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REPORT

ON THE

MEDICAL SERVICES

FOR THE YEAR

1937

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NIGERIA

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Report on the Medical Services for the Year 1937.

I.—ADMINISTRATION.

A.—STAFF.

Dr. P. S. Selwyn-Clarke, Deputy Director of Health Service, left Nigeria on the 24th July on leave preparatory to taking up the appointment of Director of Medical Services, Hong Kong.

2. Dr. G. E. Craig, Assistant Director of Medical Service, was transferred to the Gold Coast as Deputy Director of Medical Service on the 23rd January, 1937, and was succeeded by Dr. J. A. A. Duncan from Sierra Leone.

3. Dr. J. Naudi was promoted Senior Medical Officer and was seconded for special duty to the Government of Malta for a year.

4. Dr. W. Nelson and Dr. C. Wilson were transferred on promotion to the grade of Senior Medical Officer, the former to the Gold Coast and the latter to the Gambia, on the 24th April and 10th July respectively.

5. Drs. L. N. Lee, E. J. Crawford, D. G. F. Moore and A. J. M. Crichton retired from the service on the 19th May, 1st July, 1st August and 23rd August respectively.

6. To fill vacancies in the grade of Medical Officer three medical officers were transferred to Nigeria from other Colonies and twelve newly recruited medical officers were appointed. One Medical Officer of Health was transferred to Nigeria from Ceylon.

7. Out of the establishment of sixty-three Nursing Sisters, fourteen resigned or retired and one was transferred to Sierra Leone. Sixteen new appointments were made and one Senior Nursing Sister was transferred to Nigeria from Sierra Leone.

8. The sanctioned establishment of the Department was increased by five Medical Officers of Health, two African Medical Officers, two Nursing Sisters and seven Sanitary Superintendents, and small increases in the numbers of midwives, laboratory attendants, sanitary inspectors and other subordinate personnel were also made.

Table I at the end of this report shows the numbers of posts and vacancies existing at the end of the year 1937.

B.—LEGISLATION.

LIST OF ORDINANCES, REGULATIONS, ETC., AFFECTING PUBLIC HEALTH ENACTED DURING THE YEAR 1937.

ORDINANCES.

Serial No.	Date.	Short Title.	Provisions.
1	21.1.1937	Sleeping Sickness Ordinance, 1937.	Applies only to the Northern Provinces and provides for compulsory examination and treatment, the declaration of sleeping sickness areas, restriction of movement in such areas and generally for preventing the spread of the disease.
33	23.12.1937	The Medical Practitioners and Dentists (Amendment) Ordinance, 1937.	Regulates the practice of the administration of injections by unqualified persons by authorising the Director of Medical Services to license suitable persons.

REGULATIONS.

Serial No.	Date.	Ordinance made under.	Provisions.
11	19.4.1937	The Dangerous Drugs Ordinance.	Implements the Dangerous Drugs Ordinance, 1935.
19	14.6.1937	The Poisons and Pharmacy Ordinance	Regulates the training, examination and registration of Dispensers and Chemists and Druggists, and lays down conditions for the keeping of poisons.
24	19.7.1937	The Quarantine Ordinance.	Amends Regulation 36 (*b*) of the Quarantine Regulations, 1930.

ORDERS-IN-COUNCIL.

Serial No.	Date.	Ordinance made under.	Provisions.
6	22.2.1937	The Births, Deaths and Burials Ordinance.	Orders the Registration of all Births and Deaths occurring among natives in the township of Aba.
12	12.4.1937	do.	Demarcates the public Cemetery, Umuahia.
21	21.6.1937	The Sleeping Sickness Ordinance.	Declares certain parts of the Northern Provinces to be Sleeping Sickness areas.
22	5.7.1937	The Births, Deaths and Burials Ordinance.	Demarcates and appropriates for use of Methodist Cemetery, Elekuro, Ibadan, by all persons of the Wesleyan Methodist denomination.
25	3.8.1937	Public Health Ordinance.	Applies the whole of the provisions of Public Health Ordinance to Oyo Province.
27	3.8.1937	Births, Deaths and Burials Ordinance.	Demarcates and appropriates for use of Church Missionary Society Cemetery, Kudeti, Ibadan, by all persons of the Church of England denomination.
33	20.9.1937	The Dangerous Drugs Ordinance.	Excludes certain preparations containing Morphine, Cocaine, etc., from the provisions of Part III of the Dangerous Drugs Act, 1920 (10 & 11 Geo. 5, c. 46).
35	18.10.1937	The Sleeping Sickness Ordinance.	Adds to the Sleeping Sickness Areas in the Northern Provinces.

