicate a very considerable increase in the general mortality rate, which may reasonably be attributed to extension of the epidemic. The brunt of the attack fell on Sokoto, Katsina and Zaria Provinces; the case mortality rate was approximately sixty per cent and more than half of the cases occurred in children. As in former years, the outbreak abated with the onset of the rainy season and in view of the small number of cases reported in the last quarter it is hoped that during the year 1939 there will be no large-scale recurrence. The comparative freedom of the Southern Provinces from this disease may be ascribed to the relatively high humidity and less dust in the atmosphere.

36. *Smallpox*.—This disease was again prevalent throughout the year and, while it was very severe in the Northern Provinces, the increase in cases in the Southern Provinces was even more marked, as may be seen from the following table showing the incidence during the past three years :—

	Cases notified.			No. of deaths.			Case mortality.		
	1936.	1937.	1938.	1936.	1937.	1938.	1936.	1937.	1938.
Colony	17	16	34	2	0	10	11·8	0·0	29·4
Southern Provinces	514	564	2,926	53	88	586	10·3	15·6	20·0
Northern Provinces	4,352	3,095	4,551	556	439	997	12·8	14·2	21·9

37. *Leprosy*.—The International Leprosy Congress held in Cairo in March, 1938, was attended by two delegates from Nigeria, who both served on the sub-committee appointed by the Congress to report on the Epidemiology and Control of Leprosy.

During the year various proposals for the control of leprosy were under consideration by the Nigerian Branch of the British Empire Leprosy Relief Association, and of special interest were those put forward by the Medical Superintendents of the Ossiomo, Uzuakoli and Oji River Settlements respectively. The Ossiomo scheme envisaged the segregation of lepers in a large clan settlement supervised from the main Provincial Settlement, more or less in accordance with the suggestions made by Dr. E. Muir in 1936 in his Report on Leprosy in Nigeria; the Uzuakoli scheme aimed at segregation on a village basis, and the Oji River scheme took the family as the unit of control under a clinic system.

38. A valuable survey of twenty-four representative villages of the Ibiono Clan in the Calabar Province was made by the Medical Superintendent of the Itu Settlement. Among 4,626 persons examined he found 352 affected with leprosy, a rate of seventy-six per 1,000. The rate varied from 17.5 to 215 in different villages. This area is considered to be one of the most heavily infected in the Southern Provinces.

39. One of the subjects of discussion at the West African Medical Conference was whether the care of lepers could be better provided for by Governments directly or through the medium of a mission and the Conference concluded that with certain reservations the management of leper settlements can with advantage be entrusted to Medical Missions. This policy has been followed in Nigeria for some years.

40. Few changes in the management of settlements took place during 1938. In Bornu Province the Sudan United Mission acting on behalf of the Native Authority opened a new leper farm colony at Mulai, five miles south of Maiduguri, in April. The Sudan Interior Mission gave up the Sumaila Settlement in Kano Province on account of lack of water and opened a new settlement on a better site at Yada-Kunya.

41. In addition to the treatment given in the leper settlements, a large amount of out-patient treatment for non-segregated patients is provided by hospitals and dispensaries throughout Nigeria. Particulars of the leper settlements are set out in the following table which, however, does not include six or seven small leper camps of less than twenty patients each :—

Province.	Place.	Financed by.	Managed by.	Approximate number of patients resident.
NORTHERN PROVINCES.				
Adamawa ...	Garkida	N.A.	Church of Brethren Mission	634
Bauchi ...	Azare	"	Native Administration	36
	Gelengu	"	Native Administration	35
Benue ...	Mkar	"	Dutch Reformed Church Mission	240
Bornu ...	Maiduguri	"	Sudan United Mission	177
	Mulai Farm Colony	"	Sudan United Mission	69
Kano ...	Yada-Kunya	"	Sudan Interior Mission	225
Katsina ...	Baba Ruga	"	Sudan Interior Mission	350
Plateau ...	Vom	"	Sudan United Mission	86
Sokoto ...	Anamawa	"	Sudan Interior Mission	81
Zaria ...	Wusasa	"	Church Missionary Society	152
			Carried forward	2,085

Province.	Place.	Financed by.	Managed by.	Approximate number of patients resident.
SOUTHERN PROVINCES.				
			Brought forward	2,085
Abeokuta ...	Iberekodo	N.A.	Govt. Medical Officer	48
	Abeokuta	Catholic Mission	Catholic Mission	29
Benin ...	Ossiombo	N.A.	Native Administration	300
Calabar ...	Itu	Govt. and N.A.	Church of Scotland	2,000
	Ekpene Obom	N.A.	Qua Iboe Mission	544
Cameroons ...	Bamenda	"	Govt. Medical Officer	140
Ogoja ...	Abakaliki	Self-supporting	Govt. Medical Officer	—
Onitsha ...	Onitsha	Government	Govt. Medical Officer	109
Owerri ...	Oji River	N.A.	Church Missionary Society	206
	Uzuakoli	Govt. and N.A.	Methodist Mission	1,000
Oyo ...	Ogbomosho	N.A.	American Baptist Mission	250
	Ilesha	"	Wesley Guild	42
COLONY.				
Lagos ...	Yaba	Government	Government	39
Total ...				6,792

B.—VITAL STATISTICS.

42. Under the Births, Deaths and Burials Ordinance compulsory registration of native births and deaths is in force in Lagos, Aba, Calabar, Enugu, Port Harcourt, Minna and Kano Townships; while by Orders made under the Native Authority Ordinance compulsory registration is carried out in Abeokuta, Oyo and Makurdi. Voluntary registration has been introduced in several areas.

43. The statistics obtained even from towns where compulsory registration is in force cannot be regarded as reliable, except in the case of Lagos, which is the only area in which the proportion of deaths certified by Medical Practitioners is at all high. The table showing comparative death and birth rates in the various registration areas is therefore omitted in this year's report. It should, however, be added that greater accuracy is steadily being attained in townships other than Lagos. At Calabar for instance investigation has led to considerable improvement, as the following figures, particularly in so far as registration of births is concerned, show:—

No. of registrations.	1935.	1936.	1937.	1938.
Births ...	246	303	514	632
Deaths ...	358	338	365	324

44. The following table shows the vital statistics in Lagos Township for the years 1937 and 1938 and includes corrected birth and death rates assessed by the application of correction factors recommended for use by the Government Statistician, viz. 0.89 and 1.37 respectively.

	1937.	1938.
Estimated population ...	155,900	158,500
Number of births registered ...	4,095	4,288
" " crude birth rate ...	26.3	27.0
" " corrected birth rate ...	23.4	24.0
" " deaths registered ...	2,644	2,513
" " crude death rate ...	17.0	15.8
" " corrected death rate ...	23.0	21.6
Infantile mortality rate ...	135.0	127.0
Number of still births ...	135	157
Percentage of still births ...	3.3	3.6
Maternal mortality rate ...	11.6	7.9

45. The principal causes of infantile mortality were pneumonia (120), infantile convulsions (98), congenital debility (67), prematurity (65), malaria (56), bronchitis (34) and enteritis (27). While the rate still compares unfavourably with the United Kingdom, examination of Lagos statistics over the last two decades shows a very considerable decrease from 296 per 1,000 in 1919 to the present level of 127.

46. Thirty-four deaths of mothers due to causes directly connected with pregnancy and child-birth occurred in Lagos as against forty-eight in 1937, the principal causes of death being puerperal fever, puerperal hæmorrhage and puerperal convulsions associated with albuminuria.

47. The principal causes of deaths in Lagos at all ages are shown in the following table:—

				RATE PER 100 DEATHS.	
				1937.	1938.
Pneumonia	...	...	...	18.6	16.2
Tuberculosis (all forms)	...	...	...	9.2	7.8
Malaria	...	...	...	4.5	5.3
Enteritis	...	...	...	3.9	5.3
Tetanus	...	...	...	1.7	1.8
Cancer and other tumours	...	...	...	1.7	1.5
Nephritis	...	...	...	1.6	2.5

48. The following table shows the number of European officials invalided classified according to the number of months served before invaliding:—

Leave Conditions.	Under 6 months.	Under 9 months.	Under 12 months.	Under 15 months.	Under 18 months.	Over 18 months.	Total.
New ...	16	10	20	29	43	—	118
Old ...	—	—	—	—	—	—	—
Total ...	16	10	20	29	43	—	118

Nearly all officers are now on the new terms of service. The major causes of invaliding were as follows:—

Neurasthenia 17.8% Asthenia 9.3% Debility 8.5%

49. Fourteen deaths occurred among officials in Nigeria and five in the United Kingdom during vacation leave.

The causes of the former were:—

Yellow fever	...	...	...	4	Cardiac failure	...	...	...	2
Fracture (motor accidents, etc.)	...	...	...	4	Perforated gastric ulcer	...	...	...	1
Blackwater fever	...	...	...	2	Drowning	...	...	...	1

50. The sick, invaliding and death rates for European officials for the last three years are given in the following table:—

	1936.	1937.	1938.
Total number of officials resident	2,164	2,131	2,197
Average number resident	1,560	1,520	1,525
Total number of days on sick list	8,991	10,546	12,477
Average daily number on sick list	24.6	28.8	34.2
Percentage of sick to average number resident	1.5	1.9	2.2
Average number of days on sick list to each patient	9.9	10.8	10.9
Average sick time to each resident	4.1	4.9	5.7
Total number invalided	100	105	118
Percentage of invalidings to total resident	4.6	4.8	5.4
Percentage of invalidings to average number resident	6.4	6.9	7.7
Total deaths	11	6	14
Percentage of deaths to total resident	.50	.28	.64
Percentage of deaths to average number of residents	.70	.39	.92

51. Records of invalidings of non-native non-officials are very far from complete, but sixty cases were recorded during the year, of which the commoner causes were:—

Neurasthenia 16.7% Malaria 11.7% Asthenia 10%

52. Of the twenty-seven deaths recorded among non-native non-officials the principal causes are as follows:—

Subtertian malaria	5	Appendicitis	2
Blackwater fever	2	Typhoid fever	2
Lobar pneumonia	2	Broncho pneumonia	2

53. Fifty-nine African officials were permanently invalided during 1938. The most important causes of invaliding were pulmonary tuberculosis 18.6%, myocarditis 11.9%, defective vision 10.2%, arterio-sclerosis 8.4%, neuro-syphilis 6.8%, asthenia and chronic bronchitis, each 5.1%.

Of the thirty-nine deaths recorded the chief causes were:—

Lobar pneumonia	10	Liver abscess	2
Pulmonary tuberculosis	3	Post operative shock	2
Broncho pneumonia	2	Cerebral malaria	2

54. MORBIDITY IN NIGERIA REGIMENT (AFRICANS).

Soldiers—Nigeria Regiment—R.W.A.F.F.

	1937.	1938.
Average daily strength	3,082	3,346.9
Total number on sick list	7,929	8,061
“ “ of days on sick list	45,400	61,401
Average daily sick	21.99	23.73
Total number of deaths	21	19
Death rate per thousand	6.8	5.7
Number invalided during the year	23	28

55. MORBIDITY IN NIGERIA POLICE (AFRICANS).

	1937.	1938.
Average daily strength	3,429.48	3,741.39
Total number on sick list	3,450	4,037
“ “ of days on sick list	21,273	24,340
Average daily sick	58.28	66.68
Total number of deaths	42	38
Death rate per thousand	12.2	10.2
Number invalided during the year	25	27

III.—HYGIENE AND SANITATION.

A.—GENERAL REVIEW OF WORK DONE AND PROGRESS MADE.

I.—PREVENTIVE MEASURES.

(i) *Mosquito and Insect-Borne Diseases.*

(a) *Malaria.*

56. Reclamation at and around the Apapa (Lagos) aerodrome has continued throughout the year, during which 850,900 tons of spoil dredged from Lagos harbour have been pumped ashore. Although not primarily a health measure, the sanitary benefit has been very considerable as many acres of *Anopheline* breeding swamp have been obliterated and the mosquito infestation of shipping lying at Apapa wharf has been vastly reduced.

57. The Medical Officer of Health, Lagos, reports a gratifying reduction in the high seasonal mosquito infestation in other areas of the township, which is attributed to a more satisfactory control of mosquito production during periods favourable to increased breeding. Here, as elsewhere when labour is available, efforts to control breeding by oiling, application of paris green, ditching, reclamation and tree planting have been made.

58. There has been no unusual prevalence of malaria during the year and none is to be expected in a hyperendemic area like Nigeria where repeated attacks in infancy and early childhood serve to produce a high degree of immunity in adult life. Undoubtedly many children are lost during these early infections, but with the extension of western medicine this wastage should steadily decrease as treatment of severe attacks becomes available, without the production of tolerance being interfered with.

(b) *Yellow Fever.*

59. Of the ten cases recorded in 1938, eight were Europeans and two Africans. Both of the latter proved fatal and of the former five died and three recovered. One of these cases, a European lady, who recovered after a severe infection, had been inoculated about four months before the onset. Her blood had not previously been tested for the presence of immune bodies, but it is probable that only slight if any protection had resulted from inoculation; an exceptional occurrence, met with in a small percentage of the one million cases inoculated in Brazil.

60. It is estimated that during 1938 about 2,000 non-natives coming to Nigeria received an inoculation in London to protect them against yellow fever. Investigations to date have brought to light no more than six cases of catarrhal jaundice which followed, though not necessarily resulted from, this inoculation. The non-native population of Nigeria at the 1931 census was estimated to be just under 5,500.

(c) *Typhus Fever.*

61. Typhus fever is extremely seldom reported in Nigeria, but in an occasional case in recent years the diagnosis has been established. During 1938 one African fatal case, unconfirmed, was reported from Kano and one doubtful clinical European case from Jos. Unfortunately no blood test was carried out in either instance.

(d) *Trypanosomiasis.*

62. A full account of the sleeping sickness control measures and of the work of the treatment teams which have been in the field throughout the year appears in Appendix A. The re-settlement scheme outlined therein is of special sanitary importance in view of the opportunities it offers for the provision of model villages, well laid out, with improved housing, adequate supplies of good drinking water, and facilities for the proper disposal of all waste matters.

(e) *Dengue.*

63. Eleven European and two African cases, all sporadic, were reported in 1938. It is possible that more cases of this disease occur, particularly in outlying stations, but either they are not seen or not recognised as such by a Medical Officer.

(f) *Relapsing Fever.*

64. No case of this disease was reported, but in view of its prevalence in the Sudan careful watch is being kept to ensure its early detection should it again appear in Nigeria.

(ii) *Epidemic Diseases.*

(a) *Plague.*

65. No plague, human or rodent, has been reported in Nigeria for many years. The following table shows the number of rodents caught and examined in Lagos, Port Harcourt, Abeokuta and Ijebu-Ode.

	No. caught.	No. examined.	No. positive.
Lagos ...	24,469	22,084	Nil.
Port Harcourt ...	17,544	15,629	"
Abeokuta ...	7,137	357	"
Ijebu-Ode ...	21,134	19,828	"

66. In addition to spleen-smear examinations, flea-counts were carried out in various stations which indicate that the index, particularly in respect of *Xenopsylla cheopis*, which normally outnumbered *X. braziliensis*, is very high.

67. In Lagos during the year 18,812 premises were freed from rats and disinfected, but these special activities will have to be curtailed owing to the existing financial depression. A few rat-catchers will be retained for the purpose of sampling, and efforts will be continued to bring about rat-proofing of premises, better protection of foodstuffs and more efficient disposal of refuse.

(b) *Smallpox.*

68. Routine vaccination was continued by Government and Native Administration vaccinators and intensive campaigns were waged in affected areas. Reports from most provinces indicate that vaccination is becoming more acceptable, but there is little doubt that the most successful mode of carrying out vaccinations in rural areas is by organised drives under European supervision. Not only are vaccinations increased in number and carried out with more care and cleanliness where constant supervision of a vaccination team is exercised, but the officer in charge can do much by intelligent propaganda towards persuading the apathetic and ignorant to accept protection.

69. The scheme for local production of vaccine lymph at Yaba, where sheep are being used, has now passed the experimental stage and it is hoped that funds will shortly be forthcoming for the provision of adequate laboratory facilities in order that sufficient lymph may be produced to meet all local requirements. With the consequent saving to both Government and Native Administrations it should become financially possible to bring about a further increase in vaccination staff and thus accelerate the reduction in mortality.

(c) *Cerebro-spinal Meningitis.*

70. In view of the serious epidemics of this disease in the last two years, mention of which has been made in the previous section, special epidemic teams are being trained to combat future outbreaks and facilitate their early recognition. Medical Officers reported favourably on the effects of the new drug, M. & B. 693, in the treatment of early cases admitted to hospital, and emergency stocks of it have been issued to various convenient centres to ensure that early treatment is available.

71. In the Southern Provinces one case appeared in Lagos and one at Onitsha, while near Umuahia eleven cases with nine deaths were reported, but the diagnosis of the Umuahia cases was not confirmed as the patients were not seen by a Medical Officer and no further cases occurred.

(d) *Enteric Fever.*

72. Thirteen cases of typhoid fever with three deaths and two cases of paratyphoid fever were reported in the larger towns in the Northern Provinces; three cases of typhoid fever appeared in the Southern Provinces and fifteen cases with seven deaths were reported from Bansa in the Cameroons. Other cases of undefined fever in the neighbourhood involving five deaths are thought to have been typhoid. Several cases of enteric fever were also reported from two plantations in the southern Cameroons, but prompt immunisation measures may have been largely responsible for the cessation of this outbreak.

In 1937 the enteric figures for Nigeria were twelve cases, of which five were fatal.

(e) *Dysentery.*

73. Dysentery continued to be widespread throughout Nigeria and, during the year, eighty-seven cases with fifty-four deaths were notified in Lagos, 1,343 cases with forty-four deaths in the Northern

Provinces and 2,395 cases with twenty-four deaths in the Southern Provinces. These figures show in each case a slight increase over the previous year. In the provinces a large number of deaths are not reported, as the patients tend to go to their homes to die, and in Lagos notification of the disease has undoubtedly been lax, as many of the cases shown were only brought to the notice of the Medical Officer of Health after autopsy. The disease was particularly rife in the Bamenda Division of the Cameroons, where 643 cases were reported. From a special report made by the Medical Officer of Health in this area there appears to be little doubt that until the general level of sanitation throughout the district is raised outbreaks of the disease may be expected to appear from time to time, an observation which applies to Nigeria as a whole.

74. At the Pathological Laboratory at Lagos African Hospital 4,445 specimens of stools were examined as a routine with the following results:—

No. in which <i>E. histolytica</i> were found—	19, free; 25, cysts.
„ „ „ <i>B. dysenteriae</i> (Flexner) were found—	25.
„ „ „ „ „ (Schmitz) „ „ —	5.

(f) *Yaws*.

75. While yaws is commonly reported from the southern areas of the Northern Provinces it is present in greatest incidence in the Southern Provinces, particularly east of the Niger in Onitsha, Ogoja, Owerri and Calabar Provinces and in the Cameroons under British Mandate. So far as its control is concerned reliance is placed upon specific treatment, but no organised treatment campaign has yet been possible upon a large scale.

76. In Bamenda an experimental mass treatment of village children with stovarsol administered orally has been instituted with encouraging results, from which useful data should become available for application to any large-scale campaign.

(iii) *Other Diseases*.

(a) *Leprosy*.

77. Steady progress has been maintained in the establishment of leper camps throughout the country and the work is being developed along the lines advocated by Dr. Muir. Seventeen of the twenty-three provinces in Nigeria now have their Provincial Settlements and in these more than 6,000 lepers are isolated and are undergoing treatment and training. So far as possible these settlements are reserved for open, infectious cases, and the proportion of old, so-called burnt-out cases is gradually being reduced.

(b) *Tuberculosis*.

78. In Lagos 196 deaths from all forms of tuberculosis were reported during 1938 as compared with 246 in 1937, the percentage of deaths from tuberculosis to total deaths being 7.8 as against 11.3 for the previous year. These included 146 cases of tuberculosis of the respiratory system, twenty-eight cases of disseminated tuberculosis infection and twenty-two cases of other forms of the disease. There is an urgent need for a Tuberculosis Hospital for the isolation of highly infective patients in Lagos township, but unfortunately the financial position has so far precluded this provision. It is feared that it will not be possible for many years to establish an effective anti-tuberculosis service throughout the country, a fact which renders it all the more important to devise and enforce building regulations in all populous centres with a view to the removal and prevention of conditions favourable to the spread of this and other respiratory affections. Education of the public must also form an important part of the campaign against respiratory disease.

(c) *Pneumonia.*

79. In Lagos, where, as elsewhere mentioned in this report, vital statistics are more reliable than in any other area in Nigeria, over sixteen per cent of deaths were attributed to pneumonia, the disease being most prevalent in the first and last quarters of the year—the dry season. Of this disease as it affects the natives of the Northern Provinces, the Senior Health Officer, Kaduna, writes “The incidence of this disease is bound up with the African’s way of living. During the cold season he shuts himself up in his house and so far as possible seals it off from the world outside. In the sabon-garis and large population centres where most of the cases occur there is overcrowding and the combination of these two factors provides the ideal setting for the development of pneumonia and other spray or droplet infections.” This statement is equally applicable to the Southern Provinces except in so far as the more enlightened section of the population is concerned.

(d) *Rabies.*

80. A total of 380 cases were given specific treatment for exposure to rabies infection during the year. The dog was the infecting animal in all the cases, the infection being demonstrated in twenty animals, two of which were negative histologically but positive on experimental inoculation in mice. The infective animals were of widespread distribution.

(iv) *Helminthic Diseases.*

81. Helminthic infections are universal, ascariasis being as a general rule more common in the Southern Provinces and tæniasis in the Northern Provinces. In the north it is probable that guinea-worm, which is particularly common in Adamawa, Bauchi, Niger, Katsina and Sokoto Provinces, causes more damage and disability than any other helminth. The Geological Survey Department has recently devised a type of well-top which should greatly reduce the risk of contamination of well water and the steady increase in provision of protected supplies should do much to reduce the incidence of this infection. Ankylostomiasis is probably more common than available statistics indicate and there is little doubt that the hookworm is responsible for more loss of efficiency and lowering of resistance than is generally recognised.

82. The following figures prepared by the Senior Pathologist indicate the relative incidence of helminthic infestation in patients attending Lagos African Hospital:—

Number of blood specimens examined in 1938	...	...	6,172
“ containing microfilariae	...	...	133
“ of urine specimens examined in 1938	...	...	4,532
“ containing ova of <i>S. hæmatobium</i>	...	...	110
“ of specimens of faeces examined in 1938	...	...	4,445
“ containing ova of <i>Tænia</i>	...	...	21
“ “ “ <i>Ascaris</i>	...	...	2,205
“ “ “ <i>A. duodenale</i>	...	...	1,691
“ “ “ <i>T. dispar</i>	...	...	1,986
“ “ larvae of <i>Strongyloides</i>	...	...	210
“ “ ova of <i>S. mansoni</i>	...	...	10

II.—GENERAL MEASURES.

(a) *Sewage Disposal.*

83. Considerable progress can be recorded in the installation of water carriage systems, not only in the case of commercial firms which are steadily introducing water carriage installations into all European residences, but also in the case of Government houses and institutions. These systems are also finding favour with several plantation companies for introduction in their labour camps, but it is only in Lagos that, so

far, any real progress has been made in providing water-carriage latrines for the general public. Normally such installations consist of water closets or trough latrines draining to septic tanks, with final disposal in covered rubble drains, with or without pre-treatment in an aeration bed.

84. In many built-up areas, particularly in the Southern Provinces, the double-bucket system of conservancy is employed, with disposal into sea or creek, or by burial either in shallow trenching grounds or in fly-trapped deep disposal pits, depending upon the ground water level. This system is expensive and where conditions are favourable to the provision of pit latrines they have been preferred, provided that no danger to water supplies is thereby entailed.

85. In African rural communities, where the nature of the soil and level of the ground water permit, the fly-trapped *salga* is commonly employed. Experiments with borehole latrines have been extended during the year in areas where the soil appears most suitable, and on the whole results have been satisfactory. Flies have been found to deposit their eggs in the urine-soaked soil to a depth of a foot or so below ground level, but this source of nuisance can be minimised by the provision of concrete squatting slabs.

(b) Refuse Disposal.

86. The use of the mud barless type of incinerator described in previous reports is greatly favoured, as it provides a cheap and efficient mode of destruction. In the Cameroons, where suitable building mud is not available and concrete and/or local stone have to be employed, the erection of units each consisting of a central incinerator with a drying shed on either side is being encouraged.

(c) Drainage.

87. Apart from the completion during the year of work on the main outfall at Port Harcourt, no major drainage works have been undertaken, but minor drainage improvements have been continued throughout the year.