C.—FINANCIAL.

9. The more prosperous conditions prevailing in Nigeria allowed a considerable increase to be made in the Department's estimates of expenditure. The total estimated expenditure rose from £392,467 for the year 1936-37, to £480,318 for 1937-38, an increase of nearly £88,000. More than £31,000 of the increase, however, was due to discontinuance of the practice of deducting reimbursements from expenditure and £19,000 was accounted for by a special grant from the Colonial Development Fund, towards the new Sleeping Sickness control scheme.

The estimated and actual expenditure for the last eight 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	462,630

10. The details of expenditure and receipts for the year 1936-37 are set out in Table II at the end of this report.

11. The actual revenue of Nigeria for the year ending 31st March, 1937, was £6,259,547 and the estimate of revenue for the succeeding year £6,737,826.

II.—PUBLIC HEALTH.

A.—GENERAL REMARKS.

12. On the 31st of December, 1937, the Nigerian Medical Register contained the names of 220 medical practitioners. Of these practitioners, 116 Europeans and 19 Africans held official appointments, 53 Europeans were in the service of missions, 5 Europeans in that of mines or plantations, while 4 Europeans and 23 Africans were engaged in private practice.

13. For a population exceeding twenty million people this number of medical practitioners is clearly inadequate, and there is an insistent demand by the public for greater facilities for medical relief. The demand can only be met by a large increase in the number of African doctors and with the object of forming a staff of African medical practitioners to supplement the existing medical service the School of Medicine was established at Yaba in 1930.

14. The school has given a four years' course of training leading to the Certificate of Medical Assistant. Six students completed the course and passed the examination for the certificate in 1935, eleven in 1936 and nine in 1937. After obtaining his certificate, a Medical Assistant spends two years gaining clinical experience by assisting the Medical Officer of a Government Hospital, he then returns to Lagos for one year's post-graduate instruction, after which, to obtain registration as a medical practitioner in Nigeria, he must pass the examination for the Diploma of the School of Medicine.

15. The first Diploma Examination was held in December, 1937; there were six candidates but none was successful. An examination which leads to registration as a Medical Practitioner in Nigeria must be of approximately the same standard as it is in Great Britain, if the public is to be sufficiently safeguarded. The local training unfortunately is still of a much lower standard than in Britain, but each year better facilities for the medical student are being provided. Last year a small but excellent physiology block was built at the Medical School and a whole time lecturer in physiology appointed, the clinical teaching was

improved and the number of clinical teachers doubled, and a month's residence at the maternity hospital for final year students arranged. The periods of both pre-clinical and clinical training are being lengthened. A detailed account of the school is given in Appendix C.

16. The dramatic results of intravenous or intramuscular administration of the arsenobenzene compounds in the treatment of yaws and syphilis and the tonic effects of these drugs, have over a number of years led the more ignorant sections of the population to regard "injections" as a panacea for disease of every kind. This belief has been exploited by both qualified and unqualified persons. In parts of the Southern Provinces a degraded but lucrative form of private medical practice has grown up among quacks and charlatans of every kind who have gone round the country giving injections and battening on the credulity of the people. Serious accidents, many of them fatal, have followed injections given by unqualified persons.

On the other hand, in the organised mass treatment of certain diseases, notably sleeping sickness it is necessary in the public interest to employ trained but unqualified persons, working under the instructions of medical officers, to administer the injections required in treatment, because there are not enough qualified doctors available.

17. In both cases the giving of injections by unqualified persons has constituted a breach of section 22 of the Medical Practitioners and Dentists Ordinance and an amending Ordinance was introduced to exempt from the operation of this section persons whom the Director of Medical Services licenses to administer injections. Before a licence is granted in any case the medical practitioner responsible for the treatment is required to show that circumstances warrant the employment of unqualified staff, that the persons to be licensed have been properly trained, that there will be sufficient supervision and that treatment will not be given for profit. The new legislation, though it may not put a complete stop to the illegal injection practice that has sprung up, should do much to control it.

18. The increase in the establishment of Medical Officers of Health and Sanitary Superintendents restored the strength of the Health Service to approximately what it was in 1931. It enabled a Medical Officer of Health to be posted to the Cameroons where as the result of discussions with the Cameroons Planters Union and other plantation owners about the application of the Labour (Health Areas) Regulations to the plantations, an extensive building programme had been drawn up for the replacement of temporary lines for plantation labourers by permanent lines of an approved type. A careful survey of the sanitary conditions of labour camps in the tin-mines area in the Plateau Province was carried out and arrangements were made to place a Medical Officer of Health in charge of the health of the province.

It was also possible to provide personnel for the sanitary control of aerodromes in Nigeria on the Lagos-Khartoum air route. To allow of the development of traffic along this route the aerodromes at Apapa (Lagos), Kano and Maiduguri were made anti-amaryl in accordance with the requirements of the International Sanitary Convention for Aerial Navigation and the re-fuelling aerodromes were protected by a 440 yard building-free zone and kept mosquito free. The route was opened to passenger traffic in March after a procedure had been defined in consultation with the Sudan Medical Service, to prevent the possibility of yellow fever infected passengers or mosquitoes leaving Nigeria in aircraft. At the end of the year similar arrangements were made with the Gold Coast Health Authorities before the Lagos-Accra air route was opened to passenger traffic.

19. Towards the end of the year Government re-affirmed the desirability of providing, in so far as may be practicable, Government residential areas in which European residents might live with the minimum risk of exposure to the infection of yellow fever or malaria, diseases against which the indigenous population possesses a considerable degree of resistance.

20. After several years of experimental work at Yaba and Vom, the Laboratory Service has perfected its methods for the preparation of a satisfactory vaccinia vaccine, and has entered on the preliminary stages of large scale production. The lymph is obtained from sheep and a small sheep farm with the necessary inoculation rooms has been started at Yaba close to the main laboratories.

It was also possible to cease purchasing outside supplies of anti-rabies vaccine and sufficient vaccine for all the British West African Colonies is now being prepared at Yaba.

21. Owing to outbreaks of yellow fever an unusually large number of protection tests and tissue section examinations were performed by the Laboratory Service for purposes of diagnosis. In addition, protective inoculation with a vaccine supplied by the Wellcome Bureau, of persons likely to be exposed to the risk of yellow fever infection was undertaken experimentally in Lagos and investigations were made into cases of post-inoculation jaundice.

22. The Laboratory Service also co-operated with the Sir Alfred Jones Laboratory, Freetown, in the investigation of tropical typhus in West Africa.

23. The advance of sleeping sickness into new areas and the depopulation which has resulted from the disease in parts of the Northern Provinces has for some years been causing much anxiety. Treatment alone or treatment combined with minor measures of tsetse control have proved inadequate and the Deputy Director of the Sleeping Sickness Service prepared a comprehensive plan to deal with the problem. His proposals involve among other things, the removal of hamlets from heavily infected sleeping sickness belts and the re-settlement of the people in newly established villages in " clean " or " protected " areas, where seed, farming land, wells and other necessities will be provided for the settlers.

24. The Sleeping Sickness Ordinance, 1937, was enacted early in the year to provide powers to enable the scheme to be put into operation and the necessary funds were included in the estimates for 1937-38. The annual cost of the scheme when in full operation will be about £30,000 and the Colonial Development Fund will contribute for a period of five years in the proportion of £19,000 to the Government contribution of £11,000.