88. Experiments have continued with a view to devising a cheap method of disposal for domestic waste water without giving rise to mosquito breeding. The Chief Sanitary Superintendent, Lagos, has designed a soakaway trench, of which a number have been in use for two years and have given complete satisfaction in porous soil, but its efficacy in clay soils has not yet been proved. Elsewhere, covers for the ordinary soakaway pits, each consisting of a concrete slab large enough to overlap the pit at all sides and dished towards a central aperture in which a perforated drum filled with granite chips is cemented, are said to have given satisfactory results.

(d) Water Supplies.

89. In the Southern Provinces work on new major schemes at Ibadan and Ogbomosho has been commenced, the former designed to provide one million gallons per day at the outset and the latter 200,000 gallons per day, both from impounding reservoirs. Work on the augmentation of the Port Harcourt supply by the provision of 200,000 gallons per day by air lift from 150-186 feet through three bores lined with 6-inch diameter everite casings is also in hand.

90. In the north the new scheme at Zaria, to provide initially 220,000 gallons per day, is progressing, fifty per cent of the mains having been laid, the service reservoir foundations prepared and work on the intake well commenced. The new Jos scheme, which will provide initially 110,000 gallons per day from an impounding reservoir, has been held up owing to difficulties experienced in finding a suitable foundation for the dam core.

91. In pursuance of the principle laid down by His Excellency that all pipe-borne water supplies constructed by Government should be potable, various improvements carried out during the year include the installation of chlorination plant at Calabar and Yola, the beginning of works to provide for rapid filtration and chlorination of supplies at Ilorin and Onitsha, and the partial completion of an installation for dosage with soda-ash and chlorine at Enugu.

92. The Geological Department has made excellent progress with its well sinking programme, having completed ninety-nine wells during the year, distributed as follows:—Katsina Province 27, Kano Province 33, Sokoto Province 8, Bornu Province 8, Misau 5, and 18 elsewhere.

(e) Clearing of Bush and Undergrowth.

93. In the larger towns where an organised sanitary service is established, or prison or native administration labour is available for the purpose, periodical clearing of high grass within the township area, particularly along road sides, has been carried out with a view to reducing fouling and permitting conditions favourable to mosquito breeding.

(f) Domiciliary Inspections.

94. The importance of domiciliary inspection in a territory where epidemic diseases are liable to appear at any moment renders it doubly imperative that regular compound visitation by sanitary staff should be undertaken to bring about early detection of disease and to disclose and eliminate conditions favourable to the spread of insect-borne and other infections.

(g) Offensive Trades.

95. Offensive trades are not of major importance in Nigeria. Those which may give rise to nuisance include the preparation of hides and skins, the manufacture of ghee, and cloth dyeing. The curing of hides, which is an industry of great importance, may give rise to unpleasant odours, but there is a compensatory reduction in flies due to the employment in the procedure of sodium arsenite solution. The manufacture of ghee also gives rise to unpleasant odours, but offence from the protein and fat present in the wastes is easily prevented by treatment with a strong solution of slaked lime. The dyeing industry calls for constant vigilance on the part of inspectors in order to prevent mosquito breeding in the receptacles not actually in use.

III.—SCHOOL HYGIENE.

96. Close co-operation has been maintained during the year with the Education Department and much of the progress made in improving hygienic conditions in schools throughout the country has been due to the practical interest displayed by officers of that department and the assistance so willingly rendered by them to the Health Propaganda and other officers of the Medical Department.

97. The work of the Health Propaganda Officer has done much to improve conditions in schools during the past year. Many schools have erected model types of salgas and incinerators and instituted simple methods of purifying drinking water supplies, and it is hoped that the lessons thus learned will be carried by the pupils to their homes. Elsewhere model compounds and huts in miniature have been laid out with a view to demonstrating methods of procuring adequate light and ventilation and of preventing overcrowding. Such compounds have been provided on a large scale for the actual housing of boarders in Middle Schools.

98. No organised system of medical inspection of school children exists, but it has been found possible to examine scholars in Middle Schools and Training Centres in the Provinces, while in Lagos the

Medical Officer of Health and the Assistant Medical Officer of Health carried out medical inspection of boys in various secondary schools during the year.

IV.—LABOUR CONDITIONS.

99. Labour rates of pay, which were raised throughout the territory during 1937, have remained unchanged, but it is feared that during the present financial depression there is bound to be a considerable amount of unemployment among this class. This may lead to a voluntary drift from the towns back to the land.

100. Improvements in labour conditions in the plantation areas of the Southern Provinces have been briefly described in paragraph 21 *supra*. Water supplies in new camps are in general satisfactory, and adequate sanitary structures have been or are being installed. Regular visiting of estates is carried out by the Medical Officer of Health at Buea and the European Sanitary Superintendent at Victoria. In other areas plantations are inspected by local Medical Officers or Sanitary Superintendents.

V.—HOUSING AND TOWN PLANNING.

101. The work of the Lagos Executive Development Board has continued throughout the year and further progress in the demolition of slum areas with subsequent reconditioning and replanning of the land so acquired has been made. Control of the suburban area by this body has also been rigidly maintained. In addition, the health staff of the Lagos Town Council have been diligent in their efforts to improve light and ventilation and reduce overcrowding in premises, and the following figures extracted from the report of the Medical Officer of Health summarise the improvements attained in regard to housing:—

1. Total demolitions of insanitary premises under the Public Health Ordinance	Nil.
2. Premises where acute overcrowding has been reduced under the Public Health Ordinance	7
3. Additional windows provided	87
4. Additional fanlights or ventilators provided	10,271
5. Existing doors, windows, and/or fanlights perforated or otherwise treated for the improvement of ventilation and light	4,511
6. Insanitary rooms demolished	32
7. Obstructive verandahs and ceilings opened up to improve light and ventilation	440
8. Obstructive internal partitions removed to improve light and ventilation	189
9. Skylights provided in roofs	238
10. "Double" walls made single against rodent infestation	11
11. Cement floors laid to prevent rodent infestation	45

102. In the provinces, both Northern and Southern, control of housing development outside Second Class Townships is still hampered by lack of legislation and shortage of staff, but Building Bye-laws for Third Class Townships under the Townships Ordinance and for other towns and villages under the Native Authorities Ordinance have been prepared, and it is anticipated that these will be introduced during 1939.

103. Special attention was directed to the question of housing in rural areas at the West African Medical Conference held in Lagos in November and it was then agreed that better and more rapid progress in housing in rural areas would be achieved if greater use were made of sound local materials and methods of construction, than if the use of

materials and tools imported at considerable expense were urged. Housing standards were discussed and the following standards were considered to be suitable for adoption in rural areas:—

- (i) Plots should have a frontage of not less than fifty feet and a depth of not less than eighty feet.
- (ii) The ratio of the area built upon to the total area of the plot should not exceed one to three.
- (iii) The distance from eave to eave of buildings in adjacent plots should be not less than sixteen feet.
- (iv) A floor area of 120 square feet per room is considered a reasonable minimum in the case of rectangular houses, but in certain parts of West Africa where round houses are in use the materials available for construction restrict the diameter and in these cases the diameter should be the greatest that is compatible with structural stability having regard to the materials available. Elsewhere a diameter of thirteen feet is considered a suitable minimum.
- (v) Ventilating space in each room should not be less than one-tenth of the floor area.
- (vi) Floors should be raised not less than twelve inches above adjoining ground level.
- (vii) In the case of rectangular houses the inside height of walls should be not less than ten feet but in the case of round houses a height of eight feet may be accepted.

VI.—FOOD IN RELATION TO HEALTH AND DISEASE.

104. Avitaminosis, particularly among members of the labouring class and in poorer school children, is common, and the signs usually observed are geographical tongue, perleche, phrynoderma and, in more advanced cases, retrobulbar neuritis. The common dietary deficiencies are in the south, protein, and in rural areas in the Northern Provinces protein and green fresh food. Fortunately the people are becoming conscious of the latter need and dry season gardens are becoming increasingly common, but the lack of good quality protein presents a more difficult problem to deal with and is likely to continue to do so until the public are made to realise that a balanced diet is absolutely essential to their welfare.

B.—MEASURES TAKEN TO SPREAD KNOWLEDGE OF HYGIENE AND HEALTH.

105. One of the most effective, rapid and least expensive modes of spreading the knowledge of the elements of hygiene is by means of the display of cinema films, and the mobile cinema of the Health Propaganda Unit is proving a most valuable asset. That the cinema does genuinely appeal to Nigerians in all districts is evinced by the comments of Residents and other observers in the official log book. After attending four displays to audiences totalling 12,000 people the Resident of Kabba Province (Mr. Rosedale) wrote "Instruction and entertainment are so happily blended that the astounding fact that health is dependent on cleanliness is immediately and readily accepted." Touring with the propaganda van was continued for eight months during the year under review and ninety-six towns in fourteen provinces were visited; it was estimated that at least 340,000 people attended the evening film displays. A travelling exhibit was carried in the cinema van and day-time lectures were given to audiences totalling 14,400 people, made up of rulers, their councils, householders and members of the education and health staffs. The lectures consisted of an explanation in simple language of how the more common diseases are acquired, and demonstrations were given of simple improvements, using local materials, which can be introduced into any home or school at practically no cost. The chief aim behind these lectures is to convince

the people that the simple improvements demonstrated are suggested for their own benefit and that they should not introduce them merely to please officials. The results obtained in several towns which have been re-visited are very encouraging. There appears to be an unmistakable desire for knowledge for the improvement of health, particularly on the part of people in rural districts where the greater response is probably due to the fact that they have fewer counter-attractions.

106. The evening film displays from the mobile cinema have continued to arouse wide interest. It has been found that films produced locally with familiar backgrounds are more readily appreciated and understood by illiterate Africans. Films featuring scenes of home life are particularly popular and, provided the tempo of the action in the film is slow enough, lessons taught in this way get home.

107. Of the Rural Health Units that at Ife is outstanding, and the committee under the guidance of the District Officer as chairman is to be congratulated on the progress made and the manner in which they have gained the confidence of the people. Three years ago Ife was a dirty town—to-day it is clean. An additional unit has been formed at Ilesha at the request of the people through the "Young Ijeshas", and a very promising beginning has been made.

108. The manufacture of models of sanitary structures continues and upwards of 300 models have been distributed to members of the Medical and Health staffs, schools and certain responsible bodies.

109. At the West African Medical Conference the subject of health education and training in schools received considerable attention. The recommendations of the Conference stressed the need for training of a thoroughly practical nature.

C.—TRAINING OF HEALTH PERSONNEL.

110. At Lagos in the Health Office of the Town Council twenty-two Government and Town Council Sanitary Inspectors were in training at the end of the year. In addition to the training of Sanitary Inspectors a full course of lectures in Public Health is given to students at the local School of Medicine. This course is more extensive and embodies considerably more practical demonstration than is usual in similar classes in British Universities.

111. At the Ibadan Training Centre for Native Administration Sanitary Staff thirty-eight pupils passed out, and twenty-one new students were admitted. At Kano twenty-three passed out and twelve were admitted, while twenty-eight were in training at Umuahia. A new Training Centre was opened at Zaria for the training in health work of additional Sleeping Sickness Dispensary Attendants and Native Administration epidemic teams. Shorter and more practical courses of training under local Sanitary Superintendents are being devised for students destined to be employed on health work by Native Administrations in the more backward areas.

IV.—PORT HEALTH WORK AND ADMINISTRATION.

112. Airport health work has continued to proceed smoothly at Apapa (Lagos), Kano and Maiduguri, where there are anti-malarial aerodromes, and at the re-fuelling aerodromes at Kaduna, Oshogbo and Minna. At Kano and Maiduguri, which are the terminal aerodromes, 106 mail and passenger aeroplanes were dealt with during the year. After the occurrence of a fatal European case of yellow fever in the area, the aerodrome at Minna was closed for a short time in November.

113. During 1938, 938 ocean-going vessels entered and 945 left Nigerian ports as compared with 1,087 and 1,084 respectively in the previous year. In connection with cases or suspected cases of yellow fever, Degema, Opobo and Port Harcourt were for varying periods declared infected areas under the Quarantine Ordinance and the usual precautions were observed. A case of malignant scarlet fever was reported at Port Harcourt. In Lagos, which is generally the first port of call of vessels arriving from foreign ports, no cases of infectious disease were detected during the year in in-coming vessels.

114. At Lagos, routine inspection of all harbour craft for mosquito breeding and trapping for rats was continued during the year and regular fumigation of harbour craft was carried out. 29,353 out-going and in-coming deck passengers were medically inspected of whom 5,363 were vaccinated. Similar measures, though on a smaller scale and excluding fumigation, were undertaken at other seaports.

115. The facilities for the prophylaxis and treatment of venereal disease among seamen at the clinic at Apapa continue to be utilised to a satisfactory degree. A total of 2,775 seamen of all nationalities attended for prophylactic treatment and sixty-two cases of disease, mainly gonorrhoea, were treated.

V.—MATERNITY AND CHILD WELFARE.

116. The continued rapid expansion of child welfare and maternity work is one of the most satisfactory features of health activities in Nigeria. The rapidity with which it is possible in a new area to develop such services has to be observed to be believed, and it is not only in the larger centres where the people have long been aware of the benefits of western medicine that success is attained. In Ondo Province, for instance, the progress that has been made within the last few years is amazing, and it is estimated that in the immediate vicinity of Akure ninety per cent of pregnant women attend the ante-natal clinics and subsequently the welfare clinics. Previously trained Native Administration Midwives have been attached to five dispensaries in the province and during the year were responsible for the management of 525 deliveries.

117. The work of the important maternity centre at Ilorin is steadily expanding and the training of Grade I Midwives has now been commenced. New in-patients increased from 388 to 453 and 1,358 child welfare cases attended clinics. The European Nursing Sister in charge paid visits to four Native Administration dispensaries elsewhere in the province and carried out a fair amount of district visiting in Ilorin Town.

118. In Lagos 202 child welfare clinics were held during the year with a total of 8,675 attendances. The aims and objects of the clinics are becoming better understood and mothers now attend more for help and advice as to the upbringing of their infants than for their treatment when actually sick. The diet of children after weaning is receiving more attention, as is evinced by the eagerness of mothers to attend demonstrations and talks on the principles of feeding, and their willingness to carry out the instructions given by the Physician and Nursing Sister. More time is being devoted to home visiting, and the European Sister in charge visits all sick or motherless babies, while the Health Visitors carry out regular inspections.

119. At Massey Street Dispensary, Lagos, there was a further increase in the number of deliveries to a total of 968, 145 more than in the previous year. The training of Government Midwives was continued in Lagos and Aba where seven trainees gained the Grade I Certificate, while in the provinces training was carried out at Mission and Government centres and forty Grade II Certificates were granted.

120. The following table shows the progress made in maternity work:—

Name of Institution.	No. of Maternity Wards.	No. of Beds.	No. of Deliveries.	Remarks.
Aba Maternity Centre ...	1	14	376	Midwives Training Centre.
Abeokuta—Egba Native Administration Welfare Clinic	1	—	110	do.
Akure Government Hospital ...	1	4	262	do.
Owo (Akure) Native Administration Dispensary	—	—	187	Cases attended by Native Administration Grade II Midwives.
Bamenda African Hospital ...	—	°	6	*Included in 14 surgical beds in female ward.
Roman Catholic Maternity Clinic	—	10	211	This clinic is run by Roman Catholic Nuns who receive a grant from Bansa N.A.
Bauchi Hospital...	—	10	4	—
Calabar Government Maternity Hospital and Child Welfare	3	14	214	Midwives Training Centres.
Enugu African Hospital ...	1	4	52	—
Ibadan Government European Hospital	—	—	5	—
Ibadan Government African Hospital	1	1	28	—
Ibadan Adeoyo Native Administration Hospital	1	1	71	—
Idanre Native Administration Dispensary (Akure)	—	—	2	Cases attended by Native Administration Grade II Midwives.
Igbara-Odo Native Administration Dispensary (Akure)	—	—	87	
Ijebu-Ode Government African Hospital	2	12	252	Midwives Training Centre.
Ilara Native Administration Dispensary (Akure)	—	—	142	Cases attended by Native Administration Grade II Midwives.
Ilorin Native Administration Welfare Centre	3	14	337	Midwives Training Centre.
Jos African Hospital ...	—	1	26	—
Kaduna African Hospital ...	1	3	33	—
Kano City Hospital ...	1	6	96	—
Kano European Hospital ...	—	—	6	—
Katsina Native Administration Hospital	1	10	—	This ward was opened 31st December, 1938.
Lagos—European Hospital ...	1	1	15	—
Lokoja Hospital ...	—	—	21	—
Lagos Massey Street Dispensary	2	17	968	Midwives Training Centre.
Maiduguri Native Administration Hospital	1	4	6	—
Makurdi African Hospital ...	—	—	19	—
Ogoja African Hospital ...	—	—	3	—
Okigwi—African Hospital ...	—	—	6	—
Ondo Native Administration Dispensary (Akure)	—	—	107	Cases attended by Native Administration Grade II Midwives.
Opobo Hospital ...	—	—	5	—
Owerri Government Hospital ...	—	—	27	—
Port Harcourt African Hospital	1	4	92	—
Sokoto Native Administration Hospital	—	—	5	One Maternity ward is under construction.
Umuahia African Hospital ...	—	1	5	—
Warri Government Hospital ...	1	2	32	—
Zaria Government African Hospital	1	2	3	—

VI.—HOSPITALS AND DISPENSARIES.

121. The following tables show the types of hospitals which have been maintained and the facilities which exist:—

EUROPEAN HOSPITAL STATISTICS, 1938.

No.	Name of Hospital.	C. G. or N. A.	No. of Beds.	No. of Cots.	Remaining end 1937.	IN-PATIENTS TREATED.			Remaining end 1938.	OUT-PATIENTS TREATED.			OPERATIONS.			Nursing average number.	AFRICAN NURSING STAFF.	
						Male.	Female.	Total.		Male.	Female.	Total.	Major.	Minor.	Total.		Male.	Female.
1	Calabar	C.G.	8	—	1	27	5	32	1	242	38	280	—	1	1	2	—	—
2	Enugu	C.G.	12	—	1	86	16	102	3	274	59	333	—	17	17	1 $\frac{1}{2}$	3	$\frac{1}{2}$
3	Ibadan	C.G.	14	—	—	60	24	84	1	454	95	549	13	47	60	$\frac{1}{2}$	4	2
4	Jos	C.G.	18	—	1	101	43	144	1	500	122	622	6	7	13	2	5	1
5	Kaduna	C.G.	18	—	2	143	45	188	7	298	98	396	22	38	60	3	6	1
6	Kano	C.G.	12	—	—	126	41	167	4	688	120	808	16	43	59	2	6	2
7	Lagos	C.G.	28	2	7	428	152	580	13	1,334	286	1,620	41	25	66	3	8	3
7a	Lagos, Ebute Metta European Dispensary	C.G.	—	—	—	—	—	—	—	342	53	395	—	—	—	—	—	—
8	Lokoja	C.G.	4	—	—	2	1	3	—	44	9	53	—	5	5	$\frac{1}{2}$	1	—
9	Onitsha	C.G.	4	—	3	25	7	32	—	69	16	85	—	—	—	1	—	—
10	Port Harcourt	C.G.	13	2	1	77	38	115	2	590	220	810	14	46	60	2	2	1
11	Victoria	C.G.	4	—	—	14	9	23	—	69	16	85	—	4	4	$\frac{1}{2}$	—	—
12	Warri	C.G.	8	—	3	52	14	66	5	134	15	149	11	3	14	$\frac{1}{2}$	3	—
	Total	...	143	4	19	1,141	395	1,536	37	5,038	1,147	6,185	123	236	359	18 $\frac{3}{4}$	38	10 $\frac{1}{2}$
																		48 $\frac{1}{2}$

AFRICAN HOSPITAL STATISTICS, 1938.
NORTHERN PROVINCES.

No.	Type of Hospital.	Name of Hospital.	C.G. or N.A.	No. of Beds.	No. of Cots.	Remaining end 1937.	IN-PATIENTS TREATED.			Remaining end 1938.	OUT-PATIENTS TREATED.			Grand Total cases treated.	OPERATIONS.			Nursing Sisters Average No.	AFRICAN NURSING STAFF.		
							Male.	Female.	Total.		Male.	Female.	Total.		Major.	Minor.	Total.		Male.	Female.	Total.
1	C	Azare	N.A.	35	—	132	1,227	360	1,587	111	3,119	656	3,775	5,362	202	121	323	—	2	—	2
2	C	Bauchi	C.G.&	51	—	73	1,056	258	1,314	79	2,437	395	2,832	4,146	217	151	368	—	3	—	3
3	C	Bida	N.A.	71	2	59	595	76	671	39	2,111	425	2,536	3,207	84	118	202	—	2	—	2
4	C	Gadua (Dispensary)	C.G.	—	—	—	59	10	69	7	801	263	1,064	1,133	16	15	31	—	—	—	—
5	D	Gusau	N.A.	34	—	24	316	48	364	18	2,918	1,034	3,952	4,316	107	267	374	—	2	—	2
6	C	Hadeija	N.A.	36	—	49	454	131	585	53	1,833	411	2,244	2,829	8	15	23	—	2	—	2
7	D	Idah	N.A.	25	—	16	269	55	324	25	2,053	895	2,948	3,272	153	69	222	—	—	—	—
8	B	Ilorin	N.A.	40	2	15	453	638	1,091	37	2,822	1,379	4,201	5,292	165	109	274	—	2	—	2
9	B	Jos	C.G.&	122	4	139	2,412	310	2,722	104	8,459	2,081	10,540	13,262	629	582	1,211	1	14	2	16
10	B	Kaduna	N.A.	85	2	75	1,867	245	2,112	54	14,883	3,886	18,769	20,881	615	506	1,121	$\frac{1}{2}$	13	3	16
11	D	Kafanchan	C.G.	34	—	18	519	155	674	33	4,337	2,139	6,476	7,150	113	295	408	—	4	—	4
12	B	Kano Fagge	C.G.	—	—	—	—	—	—	—	3,276	1,274	4,550	4,550	—	—	—	—	—	—	—
13	B	Kano City	N.A.	285	19	256	3,973	1,472	5,445	311	9,911	2,666	12,577	18,022	779	802	1,581	2	1	2	3
14	B	Katsina	N.A.	234	—	198	2,173	993	3,166	150	5,130	1,148	6,278	9,444	345	201	546	1	—	—	—
15	D	Lafia	C.G.	13	—	6	46	11	57	—	2,816	1,442	4,258	4,315	3	14	17	$\frac{1}{2}$	7	2	9
16	B	Lokoja	C.G.	43	3	56	513	112	625	54	2,637	716	3,353	3,978	137	128	265	1	2	1	3
17	C	Maiduguri	N.A.	78	4	88	1,204	311	1,515	83	15,418	8,057	23,475	24,990	289	127	416	—	2	—	2
18	C	Makurdi...	C.G.&	91	—	40	488	133	621	—	4,986	1,923	6,909	7,530	193	121	314	—	7	—	7
19	C	Minna	N.A.	38	—	26	837	144	981	38	5,014	1,202	6,216	7,197	112	153	265	—	5	—	5
20	C	Pankshin	C.G.	60	—	58	611	112	723	51	1,791	593	2,384	3,107	97	56	153	—	1	—	1
21	C	Sokoto	N.A.	119	6	86	1,189	302	1,491	157	1,349	—	1,349	2,840	180	116	296	1	4	—	4
22	D	Wukari	N.A.	43	—	43	489	193	682	48	5,299	2,148	7,447	8,129	662	255	917	—	2	—	2
23	D	Yola	C.G.	44	—	36	537	57	594	52	2,394	478	2,872	3,466	77	18	95	—	3	—	3
24	B	Zaria	C.G.	118	2	67	1,291	199	1,490	79	9,507	1,992	11,499	12,989	212	175	387	1	15	1	16
Total			...	1,699	44	1,560	22,578	6,325	28,903	1,583	115,301	37,203	152,504	181,407	5,395	4,414	9,809	8	91	11	102

AFRICAN HOSPITAL STATISTICS, 1938.

SOUTHERN PROVINCES.