25. By October most of the European personnel required for the new work had been recruited, viz.:—An additional Entomologist, Agricultural Control Officers, R.A.M.C. non-commissioned officers and a foreman well-sinker.

I.—GENERAL DISEASES.

26. A return of diseases and deaths for 1937 is given in Tables IV and V on pages 38 to 56. The incidence of certain disease groups is shown in diagramatic form elsewhere in this Report.

27. The commonest causes of admission to hospital were ulcers, injuries, hernias, syphilis, malaria, pneumonia, diarrhœa and dysentery, trypanosomiasis, gonorrhoea and its complications, and bronchitis.

28. The following table shows the number of cases and deaths of the commoner general diseases among in-patients at Government and Native Administration hospitals during the past five years:—

	1933.	1934.	1935.	1936.	1937.
PNEUMONIA :—					
Cases	1,650	1,689	1,929	1,706	2,247
Deaths	459	473	523	474	621
BRONCHITIS :—					
Cases	1,268	1,263	1,380	1,177	1,594
Deaths	71	68	55	47	56
DIARRHŒA AND DYSENTERY :—					
Cases	1,849	1,857	1,709	1,731	1,506
Deaths	188	191	162	180	191
ULCERS :—					
Cases	3,836	3,524	4,044	4,357	4,033
Deaths	77	36	42	32	39
HERNIAS :—					
Cases	2,174	2,556	2,962	3,747	4,082
Deaths	82	78	95	112	126

29. Among hospital out-patients and those attending Native Administration dispensaries the commonest conditions treated were yaws, ulcers, bronchitis, constipation, chronic rheumatism, malaria, scabies and worm infestations.

II.—COMMUNICABLE DISEASES.

1.—MOSQUITO AND INSECT BORNE.

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

	1935.		1936.		1937.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
EUROPEANS :—						
Malaria	947	1	995	4	1,279	4
Blackwater	10	5	11	1	14	2
AFRICANS AND NON-EUROPEANS :—						
Malaria	39,508	48	38,671	55	46,379	45
Blackwater	27	7	19	2	10	6

31. *Trypanosomiasis.*—A full account of the sleeping sickness work carried out during the year is given in Appendix B.

32. *Yellow Fever.*—Outbreaks of yellow fever were widespread throughout West Africa during 1937, and though the disease appeared later in Nigeria and was not so prevalent as in some of the neighbouring territories, there was much more yellow fever than usual. Eighteen cases and eleven deaths among Europeans and ten cases and four deaths among Africans were reported during the year. The first outbreak occurred in May in an American Mission at Ogbomosho and the disease later appeared in twelve other centres in the Northern and Southern Provinces.

33. The majority of the Europeans who contracted the disease were missionaries living in close association with the local population: only three Government officers or their wives were infected and it is noteworthy that no infection has ever been reported to have taken place in a European residential area.

34. A high *Aedes* index was always associated with the outbreaks, but the larger towns in which mosquito control was practised remained free from the disease. The anti-mosquito measures carried out by the Lagos Town Council were particularly thorough and praiseworthy.

35. A notice was issued by the Department and widely circulated urging all Europeans to undergo protective inoculation against yellow fever at the Wellcome Bureau of Scientific Research before coming to Nigeria or returning from leave, and the response was very good.

2.—Infectious Diseases.

36. An account of the incidence and control of the various infectious diseases is given in section III.

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

	1933.	1934.	1935.	1936.	1937.
Yaws	86,748	119,728	123,803	110,588	90,225
Syphilis in all forms	16,286	13,439	13,361	18,432	19,155
Gonorrhoea and its complications	15,180	16,563	15,514	16,386	17,074

38. Yaws is one of the most prevalent diseases in the Eastern part of the Southern Provinces and attains its highest incidence in the Cameroons. There, in the villages remote from medical centres, it is a disease chiefly of children from two to five years of age, but its after effects often remain for life. The system of employing village 'chindas' (servants) in the Cameroons to administer intramuscular bismuth injections, has done little if anything to reduce the incidence of the disease. The chindas, paid perhaps 2s. 6d. a month by the Native Administration, are illiterate villagers with almost no knowledge of asepsis, anatomy or dosage and it seems especially dangerous to entrust to them the bismuth treatment of small children.

39. The organised treatment of the children in a small number of the Cameroons villages, with stovarsol given by mouth is therefore to be attempted on an experimental basis with a view to finding a treatment which can be carried out by unqualified personnel with safety and which will be effective in reducing the incidence of the disease.

40. *Cerebro-Spinal Meningitis.*—An extensive epidemic of cerebro-spinal fever of unusual severity raged in the north of Nigeria from January to May reaching its peak in February. It appears to have spread to Nigeria from the East and to have been associated with the epidemic of the previous year which occurred in the Anglo-Egyptian Sudan. Epidemics of this disease occur from time to time in the North of Nigeria but never in the South, and a circular was issued for the guidance of medical and administrative officers, setting out the preventive measures which it is possible to take.

41. *Leprosy.*—In the Northern Provinces there are eleven and in the Southern Provinces eight provincial leper settlements supported by Native Administrations. The policy of handing over the management of the Native Administration Settlements to Medical Missions was continued; the Sudan Interior Mission took over charge of the Sumaila (Kano) Settlement in June, of the Baba Ruga (Katsina) Settlement in August and of the new Anamawa (Sokoto) Settlement which had replaced the Gusau Settlement, in November, while the Church Missionary Society undertook the management of the Zaria Leper Settlement in October.

42. Expenditure on leprosy was approximately £4,600 by Government, £7,600 by the Native Administrations of the Northern Provinces

and £6,000 by those of the Southern Provinces; a total of more than £18,000. The missions in most cases met the salaries and other expenses of their European staff and the British Empire Leprosy Relief Association provided two doctors and ten Toc H. lay workers.

A number of leprosy surveys were made by the Superintendents of certain settlements and by the British Empire Leprosy Relief Association doctors in heavily infected areas in the South-Eastern provinces and infection rates as high as seven per cent were recorded.

43. The Superintendent of the Oji River Settlement returned from a study tour of leprosy in India and the East and at the end of the year was appointed Honorary Adviser to the Government on leprosy for a period of three years. A technical Sub-committee was set up to advise the Executive Committee of the Nigerian Branch of the British Empire Leprosy Relief Association about the scientific investigations conducted into leprosy in Nigeria.

44. 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 Colonies and 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.	Controlled by.	Approximate number of patients resident.
NORTHERN PROVINCES.				
Adamawa ...	Garkida	Govt. and N.A.	Church of the Brethren Mission	512
Bauchi ...	Azare	N.A.	Govt. Medical Officer	31
	Gelengu	„	Native Administration	32
Benue	Mkar	„	Dutch Reformed Church Mission	286
Bornu	Maiduguri	„	Sudan United Mission	239
Kano	Sumaila	„	Native Administration	144
Katsina ...	Bagar Ruga	„	Sudan Interior Mission	282
Plateau ...	Vom	„	Sudan United Mission	43
Sokoto	Gusau	„	Sudan Interior Mission	26
Zaria	Zaria	„	N.A. and C.M.S.	155
SOUTHERN PROVINCES.				
Abeokuta ...	Iberekodo	N.A.	Govt. Medical Officer	45
	Abeokuta	Catholic Mission	Catholic Mission	22
Benin	Ossiomo	N.A.	Native Administration	253
Calabar ...	Itu	Govt. and N.A.	Church of Scotland	1,500
	Ekpeme Obom	N.A.	Qua Iboe Mission	375
Cameroons ...	Bamenda	„	Govt. Medical Officer	157
Ogoja	Abakaliki	Self Supporting	„ „ „	40
Onitsha ...	Onitsha	Government	„ „ „	116
Owerri	Oji River	N.A.	Church Missionary Society	60
	Uzuakoli	Govt. and N.A.	Methodist Mission	1,125
Oyo	Ogbomosho	N.A.	American Baptist Mission	122
	Ilesha	„	Wesley Guild	42
COLONY.				
Lagos	Yaba	Government	Government	66
			Total	5,673

N. A. = Native Administration.

B.—VITAL STATISTICS.