No.	Type of Hospital.	Name of Hospital.	C.G. or N.A.	No. of Beds.	No. of Cots.	Remaining end 1937.	IN-PATIENTS TREATED.			Remaining end 1938.	OUT-PATIENTS TREATED.			Grand total cases treated.	OPERATIONS.			Nursing Sisters Average No.	AFRICAN NURSING STAFF.		
							Male.	Female.	Total.		Male.	Female.	Total.		Major.	Minor.	Total.		Male.	Female.	Total.
1	B	Ala	C.G.	74	4	62	719	873	1,592	76	12,027	6,404	18,431	20,023	412	287	699	1	7	11	18
2	B	Abakaliki	C.G.	16	—	22	257	41	298	19	4,417	1,233	5,650	5,948	37	128	165	—	2	—	2
3	B	Abokuta	C.G.	100	7	34	663	244	907	—	5,745	2,072	7,817	8,724	191	132	323	1	9	3	12
4	D	Afikpo	C.G.	—	—	—	—	—	—	—	6,137	3,363	9,500	9,500	—	—	—	—	—	—	—
5	C	Agbor	C.G.	26	2	34	332	80	412	24	10,449	5,510	15,959	16,371	423	75	498	—	4	—	4
6	C	Akure	C.G.	38	—	26	329	452	781	36	3,080	2,117	5,197	5,978	395	84	479	—	3	1	4
7	C	Bamenda	C.G. & N.A.	100	—	55	917	318	1,235	54	5,947	3,702	9,649	10,884	221	147	368	—	5	—	5
8	D	Banso	N.A.	55	—	37	620	376	996	61	3,248	1,821	5,069	6,065	659	62	731	—	2	—	2
9	C	Benin City	C.G.	25	—	6	155	67	222	5	9,872	4,409	14,281	14,503	31	27	58	—	3	1	4
10	B	Calabar	C.G.	163	8	119	1,280	481	1,761	57	16,034	6,358	22,392	24,153	226	923	1,149	2	16	6	22
11	C	Degema	C.G. & N.A.	38	—	17	255	133	388	15	5,310	2,742	8,052	8,440	26	100	126	—	3	—	3
12	B	Enugu	C.G.	72	20	114	1,687	343	2,030	104	27,434	5,348	32,782	34,812	548	611	1,159	14	15	14	164
13	C	Forcados	C.G.	12	—	7	262	70	332	10	8,761	2,475	11,236	11,568	59	126	185	—	2	—	2
14	B	Ibadan, Adeoyo	N.A.	81	4	47	732	403	1,135	74	9,349	6,372	15,721	16,856	455	181	636	1	—	—	—
15	C	Ibadan, African	C.G.	33	—	38	575	97	672	24	7,253	2,033	9,286	9,958	103	231	334	—	7	—	7
16	C	Ifele-Ode	C.G.	67	18	40	545	604	1,149	32	3,652	1,752	5,394	6,533	161	58	219	—	9	4	13
17	C	Ikot-Ekpene	C.G. & N.A.	67	—	47	620	486	1,106	—	905	574	1,479	2,585	216	100	316	—	4	—	4
18	C	Kumba	C.G.	68	—	66	811	505	1,316	20	3,313	1,729	5,042	6,358	181	48	229	—	4	—	4
19	B	Lagos, African	C.G.	197	18	124	2,956	887	3,843	174	22,765	15,378	38,143	41,986	1,420	1,204	2,624	4	27	6	33
20	B	Lagos, Massey Street	C.G.	24	20	10	3	1,411	4,115	22	4,199	4,115	8,314	9,728	—	—	—	2	—	64	64
20a	C	Lagos, I.D.H. (Yaba)	C.G.	—	—	3	167	51	218	—	—	—	—	218	—	—	—	—	—	—	—
21	C	Lagos, Yaba Asylum	C.G.	—	—	340	337	132	469	218	497	314	811	1,280	—	—	—	—	—	—	—
22	C	Lagos, Ebute Metta	C.G.	—	—	—	—	—	—	—	13,338	4,899	18,237	18,237	—	—	—	—	2	—	2
23	C	African Dispensary	C.G.	61	—	32	597	128	725	33	5,576	2,337	7,913	8,638	213	117	330	—	4	—	4
24	C	Mamfe	C.G. & N.A.	16	—	11	179	92	271	14	5,428	3,056	8,484	8,755	95	13	108	—	1	—	1
25	C	Obubra	C.G.	35	—	32	264	105	369	28	8,714	3,850	12,564	12,933	44	204	248	—	2	—	2
26	C	Ogoja	C.G.	77	8	33	842	457	1,299	56	15,264	10,341	25,605	26,904	225	206	431	—	5	—	5
27	C	Okigwi	C.G.	61	3	43	674	576	1,250	36	14,857	12,024	26,881	28,131	208	415	623	1	9	2	11
28	C	Onitsha	C.G. & N.A.	30	—	14	571	107	678	19	34,198	12,357	46,555	47,233	98	150	248	—	3	1	4
29	C	Opobo	C.G.	35	—	25	578	82	660	6	3,807	2,432	6,239	6,899	136	65	201	—	3	2	5
30	C	Oshogbo	C.G.	82	6	56	682	329	1,011	57	9,150	7,273	16,423	17,434	243	256	499	—	4	—	4
31	B	Owerri	C.G.	130	32	105	2,045	939	2,984	112	24,774	8,048	32,822	35,806	1,407	792	2,199	1	25	4	29
32	C	Port Harcourt	C.G.	37	—	13	296	21	317	5	5,906	2,963	8,869	9,836	52	81	133	—	4	—	4
33	C	Sapele	C.G.	34	—	38	622	177	799	38	9,417	4,527	13,944	14,743	326	740	1,066	—	3	—	3
34	B	Umuahia	C.G.	95	4	77	765	243	1,008	45	8,886	2,555	11,441	12,449	389	139	528	—	9	2	11
35	B	Victoria	C.G.	38	2	16	353	135	488	22	6,023	1,781	7,804	8,292	35	211	246	—	6	—	6
36	B	Warri	C.G.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total			...	1,930	158	1,743	22,700	11,445	34,145	1,512	335,792	157,544	493,276	527,421	9,245	8,178	17,423	164	292	51	253

A.—HOSPITAL BUILDINGS.

122. No new hospitals were built but the following list shows the principle extensions carried out during the year.

Sokoto.—New female ward (under construction).

Minna.—New block of two wards and a sanitary annexe.

Ilorin.—Reconstruction of the isolation block; construction of disinfector of modified Serbian barrel type.

Katsina.—New maternity ward: officially opened by Lady Bourdillon on 31st December.

Pankshin.—New 22-bed ward completed by Pankshin Native Administration.

Kano.—Completion of new Hakimai Ward giving privacy for treatment of purdah women.

Banso.—New 8-bed ward, operating theatre and an out-patient block.

Sapele.—New out-patient block.

Ogoja.—New septic ward and a new mortuary.

Okigwi.—Extension of ward for twins and motherless children.

Massey Street Dispensary, Lagos.—A tablet in memory of Dr. O. Sapara, I.S.O., was presented by the Association of Medical Practitioners and Dentists. It was unveiled on October 18th, 1938.

B.—NATIVE ADMINISTRATION DISPENSARY SYSTEM.

123. At the close of the year there were 337 Native Administration dispensaries, 121 in the Northern Provinces and 216 in the Southern Provinces, an increase of fifteen during the year. There has been a notable increase in the number of cases treated, especially in the Northern Provinces, where the number has been more than doubled during the past twelve months. There is however a tendency for some Native Administrations to increase the number of their dispensaries by reducing the capital expenditure on each below the recognised minimum of £300.

124. The total cases treated and the total attendances were:—

	NORTHERN PROVINCES.		SOUTHERN PROVINCES.	
	1937.	1938.	1937.	1938.
Cases treated	162,735	396,891	531,443	691,505
Attendances	1,049,538	1,870,185	2,298,328	2,477,015

C.—MEDICAL WORK OF RELIGIOUS MISSIONS.

125. The following table has been compiled from information kindly supplied by Mission Superintendents:—

Mission.	No. of Stations performing Medical work.	No. of Doctors.	No. holding Missionary Permits.	NATURE OF WORK.				Cases treated.	Total Attendances.
				Hospitals.	Dispensaries.	Leprosy Clinics.	Maternity and Infant Welfare Clinics.		
NORTHERN PROVINCES.									
Sudan Interior Mission ...	44	4	71	2	44	5	9	33,120	341,709
Sudan United Mission ...	25	4	2	2	25	2	3	27,058	182,684
Dutch Reformed Church Mission	6	1	15	1	5	1	27	11,078	88,979
Christian Mission in Many Lands	3	...	3	...	3	1	...	4,126	6,476
Church of the Brethren Mission	3	3	3	2	1	2	2	7,083	67,920
C.M.S. Hospital, Zaria ...	5	1	3	1	3	1	2	6,596	40,702
SOUTHERN PROVINCES.									
Methodist Missionary Society	7	3	...	1	3	1	1	12,205	57,182
Church of Scotland ...	5	3	3	3	5	2	2	12,632	62,158
Amachara Medical Mission ...	1	...	1	1	1	...	4	9,305	27,166
Wesley Guild Hospital, Ilesha	1	1	...	1	3	1	1	8,602	36,617
Roman Catholic Mission, Abeokuta	2	1	1	1	...	1	1	2,319	9,086
American Baptist Mission, Ogbomosho	3	2	1	1	1	1	1	1,588	17,636
Totals ...	105	23	103	16	94	18	53	135,712	938,315

D.—DENTAL REPORT.

126. There are two Government dentists in Nigeria, one stationed in Lagos and the other at Kaduna.

LAGOS.

127. The Lagos dentist was on leave between June and November. The number of European officials treated was slightly below the average of previous years. The number of African officials including wives and children was up to the average and it was noticeable that in the majority of cases more conservative treatment was undertaken than formerly, possibly due partly to propaganda such as that disseminated during the Health Weeks.

128. In the majority of cases referred from the hospital outpatient department extractions were unfortunately necessary, the condition of the teeth being such that no other course was possible. Most of the school children were suffering from caries and in many cases the delay in seeking treatment rendered fillings inadvisable owing to the advanced decay. Propaganda in schools might do much to remedy this state of affairs.

KADUNA.

129. Lack of funds this year for the renewal of equipment was particularly unfortunate as several articles are showing the results of the long wear to which they have been subjected.

130. The following table indicates cases treated by the two dentists:—

				Fillings.	Dressings.	Extractions.	Sealings.	Root Treatments.	Dentures.	Anesthetics.
Europeans	...	...	...	510	202	135	175	23	58	48
Africans	...	...	...	124	60	419	168	—	49	91
Total	...	...	...	634	262	554	343	23	107	139

E.—SURGICAL OPERATIONS—1938.

131. The total numbers of surgical operations performed in Government and Native Administration Hospitals during the last two years under review are as follows:—

YEAR.	MAJOR OPERATIONS.		MINOR OPERATIONS.	
	Number performed.	Deaths.	Number performed.	Deaths.
1937	15,418	336	11,337	5
1938	14,763	201	12,828	1

F.—X-RAY DEPARTMENTS.

132. The Government African Hospitals at Lagos, Kaduna, Port Harcourt and Calabar and the Native Administration Hospitals at Adeoyo (Ibadan) and Kano City are provided with X-ray plants. Several of them, however, require considerable expenditure on the replacement of obsolete parts.

133. European radiographers are in charge of the plants at Lagos, Kaduna and Port Harcourt and a specially trained Nursing Sister is in charge at Kano, all working under the supervision of the Medical Staff. The installation at Calabar is worked by the Senior Medical Officer and at Ibadan by the Medical Officer, Adeoyo.

VII.—PRISONS AND ASYLUMS.

134. The following figures show the general health and death rates of prisoners in Government gaols in Nigeria during the year contrasted with figures for the previous year:—

Year.	Average daily in Prison.	Total No. on Sick List.	Total No. of days on Sick List.	Average daily Sick.	No. of Deaths.
1937	6,570	22,657	50,965	62.07	113
1938	6,885	30,862	44,278	84.48	105

135. The following table shows the causes of deaths among prisoners:—

Infectious diseases	...	...	...	...	...	37
General diseases	...	...	...	...	...	2
Diseases of the circulatory system	...	...	...	...	...	11
" " " respiratory	...	...	...	...	...	15
" " " nervous	...	...	...	...	...	16
" " " urinary	...	...	...	...	...	4
" " " digestive	...	...	...	...	...	7
" " " blood and blood forming organs	...	...	...	...	...	4
Cancer and other tumours	...	...	...	...	...	2
Old age	...	...	...	...	...	4
Ill-defined diseases	...	...	...	...	...	3
						105

LUNACY.

136. The report of Dr. Cunynham-Brown, C.B.E., who was sent out in 1936 by the Secretary of State to advise on the care and treatment of lunatics was received during the year and is under consideration. Pending a final decision and until more suitable buildings are available, it is proposed, as a temporary measure, to utilise Lokoja prison and Abeokuta Native Administration prison solely for the detention of lunatics who are now confined in various prisons throughout Nigeria. The Medical Department maintains two lunatic asylums, one at Yaba and the other at Calabar.

137. The statistics for lunatics confined in prisons are as follows:—

	ADMISSIONS.			DISCHARGES.	DEATHS.		
	Male.	Female.	Total.		Male.	Female.	Total.
Criminal	26	4	30	—	5	1	6
Civil	47	12	59	—	9	2	11

There were 238 male and thirty-seven female lunatics in Nigerian prisons at the end of the year.

VIII.—METEOROLOGY.

138. The comparative monthly Rainfall for Lagos, from 1928-1938 was as follows:—

Month.	YEAR.										
	1928.	1929.	1930.	1931.	1932.	1933.	1934.	1935.	1936.	1937.	1938.
January	1.77	.02	1.38	0.94	0.02	4.93	0.20	...	.93	...	0.86
February	2.22	1.46	2.21	1.47	0.44	2.05	...	1.24	1.54	2.77	3.08
March	8.20	1.73	3.27	5.89	2.61	4.67	4.75	8.36	5.78	5.05	1.66
April	6.96	7.04	5.01	7.16	3.80	3.95	5.73	6.27	2.57	4.81	6.03
May	15.33	11.34	8.61	8.87	11.34	6.61	5.38	13.99	12.08	10.02	10.87
June	21.05	24.79	13.28	17.73	14.10	14.86	15.68	21.18	11.70	20.04	11.52
July	2.53	19.93	18.40	17.81	0.86	19.49	14.49	16.09	0.16	18.07	3.48
August	2.05	.81	.66	2.10	3.02	1.51	7.91	0.42	1.12	1.42	1.61
September	5.60	3.11	2.67	12.54	4.11	5.49	4.32	2.32	1.77	12.54	4.55
October	12.67	6.03	12.46	5.87	5.16	6.01	13.45	6.08	13.88	5.45	8.62
November	.54	4.10	1.88	2.24	2.63	5.31	1.17	2.33	5.33	0.38	6.24
December	.13	6.02	1.69	0.93	...	0.97	4.72	0.43	2.42	1.26	0.16
Total	79.05	86.38	71.52	83.55	48.09	75.85	77.80	78.71	62.28	81.81	58.68

METEOROLOGICAL RETURNS FOR 1938.

STATION.	Absolute Shade Max.	Absolute Shade Min.	Average Max.	Average Min.	Relative Humidity.	Rainfall inches.
Ilorin	101	55	92·9	65	83·1	44·99
Kaduna	102	55	78·3	60·4	66·5	47·12
Maiduguri	109	47	101·5	59·7	47·2	29·84
Kano	105	50	97·2	59·8	55·1	43·87
Lokoja	103	60	94·8	67·4	80·5	37·13
Yola	108	60	99·5	66·9	64·6	29·28
Lagos	92	66	88·7	69·6	88·3	58·68
Ibadan	101	60	91·7	64·7	94·2	40·74
Calabar	89	68	36·5	28·8	38·7	112·18
Enugu	97	66	92·4	67·4	78·5	59·41

IX.—SCIENTIFIC.

139. The following abridged reports appear as appendices:—

A.—Report on the Laboratory Service.

B.—Report on the Sleeping Sickness Service with special Report on “The Effect of Exposing ‘Premunised’ Animals to fresh infections in a new area.”

C.—Report on the Schools of Medicine and Pharmacy.

R. BRIERCLIFFE,
Director of Medical Services.

RETURNS

TABLE I

AUTHORISED ESTABLISHMENT OF THE DEPARTMENT.

(SHOWING VACANCIES ON THE 31ST OF DECEMBER, 1938).

(a) EUROPEAN STAFF.

Medical Directorate.

Director of Medical Services.
Deputy Director of Medical Service.
Deputy Director of Health Service.
Assistant Director of Medical Service.
Assistant Director of Health Service.
Administrative Secretary.
Accountant.

Medical Service.

2 Senior Specialists.
2 Specialists.
8 Senior Medical Officers (1 vacancy).
76 Medical Officers (6 vacancies).
2 Government Dentists.
9 Senior Nursing Sisters.
54 Nursing Sisters (4 vacancies).

Clerical and Storekeeping Staff.

1 Medical Storekeeper.
1 Assistant Storekeeper and Inspecting Chemist.
2 Assistant Radiographers and Storekeepers, Grade I.
2 " " " " Grade II.

Health Service.

3 Senior Health Officers.
13 Medical Officers of Health (3 vacancies).
1 Chief Sanitary Superintendent.
8 Sanitary Superintendents, Grade I.
34 " " Grade II (3 vacancies).

Laboratory Service.

1 Senior Pathologist.
4 Pathologists.
2 Technical Assistants, Grade I.
3 " " Grade II.

Medical and Pharmacy Schools.

1 Principal of the Medical School.
1 Assistant Principal of the Medical School.
1 Superintendent, School of Pharmacy.
1 Technical Instructor, Medical School.

Sleeping Sickness Service.

1 Deputy Director, Sleeping Sickness Service.
2 Sleeping Sickness Medical Officers.
2 Entomologists.
1 Technical Assistant, Grade II.
10 Control Officers.
8 Non-Commissioned Officers.

(b) AFRICAN STAFF.

Medical Service.

- 1 Specialist.
- 14 Medical Officers.
- 5 Cadet Medical Officers.
- 6 Assistant Medical Officers (1 vacancy).
- 22 Medical Assistants.
- 6 Senior Dispensers.
- 20 First-class Dispensers.
- 122 Second and Third-class Dispensers (6 vacancies).
- 10 Senior Nurses (3 vacancies).
- 50 First-class Nurses.
- 434 Second and Third-class Nurses (1 vacancy).
- 56 „ „ „ „ Midwives (1 vacancy).
- 1 First-class Lunatic Asylum Attendant.
- 24 Second and Third-class Lunatic Asylum Attendants.
- 6 „ „ „ „ Leper Asylum Attendants.

Health Service.

- 1 Senior Sanitary Inspector.
- 8 First-class Sanitary Inspectors.
- 91 Second and Third-class Sanitary Inspectors.
- 36 Sub-Inspectors of Sanitation (2 vacancies).
- 62 Vaccinators (3 vacancies).
- 1 Registrar of Vital Statistics.
- 2 Deputy Registrars of Vital Statistics.

Laboratory Service.

- 3 First-class Laboratory Assistants.
- 21 Second and Third-class Laboratory Assistants (3 vacancies).

Medical and Pharmacy Schools.

- 1 Tutor.

Tsetse Investigation and Sleeping Sickness Staff.

- 2 First-class Clerks.
- 4 Second and Third-class Clerks.
- 1 Second-class Dispenser.
- 2 „ „ Nurses.
- 20 Third-class Nurses (4 vacancies).
- 1 First-class Laboratory Assistant.
- 2 Third-class Laboratory Assistants.

Clerical and Storekeeping Staff.

- 1 Assistant Accountant.
- 1 Chief Clerk.
- 4 Assistant Chief Clerks.
- 16 First-class Clerks (2 vacancies).
- 66 Second and Third-class Clerks (12 vacancies).
- 1 Chief Dispenser Storekeeper.
- 2 Senior Dispenser Storekeepers.
- 3 First-class Dispenser Storekeepers.
- 4 Second and Third-class Dispenser Storekeepers.

TABLE II.
FINANCIAL.
FINANCIAL YEAR, 1937-38.

REVENUE.						£	s.	d.
Medical receipts	...	...	...	...	...	8,641	13	8
Births and deaths registration fees	...	...	...	...	...	25	9	6
Fumigation and deratisation fees	...	...	...	...	...	73	10	5
Sale of departmental stores	...	...	...	...	...	1,261	2	10
Sale of anti-rabic vaccine	...	...	...	...	...	223	18	6
Sanitary dues under the Quarantine Ordinance	...	...	...	...	...	1,026	14	6
						£11,252	9	5

EXPENDITURE.						£	s.	d.
(a) Personal Emoluments	...	...	...	...	...	265,799	12	1
(b) Other Charges :—								
(1) MEDICAL.								
						£	s.	d.
Medical, surgical, dental, X-ray equip- ment and laundry	...	...	...			54,042	7	4
Hospital diets	...	...	...			11,641	0	5
Labour	...	...	...	...	...	14,977	10	11
(2) LABORATORY.								
Labour	...	...	...	...	...	406	17	9
General laboratory	...	...	...			1,521	5	1
(3) HEALTH.								
Labour	...	...	...	...	...	21,848	3	10
General sanitary	...	...	...	...	...	11,329	0	0
(4) GENERAL.								
Railway transport	...	...	...			11,390	12	4
Other items under Other Charges	...					28,535	16	1
						£155,692	13	9
						£421,492	5	10

(c) Special Expenditure:—

	£	s.	d.
Sleeping Sickness Service	34,795	13	11
Anti-plague measures	4,055	6	0
Other items under Special Expenditure	2,286	1	8
	£41,137	1	7

TABLE IV.
RETURN OF DISEASES AND DEATHS (EUROPEAN)
FOR THE YEAR 1938.

Diseases.			IN-PATIENTS.						OUT-PATIENTS.			
			Remaining in Hospital at end of 1937.	TOTAL.			Total cases treated.	Remaining in Hospital at end of 1938.	Male.	Female.	Deaths.	
				Admissions.		Deaths.						
				Male.	Female.							
I.—Infectious and Parasitic Diseases.												
1a.	Typhoid fever	...	...	3	2	2	5	...	...	2	...	
2a.	Paratyphoid A.	...	...	1	...	...	1	...	...	...	...	
2b.	Paratyphoid B.	...	...	...	1	...	1	...	...	2	...	
2c.	Enteric fever, type not defined	...	...	1	...	...	1	...	...	...	...	
3.	Typhus fever	...	...	1	...	...	1	...	...	...	...	
4.	Relapsing fever	...	...	...	...	...	...	...	...	...	...	
5.	Undulant fever	...	...	...	...	...	...	...	...	...	...	
Smallpox—												
6a.	Variola major	...	...	...	...	...	...	...	...	...	...	
6b.	Variola minor	...	...	...	...	...	...	...	...	...	...	
7.	Measles	...	...	...	...	...	...	...	5	3	...	
8.	Scarlet fever	...	...	1	...	1	1	...	...	...	...	
9.	Whooping cough	...	...	...	...	...	...	...	2	1	...	
10.	Diphtheria	...	...	...	...	...	...	...	...	...	...	
11.	Influenza	...	...	18	7	...	25	...	62	18	...	
12.	Cholera	...	...	...	...	...	...	...	...	...	...	
13a.	Amœbic dysentery	...	1	19	9	...	29	...	33	4	...	
13b.	Bacillary dysentery	...	...	12	5	...	17	...	4	2	...	
13c.	Dysentery—type unspecified...	...	...	3	...	...	3	...	8	6	...	
14a.	Bubonic plague	...	...	...	...	...	...	...	...	...	...	
14b.	Pneumonic plague	...	...	...	...	...	...	...	...	...	...	
14c.	Septicæmic plague	...	...	...	...	...	...	...	...	...	...	
15.	Erysipelas	...	...	1	...	...	1	...	1	...	...	
16.	Acute poliomyelitis	...	...	...	...	...	...	...	...	...	...	
17.	Encephalitis lethargica	...	...	...	...	...	...	...	...	...	...	
18.	Cerebro-spinal fever	...	...	...	...	...	...	...	1	...	1	
19.	Glanders	...	...	...	...	...	...	...	...	...	...	
20.	Anthrax	...	...	...	...	...	...	...	...	...	...	
21.	Rabies	...	...	...	...	...	...	...	...	...	...	
22.	Tetanus	...	...	...	...	...	...	...	...	...	...	
Tuberculosis of—												
23.	Respiratory system	...	...	2	1	...	3	...	6	1	...	
24.	Central nervous system	...	...	...	...	...	...	...	...	...	...	
25.	Intestines and peritoneum	...	...	...	...	...	...	...	...	...	...	
26.	Vertebral column	...	...	...	...	...	...	...	1	...	...	
27.	Other bones and joints	...	...	...	...	...	...	...	...	...	...	
28.	Skin and subcutaneous tissues	...	...	...	...	...	...	...	...	...	...	
29.	Lymphatic system	...	...	...	...	...	...	...	...	...	...	
30.	Genito-urinary system	...	...	...	...	...	...	...	1	...	...	
31.	Other organs	...	...	...	...	...	...	...	...	...	...	
32.	Disseminated tuberculosis	...	...	...	...	...	...	...	...	...	...	
33.	Leprosy	...	...	...	...	...	...	...	...	...	...	
34a.	Primary syphilis	...	...	...	...	...	...	...	43	...	...	
34b.	Secondary syphilis	...	...	3	...	...	3	...	19	1	...	
34c.	Tertiary syphilis	...	...	...	...	...	...	...	10	1	...	
34d.	Congenital syphilis	...	...	...	...	...	...	...	1	...	...	
35a.	Gonorrhœa	...	...	8	...	...	8	...	160	2	...	
35b.	Gonorrhœa with complications	...	...	4	...	...	4	...	10	...	...	
35c.	Gonorrhœal arthritis	...	...	2	...	...	2	...	2	...	...	
35d.	Gonorrhœal ophthalmia	...	...	...	...	...	...	...	...	...	...	
35f.	Soft chancre	...	...	3	...	...	3	...	30	...	...	
35g.	Venereal bubo	...	...	...	...	...	...	...	...	...	...	
Carried forward			...	1	82	25	3	108	...	399	43	1

TABLE IV.—RETURN OF DISEASES AND DEATHS (EUROPEAN)
FOR THE YEAR 1938—continued.