45. The townships of Aba and Enugu are now registration areas and together with Lagos and Ebute Metta in the Colony, Calabar, Port Harcourt and Kano in the protectorate they constitute the only areas in Nigeria where the registration of births and deaths is compulsory. In addition, in several areas under Native Administration control an attempt is made with varying success to record births and deaths, but in many cases the figures are of little value. The movement of population between the towns is so great and the growth of the larger towns so rapid that many of the residents do not belong by birth and the age distribution consequently shows a peak in the middle years. In addition people return to their birthplace if possible to give birth to their children and also when sickness overtakes them.

46. The following short table gives the birth and death rates in those areas for which figures are available:—

	Estimated Population.	Birth Rates.			Deaths Rates.		
	1937.	1935.	1936.	1937.	1935.	1936.	1937.
Calabar	18,000	14·3	17·6	27·2	20·8	19·5	20·2
Kano	8,710	15·5	14·5	12·8	11·2	12·6	25·0
*Lagos and Ebute Metta combined	155,900	26·4	23·7	22·9	18·9	18·9	23·3
Port Harcourt	20,000	15·0	11·8	10·6	11·7	10·0	9·9
Aba	9,152	—	—	31·5	—	—	18·9
Enugu	14,541	—	—	26·0	—	—	19·7
Ijebu Province	333,000	—	—	36·0	—	—	27·0

* *Corrected rates.*—The correction factors for Lagos and Ebute Metta are as follows:—

Birth Rate	.89
Death Rate	1.37

It is highly probable that similar factors are necessary for other townships but crude rates are shown.

3.—Infantile Mortality.

	1935.	1936.	1937.
Calabar	—	—	67
Kano	—	—	180
Lagos and Ebute Metta	130	140	130
Port Harcourt	—	—	235
Aba	—	—	187
Enugu	—	—	312

47. The maternal mortality rate for Lagos was eight per 1,000 births.

48. Still births amounted to 3.08 per cent of the total births in Lagos township.

49. It is useless to discuss mortality according to age and sex until one has an accurate knowledge of the age and sex constitution of the populations in the townships and this knowledge is available in an incomplete state for Lagos only. A rough examination has shown that there has been no change in the mortality in the various age groups since the 1931 census was published.

50. The certification of deaths in Lagos is now fairly satisfactory as 89.6 of the deaths are registered by medical practitioners. Elsewhere certification is not so complete as is shown by the following figures:—Kano 59%, Port Harcourt 78%, Aba 61%, Enugu 49%, Calabar 38%.

51. *Causes of deaths.*—The following short table shows the relative importance of certain diseases in the causation of death in Lagos.

	Rate per 100 deaths.
Tetanus	1.7%
Tuberculosis (all causes)	9.2%
Malaria	4.5%
Pneumonia-broncho	13.1%
,, lobar	4.1%
,, not specified	1.4%
Enteritis	3.9%
Chronic Nephritis	1.6%
Cancer and other tumours	1.7%

52. The following tables give the major causes of death and invaliding in officials and non-officials (non-natives).

(*a*) Invaliding by completed months of service (officials):—

	Under 6 months.	Under 9 months.	Under 12 months.	Under 15 months.	Under 18 months.	Over 18 months.	Total.
Old terms	1	0	0	0	0	0	1
New ,,	8	4	5	33	54	0	104

53. The great majority of officers are now on the new terms of service. The major causes of invaliding were as follows:—

Neurasthenia	24.0%
Asthenia	7.6%
Malaria	5.7%
Debility	4.8%

(*b*) Six deaths occurred among officials and the causation was as follows:—

Yellow Fever	2
Blackwater	1
Suicide	1
Pyonephrosis	1
Cerebral Injuries	1

(*c*) Sick, invaliding and death rates of European officials for the years 1935, 1936 and 1937.