Diseases.		IN-PATIENTS.						OUT-PATIENTS.		
		Remaining in Hospital at end of 1937.	TOTAL.			Total cases treated.	Remaining in Hospital at end of 1938.	Male.	Female.	Deaths.
			Admissions.		Deaths.					
			Male.	Female.						
Brought forward	...	1	82	25	3	108	...	399	43	1
I.—Infectious and Parasitic Diseases—contd.										
35h. Other venereal diseases	...	...	...	...	...	...	...	1	...	...
36a. Septicæmia	...	...	...	1	...	1	...	...	...	...
36b. Pyæmia	...	...	...	...	...	...	...	...	...	...
36c. Gas gangrene	...	...	...	...	...	...	...	...	...	...
37. Yellow fever	...	...	2	...	2	2	...	2	...	1
38a. Tertian malaria (<i>P. vivax</i>)	...	...	1	...	...	1	...	5	1	...
38b. Quartan malaria (<i>P. malaria</i>)	...	...	...	1	...	1	...	...	...	...
38c. Subtertian malaria (<i>P. falciparum</i>)	...	1	191	35	3	227	6	526	120	2
38d. Malaria—type unspecified	...	3	102	23	...	128	5	237	51	...
38e. Blackwater fever	...	...	4	2	4	6	...	8	...	...
39a. Leishmaniasis	...	...	...	...	...	...	...	...	...	...
39b. Spirochaetosis ictero-hæmorrhagica	...	...	...	...	...	...	...	...	...	...
39c. Trypanosomiasis	...	...	2	...	...	2	...	3	...	...
39d. Yaws	...	...	...	...	...	...	...	...	...	...
39e. Other protozoal diseases	...	...	...	...	...	...	...	...	...	...
40. Ankylostomiasis	...	...	9	...	...	9	...	10	2	...
41. Hydatid cysts	...	...	...	...	...	...	...	...	...	...
42a. Ascariasis	...	...	3	2	...	5	...	10	4	...
42b. Dracontiasis (guinea-worm)	...	...	1	...	...	1	...	1	...	...
42c1. Filariasis (<i>bancrofti</i>)	...	...	...	...	...	...	...	4	...	...
42c2. Filariasis (<i>loa-loa</i>)	...	...	...	...	...	...	...	15	5	...
42c3. Onchocerciasis	...	...	...	...	...	...	...	...	...	...
42d. Schistosomiasis (<i>haematobium</i>)	...	...	...	...	...	...	...	...	...	...
42e. Schistosomiasis (<i>mansoni</i>)	...	...	...	...	...	...	...	...	...	...
42f. Teniasis (tape-worm)	...	...	6	2	...	8	...	20	4	...
42g. Other helminthiasis (<i>oxyuris</i> , &c.)	...	...	...	1	...	1	...	6	1	...
43a. Actinomycosis	...	...	...	...	...	...	...	...	...	...
43b. Other mycoses (madura-foot, &c.)	...	...	...	...	...	...	...	...	...	...
44a. Sequelæ of vaccination	...	...	...	...	...	...	...	94	40	...
44b. German measles	...	...	1	...	...	1	...	8	1	...
44c. Chicken-pox	...	...	1	...	...	1	...	2	...	...
44d. Mumps	...	...	3	...	...	3	...	4	...	...
44e. Dengue	...	...	2	...	...	2	...	7	2	...
44f. Glandular fever	...	...	...	...	...	...	...	...	...	...
44g. Other infectious and parasitic diseases	...	...	1	...	...	1	...	3	2	...
II.—Cancer and other Tumours.										
Cancer of:—										
45. Buccal cavity and pharynx	...	...	...	...	...	...	...	2	...	...
46a. Oesophagus	...	...	...	...	...	...	...	...	...	...
46b. Stomach and duodenum	...	...	...	...	...	...	...	...	...	...
46c. Rectum	...	...	...	...	...	...	...	...	...	...
46d. Liver	...	...	...	...	...	...	...	...	...	...
46e. Pancreas	...	...	...	...	...	...	...	1	...	...
46f. Other digestive organs	...	...	...	...	...	...	...	...	...	...
47. Respiratory organs	...	...	...	...	...	...	...	...	...	...
48. Uterus	...	...	...	...	...	...	...	...	...	...
49. Other female genital organs	...	...	...	...	...	...	...	...	...	...
Carried forward	...	5	411	92	12	508	11	1,368	276	4

TABLE IV.—RETURN OF DISEASES AND DEATHS (EUROPEAN)
FOR THE YEAR 1938—continued.

Diseases.	IN-PATIENTS.						OUT-PATIENTS.			
	Remaining in Hospital at end of 1937.	TOTAL.			Total cases treated.	Remaining in Hospital at end of 1938.	Male.	Female.	Deaths.	
		Admissions.		Deaths.						
		Male.	Female.							
Brought forward	5	411	92	12	508	11	1,368	276	4	
II.— <i>Cancer and other Tumours</i> —contd.										
Cancer of :—										
50. Breast	...	...	...	...	...	...	1	...	...	
51. Male genito-urinary organs...	...	...	...	...	...	...	1	...	...	
52. Skin	...	1	...	...	1	...	2	...	...	
53. Other organs	...	...	...	...	...	...	...	...	...	
54a. Dermoid cyst	...	...	...	...	...	...	3	...	...	
54b. Fibroid, uterine	...	...	...	...	...	...	...	...	...	
54c. Lipoma	...	1	1	...	2	...	1	1	...	
54d. Other non-malignant tumours	...	...	1	...	1	...	38	10	...	
55. Tumours of undetermined nature	...	...	...	...	...	...	3	...	...	
III.— <i>Rheumatism, Diseases of Nutri- tion and of Endocrine Glands and other General Diseases.</i>										
56. Rheumatic fever	...	...	...	...	...	...	...	...	...	
57a. Chronic rheumatism	...	7	3	...	10	...	123	22	...	
57b. Rheumatoid arthritis, Osteo- arthritis, &c.	...	1	...	...	1	...	6	...	...	
58. Gout	...	...	...	...	...	...	6	1	...	
59. Diabetes mellitus	...	3	...	...	3	...	4	1	...	
60a. Scurvy (<i>hypovitaminosis C</i>) ...	...	...	...	...	...	...	...	...	...	
60b. Hypovitaminosis A	...	...	...	...	...	...	...	...	...	
61a. Beri-beri (<i>hypovitaminosis B₁</i>)	...	...	...	...	...	...	...	...	...	
61b. Epidemic dropsy (toxæmic) ...	...	...	...	...	...	...	...	...	...	
62. Pellagra (<i>hypovitaminosis B₃</i>)	...	...	...	...	...	...	...	...	...	
63. Rickets (<i>hypovitaminosis D</i>) ...	...	...	...	...	...	...	...	...	...	
65. Diseases of the pituitary gland	...	...	...	...	...	...	...	...	...	
66a. Simple goitre	...	...	...	...	...	...	...	2	...	
66b. Exophthalmic goitre	...	...	2	...	2	...	...	2	...	
66c. Other diseases of thyroid and parathyroids	...	...	2	...	2	...	2	...	...	
67. Diseases of the thymus	...	...	...	...	...	...	...	...	...	
68. Diseases of the adrenals	...	...	...	...	...	...	...	...	...	
69. Other general diseases	...	...	...	...	...	...	1	2	...	
IV.— <i>Diseases of the Blood and Blood Forming Organs.</i>										
70a. Purpura	...	1	...	...	1	...	1	...	...	
70b. Hæmophilia	...	...	...	...	...	...	...	...	...	
71a. Pernicious anæmia	...	...	...	...	...	...	...	...	...	
71b. Anæmia—other types	...	5	5	...	10	1	88	76	...	
72a. Leukæmia	...	...	...	...	...	...	...	...	...	
72b. Lymphadenoma	...	...	...	...	...	...	...	...	...	
73. Diseases of the spleen (splenomegaly, &c.)	1	1	1	...	3	...	5	1	...	
74. Other diseases of the blood and blood forming organs ...	...	...	...	...	...	...	...	...	...	
Carried forward	6	431	107	12	544	12	1,553	394	4	

TABLE IV.—RETURN OF DISEASES AND DEATHS (EUROPEAN)
FOR THE YEAR 1938—continued.

Diseases.	IN-PATIENTS.						OUT-PATIENTS.		
	Remaining in Hospital at end of 1937.	TOTAL.			Total cases treated.	Remaining in Hospital at end of 1938.	Male.	Female.	Deaths.
		Admissions.		Deaths.					
		Male.	Female.						
Brought forward	6	431	107	12	544	12	1,553	394	4
V.—Chronic Poisoning.									
75. Alcoholism (acute or chronic)	...	4	...	...	4	...	3	...	...
76. Chronic poisoning by other organic substances (cocaine, morphine, &c.)	...	...	...	...	...	...	...	...	...
77. Chronic poisoning by mineral substances	...	...	...	...	...	...	...	...	...
VI.—Diseases of the Nervous System and Sense Organs.									
78. Encephalitis, cerebral abscess, etc. (not including encephalitis lethargica; see 17)	...	...	...	...	...	...	...	...	...
79. Meningitis (not including tubercular or cerebro-spinal meningitis; see 18)	...	...	...	...	...	...	...	...	...
80. Tabes dorsalis (Locomotor ataxy)	...	...	...	...	...	...	1	...	...
81. Other diseases of spinal cord (not including acute poliomyelitis; see 16)	...	...	...	...	...	...	...	...	...
82a. Cerebral hæmorrhage. Apoplexy	...	...	...	...	...	...	...	...	...
82b. Cerebral embolism	...	...	1	...	1	...	...	...	...
82c. Cerebral thrombosis	...	...	...	...	...	...	...	...	...
82d. Hemiplegia and other paralysis of unstated origin	...	...	...	...	...	...	2	...	...
83. General paralysis of the insane	...	1	...	...	1	...	...	...	...
84a. Dementia præcox	...	1	...	...	1	...	...	...	...
84b. Paranoia	...	...	...	...	...	...	...	...	...
84c. Other forms of insanity	...	3	1	...	4	...	...	...	...
85. Epilepsy	...	2	2	...	4	...	4	1	...
86. Infantile convulsions (under five years of age)	...	1	...	1	1	...	...	...	...
87a. Chorea	...	...	...	...	...	...	1	...	...
87b. Neuritis. Neuralgia	...	12	5	...	17	...	119	44	...
87c. Disseminated sclerosis	...	...	...	...	...	...	...	...	...
87d. Amentia	...	1	...	...	1	...	...	...	...
87e. Hysteria	...	...	2	...	2	...	1	1	...
87f. Psychasthenia. Neurasthenia	...	21	8	...	29	...	103	19	...
87g. Other diseases of the nervous system	...	3	5	...	8	1	38	4	...
88a. Cataract	...	1	...	...	1	...	2	...	...
88b. Conjunctivitis	...	5	...	...	5	...	68	10	...
88c. Ectropion. Entropion	...	...	...	...	...	...	...	...	...
88d. Errors of refraction	...	...	...	...	...	...	25	5	...
88e. Glaucoma	...	...	...	...	...	...	...	...	...
88f. Iritis	...	...	...	...	...	...	4	...	...
88g. Keratitis	...	...	...	...	...	...	2	...	...
88h. Pterygium	...	1	...	...	1	...	3	...	...
88i. Trachoma	...	...	...	...	...	...	...	...	...
88j. Ulcer of cornea. Staphyloma. Leukoma	...	...	...	...	...	...	3	...	...
88k. Other diseases of the eye and annexa	...	4	1	...	5	...	59	12	...
Carried forward	6	491	132	13	629	13	1,991	490	4

TABLE IV.—RETURN OF DISEASES AND DEATHS (EUROPEAN)
FOR THE YEAR 1938—continued.

Diseases.	IN-PATIENTS.						OUT-PATIENTS.		
	Remaining in Hospital at end of 1937.	TOTAL.			Total cases treated.	Remaining in Hospital at end of 1938.	Male.	Female.	Deaths.
		Admissions.		Deaths.					
		Male.	Female.						
Brought forward ...	6	491	132	13	629	13	1,991	490	4
VI.—Diseases of the Nervous System and Sense Organs—contd.									
89a. Otitis ...	...	6	2	...	8	...	137	28	...
89b. Mastoiditis ...	...	...	1	...	1	...	3	...	...
89c. Other diseases of the ear ...	...	2	1	...	3	1	93	22	...
89d. Wax in ear ...	...	...	...	...	...	...	210	47	...
VII.—Diseases of the Circulatory System.									
90. Pericarditis ...	...	...	...	...	...	...	...	...	...
91. Acute endocarditis ...	...	...	...	...	...	...	...	...	...
92. Chronic endocarditis. Valvular heart disease ...	...	2	2	...	4	...	4	...	1
93. Myocardial degeneration. Chronic myocarditis ...	...	4	1	...	5	...	2	5	1
94. Diseases of the coronary arteries. Angina pectoris. Coronary thrombosis, &c. ...	...	...	...	...	...	...	2	1	...
95a. Disordered action of the heart ...	...	5	3	...	8	...	6	3	...
95b. Other diseases of the heart ...	...	3	...	1	3	...	7	2	...
96. Aneurysm ...	...	...	...	...	...	...	...	...	...
97. Arterio-sclerosis ...	...	1	...	...	1	...	1	...	...
98. Gangrene ...	...	1	...	1	1	...	...	...	...
99. Other diseases of the arteries ...	...	3	...	...	3	...	4	...	...
100a. Haemorrhoids ...	...	10	1	...	11	...	66	7	...
100b. Varix. Varicose veins. Varicocele ...	...	4	...	...	4	...	25	6	...
100c. Phlebitis ...	...	2	...	...	2	...	6	2	...
100d. Other diseases of veins ...	...	...	...	...	...	...	1	...	...
101a. Bubo (non-specific) ...	...	2	...	...	2	...	3	...	...
101b. Adenitis and other diseases of the lymphatic system ...	...	12	2	...	14	6	37	4	...
102. Abnormalities of blood pressure, hyperpiesia, &c. ...	...	2	...	...	2	...	10	3	...
103a. Epistaxis ...	...	...	...	...	...	...	1	1	...
103b. Other diseases of the circulatory system ...	...	...	...	...	...	...	3	...	...
VIII.—Diseases of the Respiratory System.									
104a. Rhinitis. Coryza ...	...	5	...	...	5	...	199	23	...
104b. Other diseases of the nose ...	...	...	...	...	...	...	7	...	...
104c. Diseases of the accessory nasal sinuses ...	...	2	...	...	2	...	12	3	...
104d. Nasal polypus ...	...	...	...	...	...	...	...	...	...
104e. Gangosa ...	...	...	...	...	...	...	...	...	...
105a. Laryngitis ...	...	3	1	...	4	...	58	9	...
105b. Other diseases of the larynx ...	...	...	...	...	...	...	...	...	...
106a. Acute bronchitis ...	...	12	7	...	19	...	174	12	...
106b. Chronic bronchitis ...	...	8	...	...	8	...	36	4	...
106c. Bronchiectasis ...	...	2	...	...	2	...	1	...	...
107. Broncho-pneumonia ...	...	1	6	1	2	8	2	1	...
108. Lobar pneumonia ...	...	6	...	2	6	...	1	...	...
110a. Pleurisy ...	...	5	...	...	5	...	7	1	...
110b. Empyema ...	...	...	...	...	...	...	...	...	...
Carried forward ...	7	599	154	19	760	20	3,109	674	6

TABLE IV.—RETURN OF DISEASES AND DEATHS (EUROPEAN).

FOR THE YEAR 1938—*continued*.

Diseases.	IN-PATIENTS.						OUT-PATIENTS.		
	Remaining in Hospital at end of 1937.	TOTAL.			Total cases treated.	Remaining in Hospital at end of 1938.	Male.	Female.	Deaths.
		Admissions.		Deaths.					
		Male.	Female.						
Brought forward	7	599	154	19	760	20	3,109	674	6
VIII.— <i>Diseases of the Respiratory System</i> —contd.									
111a. Hypostatic congestion of lungs	...	...	...	...	...	...	...	...	...
111b. Embolism of lung	...	...	...	...	...	...	...	...	...
112a. Asthma	...	2	2	...	4	...	17	7	...
112b. Hay fever	...	...	...	...	...	...	3	2	...
113. Pulmonary emphysema	...	1	...	...	1	...	2	...	...
114a. Gangrene or abscess of lung	...	1	...	...	1	...	...	...	...
114b. Other diseases of the respiratory system	...	1	...	...	1	...	3	...	...
IX.— <i>Diseases of the Digestive System</i> .									
115a. Dental caries. Alveolar abscess	...	27	9	...	36	...	255	56	...
115b. Pyorrhœa	...	2	...	...	2	...	10	1	...
115c. Stomatitis	...	...	...	...	...	...	13	7	...
115d. Tonsillitis. Pharyngitis. Quinsy	...	39	12	1	51	...	185	38	...
115e. Adenoids	...	...	...	...	...	...	...	...	...
115f. Other diseases of the buccal cavity, pharynx, etc.	...	2	...	...	2	...	16	4	...
116. Diseases of the œsophagus	...	2	...	...	2	...	...	...	...
117a. Ulcer of the stomach	...	2	...	1	2	...	10	...	...
117b. Ulcer of the duodenum	...	8	...	...	8	...	12	1	...
118a. Gastritis	1	24	3	...	28	...	115	31	...
118b. Dyspepsia	...	14	3	...	17	...	203	21	...
118c. Other diseases of the stomach	...	8	3	...	11	...	9	2	...
119. Infantile diarrhoea (under two years of age)	...	1	...	...	1	...	...	...	...
120a. Sprue	...	...	...	...	...	...	...	...	...
120b. Colitis	1	8	3	...	12	...	24	4	...
120c. Gastro-enteritis	...	28	8	...	36	...	97	31	...
120d. Diarrhœa	...	10	3	...	13	...	171	40	...
121. Appendicitis	...	14	9	2	23	1	17	8	...
122a. Hernia	...	10	...	...	10	...	21	...	...
122b. Strangulated hernia	...	...	...	...	...	...	1	...	...
122c. Intestinal obstruction	...	...	...	...	...	...	...	...	...
123a. Constipation	...	2	2	...	4	...	52	20	...
123b. Diverticulitis	...	...	...	...	...	...	2	...	...
123c. Fistula in ano	...	10	1	...	11	...	8	2	...
123d. Ischio-rectal abscess	...	3	...	...	3	...	3	...	...
123e. Other diseases of the intestines	...	5	2	...	7	...	18	3	...
124. Cirrhosis of the liver	...	...	...	...	...	...	...	...	...
125a. Acute yellow atrophy of the liver	...	...	...	...	...	...	...	...	...
125b. Hepatitis	...	7	1	...	8	...	17	2	...
125c. Abscess of the liver	...	...	...	...	...	...	...	...	...
125d. Other diseases of the liver	...	1	...	...	1	...	1	...	...
126. Biliary calculi	...	1	...	...	1	...	1	...	...
127a. Cholecystitis	...	6	2	...	8	...	6	2	...
127b. Catarrhal jaundice	2	15	3	...	20	1	26	1	...
127c. Other diseases of the gall, bladder and ducts	...	...	...	...	...	...	1	1	...
128. Diseases of the pancreas	...	...	...	...	...	...	...	...	...
129. Peritonitis	...	...	...	...	...	...	...	...	...
Carried forward	11	853	220	23	1,084	22	4,428	958	6

TABLE IV.—RETURN OF DISEASES AND DEATHS (EUROPEAN)
FOR THE YEAR 1938—*continued*.

Diseases.	IN-PATIENTS.						OUT-PATIENTS.		
	Remaining in Hospital at end of 1937.	TOTAL.			Total cases treated.	Remaining in Hospital at end of 1938.	Male.	Female.	Deaths.
		Admissions.		Deaths.					
		Male.	Female.						
Brought forward	11	853	220	23	1,084	22	4,428	958	6
X.—Non-Venereal Diseases of the Genito-Urinary System and Annexa.									
130. Acute nephritis	...	1	1	1	2	...	2	1	...
131. Chronic nephritis	...	1	...	...	1	...	2	1	...
133a. Pyelitis	...	4	3	...	7	...	7	6	...
133b. Other diseases of the kidney and annexa	...	5	2	1	7	...	4	1	...
134a. Calculi of the kidney and ureter	...	4	...	...	4	...	6	2	...
134b. Calculi of the bladder	...	...	...	...	...	...	1	...	...
135a. Cystitis	1	6	7	...	14	...	29	17	...
135b. Other diseases of the bladder	...	...	...	...	...	...	2	2	...
136a. Stricture of the urethra	...	...	...	...	...	...	7	...	...
136b. Urethral fistula	...	...	...	...	...	...	...	...	...
136c. Perineal abscess	...	...	...	...	...	...	4	...	...
136d. Other diseases of the urethra	...	6	...	...	6	...	38	...	...
137a. Hypertrophy of the prostate	...	1	...	...	1	...	1	...	...
137b. Prostatitis	...	8	...	...	8	...	11	...	...
137c. Other diseases of the prostate	...	...	...	...	...	...	...	...	...
138a. Phimosis	...	2	...	...	2	...	2	...	...
138b. Epididymitis. Orchitis	...	1	...	...	1	...	10	...	...
138c. Hydrocele	...	...	...	...	...	...	1	...	...
138d. Other non-venereal diseases of the male genital organs	...	...	...	...	...	...	9	...	...
138e. Granuloma venereum	...	...	...	...	...	...	...	...	...
139a. Diseases of the ovary	...	...	...	...	...	...	...	...	...
139b. Salpingitis and other diseases of the Fallopian tube	...	...	2	...	2	...	...	2	...
139c. Pelvic cellulitis, abscess, etc.	...	...	1	...	1	...	...	3	...
139d. Displacement of uterus	...	...	1	...	1	...	...	6	...
139e. Dysmenorrhœa	...	...	7	...	7	...	...	25	...
139f. Endometritis. Cervicitis	...	...	11	...	11	...	...	12	...
139g. Menorrhagia	...	...	2	...	2	...	...	22	...
139h. Mastitis. Abscess and other diseases of the breast	...	1	1	...	2	...	1	5	...
139i. Other diseases of the female genital organs	...	...	5	...	5	...	...	24	...
XI.—Diseases of Pregnancy, Child Birth and the Puerperal State.									
140. Post-abortive sepsis	...	...	...	...	...	...	...	...	...
141a. Abortion	...	...	9	...	9	...	...	3	...
141b. Ante-partum hæmorrhage	...	...	...	...	...	...	...	...	...
142. Ectopic gestation	...	...	...	...	...	...	...	...	...
143. Hydatid mole and other accidents of pregnancy	...	...	2	...	2	...	...	13	...
144a. Placenta prævia	...	...	...	...	...	...	...	...	...
144b. Other puerperal hæmorrhage	...	...	1	...	1	...	...	1	...
145. Puerperal sepsis	...	...	...	...	...	...	...	...	...
146. Puerperal albuminuria. Eclampsia	...	...	...	...	...	...	...	...	...
147. Other toxæmias of pregnancy	...	...	13	...	13	...	...	12	...
148a. Puerperal phlegmasia alba dolens	...	...	...	...	...	...	...	...	...
Carried forward	12	893	288	25	1,193	22	4,565	1,116	6

TABLE IV.—RETURN OF DISEASES AND DEATHS (EUROPEAN)
FOR THE YEAR 1938—*continued*.

Diseases.	IN-PATIENTS.						OUT-PATIENTS.		
	Remaining in Hospital at end of 1937.	TOTAL.			Total cases treated.	Remaining in Hospital at end of 1938.	Male.	Female.	Deaths.
		Admissions.		Deaths.					
		Male.	Female.						
Brought forward	12	893	288	25	1,193	22	4,565	1,116	6
XI.— <i>Diseases of Pregnancy, Child Birth and the Puerperal State—contd.</i>									
148 <i>b</i> . Puerperal embolism	...	...	...	...	...	...	...	...	...
149 <i>a</i> . Difficult labour	...	...	1	...	1	...	...	...	...
149 <i>b</i> . Retained placenta	...	...	...	...	...	...	...	...	...
149 <i>c</i> . Other accidents of child birth	...	...	1	...	1	...	...	...	...
150 <i>a</i> . Puerperal insanity	...	...	...	...	...	...	...	...	...
150 <i>b</i> . Puerperal diseases of the breast	...	...	...	...	...	...	...	...	...
150 <i>c</i> . Normal labour	...	...	26	...	26	1	...	3	...
XII.— <i>Diseases of the Skin and Cellular Tissue.</i>									
151. Carbuncle. Boil	1	32	7	...	40	1	312	26	...
152 <i>a</i> . Cellulitis	...	23	1	...	24	...	97	7	...
152 <i>b</i> . Acute abscess	...	16	1	...	17	1	54	2	...
152 <i>c</i> . Whitlow	...	8	3	...	11	...	48	9	...
153 <i>a</i> . Ainhum	...	...	...	...	...	...	...	...	...
153 <i>b</i> . Chigoes	...	1	...	...	1	...	19	4	...
153 <i>c</i> . Eczema. Dermatitis	...	6	1	...	7	2	173	32	...
153 <i>d</i> . Elephantiasis	...	...	...	...	...	...	...	...	...
153 <i>e</i> . Herpes	...	3	...	...	3	...	17	1	...
153 <i>f</i> . Impetigo	...	...	...	...	...	...	6	7	...
153 <i>g</i> . Keloid	...	...	1	...	1	...	2	1	...
153 <i>h</i> . Myiasis	...	...	...	...	...	...	8	3	...
153 <i>i</i> . Pediculosis	...	...	...	...	...	...	9	...	...
153 <i>j</i> . Psoriasis	...	...	1	...	1	...	8	2	...
153 <i>k</i> . Scabies	...	...	...	...	...	...	13	...	...
153 <i>l</i> . Tinea	...	2	...	...	2	...	158	18	...
153 <i>m</i> . Ulcer	1	11	1	...	13	...	74	18	...
153 <i>n</i> . Urticaria	...	3	...	...	3	1	41	13	...
153 <i>o</i> . Other diseases of the skin and its annexa	...	6	2	...	8	...	122	24	...
XIII.— <i>Diseases of the Bones and Organs of Locomotion.</i>									
154 <i>a</i> . Osteomyelitis	...	1	...	...	1	...	1	...	...
154 <i>b</i> . Periostitis	...	...	...	...	...	...	...	1	...
155. Other diseases of the bones	...	...	...	...	...	...	1	...	...
156 <i>a</i> . Arthritis	...	4	2	...	6	...	42	2	...
156 <i>b</i> . Synovitis	...	4	...	...	4	...	38	4	...
156 <i>c</i> . Other diseases of joints—loose cartilage, ankylosis, &c.	...	2	1	...	3	...	20	1	...
156 <i>d</i> . Abscess of muscle	...	3	...	...	3	...	3	...	...
156 <i>e</i> . Ganglion	...	...	1	...	1	...	3	2	...
156 <i>f</i> . Lumbago	...	5	...	...	5	...	62	7	...
156 <i>g</i> . Other diseases of other organs of locomotion	...	3	...	...	3	...	28	6	...
XIV.— <i>Congenital Malformations.</i>									
157 <i>a</i> . Hydrocephalus	...	...	...	...	...	...	...	...	...
157 <i>b</i> . Spina bifida. Meningocele	...	...	...	...	...	...	...	...	...
Carried forward	14	1,026	338	25	1,378	28	5,924	1,309	6

TABLE IV.—RETURN OF DISEASES AND DEATHS (EUROPEAN)
FOR THE YEAR 1938—continued.

Diseases.	IN-PATIENTS.						OUT-PATIENTS.		
	Remaining in Hospital at end of 1937.	TOTAL.			Total cases treated.	Remaining in Hospital at end of 1938.	Male.	Female.	Deaths.
		Admissions.		Deaths.					
		Male.	Female.						
Brought forward	14	1,026	338	25	1,378	28	5,924	1,309	6
XIV.— <i>Congenital Malformations—</i> contd.									
157c. Malformations of the heart	...	...	...	...	...	...	...	...	...
157d. Monstrosities	...	...	...	...	...	...	...	...	...
157e. Cleft palate. Harelip	...	...	...	...	...	...	...	...	...
157f. Imperforate anus	...	...	...	...	...	...	...	...	...
157g. Other congenital malformations	...	...	...	...	...	...	...	...	...
157h. Hæmatocolpos	...	...	...	...	...	...	...	...	...
XV.— <i>Diseases of Early Infancy.</i>									
158. Congenital debility	...	...	...	...	...	...	1	...	...
159. Premature birth	...	...	...	...	...	...	...	...	...
160. Injury at birth	...	...	...	...	...	...	...	...	...
161a. Icterus neonatorum	...	1	...	1	1	...	...	...	...
161b. Pemphigus neonatorum	...	...	...	...	...	...	...	...	...
161c. Other diseases peculiar to early infancy	...	...	...	...	...	...	1	1	...
XVI.— <i>Old Age.</i>									
162a. Senile dementia	...	...	...	...	...	...	...	...	...
162b. Other forms of senile decay	...	...	...	...	...	...	...	...	...
XVII.— <i>Affections due to Violence.</i>									
165a. Suicide	...	...	...	...	...	...	...	...	...
165b. Attempted suicide	...	1	...	...	1	...	...	...	...
172. Infanticide	...	...	...	...	...	...	...	...	...
173. Homicide	...	...	...	...	...	...	...	...	...
176a. Snake bite	...	...	...	...	...	...	1	...	...
176b. Insect bite or sting	...	1	1	...	2	...	50	38	...
177. Food poisoning	...	3	5	...	8	...	7	3	...
178. Accidental gas poisoning	...	...	...	...	...	...	1	...	...
179. Other acute accidental poisoning	...	4	...	...	4	1	...	...	...
181a. Burns by fire	...	2	...	...	2	...	10	1	...
181b. Other burns or scalds	...	3	1	...	4	...	20	3	...
182. Accidental mechanical suffocation	...	...	...	...	...	...	...	...	...
183. Accidental drowning	...	...	...	...	...	...	...	...	...
184. Accidental injury by firearms	...	1	...	...	1	...	1	...	...
Injuries :—									
185. By cutting or piercing instru- ments	...	3	...	...	3	...	57	3	...
186a. Due to falls, crushing, machinery, railways, &c.	...	15	...	...	15	...	111	9	...
186b. Due to motor accidents	...	13	1	4	14	2	10	3	...
188. By non-venomous animals... ..	...	1	...	...	1	...	15	5	...
Carried forward	14	1,074	346	30	1,434	31	6,209	1,375	6

TABLE IV.—RETURN OF DISEASES AND DEATHS (EUROPEAN)
FOR THE YEAR 1938—*continued*.

Diseases.	IN-PATIENTS.						OUT-PATIENTS.		
	Remaining in Hospital at end of 1937.	TOTAL.			Total cases treated.	Remaining in Hospital at end of 1938.	Male.	Female.	Deaths.
		Admissions.		Deaths.					
		Male.	Female.						
Brought forward	14	1,074	346	30	1,434	31	6,209	1,375	6
XVII.— <i>Affections due to Violence—</i> contd.									
189. Hunger or thirst (starvation, privation)	...	...	...	...	...	...	...	...	...
191a. Heat stroke	...	2	...	1	2	...	3	...	...
191b. Sunstroke	...	1	...	...	1	...	4	...	...
192. Injuries by lightning	...	...	...	...	...	...	...	...	...
193. Injuries by electricity	...	...	...	...	...	...	...	...	...
194a. Dislocation	...	2	...	...	2	...	8	1	...
194b. Sprain	...	10	...	...	10	...	119	22	...
194c. Fracture	...	21	11	2	32	4	55	8	...
194d. Wounds and other external injuries	...	20	4	...	24	1	243	30	...
196. Wounds of war	...	...	...	...	...	...	49	...	...
198. Execution	...	...	...	...	...	...	...	...	...
XVIII.— <i>Ill-Defined Diseases.</i>									
200a. Asthenia	...	16	3	...	19	1	187	62	...
200b. Goundou	...	...	...	...	...	...	...	...	...
200c. Malingering	...	...	...	...	...	...	...	...	...
200d. Pyrexia of uncertain origin	...	7	2	...	9	...	13	3	...
200e. Shock	...	1	...	...	1	...	...	...	...
200f. Hyperpyrexia	...	...	...	...	...	...	2	...	...
<i>Diseases not included above.</i>									
201. Anti-rabic prophylaxis	...	2	...	...	2	...	62	14	...
210. Transferred cases already diagnosed by Medical Officer on other station	...	...	...	...	...	...	...	...	...
Total cases of Diseases treated ...	14	1,156	366	33	1,536	37	6,954	1,515	6

TABLE V.
RETURN OF DISEASES AND DEATHS (NON-EUROPEAN)
FOR THE YEAR 1938.

Diseases.				IN-PATIENTS.						OUT-PATIENTS.					
				Remaining in Hospital at end of 1937.	TOTAL.		Deaths.	Total cases treated.	Remaining in Hospital at end of 1938.	Male.	Female.	Deaths.			
					Admissions.										
					Male.	Female.									
I.—Infectious and Parasitic Diseases.															
1a. Typhoid fever	...	...	...	...	13	2	4	15	1	...	...	...	...	...	...
2a. Paratyphoid A.	...	...	...	...	4	...	1	4	...	...	...	...	...	...	...
2b. Paratyphoid B.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2c. Enteric fever, type not defined	...	...	...	...	9	3	5	12	1	...	...	...	...	...	...
3. Typhus fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4. Relapsing fever	...	...	...	...	3	1	...	4	...	...	...	...	...	...	...
5. Undulant fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Smallpox:—															
6a. Variola major	...	...	...	1	627	270	200	898	19	262	63	7	...	...	...
6b. Variola minor	...	...	...	...	95	32	1	127	...	64	29	...	...	...	...
7. Measles	...	...	...	1	45	22	...	68	2	109	60	...	...	...	...
8. Scarlet Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9. Whooping Cough	...	...	...	...	5	6	...	11	...	197	173	1	...	...	...
10. Diphtheria	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11. Influenza	...	...	...	2	27	4	...	33	2	204	53	...	...	...	...
12. Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13a. Amoebic dysentery...	...	...	...	10	649	138	77	797	17	1,573	748	...	...	...	...
13b. Bacillary dysentery	...	...	...	1	75	12	19	88	2	41	16	...	...	...	...
13c. Dysentery—type unspecified	...	...	...	...	429	168	95	597	12	1,885	933	2	...	...	...
14a. Bubonic plague	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14b. Pneumonic plague	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14c. Septicæmic plague	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15. Erysipelas	...	...	...	...	11	...	...	11	...	2	3	...	...	...	...
16. Acute poliomyelitis	...	...	...	...	5	...	...	5	...	6	2	...	...	...	...
17. Encephalitis lethargica	...	...	...	...	4	2	...	6	...	...	3	...	...	...	...
18. Cerebro-spinal fever	...	...	...	3	306	36	212	345	...	4	3	...	...	...	...
19. Glanders	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20. Anthrax	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...
21. Rabies	...	...	...	...	6	4	4	10	...	1	...	...	...	...	...
22. Tetanus	...	...	...	9	79	46	63	134	6	17	11	...	...	...	...
Tuberculosis of:—															
23. Respiratory system	...	...	...	27	416	83	172	526	26	335	104	4	...	...	...
24. Central nervous system	...	...	...	...	...	...	...	...	...	4	1	...	...	...	...
25. Intestines and peritoneum	...	...	...	1	12	4	5	17	...	...	1	...	...	...	...
26. Vertebral column	...	...	...	5	37	19	2	61	6	23	11	...	...	...	...
27. Other bones and joints	...	...	...	3	45	13	4	61	2	24	9	...	...	...	...
28. Skin and subcutaneous tissues	...	...	...	2	7	2	1	11	1	3	...	...	...	...	...
29. Lymphatic system	...	...	...	3	32	17	7	52	1	73	28	...	...	...	...
30. Genito-urinary system	...	...	...	...	4	...	...	4	...	...	1	...	...	...	...
31. Other organs	...	...	...	2	11	2	1	15	...	10	5	...	...	...	...
32. Disseminated tuberculosis	...	...	...	1	5	3	2	9	1	3	2	...	...	...	...
33. Leprosy	...	...	...	88	344	84	10	516	144	798	253	...	...	...	...
34a. Primary syphilis	...	...	...	105	1,330	826	21	2,261	198	4,515	1,348	...	...	...	...
34b. Secondary syphilis	...	...	...	72	830	343	10	1,245	102	3,461	2,240	...	...	...	...
34c. Tertiary syphilis	...	...	...	26	253	108	10	387	22	1,283	686	...	...	...	...
34d. Congenital syphilis...	...	...	...	13	33	44	9	90	3	71	121	...	...	...	...
35a. Gonorrhœa	...	...	...	55	1,187	230	11	1,472	82	12,116	1,851	...	...	...	...
35b. Gonorrhœa with complications	...	...	...	4	100	48	2	152	8	266	28	...	...	...	...
35c. Gonorrhœal arthritis	...	...	...	11	178	25	3	214	17	336	23	...	...	...	...
35d. Gonorrhœal ophthalmia	...	...	...	5	80	15	...	100	7	193	89	...	...	...	...
35f. Soft chancre...	...	...	...	9	189	12	...	210	13	1,195	111	...	...	...	...
35g. Venereal bubo	...	...	...	9	152	20	1	181	2	679	89	...	...	...	...
35h. Other venereal diseases	...	...	...	...	9	1	...	10	...	34	37	...	...	...	...
36a. Septicæmia	...	...	...	...	30	13	23	43	...	10	6	...	...	...	...
36b. Pyæmia	...	...	...	...	2	1	2	3	...	3	...	...	...	...	...
36c. Gas gangrene	...	...	...	...	4	...	...	4	...	...	...	...	...	...	...
Carried forward	...	...	...	468	7,682	2,660	977	10,810	695	19,790	9,141	14	...	...	...

TABLE V.—RETURN OF DISEASES AND DEATHS (NON-EUROPEAN)
FOR THE YEAR 1938—continued.

Diseases.	IN-PATIENTS.						OUT-PATIENTS.		
	Remaining in Hospital at end of 1937.	TOTAL.			Total cases treated.	Remaining in Hospital at end of 1938.	Male.	Female.	Deaths.
		Admissions.		Deaths.					
		Male.	Female.						
Brought forward	468	7,682	2,660	977	10,810	695	19,790	9,141	14
I.—Infectious and Parasitic Diseases —contd.									
37. Yellow fever... ..	...	4	...	1	4	...	...	...	...
38a. Tertian malaria (<i>P. vivax</i>) ...	1	2	1	...	4	...	...	31	...
38b. Quartan malaria (<i>P. malariae</i>) ...	...	3	...	...	3	...	21	10	...
38c. Subtertian malaria (<i>P. falciparum</i>)	30	1,408	377	45	1,815	41	16,047	8,401	3
38d. Malaria—type unspecified ...	12	759	136	25	907	21	11,231	5,863	2
38e. Blackwater fever	...	11	6	3	17	...	3	...	...
39a. Leishmaniasis	...	...	...	...	...	...	...	...	...
39b. Spirochaetosis icterohæmorrhagica	...	...	...	...	...	...	...	...	...
39c. Trypanosomiasis	146	876	224	85	1,246	125	2,103	889	...
39d. Yaws	29	201	140	2	370	30	35,120	19,911	...
39e. Other protozoal diseases	...	...	...	...	...	...	3	...	...
40. Ankylostomiasis	44	992	233	22	1,269	25	1,047	461	...
41. Hydatid cysts	...	...	1	...	1	...	4	1	...
42a. Ascariasis	10	290	80	5	380	10	28,427	13,485	...
42b. Dracontiasis (guinea-worm) ...	14	593	71	...	678	20	1,718	236	...
42c1. Filariasis (<i>bancrofti</i>)	...	19	2	...	21	2	74	29	1
42c2. Filariasis (<i>loa-loa</i>)	...	15	1	...	16	...	435	222	...
42c3. Onchocerciasis	...	4	2	...	6	...	5	2	...
42d. Schistosomiasis (<i>hæmatobium</i>) ...	12	228	17	8	257	14	610	40	...
42e. Schistosomiasis (<i>mansoni</i>)... ..	7	127	12	2	146	25	250	40	...
42f. Taeniasis (tape-worm)	4	209	82	...	295	12	5,026	1,230	...
42g. Other helminthiasis (<i>oxyuris</i> , &c.)	...	143	19	...	162	6	423	194	...
43a. Actinomycosis	...	1	1	...	2	...	10	12	...
43b. Other mycoses (madura-foot, &c.)	...	11	1	...	12	2	339	330	1
44a. Sequelæ of vaccination	...	1	1	...	2	...	3,447	1,473	...
44b. German measles	...	12	4	...	16	1	16	5	...
44c. Chicken-pox... ..	50	930	121	...	1,101	3	615	127	...
44d. Mumps	6	56	23	...	85	6	467	186	...
44e. Dengue	...	2	...	...	2	...	...	...	...
44f. Glandular fever	...	...	...	...	...	...	...	...	...
44g. Other infectious and parasitic diseases	1	1	3	1	5	...	8	...	...
II.—Cancer and other Tumours.									
Cancer of—									
45. Buccal cavity and pharynx ...	2	8	4	...	14	...	2	1	...
46a. Oesophagus	...	...	...	...	...	...	...	...	...
46b. Stomach and duodenum	1	5	7	2	13	...	2	2	...
46c. Rectum	...	3	...	...	3	...	...	...	...
46d. Liver	1	15	3	10	19	...	1	1	...
46e. Pancreas	...	1	1	2	2	...	...	...	...
46f. Other digestive organs	...	2	2	1	4	...	1	...	...
47. Respiratory organs	...	1	2	...	3	...	2	1	...
48. Uterus	...	...	4	...	4	...	...	2	...
49. Other female genital organs ...	...	...	4	...	4	1	...	2	...
50. Breast	...	...	9	3	9	...	...	6	...
51. Male genito-urinary organs ...	...	5	...	...	5	...	...	...	...
52. Skin	...	8	1	1	9	...	...	3	...
53. Other organs	1	14	5	7	20	2	7	6	...
54a. Dermoid cyst	...	10	21	1	31	...	47	24	...
54b. Fibroid, uterine	4	...	80	1	84	8	...	135	...
54c. Lipoma	9	112	58	2	179	13	178	99	...
54d. Other non-malignant tumours ...	15	157	97	9	269	9	391	207	...
55. Tumours of undetermined nature	2	77	32	12	111	6	166	106	...
Carried forward	869	14,998	4,548	1,227	20,415	1,077	128,036	62,914	21

TABLE V.—RETURN OF DISEASES AND DEATHS (NON-EUROPEAN)
FOR THE YEAR 1938—continued.

Diseases.	Remaining in Hospital at end of 1937.	IN-PATIENTS.					Remaining in Hospital at end of 1938.	OUT-PATIENTS.		
		TOTAL.			Total cases treated.	Male.		Female.	Deaths.	
		Admissions.								
		Male.	Female.	Deaths.						
Brought forward	869	14,998	4,548	1,227	20,415	1,077	128,036	62,914	21	
III.— <i>Rheumatism, Diseases of Nutrition and of Endocrine Glands and other General Diseases.</i>										
56. Rheumatic fever	...	...	...	...	...	...	...	...	...	
57a. Chronic rheumatism	30	673	195	6	898	47	25,880	12,378	...	
57b. Rheumatoid arthritis, osteo- arthritis, &c.	1	25	5	...	31	...	1,049	367	...	
58. Gout	...	2	...	...	2	...	17	17	...	
59. Diabetes mellitus	2	50	6	7	58	1	29	16	...	
60a. Scurvy (<i>hypovitaminosis C</i>) ...	...	1	3	...	4	...	11	8	...	
60b. Hypovitaminosis A	...	30	8	4	38	3	1,413	423	...	
61a. Beri-beri (<i>hypovitaminosis B₁</i>) ...	3	8	4	2	15	...	122	22	...	
61b. Epidemic dropsy (<i>toxæmic</i>) ...	...	7	5	1	12	2	6	...	...	
62. Pellagra (<i>hypovitaminosis B₃</i>) ...	...	1	1	...	2	...	178	129	...	
63. Rickets (<i>hypovitaminosis D</i>) ...	...	4	2	1	6	...	14	9	...	
65. Diseases of the pituitary gland ...	...	2	...	...	2	...	4	8	...	
66a. Simple goitre	3	21	35	6	59	4	96	183	...	
66b. Exophthalmic goitre	...	4	4	...	8	...	2	11	...	
66c. Other diseases of thyroid and parathyroids	...	9	7	1	16	...	11	11	...	
67. Diseases of the thymus	...	...	...	...	...	...	3	...	...	
68. Diseases of the adrenals	...	...	...	...	...	...	...	1	...	
69. Other general diseases	...	4	...	...	4	...	8	2	...	
IV.— <i>Diseases of the Blood and Blood Forming Organs.</i>										
70a. Purpura	...	4	...	...	4	...	...	...	...	
70b. Hæmophilia	...	5	1	...	6	...	12	...	...	
71a. Pernicious anæmia	...	...	...	...	...	...	...	...	...	
71b. Anæmia—other types	16	251	336	35	603	13	3,105	2,924	1	
72a. Leukæmia	...	2	1	1	3	...	2	...	...	
72b. Lymphadenoma	2	12	3	2	17	...	21	4	...	
73. Diseases of the spleen (<i>splenome- galy, &c.</i>)	14	122	95	7	231	10	1,947	1,343	1	
74. Other diseases of the blood and blood forming organs	...	4	4	2	8	...	20	21	...	
V.— <i>Chronic Poisoning.</i>										
75. Alcoholism (acute or chronic) ...	..	5	2	...	7	...	2	...	...	
76. Chronic poisoning by other organic substances (cocaine, morphine, &c.)	...	2	1	...	3	...	...	...	...	
77. Chronic poisoning by mineral substances	...	2	...	...	2	...	1	...	...	
VI.— <i>Diseases of the Nervous System and Sense Organs.</i>										
78. Encephalitis, cerebral abscess, &c. (not including encephalitis lethargica; see 17)	1	7	1	3	9	...	4	3	...	
79. Meningitis (not including tubercu- lar or cerebro-spinal meningitis; see 18)	1	24	8	17	33	...	9	2	..	
80. Tabes dorsalis (<i>Locomotor ataxy</i>)	1	15	3	2	19	3	8	...	...	
Carried forward	943	16,294	5,278	1,324	22,515	1,160	162,010	80,796	23	

TABLE V.—RETURN OF DISEASES AND DEATHS (NON-EUROPEAN)
FOR THE YEAR 1938—continued.