	1935.	1936.	1937.
Total number of officials resident	2,053	2,164	2,131
Average number resident	1,473	1,560	1,520
Total number of days on sick list	9,204	8,991	10,546
Average daily number on sick list	25·2	24·6	28·8
Percentage of sick to average number resident	1·7	1·5	1·9
Average number of days on sick list to each patient ...	10·3	9·9	10·8
Average sick time to each resident	4·4	4·1	4·9
Total number invalided	95	100	105
Percentage of invalidings to total resident	4·6	4·6	4·8
Percentage of invalidings to average number resident	6·4	6·4	6·9
Total deaths	7	11	6
Percentage of deaths to total resident	·34	·50	·28
Percentage of deaths to average number of residents ...	·47	·70	·39

(*d*) The data available for invaliding among non-native non-officials is very incomplete. Of the fifty-four persons about whom the cause of invaliding is known the major cases are as follows:—

Neurasthenia	24.0%
Asthenia	9.2%
Malaria	7.4%

(*e*) Twenty-nine deaths are recorded among non-native non-officials. The principal causes are as follows:—

Yellow Fever	4
Subtertian Malaria	4
Carbuncle	2
Blackwater Fever	1

54. It is impossible to state with any certainty the average non-native non-official population but assuming that it is in the neighbourhood of 2,500 the death rate is 11.6 or three times the official death rate. The causes of this are many and include the following:—poorer selection of recruits, higher age group, poorer living conditions.

55. The following notes give the major causes of invaliding and death in African officials. Eighteen officials were permanently invalided out of the service and thirty-two deaths are recorded. The most important causes of invaliding were defective vision 16% and neurasthenia 11%. Of the thirty-two deaths recorded 20% were due to nephritis, 20% to pneumonia, 16% to myocarditis and cardiac failure, and 10% to pulmonary tuberculosis.

56. Morbidity in Nigeria Regiment (Africans).

Soldiers—Nigeria Regiment—R.W.A.F.F.

Average daily strength	3,082
Total number on sick list	7,929
Total number of days on sick list ...	45,400
Average daily sick	21.99
Total number of deaths	21
Death rate per thousand	6.8
Number invalided during the year ...	23

57 Twenty-three members of the Nigeria Regiment were invalided and twenty-one died during 1937 as compared with fifty invalidings and twenty-one deaths respectively in 1936.

Morbidity in Nigeria Police (Africans).

Average daily strength	3,429.48
Total number on sick list	3,450
Total number of days on sick list ...	21,273
Average daily sick	58.28
Total number of deaths	42
Death rate per thousand	12.2
Number invalided during the year ...	25

58. The number of African police invalided during 1937 was twenty-five as compared with twenty-nine in 1936 and the number of deaths was forty-two as compared with thirty-four in 1936.

III.—HYGIENE AND SANITATION.

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

1.—Preventive Measures.

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

(*a*) *Malaria.*

59. Malaria in Nigeria is carried by *Anopheles gambiæ* and *A. funestus*. The extent of larvicidal work against these species largely depends on funds available for labour and larvicides; what funds exist have been used to the best advantage during the year.

60. In Lagos every consignment of diesel oil received has been tested for its larvicidal properties before use. The test is made by trying a standard amount (5 c.c.) of oil on the surface of water contained naturally in a square pit—two-foot square—made in low-lying ground and allowed to breed mosquitoes before the oil to be tested is applied.

61. The Senior Pathologist in Lagos held a post-mortem examination in a series of 100 children aged under three years and found malaria to have been the cause of death in twenty-six of these cases, in eleven of which the malaria was of the cerebral type.

62. For Lagos, as a result of the report of the Swamp Reclamation Board, Government has ruled that all spoil from harbour dredging should be used for the reclamation of low-lying ground. The needs of industrial development, however, in this matter of filling have been given priority. Lack of necessary plant, moreover, makes it impossible for some time to comply fully with the ruling.

63. Minor reclamation by filling and afforestation has been continued in Lagos during the year. Here progress is steady though necessarily slow and gradual. Such minor reclamation has gone on in parts of Ikoyi, the Idumagbo lagoon in Lagos town and the Railway Reservation in Ebute Metta. A Forest Guard has continued to check deforestation in Lagos township.