Diseases.	IN-PATIENTS.						OUT-PATIENTS.		
	Remaining in Hospital at end of 1937.	TOTAL.			Total Cases treated.	Remaining in Hospital at end of 1938.	Male.	Female.	Deaths.
		Admissions.		Deaths.					
		Male.	Female.						
Brought forward	943	16,294	5,278	1,324	22,515	1,160	162,010	80,796	23
VI.—Diseases of the Nervous System and Sense Organs—contd.									
81. Other diseases of spinal cord (not including acute poliomyelitis; see 16)	1	16	2	3	19	...	7	1	...
82a. Cerebral hæmorrhage. Apoplexy	2	22	5	18	29	...	3	3	...
82b. Cerebral embolism	...	4	...	2	4	...	3	1	...
82c. Cerebral thrombosis	1	10	5	8	16	...	...	...	...
82d. Hemiplegia and other paralysis of unstated origin	13	147	27	24	187	20	183	53	...
83. General paralysis of the insane	1	8	1	1	10	1	5	2	...
84a. Dementia præcox	...	16	5	5	21	11	6	...	...
84b. Paranoia	...	21	3	...	24	22	9	1	...
84c. Other forms of insanity	30	276	128	40	434	187	39	8	...
85. Epilepsy	7	105	36	10	148	11	295	90	...
86. Infantile convulsions (under five years of age)	3	21	19	18	43	...	104	87	4
87a. Chorea	...	1	1	...	2	...	27	17	...
87b. Neuritis. Neuralgia	5	116	34	1	155	3	2,954	1,006	...
87c. Disseminated sclerosis	...	5	1	...	6	1	2	...	...
87d. Amentia	...	1	2	...	3	...	1	...	...
87e. Hysteria	1	11	13	...	25	...	32	12	...
87f. Psychasthenia. Neurasthenia	5	28	13	1	46	1	251	103	...
87g. Other diseases of the nervous system	2	32	9	5	43	...	280	52	...
88a. Cataract	5	80	21	1	106	7	157	149	...
88b. Conjunctivitis	19	334	128	...	481	17	7,247	4,135	...
88c. Ectropion. Entropion	2	18	17	...	37	3	23	24	...
88d. Errors of refraction	...	1	2	...	3	...	242	57	...
88e. Glaucoma	...	10	7	...	17	2	61	38	...
88f. Iritis	4	35	8	...	47	2	152	54	...
88g. Keratitis	4	36	13	...	53	2	152	53	...
88h. Pterygium	...	25	3	...	28	...	59	33	...
88i. Trachoma	...	5	4	...	9	...	63	64	...
88j. Ulcer of cornea. Staphyloma. Leukoma	3	79	23	1	105	6	234	144	...
88k. Other diseases of the eye and annexa	6	141	61	...	208	9	2,274	1,193	...
89a. Otitis	7	88	29	4	124	2	6,679	3,409	...
89b. Mastoiditis	1	10	3	2	14	1	65	46	...
89c. Other diseases of the ear	1	14	9	...	24	1	739	421	...
89d. Wax in ear	...	2	1	...	3	...	1,188	465	...
VII.—Diseases of the Circulatory System.									
90. Pericarditis	...	11	2	2	13	...	50	18	...
91. Acute endocarditis	...	9	5	5	14	2	8	11	...
92. Chronic endocarditis. Valvular heart disease	7	172	58	50	237	7	268	160	...
93. Myocardial degeneration. Chronic myocarditis	12	158	62	50	232	5	246	113	...
94. Diseases of the coronary arteries. Angina pectoris. Coronary thrombosis, &c.	...	...	1	...	1	...	3	1	...
95a. Disordered action of the heart	5	58	23	16	86	2	97	101	...
95b. Other diseases of the heart	4	69	37	16	110	4	204	138	...
96. Aneurysm	1	23	3	7	27	2	16	3	...
97. Arterio-sclerosis	...	9	...	...	9	...	17	5	...
98. Gangrene	6	42	6	9	54	1	19	2	...
99. Other diseases of the arteries	...	2	...	1	2	...	12	...	...
100a. Hæmorrhoids	15	179	60	2	254	6	801	354	...
Carried forward	1,116	18,744	6,168	1,626	26,028	1,498	187,287	93,423	27

TABLE V.—RETURN OF DISEASES AND DEATHS (NON-EUROPEAN) FOR
THE YEAR 1938—*continued*.

Diseases.	IN-PATIENTS.						OUT-PATIENTS.		
	Remaining in Hospital at end of 1937.	TOTAL.			Total cases treated.	Remaining in Hospital at end of 1938.	Male.	Female.	Deaths.
		Admissions.		Deaths.					
		Male.	Female.						
Brought forward	1,116	18,744	6,168	1,626	26,028	1,498	187,287	93,423	27
VII.— <i>Diseases of the Circulatory System—contd.</i>									
100b. Varix. Varicose veins. Varicocele	...	13	...	...	13	...	44	11	...
100c. Phlebitis	...	9	4	...	13	...	13	1	...
100d. Other diseases of veins	1	1	1	...	3	...	2	5	...
101a. Bubo (non-specific)	18	287	33	...	338	20	836	120	...
101b. Adenitis and other diseases of the lymphatic system	17	343	56	2	416	26	1,996	677	...
102. Abnormalities of blood pressure, hyperpiesia, &c.	...	3	1	...	4	...	9	2	...
103a. Epistaxis	...	10	2	...	12	...	39	16	...
103b. Other diseases of the circulatory system	...	2	1	...	3	...	6	7	...
VIII.— <i>Diseases of the Respiratory System.</i>									
104a. Rhinitis. Coryza	2	63	7	3	72	5	4,815	1,660	...
104b. Other diseases of the nose	...	1	3	...	4	...	154	126	...
104c. Diseases of the accessory nasal sinuses	1	16	...	...	17	...	22	4	...
104d. Nasal polypus	...	7	2	...	9	...	14	6	...
104e. Gangosa	...	5	2	...	7	...	16	7	...
105a. Laryngitis	4	37	9	2	50	2	522	240	...
105b. Other diseases of the larynx	...	...	1	...	1	...	10	10	...
106a. Acute bronchitis	33	816	197	37	1,046	26	21,467	9,858	3
106b. Chronic bronchitis	28	415	94	18	537	12	8,634	4,556	9
106c. Bronchiectasis	...	8	...	2	8	...	7	1	...
107. Broncho-pneumonia	19	468	161	197	648	24	251	114	13
108. Lobar pneumonia	51	1,083	161	307	1,295	47	261	79	...
110a. Pleurisy	8	166	22	9	196	10	544	114	...
110b. Empyema	3	13	1	4	17	...	1	1	...
111a. Hypostatic congestion of lungs... ..	...	1	1	...	2	...	...	1	...
111b. Embolism of lung	...	...	1	...	1	...	...	...	...
112a. Asthma	4	101	19	7	124	1	339	146	...
112b. Hay fever	...	...	...	...	...	...	...	...	...
113. Pulmonary emphysema	...	15	4	1	19	1	16	5	...
114a. Gangrene or abscess of lung	...	3	1	1	4	1	3	4	...
114b. Other diseases of the respiratory system	...	13	8	1	21	2	719	260	...
IX.— <i>Diseases of the Digestive System.</i>									
115a. Dental caries. Alveolar abscess	...	61	23	...	84	...	6,431	1,474	...
115b. Pyorrhœa	...	30	8	...	38	...	1,040	593	...
115c. Stomatitis	8	65	47	8	120	5	2,033	1,232	...
115d. Tonsillitis. Pharyngitis. Quinsy	2	124	51	5	177	5	1,765	896	...
115e. Adenoids	...	7	...	...	7	...	20	10	...
115f. Other diseases of the buccal cavity, pharynx, etc.	...	18	9	4	27	1	442	202	...
116. Diseases of the œsophagus	...	6	2	...	8	1	10	1	...
117a. Ulcer of the stomach	...	22	3	6	25	...	13	4	...
117b. Ulcer of the duodenum	1	20	4	2	25	4	16	5	...
118a. Gastritis	5	157	51	5	213	5	1,472	752	...
118b. Dyspepsia	3	125	59	1	187	9	5,655	3,599	...
118c. Other diseases of the stomach	1	22	13	5	36	1	287	207	1
119. Infantile diarrhœa (under two years of age)	1	27	21	10	49	2	1,235	889	3
Carried forward	1,326	28,327	7,251	2,263	31,904	1,708	248,446	21,318	56

TABLE V.—RETURN OF DISEASES AND DEATHS (NON-EUROPEAN) FOR
THE YEAR 1938—continued.

Diseases.	IN-PATIENTS.						OUT-PATIENTS.		
	Remaining in Hospital at end of 1937.	TOTAL.		Deaths.	Total cases treated.	Remaining in Hospital at end of 1938.	Male.	Female.	Deaths.
		Admissions.							
		Male.	Female.						
Brought forward ...	1,326	23,327	7,251	2,263	31,904	1,708	248,446	121,318	56
<i>IX.—Diseases of the Digestive System—contd.</i>									
120a. Sprue... ..	...	...	...	...	...	...	...	...	...
120b. Colitis	2	57	13	1	72	...	871	534	...
120c. Gastro-enteritis	4	240	61	37	305	7	1,072	618	3
120d. Diarrhœa	3	473	131	41	607	13	7,032	3,662	1
121. Appendicitis	1	60	12	7	73	...	53	17	1
122a. Hernia	160	2,659	219	58	3,038	130	1,784	135	...
122b. Strangulated hernia	7	170	9	44	186	5	20	3	...
122c. Intestinal obstruction	...	24	19	17	43	1	1	5	...
123a. Constipation	5	144	146	4	295	2	28,044	11,149	...
123b. Diverticulitis	...	...	...	...	...	...	...	...	...
123c. Fistula in ano	5	66	11	3	82	3	83	23	...
123d. Ischio-rectal abscess	...	29	5	...	34	2	7	2	...
123e. Other diseases of the intestines	3	72	46	11	121	7	195	144	...
124. Cirrhosis of the liver	15	83	23	30	121	6	24	12	...
125a. Acute yellow atrophy of the liver	...	1	1	1	2	...	...	...	...
125b. Hepatitis	6	126	33	24	165	5	170	64	...
125c. Abscess of the liver	3	59	10	12	72	6	26	6	...
125d. Other diseases of the liver	...	13	7	1	20	...	17	3	...
126. Biliary calculi	...	...	1	...	1	...	...	...	...
127a. Cholecystitis	1	6	4	1	11	...	11	5	...
127b. Catarrhal jaundice	3	158	29	12	190	4	439	120	...
127c. Other diseases of the gall, bladder and ducts	...	3	1	...	4	...	4	...	...
128. Diseases of pancreas	...	...	1	...	1	...	...	1	...
129. Peritonitis	1	29	33	24	63	1	23	24	...
<i>X.—Non-Veneral Diseases of the Genito-Urinary System and Annexa.</i>									
130. Acute nephritis	6	131	42	41	179	9	160	53	...
131. Chronic nephritis	9	105	35	32	149	4	87	32	...
133a. Pyelitis	...	19	23	2	42	1	26	17	...
133b. Other diseases of the kidney and annexa	1	16	45	3	62	1	52	10	...
134a. Calculi of the kidney and ureter	...	...	...	...	...	...	6	4	...
134b. Calculi of the bladder	2	8	1	...	11	...	1	2	...
135a. Cystitis	7	101	45	6	153	6	476	291	...
135b. Other diseases of the bladder	5	41	16	5	62	4	51	42	...
136a. Stricture of the urethra	28	492	8	31	528	19	628	22	...
136b. Urethral fistula	1	71	19	7	91	14	70	10	...
136c. Perineal abscess	...	57	3	3	60	4	31	2	...
136d. Other diseases of the urethra	5	81	10	4	96	6	260	26	...
137a. Hypertrophy of the prostate	1	7	...	1	8	...	2	...	...
137b. Prostatitis	1	17	...	...	18	1	23	...	...
137c. Other diseases of the prostate	...	7	...	3	7	...	2	...	...
138a. Phimosis	16	725	...	...	741	9	2,208	...	...
138b. Epididymitis. Orchitis	12	313	...	1	325	12	910	...	...
138c. Hydrocele	40	834	...	13	874	47	497	...	...
138d. Other non-venereal diseases of the male genital organs	1	44	...	4	45	4	196	...	...
138e. Granuloma venereum	8	74	17	1	99	10	45	19	...
139a. Diseases of the ovary	10	...	34	4	44	2	...	48	...
139b. Salpingitis and other diseases of the Fallopian tube	5	...	160	1	165	6	...	268	...
139c. Pelvic cellulitis, abscess, etc.	10	...	25	...	35	2	...	57	...
139d. Displacement of uterus	1	...	67	2	68	4	...	161	...
Carried forward	1,714	30,942	8,616	2,755	41,272	2,065	294,053	138,909	61

TABLE V.—RETURN OF DISEASES AND DEATHS (NON-EUROPEAN) FOR
THE YEAR 1938—continued.

Diseases.	IN-PATIENTS.						OUT-PATIENTS.		
	Remaining in Hospital at end of 1937.	TOTAL.			Total cases treated.	Remaining in Hospital at end of 1938.	Male.	Female.	Deaths.
		Admissions.		Deaths.					
		Male.	Female.						
Brought forward	1,714	30,942	8,616	2,755	41,272	2,065	294,053	138,909	61
X.—Non-Venereal Diseases of the Genito-Urinary System and Annexa—contd.									
139e. Dysmenorrhœa	2	...	123	...	125	1	...	3,545	...
139f. Endometritis. Cervicitis ...	12	...	397	4	409	8	...	930	...
139g. Menorrhagia	...	...	36	...	36	...	...	465	...
139h. Mastitis. Abscess and other diseases of the breast	5	9	94	5	108	5	32	742	...
139i. Other diseases of the female genital organs	14	...	209	7	223	1	...	1,247	...
XI.—Diseases of Pregnancy, Child Birth and the Puerperal State.									
140. Post-abortive sepsis	...	...	15	3	15	...	...	11	...
141a. Abortion	5	...	338	5	343	13	...	429	...
141b. Ante-partum hæmorrhage ...	...	...	18	2	18	...	...	18	...
142. Ectopic gestation	...	...	9	2	9	...	...	18	...
143. Hydatid mole and other accidents of pregnancy	...	...	140	4	140	2	...	464	...
144a. Placenta prævia	...	...	23	2	23	...	...	...	...
144b. Other puerperal hæmorrhage ...	...	...	21	1	21	...	...	11	...
145. Puerperal sepsis	...	...	44	7	44	...	...	9	...
146. Puerperal albuminuria. Eclampsia	...	...	78	3	78	4	...	5	...
147. Other toxæmias of pregnancy ...	1	...	107	2	108	...	...	346	...
148a. Puerperal phlegmasia alba dolens	...	...	1	...	1	...	...	...	...
148b. Puerperal embolism	...	...	3	...	3	...	...	...	...
149a. Difficult labour	13	...	194	43	207	5	...	6	...
149b. Retained placenta	...	...	94	12	94	1	...	10	...
149c. Other accidents of child birth ...	5	...	133	5	138	2	...	30	...
150a. Puerperal insanity	...	...	1	...	1	...	...	...	...
150b. Puerperal diseases of the breast	...	...	10	...	10	...	...	9	...
150c. Normal labour	27	...	2,266	2	2,293	40	...	48	...
XII.—Diseases of the Skin and Cellular Tissue.									
151. Carbuncle. Boil	7	134	26	1	167	5	3,422	1,014	...
152a. Cellulitis	20	608	108	21	736	31	2,741	780	1
152b. Acute abscess	56	1,038	180	17	1,274	56	4,734	1,304	...
152c. Whitlow	14	162	34	...	210	11	2,855	1,166	...
153a. Ainhum	4	33	4	...	41	...	167	54	...
153b. Chigoes	1	17	10	...	28	1	224	66	...
153c. Eczema. Dermatitis	11	161	49	3	221	13	5,421	2,318	...
153d. Elephantiasis	35	369	40	10	444	31	273	54	...
153e. Herpes	1	24	5	...	30	...	191	63	...
153f. Impetigo	...	27	10	...	37	1	491	272	...
153g. Keloid	1	18	7	...	26	2	70	52	...
153h. Myiasis	...	...	...	...	...	...	5	3	...
153i. Pediculosis	...	6	5	...	11	...	56	454	...
153j. Psoriasis	...	4	2	...	6	...	268	156	...
153k. Scabies	9	263	93	...	365	11	15,387	5,036	...
153l. Tinea	1	95	46	3	142	20	9,417	2,723	...
153m. Ulcer	389	2,730	1,232	41	4,351	295	43,251	16,080	...
153n. Urticaria	4	10	5	...	19	...	710	312	...
153o. Other diseases of the skin and its annexa	2	58	21	2	81	7	906	459	...
Carried forward	2,353	36,708	14,847	2,962	53,908	2,631	384,674	179,618	62

TABLE V.—RETURN OF DISEASES AND DEATHS (NON-EUROPEAN) FOR
THE YEAR 1938—*continued*.

Diseases.	IN-PATIENTS.							OUT-PATIENTS.		
	Remaining in Hospital at end of 1937.	TOTAL.			Total cases treated.	Remaining in Hospital at end of 1938.	Male.	Female.	Deaths	
		Admissions.		Deaths.						
		Male.	Female.							
Brought forward	2,353	36,708	14,847	2,962	53,908	2,631	384,674	179,618	62	
XIII.— <i>Diseases of the Bones and Organs of Locomotion.</i>										
154a. Osteomyelitis	42	234	84	9	360	36	246	121	...	
154b. Periostitis	1	43	8	...	52	3	384	153	...	
155. Other diseases of the bones ...	6	39	17	...	62	1	422	186	...	
156a. Arthritis	35	413	67	7	515	22	3,892	1,082	...	
156b. Synovitis	9	150	10	1	169	3	966	223	...	
156c. Other diseases of joints—loose cartilage, ankylosis, etc. ...	2	16	7	...	25	1	200	81	...	
156d. Abscess of muscle	27	439	75	26	541	23	1,148	362	...	
156e. Ganglion	1	33	17	1	51	3	657	205	...	
156f. Lumbago	...	54	1	...	55	1	1,869	551	...	
156g. Other diseases of other organs of locomotion	2	38	9	1	49	5	701	195	...	
XIV.— <i>Congenital Malformations.</i>										
157a. Hydrocephalus	...	4	2	2	6	...	8	4	...	
157b. Spina bifida. Meningocele ...	...	...	...	...	...	...	2	1	...	
157c. Malformations of the heart ...	...	...	...	...	...	...	...	...	...	
157d. Monstrosities	...	...	...	...	...	...	...	...	...	
157e. Cleft palate. Harelip	...	4	1	...	5	1	3	4	1	
157f. Imperforate anus	...	2	1	1	3	...	...	1	...	
157g. Other congenital malformations	...	7	8	1	15	...	18	6	...	
157h. Hæmatocolpos	...	...	2	...	2	...	...	...	...	
XV.— <i>Diseases of Early Infancy.</i>										
158. Congenital debility	10	50	47	21	107	11	230	181	4	
159. Premature birth	...	6	75	8	81	1	1	7	...	
160. Injury at birth	...	...	2	...	2	...	2	...	...	
161a. Icterus neonatorum	...	2	4	...	6	...	...	1	...	
161b. Pemphigus neonatorum	...	...	2	1	2	...	1	1	...	
161c. Other diseases peculiar to early infancy	21	44	120	48	185	10	474	566	6	
XVI.— <i>Old Age.</i>										
162a. Senile dementia	...	7	2	1	9	1	71	17	1	
162b. Other forms of senile decay ...	...	19	7	6	26	2	37	44	2	
XVII.— <i>Affections due to Violence.</i>										
165a. Suicide	...	1	...	1	1	...	...	...	...	
165b. Attempted suicide	...	9	4	4	13	2	2	...	...	
172. Infanticide	...	...	...	...	...	...	...	...	...	
173. Homicide	...	...	...	...	...	...	1	...	...	
176a. Snake bite	...	79	13	6	92	...	142	43	...	
176b. Insect bite or sting	...	17	3	1	20	...	503	155	...	
177. Food poisoning	...	6	8	5	14	...	4	...	...	
178. Accidental gas poisoning	...	9	1	3	10	...	...	...	...	
179. Other acute accidental poisoning	1	24	9	8	34	...	16	16	...	
181a. Burns by fire	27	203	96	41	326	20	1,793	872	...	
181b. Other burns or scalds	4	46	31	3	81	10	480	370	...	
182. Accidental mechanical suffoca- tion	...	...	3	...	3	...	...	...	...	
Carried forward	2,541	38,706	15,583	3,168	56,830	2,787	398,947	185,066	76	

TABLE V.—RETURN OF DISEASES AND DEATHS (NON-EUROPEAN)
FOR THE YEAR 1938—*continued*.

Diseases.	IN-PATIENTS.						OUT-PATIENTS.		
	Remaining in Hospital at end of 1937.	TOTAL.			Total cases treated.	Remaining in Hospital at end of 1938.	Male.	Female.	Deaths.
		Admissions.		Deaths.					
		Male.	Female.						
Brought forward	2,541	38,706	15,583	3,168	56,830	2,787	398,947	185,066	76
XVII.— <i>Affections due to Violence—</i> contd.									
183. Accidental drowning	...	2	2	...	4	...	...	...	...
184. Accidental injury by firearms ...	7	152	15	16	174	8	96	14	...
Injuries:—									
185. By cutting or piercing instru- ments	83	1,033	169	38	1,285	65	11,733	1,980	1
186a. Due to falls, crushing, machinery, railways, &c. ...	23	436	74	21	533	37	7,686	1,034	...
186b. Due to motor accidents ...	11	199	43	22	253	10	395	67	...
188. By non-venomous animals ...	2	37	25	...	64	4	484	253	...
189. Hunger or thirst (starvation, privation)	2	14	18	8	34	1	14	8	...
191a. Heat stroke	...	2	2	...	4	...	1	1	...
191b. Sunstroke	...	2	...	1	2	...	...	...	...
192. Injuries by lightning	...	1	...	...	1	...	14	...	...
193. Injuries by electricity	...	6	...	...	6	...	5	...	...
194a. Dislocation	8	92	15	2	115	3	190	67	...
194b. Sprain	1	179	22	2	202	3	4,804	635	...
194c. Fracture	91	797	169	61	1,057	88	505	101	...
194d. Wounds and other external injuries	78	1,715	337	22	2,130	77	23,909	4,128	...
196. Wounds of war	...	...	...	...	...	...	...	...	...
198. Execution	...	...	...	...	...	...	...	...	...
XVIII.— <i>Ill-Defined Diseases.</i>									
200a. Asthenia	3	161	61	40	225	9	1,627	1,204	...
200b. Goundou	...	2	1	...	3	...	6	6	...
200c. Malingering	3	25	...	...	28	...	293	7	...
200d. Pyrexia of uncertain origin ...	1	17	3	4	21	...	17	3	...
200e. Shock	...	6	2	2	8	...	4	...	...
200f. Hyperpyrexia	...	6	2	1	8	1	2	...	...
<i>Diseases not included above.</i>									
201. Anti-rabic prophylaxis	1	17	3	...	21	...	226	112	...
202. Ascites	...	29	11	6	40	2	75	61	...
210. Transferred cases already diag- nosed by Medical Officer on other station... ..	...	...	...	...	...	...	...	...	...
Total cases of Diseases treated	2,855	43,636	16,557	3,414	63,048	3,095	451,033	194,747	77

APPENDICES

APPENDIX A.

Laboratory Service.

1. The Laboratory Service consisted of the following sections:—

- (1) The office and laboratory of the Senior Pathologist at Yaba.
- (2) A Bacteriological Unit at Yaba, under a Pathologist.
- (3) A laboratory at the African Hospital, Lagos, under a Pathologist.
- (4) Clinical laboratories at Kaduna, Port Harcourt, Calabar, Kano, Jos and Zaria.

1. SENIOR PATHOLOGIST'S LABORATORY.

EXAMINATION OF MATERIAL FOR RABIES.

2. Forty-five brains were received for examination, including three feline and one human. Twenty (including one feline) were positive.

YELLOW FEVER PROTECTION TESTS.

3. Specimens of blood received numbered 207 of which 150 were from Europeans, and eighty-three were from persons who had not been inoculated. Twenty-three of the specimens received were useless for examination owing to contamination or insufficient quantity of serum. Of the eighty-three tests for diagnosis seventeen (one European) gave full protection, thirty-seven (six Europeans) were negative, and nine (two Europeans) gave partial protection.

Prophylactic inoculations of dried vaccine were administered to 112 Europeans. Protection tests, carried out after a minimum period of three weeks were, with three exceptions, fully positive. Two of the people inoculated volunteered to give a blood specimen daily from the 5th to the 9th day following inoculation. Protection tests were made and gave negative results.

TISSUES FOR EXAMINATION.

4. Twenty-two tissues were received for examination for yellow-fever. Seven were positive (five Europeans), and were distributed as follows:—Port Harcourt two, Calabar, Jos, Minna, Oshogbo and Ijebu-Ode one each.

PLAGUE.

5. During the year, 7,029 rat smears received from the dissecting station at Ebute Ero were examined. All were negative.

POST-MORTEMS.

6. Sixty-two autopsies were performed (Coroner's forty-four, Health eighteen) and are summarised as follows, viz. accidents fourteen, broncho-pneumonia twelve, tuberculosis nine, and other conditions twenty-seven.

7. In addition to the above, investigation into infant mortality was continued until April and thirty-three autopsies were performed with the following results:—

Broncho-pneumonia	...	...	...	...	20
Pulmonary tuberculosis	...	...	...	...	3
Lobar pneumonia	...	...	...	...	2
Other conditions	...	...	...	...	8

VACCINIA VACCINE.

8. Experimental production of vaccinia vaccine at Yaba was continued and satisfactory seeds were produced. Sheep were obtained from Kano and twenty-five animals were used with an average yield of twenty-nine grams of pulp.

Potency in infants and rabbits has been maintained and batches of vaccine were sent to the Gold Coast and Sierra Leone for experimental use.

Potency at room temperature gave the following results:—

4-13 days	...	...	100% positive.
16-20	..	...	66% ..
at 25	..	...	50% ..

Vaccine, after being kept at room temperature for ten days and then stored one month at 10°C gave 100% positive results.

RABIES VACCINES.

9. Experiments were continued with the preparation of this vaccine from sheep and as satisfactory results were obtained it was decided to manufacture the vaccine from these animals. 15,080 c.c. were prepared and issued.

2. BACTERIOLOGICAL UNIT, YABA.

10. *Fæces*.—185 specimens were plated from cases of suspected dysentery and the following organisms were isolated.

Bact. dysenteriae	Flexner V	...	...	...	8
"	"	"	W	...	12
"	"	"	X	...	2
"	"	"	G (Sartorius)	...	4
"	"	"	Inagglutinable	...	3
"	"	Schmitz	...	...	5
"	"	Shiga	...	...	1

A second Shiga strain was isolated at post-mortem examination.

Twenty-nine cultures, sent in from out-stations were examined and the following were typed.

Bact. dysenteriae	Flexner V	...	...	...	8
"	"	"	W	...	5
"	"	"	X	...	3
"	"	"	WZ	...	1
"	"	"	Inagglutinable	...	1
"	"	Sonne	...	...	1
"	"	Schmitz	...	...	2
"	typhosum	...	...	...	2

11. *Urine* cultures were made from sixty-four cases, organisms of the Bact. coli group being found in twenty-one instances. Other organisms isolated were Streptococci (four times) and Ps. pyocyaneum, Bact. alkaligenes and a Corynebacterium (once each).

12. *Blood cultures* numbered thirteen, the only positive findings being Streptococcus hæmolyticus (once), Bact. coli (once) and Friedlander's bacillus (once).

13. *Widals*.—Forty-seven tests were performed for evidence of active enteric infection with the following results.

Bact. typhosum "H" and/or "O" ...	9
" paratyphosum A ...	1
" paratyphosum C ...	1
Negative for active infection ...	36

Two widals for the Brucella group were negative while one Weil-Felix test was positive for Proteus X 19.

14. *Kahn Tests*.—1,950 sera were received of which fifteen were discarded as unsuitable for the test. The results were as follows:—

Positive ...	717
Doubtful ...	180
Negative ...	1,038

Thirty cerebro-spinal fluids gave the following results:—

Positive ...	5
Doubtful ...	3
Negative ...	22

15. *Miscellaneous Examinations* numbered forty-three. These included specific examinations for tetanus, anthrax and tubercle bacilli and examination of pathological material for other organisms. The most interesting results were the isolation of C1. tetani from a small excised wound and of Streptococcus hæmolyticus from a knee-joint.

3. LABORATORY OF THE AFRICAN HOSPITAL, LAGOS.

RESEARCH WORK.

17. Owing to depletion of the Laboratory Service staff through leave incidence and invalidings, research work was practically at a standstill.

3. LABORATORY OF THE AFRICAN HOSPITAL, LAGOS.

18. *Teaching*.—The laboratory was used during the year for the training of Medical Students and Medical Assistants in Pathology, Bacteriology and Parasitology. Owing to shortage of staff, the training of Laboratory Assistants was temporarily suspended.

19. *Tumours*.—159 specimens of tumours were examined during 1938, compared with 148 in 1937. Of the tumours examined forty-nine were benign and 110 malignant. The regional distribution of the malignant neoplasms was:—

Site.	Carcinoma.	Sarcoma.	Melanoma.
Alimentary tract ...	6	1	—
Bones and joints ...	5	4	—
Breast—female ...	10	—	—
Genitals—female ...	11	1	—
Genitals—male ...	2	—	—
Kidney ...	1	—	—
Liver—primary ...	4	—	—
Lymph nodes—primary ...	—	6	—
Lymph nodes—secondary ...	5	—	—
Orbit ...	2	2	—
Pancreas ...	1	1	—
Salivary glands ...	10	—	—
Skin, subcutaneous and muscle	22	7	8
Thyroid ...	1	—	—
Total ...	80	22	8

20. *Miscellaneous Histological Examinations*.—Specimens examined and reported upon totalled 564 as compared with 404 the previous year. This figure represents 1,157 blocks of tissue prepared, cut and stained.

21. *Post-mortem Examinations.*—During the year 251 autopsies were performed at the African Hospital by the Pathologists as compared with 460 in 1937. Of these ninety-seven were Coroner's, 130 were Health and the remainder hospital cases. The most frequent causes of death were broncho-pneumonia forty-five cases, lobar pneumonia twenty-six, tuberculosis forty-nine, accidents sixteen, nephritis ten and malaria seven.

22. *Miscellaneous Bacteriological Examinations.*—251 examinations were made including thirty-eight for mycobacterium lepræ (four positive Africans).

23. *Biochemical Examinations.*—Total examinations, 129; blood cholesterol, six; blood sugar, twenty-seven; blood urea, thirty-one; urinary sugar (quantitative), five; fractional gastric analysis, 49; urea concentration, eight; Van den Bergh reaction, three.

24. *Examination of the Cerebro-spinal Fluid.*—Total specimens, thirty-three; globulin, eight; protein, nineteen; sugar, one; cell count, twenty-one; deposit, six.

25. *Biological Examinations.*—Three Ascheim-Zondek tests with one positive.

26. *Venereal Diseases.*—Pus smears for gonococci.

	No. of examinations.	Positive.		No. of examinations.	Positive.
European male ...	34	8	African male ...	50	11
„ female ...	9	2	„ female ...	81	20

27. *Dark Ground Examinations for Treponema Pallidum.*

Total examined ...	29			
European male ...	5	Positive ...	2	
African male ...	24	Positive ...	5	

ROUTINE LABORATORY EXAMINATIONS.

	Lagos Area.	Outstations.
Blood films examined ...	6,172	10,267
Subtertian parasites found ...	692	1,164
Crescents found ...	—	15
Quartan parasites found ...	—	22
Benign tertian parasites found ...	1	—
Trypanosomes found ...	1	140
Microfilariae ...	133	234
Blood counts performed ...	264	162
Stool examinations performed ...	4,445	10,084
T. saginata ...	21	362
Ascaris ...	2,205	920
Ankylostomes ...	1,691	4,368
T. trichiura ...	1,986	1,285
Strongyloides ...	210	169
Flagellates ...	114	464
E. histolytica, free ...	19	115
„ „ encysted ...	25	182
E. coli, free ...	123	162
„ „ encysted ...	766	592
S. mansoni ...	10	125
Blood ...	334	1,029
Mucus ...	396	1,029
Cellular exudate ...	333	1,138
Protozoa, unclassified ...	13	43
Urine examinations performed ...	4,532	10,916
S. hæmatobium found ...	110	413
Kahn tests performed ...	1,950	2,297
Positive ...	717	1,098
Negative ...	1,038	1,075
Doubtful ...	180	124
Agglutination tests (typhoid) performed ...	47	45
Positive ...	11	21
Sputum examinations performed ...	151	122
Tubercle bacilli found ...	37	20
Other examinations performed ...	(vide supra)	1,185

Two hundred and forty-one post-mortem examinations were performed by the out-station laboratory staff.

APPENDIX B.

Report of the Sleeping Sickness Service, 1938.

The greater part of the year has continued to be a period of transition but by the end of the year it could be stated that this period had come to an end. The scheme for the expansion of the service came into operation in April, 1937. Under this scheme the Colonial Development Fund is providing £19,000 per annum for five years for Sleeping Sickness Control measures. Immediate steps were taken to make the new appointments but it was neither necessary nor possible to obtain all the new staff last year and the full number was not obtained until the end of 1938.

2. The four Sleeping Sickness Control Officers required to bring the establishment of these officers up to full strength were appointed in 1938 and arrived in Nigeria during September and October. The remaining two Royal Army Medical Corps British Non-Commissioned Officers who were still required arrived in December.

3. The treatment section of the service has been reorganised. Five complete Sleeping Sickness Teams have been kept in the field during the whole of the year. In June a sixth team was also formed and placed in the field.

Each team consists of fully trained African staff working under the immediate charge of a British Non-Commissioned Officer. The teams have now been organised into three units each of two teams. Each unit is under the command of a Medical Officer. In addition to his work with the teams, the Medical Officer is responsible for the supervision and co-ordination of all the activities of the Sleeping Sickness Service in his area. Among his duties are the inspection of Sleeping Sickness Dispensaries, and the planning of anti-tsetse clearing. He has a special sub-team at his disposal and with it he may carry out either preliminary investigations in new areas or an investigation in areas which have been surveyed and treated by the teams in the past. Investigations in areas previously treated have been carried out by Medical Officers with sub-teams in the Galadima District of the Katagum Division and in the Miango and Kwall areas of Plateau Province.

At the end of the year a Sleeping Sickness team was sent to the Cameroons to deal with an epidemic of sleeping sickness which was reported to have broken out there.

4. The Control Section of the Service has been engaged in work in the Sleeping Sickness Settlement areas in the old Anchau District of Zaria Province. This section has also carried out large scale protective clearing campaigns in the south of the Katsina, and in Zaria, Provinces.

5. The Deputy Director of the Service, Dr. H. M. O. Lester, O.B.E., proceeded to East Africa in October for the purpose of commencing the investigations into sleeping sickness which he is undertaking in connection with the award made to him from the Carnegie Refresher Course Fund.

(2) FIELD WORK.

6. During the year 378,109 people have been examined by the Sleeping Sickness teams and 21,073 of them were found to be infected. Of these 20,995 had completed treatment at the end of the year. A

further 9,661 cases were diagnosed and treated at field dispensaries and 4,272 at general medical stations. This brings the total cases for the year to 35,006.

In addition to the above, 9,016 persons were examined in connection with the scheme for the control of Mines Labour in the Southern Division of Plateau Province. 127 cases of sleeping sickness discovered among these labourers were treated at the Sleeping Sickness Dispensary at Wamba.

(3) THERAPEUTIC MEASURES.

Treatment Teams.

7. Six out of the eight Royal Army Medical Corps British Non-Commissioned Officers completed their training and took over charge of the teams during the year. They have done very well at this work but while they were gaining experience the work of the teams had naturally to be somewhat slowed down.

A good deal of time had also to be devoted to completing the training of the new African staff and to reorganising the treatment service.

8. The work of the teams is shown in the following table. It will be noticed that in certain areas more people are shown as being treated than were diagnosed during the year. This was due to the fact that cases diagnosed at the end of the year 1937 did not complete their treatment until early in 1938.

(a) *New Surveys.*

Locality.	No. Examined.	No. of Cases of S.S.	Infection Rate.	No. Treated.
KATSINA PROVINCE.				
Galadima Emirate	36,458	624	1.7	556
Musawa	...	...	...	293
ZARIA PROVINCE.				
Birnin Gwari Emirate	16,577	95	.5	86
NIGER PROVINCE.				
Minna Division	20,890	2,041	9.8	2,517
BENUE PROVINCE.				
Wukari Division	35,247	3,032	8.6	2,999
Nasarawa Emirate	53,306	12,477	23.4	6,873
Keffi Emirate	...	...	...	3,825
KANO PROVINCE.				
Gwarzo District	8,704	84	.96	79
Karaye District	...	...	...	1,216
BAUCHI PROVINCE.				
Ningi Emirate	31,731	461	1.5	457
Rahama Area	5,698	223	3.9	215
Total New Surveys	208,611	19,037	9.1	19,116

(b) *Resurveys.*

Locality.	No. Examined.	No. of Cases of S.S.	Infection Rate.	No. Treated.
KATSINA PROVINCE.				
Galadima West	27,625	129	5	123
PLATEAU PROVINCE.				
Jemaa Division	36,299	910	2.5	885
Southern Division	30,418	290	.9	279
Jos Division	15,937	365	2.3	360
Pankshin Division	4,727	78	1.6	74
KANO PROVINCE.				
Hadejia Emirate	11,540	152	1.32	148
Birnin Kudu West	41,199	102	.25	...
BAUCHI PROVINCE.				
Katagum Division	1,753	10	.6	10
Total Resurveys	169,498	2,036	1.2	1,879
Grand Total all Surveys ...	378,109	21,073	5.6	20,995

9. It will be seen that an average infection rate of approximately 5.6% was found among the persons examined. During the previous year 447,358 people were examined with an average infection rate of 6.3%. The reason for the smaller numbers for this year is due partly to the fact that in some instances we have been working in areas where the service has never operated before. As the people in these areas are often rather frightened at the idea of a mass survey and treatment, a considerable amount of time has had to be spent in carrying out propaganda among them. The results of this propaganda have been most gratifying and the time spent on it has certainly not been wasted. The chief reason, however, for the fall in the figures is that re-examinations in areas surveyed some years earlier have been carried out to a much greater extent than formerly. Three out of six teams have in fact been chiefly engaged in carrying out these re-examinations.

10. The service has long been anxious to carry out resurveys on a large scale but until recently neither staff nor funds were available. During the year resurveys were carried out in parts of the Plateau Province and in the Kano, Katsina, Katagum and Hadejia Emirates.

11. The difference between the findings of surveys in new areas and the resurveys is very marked. During the new surveys some 208,611 people were examined of whom 19,037 were found to be infected, the average infection rate being about 9.1%. In the course of the resurveys 169,498 people were examined, of whom only 2,036 were found to be infected, the average rate of infection thus being only 1.2%.

12. The chief object of these large scale re-investigations was to ascertain present conditions in the main sleeping sickness belt. The areas in which it was decided to carry them out were considered to be sufficiently diverse in character and far enough apart from each other to enable the combined results to give a good indication of these conditions.

The results are most encouraging. Broadly speaking, the general infection rate in these areas is now only about a quarter to one-eighth of what it was in former years.

13. It is noteworthy however that high infection rates, ranging from ten per cent to forty per cent, are still being obtained in the Nasarawa Emirate of Benue Province, an Emirate in which no mass treatments had ever been carried out before this year. Although the beneficial effects of the intensive treatment campaigns made during the last few years are undoubted, there must be no relaxation of our efforts. There are still some infected areas which have not yet been surveyed, and there are others where resurveys are urgently required.

14. In one of his recent papers entitled "The Progress of Sleeping Sickness Work in Northern Nigeria" (*West African Medical Journal*, October, 1938) Dr. Lester states "The prospects for the control of the disease are now very much brighter. Already there are signs that spread has largely been checked and that mass treatment and the establishment of dispensaries have helped to lower the infection rate, even in the worst affected areas. When once the full force of the protective campaigns can be felt, there should be a great decrease in the amount of sleeping sickness in the Northern Provinces".

15. All the teams have also carried out general medical and health work and some 30,000 vaccinations have been done. As yaws was found to be very prevalent in the Ninzam District of Jemaa Division (Plateau Province) a campaign against this disease was carried out. During this campaign, 710 cases of yaws were treated. The results of this treatment were excellent. The people were extremely grateful and much impressed by the effects of European medicine (Bismuth) on this disease.

(4) DISPENSARIES.

16. Sleeping sickness work has been carried out at thirty specially built dispensaries and at a number of Native Administration dispensaries. Four new dispensaries of the former class were opened during the year. Their establishment in the districts which have been surveyed and treated has played a big part in reducing the infection rate and in controlling the disease. In many of the pagan areas they are very popular, in some instances whole families have trekked thirty miles in order to be examined and treated there.

17. As much general medical work as possible is done at these dispensaries and in order to raise the standard of this work a special training school has been opened in Zaria. Some fifteen carefully selected dispensary attendants have been sent to this school where they are given a course of training in health work similar to that for sanitary inspectors. At the same time they are instructed in medical work at the African Hospital and at a model dispensary. When they have completed their training they will be posted as second men to the most important and popular of the dispensaries. An effort is being made to improve the buildings and to build model compounds for the staff. It is hoped that in time these dispensaries may become converted into real centres for general medical and health work.

(5) THE CONTROL OF MINES LABOUR IN THE SOUTHERN DIVISION OF PLATEAU PROVINCE.

18. The system of control of tin mining labour commenced in 1935 continues to function excellently. The six-weekly examinations of all labourers employed in the mines is carried out by a Sleeping Sickness Medical Officer. During the course of these examinations some 9,016 labourers were examined of whom 127 were found to have contracted sleeping sickness, an infection rate of 1.41%. During the year a full survey and mass treatment was carried out in the Wamba, Nunku and Mama Districts of the Southern Division when the average infection rate there was found to be one per cent. This is a great contrast to the situation there in 1934 when a partial resurvey of the worst areas was

carried out which gave an infection rate among the permanent mines labourers of 45.4%, while that of the neighbouring pagan villages which supplied a considerable portion of the casual labour was 14.3%. A re-examination in 1936 of these villages showed that the infection rate among them had dropped to 3.7%. In 1935 a Sleeping Sickness Dispensary was opened at Wamba in connection with the scheme for controlling the mines labourers. In that year 949 patients were treated there, and since then there has been a progressive decrease in the number of cases treated, the number for this year being 334.

There is little doubt that the combination of the Wamba Dispensary with the scheme for control of the mines labourers has been responsible for the great reduction in the amount of sleeping sickness in this locality during the last few years.

(6) SLEEPING SICKNESS CONTROL.

19. The Sleeping Sickness Control Section which was formed and started work during the latter part of 1937 was brought up to full strength during the year. A certain amount of time had to be spent on training the new Control Officers who arrived during the year. Some sixty African Headmen and a number of skilled labourers also completed their special training, the beneficial effects of which were soon seen in the increased amount of work which the Control Section was able to perform during the year. In addition to the work connected with the Anchau Settlement Scheme, the Control Section is also responsible for the supervision of the large-scale protective clearing campaigns which are being carried out in other parts of the Northern Provinces.

20. As pointed out in the 1937 Report it was decided that work in the proposed fly-free corridor was to be first carried out in the Anchau District and that the other districts were to be dealt with later.

21. An Advisory Committee consisting of the Secretary, Northern Provinces, the Resident, Zaria Province, the Assistant Director of Agriculture, and the Deputy Director, Sleeping Sickness Service, has been formed to settle general matters of policy. The work at Anchau is now in charge of a Sub-Committee, which consists of the Entomologist and of the District Officer who has been posted to take charge of the actual moving of the population.

(a) *Anchau Settlement Scheme.*

22. The Sub-Committee has reported as follows:—During January the 1-inch to the mile map of Anchau District was completed. This made it possible to plan out in some detail a section of the corridor and the associated population movements, and to make out a provisional clearing programme for the whole district. Later in the dry season surveys were made of the southern parts of Ikara District which border on Anchau. Another important preliminary activity was the improvement of communications in the district. A system of motorable tracks was constructed, mostly following the line of major trade routes.

23. Meanwhile, clearing had been started on a small scale and experiments were made in order to arrive at the most satisfactory technique. By the end of the season forty-five miles of stream had been cleared at the cost of approximately £10 per mile. Clearing was finally closed down for the season at the end of April, owing to the rapid dispersal of labour which followed the first rains.

24. After the arrival in January of the Well Foreman, a well-sinking programme was at once put in hand and this continued without interruption into the wet season. By August (when work was stopped) twenty-two cement-lined shafts had been completely or partially sunk in the villages and certain hamlets of the district.

25. As enough was not known of the potentialities of different sorts of land, or of the agricultural practices of the people, to admit of satisfactory planning, a study was made of the local soils and vegetation types. An agricultural experiment was carried out during the rains. A number of small plots were sited in the principal vegetation communities and soil types and these were planted with the most important crops grown locally. The results of this experiment, together with more detailed mapping of the settlement areas, helped to fill important gaps in existing knowledge of the district.

The Wet Season, May to September, 1938.

26. During the rainy season attention was devoted mainly to gaining detailed information about the district and its inhabitants. Well-sinking also continued until August when it had to be abandoned owing to the rapidly rising water table.

27. The principal occupation of all Control Officers during the rains was the mapping of all proposed settlement areas on a scale of three inches to the mile, cultivated land and the chief vegetation types being shown. These maps have proved very valuable in showing exactly where vacant land is available, and have thrown altogether new light on the extent of existing cultivation in the district.

28. One Control Officer also devoted himself to the agricultural plot experiment referred to above; another studied questions of water consumption in connection with the well-sinking programme; and a third made large scale plans of Anchau and Kargi with a view to the improvement of these places.

29. Several members of the staff investigated native farming methods and ascertained that much larger areas are used by the local people than had been supposed. This information was required in order that adequate space should be allotted in the new settlement areas, without disturbing existing methods of cultivation.

30. During the rains monthly fly-surveys were carried out in order to test the efficacy both of ordinary clearing and of the barrier method already mentioned.

The Dry Season, 1938-39 (October to December only).

31. Four new Control Officers arrived during September and October, but as several officers have lately been posted to Community Clearing Campaigns in other districts there has been no actual increase in the Settlement Staff. The District Officer who has been seconded to the Anchau Settlement Scheme arrived at the beginning of October to take charge of population movements and other administrative aspects of the work.

32. During October all roads and tracks were repaired and Anchau was in contact with the railway after being somewhat isolated since July. New tracks were made to Damau in the south and to Pala and Tudun Wada (connecting to Kano) in the north.

33. From the beginning of October every man desiring work had been taken on, and clearing was begun in the middle of that month. As the result of an abundant labour supply, sufficient tools, and increasing efficiency, very rapid progress has been made and by the end of December seventy miles of stream had been cleared at a cost of about £11 per mile. There is now practically no more clearing to be done in Anchau District and attention will be turned to that part of the corridor which adjoins Anchau to the south-east.

34. The District Officer has taken in hand the improvement of Anchau town, and a scheme has been approved for accommodating 600 people, displaced in the course of improvements, in a model settlement nearby.

35. A census of the district and a hamlet-to-hamlet economic inquiry has also been carried out. This is being followed up by final plans for the resettlement of those who are to move, and the first sites for new hamlets had been fixed by the end of the year. In the course of the present season it is hoped to decide upon all new sites, so that the people can plant cotton and groundnuts on their new lands during the next rains. The actual move will take place in the following dry season.

36. New settlements will be laid out and the compounds at least partially built at the expense of the scheme; buildings erected subsequently by the villagers or voluntary settlers will have to conform to the principles laid down.

37. The allowance of farmland, including fallow, in the settlements will be at the rate of fourteen acres to each working male (including those boys who work on the farms). An additional four acres per working male will be allowed for expansion, and areas are also to be reserved for fuel plantations and grazing.

38. Plans for the remaining parts of the corridor have been under consideration, and those village areas which adjoin Anchau to the south-east were surveyed during November and December. It is expected that the whole length of the corridor will have been planned out by the end of next dry season (1939-40).

(b) *Protective Clearing.*

39. In addition to their work at Anchau the Control Section are responsible for the supervision of large scale protective clearing campaigns. Two such campaigns are being carried out, one in Southern Katsina, the other in Zaria Province. In Katsina work has been carried out in the Kankara, Musawa, Kogo, Maska, Dan Ja and Galadima Districts. In Zaria Province work is being carried out in Paki and Makarfi Districts. When these campaigns are completed, it is expected that some 200,000 people will be protected against infection with sleeping sickness. A further campaign, together with a small settlement scheme involving the moving of several villages was also planned in the Tudun Wada District of Kano Emirate.

(7) RESEARCH WORK.

40. Owing to the greatly increased activities of the Department in other areas and the consequent demands for staff there, it has rarely been possible to keep more than one officer at Gadau. The Medical Officer in charge of the station has to run a small hospital and out-patient dispensary and inspect the various sleeping sickness dispensaries in this area. He has also to teach the new African Dispensary Attendants who are later posted to the teams and dispensaries. Under these circumstances little time could be devoted to research, but a certain amount of entomological work and chemotherapeutic research has been done. During the year the Technical Assistant was posted to Kaduna where chemotherapeutic research was carried out.

(8) ENTOMOLOGICAL WORK.

41. The Senior Entomologist, Dr. T. A. M. Nash was on leave during the latter part of the year. His report is as follows:—The pupal environment of *G. morsitans* and *G. tachinoides* has been studied at Gadau. It has been found in soils ranging from coarse sand to fairly heavy clay; organic matter may even be absent.

42. The climatic changes are so great that no one type of breeding-ground can satisfy the female's requirements throughout the year; instead, different breeding places are selected for different seasons. In the dry months, rising soil temperature is associated with the shifting of breeding to cooler sites. Evacuation usually starts when the maximum soil temperature at one and a half inches is approaching 90°F; between 90° and 96°F only a few puparia (with a high mortality rate) are found, whilst at higher temperatures no puparia are found and the site is abandoned until the return of cooler conditions. In the rains, when the soil water content in a breeding-ground becomes too high, the female deserts it in favour of a drier site. Evacuation and higher pupal mortalities are associated with soil-water contents ranging from 20-33%, while in wetter soils puparia are never found. Broadly speaking pupal mortality is high in the dry season and low in the wet. Since, however, the females vacate a breeding-ground before the soil conditions become too extreme, the mean monthly mortality rate in the field rarely exceeds 25-30% in the dry months, and may fall to below 10% during the rains.

43. The discovery of new types of breeding-grounds has shown that breeding *does* take place throughout the year, except for a month's cessation in very wet seasons. The short duration of the pupal period in the early rains coupled with very low pupal mortality and an equable climate for the emerging offspring, probably accounts for the rapid increase of tsetse at this season.

44. The removal of the thickest windbreak from around a residual forest island (Kurumi) at Gadau resulted in the almost complete eradication of *G. tachinoides* last hot season; a slight thinning of the seedling ebones of the true forest is expected to cause extermination this year. *G. morsitans* has proved far more resistant to partial clearing. Large-scale experiments in this method are being carried out in Anchau. Results suggest that it is unnecessary to clear small streams that are dry, as *G. tachinoides* cannot survive the hot weather in the absence of water or wet sand unless the vegetation is exceptionally heavy. A barrier clearing further down the water system prevents the annual re-infestation of the upper reaches in the rains.

45. The following papers have been published by the Entomologist during the last year.

- (1) The Probable Effect of Densification of Woodland upon the Distribution of Tsetse in Northern Nigeria.
- (2) The Ecology of the Puparium of *Glossina* in Northern Nigeria.

(9) TRYPANOSOMIASIS.

EFFECT OF EXPOSING "PREMUNISED" ANIMALS TO FRESH INFECTIONS IN A NEW AREA.

46. The Acting Deputy Director of Sleeping Sickness Service reports:—In the 1935 and 1936 reports mention was made of experiments either naturally or after treatment from *T. vivax* infections were given a dose of pure *T. vivax* by the syringe. These animals were the survivors of several hundreds of experimental cattle. It was found that these twenty-one cattle were but little affected (one death in twelve months) by inoculation of a dose which sufficed to kill eight out of ten clean animals.

47. The next point was to decide whether this resistance to *T. vivax* was due to specific anti-bodies acquired by the animals during their previous infections or whether it was a resistance inherent in the animals and not acquired artificially. As they had never been exposed to infection with *T. congolense*, seventeen of the "Premunised" animals were injected with a dose of pure *T. congolense* obtained from a sheep.

48. At the end of ten months it was found that only one death had occurred among the premunised animals whereas six out of ten clean animals forming the control group had died. It appeared therefore that the premunised cattle possessed a natural rather than an acquired resistance to trypanosomal infection.

49. The next step was to transfer these animals to the middle sleeping sickness belt (an area far removed from Gadau) to determine if they were equally resistant there. Owing to the courtesy of the Director of Agriculture it was possible to send eleven of these premunised cattle to the stock farm at Ilorin where experiments on cattle breeding for mixed farming are being carried out. They arrived at Ilorin in October, 1937. They were in fair condition but one or two suffered from streptothricosis. One animal succumbed within twenty days of arrival, and two more died within two months of arrival. Of the remaining eight, one remained well and fit but the other seven all became infected with trypanosomes. They were treated with tartar emetic but in spite of this three of them died. It is noteworthy however, that three of these animals, including one that died, only broke down when put to work. Previous to this two of them had not shown any trypanosomes. Thus out of eleven premunised animals six died within six months of their arrival in Ilorin, four were in bad condition and only one has remained fit and able to work. From the fact that one died within twenty days of arrival it would appear that some outside factor broke down the resistance. Sheep infected with an Ilorin strain of *T. congolense* were sent to Gadau. The strain is now being tested in cattle there and appears less virulent than Gadau strains of that trypanosome.

APPENDIX C.

Report on the Schools of Medicine and Pharmacy.

SCHOOL OF MEDICINE.

I.—PREMISES.

The temporary wooden building, which was transferred in April, 1934, from the former Yellow Fever Compound to the School grounds and has since been used as an administrative block, though condemned as unserviceable continued to be occupied.

II.—STAFF.

The permanent staff of European Officers consisted of the Principal, the Lecturer in Physiology and the Technical Instructor. In addition twelve Medical Officers acted as lecturers and took clinical and laboratory classes in medicine, surgery, obstetrics, pathology, public health, etc.

III.—MEDICAL CURRICULUM.

Reference was made in the 1937 Report to the reorganisation of the School which was undertaken with a view to raising the standard of training. A new Prospectus was issued with the approval of the Board of Medical Examiners; this publication, which embodies a number of changes designed to improve the curriculum, was released in October.

The new curriculum is divided into the following periods:—

(a) Pre-medical	...	...	...	...	1½ years.
(b) Pre-clinical	...	...	...	...	2 „
(c) Clinical	...	...	...	...	3 „
(d) Post-diploma house officership	...	...	...	...	2 „
Total period of training					8½ „

The conditions governing admission to the School and the subsequent training are fully set out in the new Prospectus.

IV.—GRADUATES AND STUDENTS.

The following table of graduates and students of the School is appended herewith:—

Old Course:

Medical Practitioners	...	...	...	...	5
Medical Assistants	...	...	...	...	20
Medical Students in the final year	...	...	...	...	2

New Course:

Medical Students in the third year	...	...	5
Medical Students in the first year	...	...	10

Of the above, one student (old course) was eliminated after the December examinations.

V.—EXAMINATIONS.

Examinations under the Medical Practitioners and Dentists Ordinance were conducted by the Board of Medical Examiners in January, April, June, September and December. The details were as follows:

Medical Assistant's Certificate (Final Examination).

January, 1938—8 candidates—6 successful.

June, 1938—2 — „

December, 1938—2 — „

Diploma of Licentiate of the School of Medicine.

June, 1938—6 candidates—3 successful.

December, 1938—9 „ —2 „

New Course (First Professional Examination).

June, 1938—Anatomy and Physiology—5 candidates—4 successful.

September, 1938—„ „ „ —1 candidate—1 „

VI.—MEDICAL SCHOOL PRIZES.

The Medical School has for the second time been the fortunate recipient of a donation to the value of £20 from Sir Walter Johnson, Kt., c.m.g., late Director of Medical Services. The grant was utilised in accordance with the donor's wishes for the purchase of standard medical text-books which were presented as prizes to candidates who obtained the highest aggregate of marks in professional examinations.

Prizes in the form of plaques were also donated by Dr. Briercliffe, Director of Medical Services. The plaques were awarded annually for proficiency in each of the major professional subjects for the Medical Assistant's Certificate. The names of the recipients were engraved on the plaques.

Another source from which prizes were given during the year was the Committee of the Blair Aitken Memorial Fund. The Committee awarded £10 for books or instruments to the student who, in the opinion of the Director of Medical Services, was the best of his year.

SCHOOL OF PHARMACY.

I.—STUDENTS.

At the beginning of the year eighteen students were in attendance, of whom six were preparing for the Chemist and Druggist Examination, and twelve for the Dispenser's Qualifying Examination. In April ten new students were admitted, and in June one student was eliminated as unsatisfactory.

II.—STAFF.

The Staff consisted of the Superintendent, two Second-class Dispensers, one Science Teacher and one part-time Lecturer in Botany. One Second-class Dispenser and the Science Tutor proceeded to

Achimota College, Gold Coast, in June in order to sit the Intermediate Science Examination of London University; the Second-class Dispenser was successful.

III.—PREPARATION OF ETHYL ESTERS OF HYDNOCARPUS OIL.

During the year 498 quarts of filtered hydnocarpus oil and 298 quarts of esters were prepared.

IV.—EXAMINATIONS.

Statutory examinations were held in June and December and the results were as follows:—

June.

Dispensers Qualifying Examination, Part One.

Eleven candidates sat: nine passed.

Dispensers Qualifying Examination, Part Two.

One candidate sat and failed.

Chemist and Druggist Examination.

Six candidates sat: all failed.

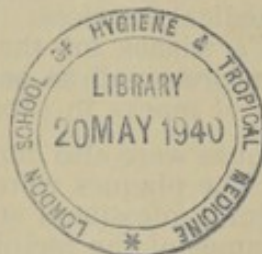
December.

Dispensers Qualifying Examination, Part One.

One candidate sat and failed.

Dispensers Qualifying Examination, Part Two.

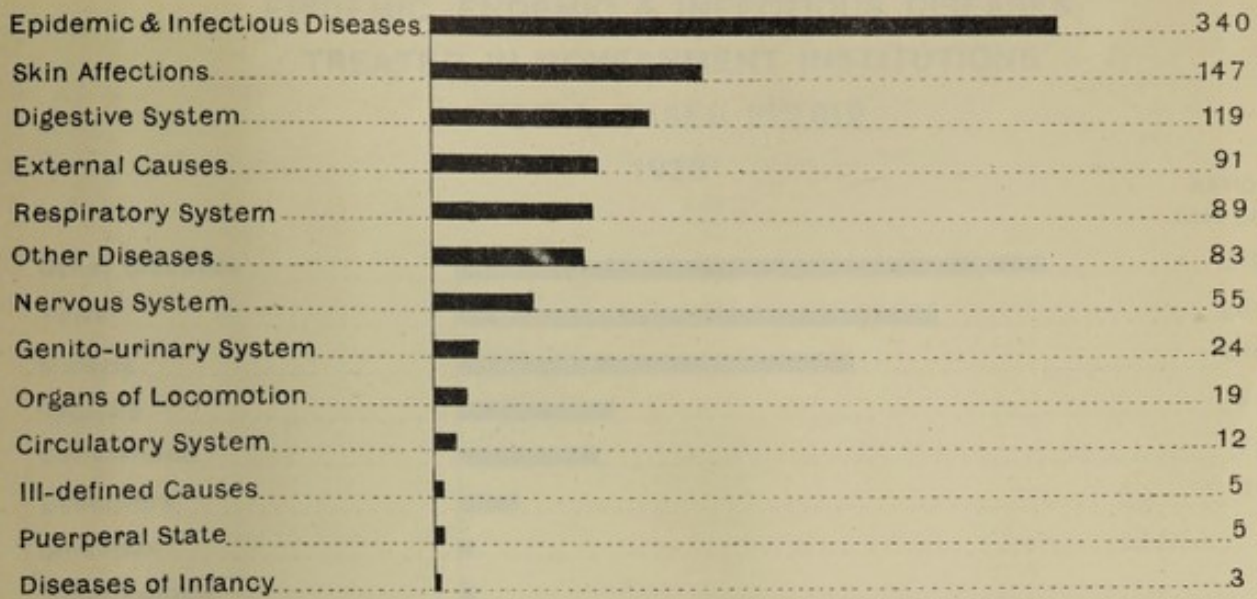
One candidate sat and passed.



COMPARATIVE DIAGRAMS OF DISEASE GROUPS
TREATED IN GOVERNMENT INSTITUTIONS
1937 & 1938

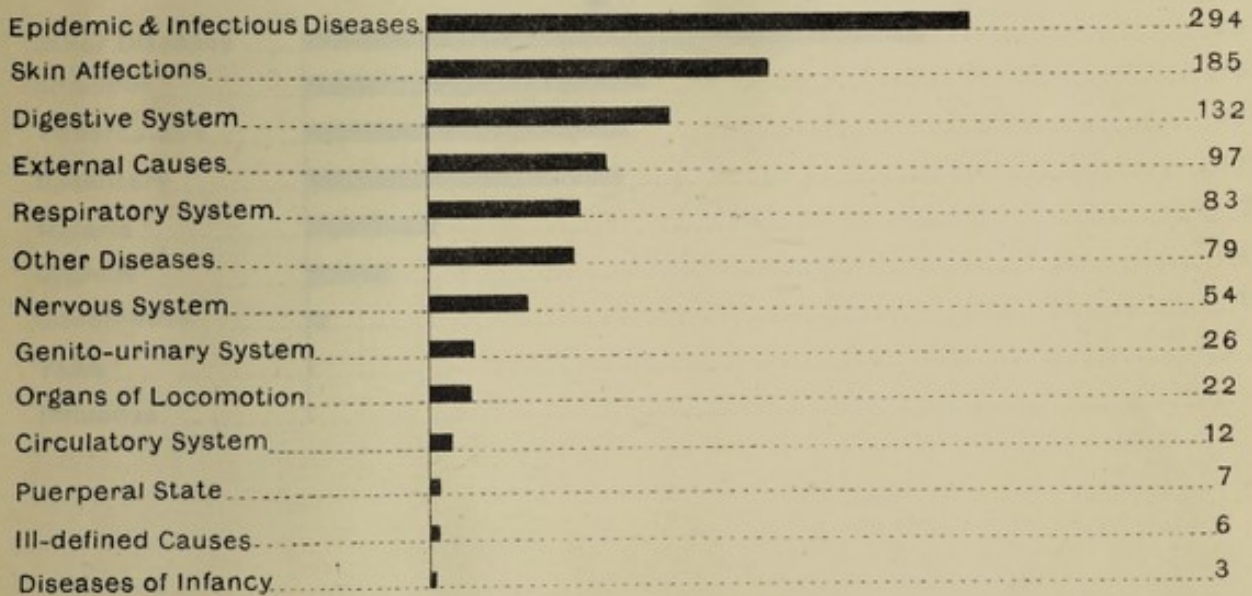
1937

PER MILLE



1938

PER MILLE



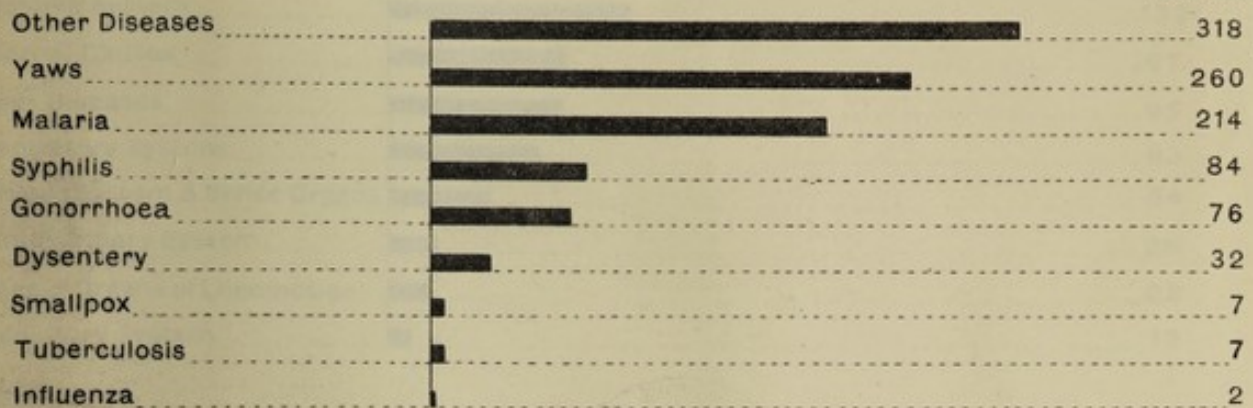


EPIDEMIC, ENDEMIC & INFECTIOUS DISEASES TREATED IN GOVERNMENT INSTITUTIONS

TOTAL CASES 212,812

1938

RATIO PER
1,000 CASES



TOTAL DEATHS 1,122

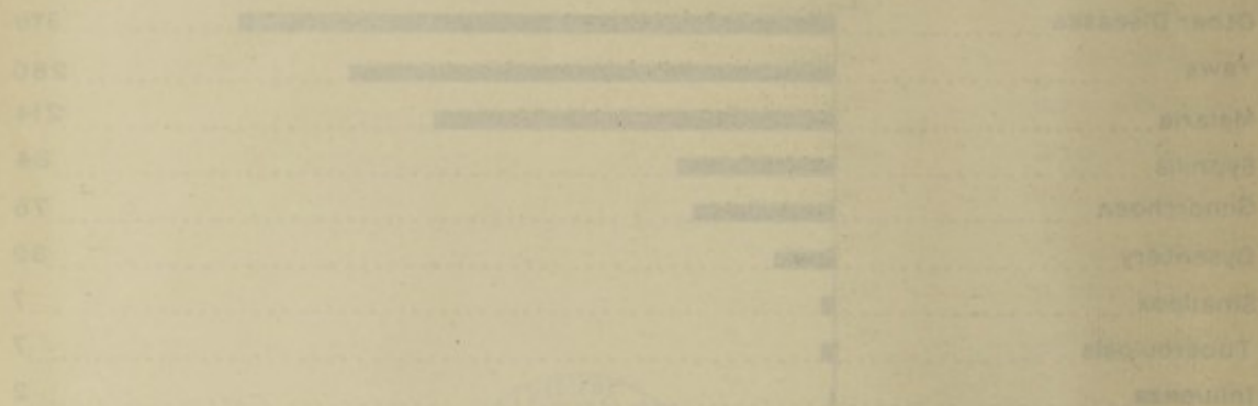
RATIO PER
1,000 DEATHS



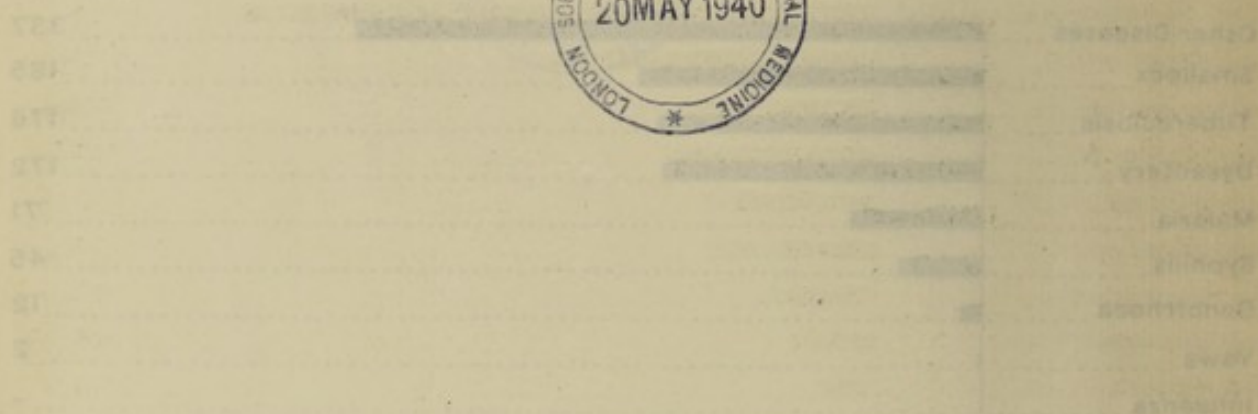
EPIDEMIC, ENDEMIC & INFECTIOUS DISEASES
TREATED IN GOVERNMENT INSTITUTIONS
TOTAL CASES 212,812

1938

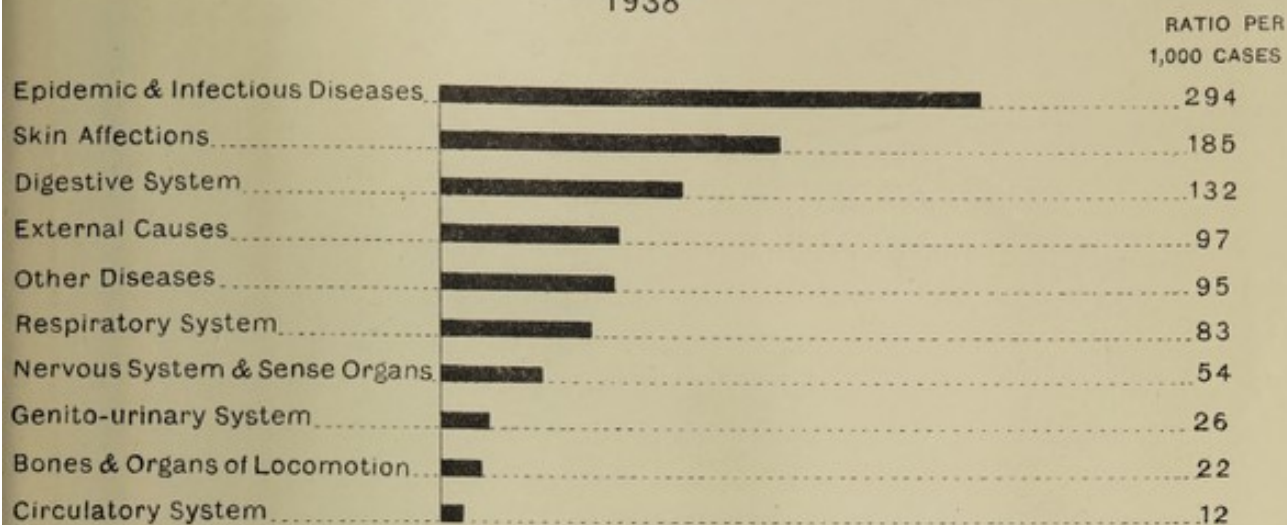
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BY CASES



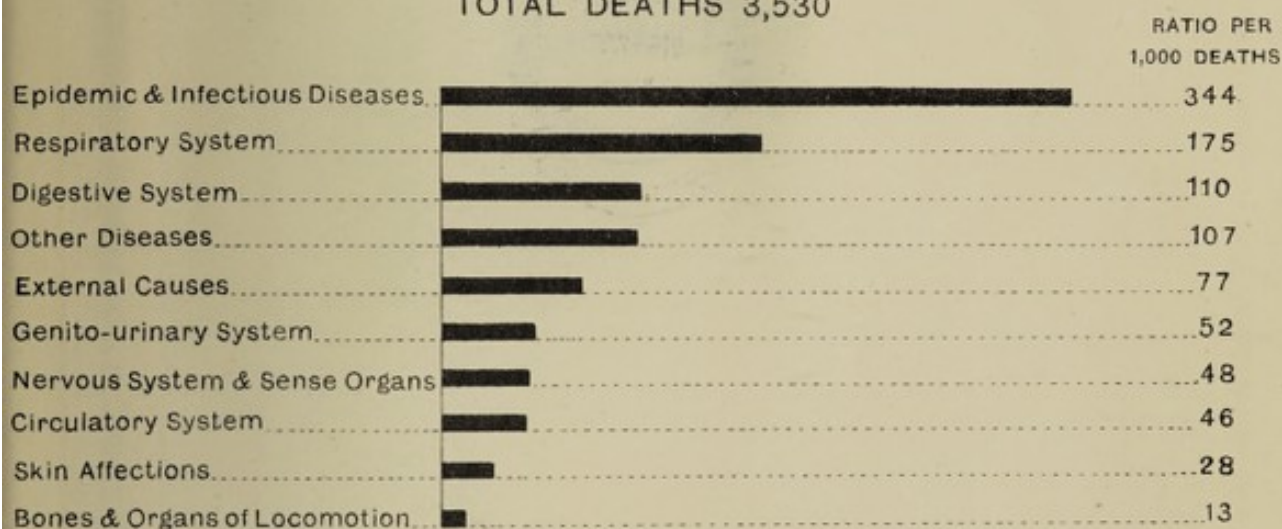
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BY CASES



GENERAL SYSTEMATIC & PREVENTABLE DISEASES
TREATED IN GOVERNMENT INSTITUTIONS
TOTAL CASES 718,833
1938



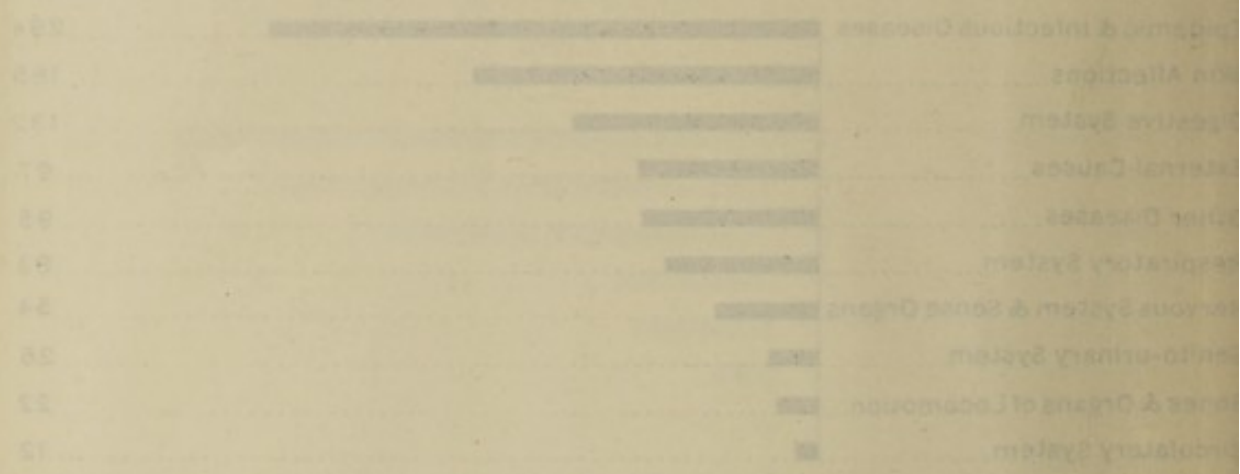
TOTAL DEATHS 3,530



GENERAL SYSTEMATIC & PREVENTABLE DISEASES TREATED IN GOVERNMENT INSTITUTIONS TOTAL CASES 718,823

1938

RATIO PER
1000 CASES



RATIO PER
1000 DEATHS