64. In Jos, many of the steep drains which are so liable to erosion have been " stepped " with some success.

65. The Medical Officer, Abakaliki, reports that the lake in that station has been successfully stocked with larva-eating fish which are increasing in numbers.

66. In Port Harcourt, all refuse has been utilised for swamp reclamation after burning in mud incinerators of the barless type.

(*b*) *Yellow Fever.*

67. As on the Gold Coast and in neighbouring French Colonies, Yellow Fever was particularly active throughout the year and, although there was no major epidemic, sporadic outbreaks were responsible for eleven deaths among the white population and four known deaths among Africans.

68. The first recognised cases appeared at Ogbomosho on the American Baptist Mission compound where at the end of June and beginning of July four American whites became infected of whom two died. A third fatality occurred, the victim being an infant of less than a year old who had been resident in the children's home maintained within the Mission compound.

69. Towards the latter part of July two fatal cases occurred, one at Ibadan and one at Warri European Hospitals. The former was a District Officer who while on tour had probably become infected at the village of Otu in Oyo Province, while the latter had been resident in Burutu in Warri Province for some considerable time prior to his illness. In association with the latter case two mild cases, both in Europeans, who had been resident in the infected area were later revealed by mouse protection tests.

70. A further small outbreak occurred on a Mission Girls' School compound at Ovim in Owerri Province at the end of July, the first case revealed being that of a European lady who died on the 4th of August. Investigation revealed that there had been cases of illness among the school children resident in the compound during the preceding few weeks and three of the girls found suffering from fever were on convalescence proved to have had amaryl. A further associated case

was that of a European missionary who had visited the mission at Ovim a few days before his illness which occurred at a mission house a few miles from Okigwi. His illness was mild in character, but proved to be yellow fever on blood protection test being performed. At Aba in the same province a fatal case occurred a little later in the month in an African male, who proved to have been resident in or around Ikot-Ekpene, Calabar Province, at the time of infection; while a further fatal African case on a plantation near Sapele, Warri Province, had arrived from the Okigwi Division of Owerri Province a day before his illness supervened.

71. Yellow fever also appeared in Plateau Province about this time. Five suspected recovered cases were reported from Jos and Bukuru, but of these only three could be regarded as positive after successive blood tests had been performed. There was little doubt however of three European cases, two of which were fatal, which occurred in the Shendam Division of that province at the end of September and in early October. The first of these died on the 28th September and had not been seen by a medical man, but judging from his case history and in the light of the subsequent early occurrence of two further proved cases of yellow fever, there is little doubt that he was also a victim of that disease. In October a further fatal case occurred in a European Official's wife at Makurdi, who may either have been infected in the extreme south of Plateau Province or in villages to the north of Benue Province adjoining; while in late November two European cases, one of which was fatal, were reported from Wana in the Southern Division of Plateau Province.

72. An isolated fatal African case also occurred in the south of Abeokuta Province and in December, two isolated European cases, both of which proved fatal, occurred, one in the Udi Division of Onitsha Province and the other on a plantation some nine or ten miles outside the Port of Calabar.

73. It will be seen that in all proven cases amounted to eighteen Europeans with eleven deaths and ten Africans with four deaths. There is little doubt that among the African population many more sporadic outbreaks may have occurred, particularly in areas to which the influence of modern medicine has not yet been applied: indeed, reported high mortality in a hill pagan tribe in the Dikwa Division was investigated with this in view, but no active cases were available for examination. Analysing the cases among Europeans it is noteworthy that no fewer than eleven of the reported cases occurred on mission compounds where Europeans and Africans live in close proximity, three occurred in European officials (one wife) on tour in villages where no adequate separation of rest-houses from native habitations is normally found and the remaining four were associated with residence in commercial compounds where little control of aedes had been exercised and no building free zones exist.

74. Prophylactic measures included notification, screening, isolation of cases, observation or surveillance of contacts, evacuation of contacts from infected premises, fumigation, intensive anti-larval measures, quarantine of shipping and passive and active immunisation.

75. Segregation of the susceptible white race from the African race, which has normally considerable resistance to amaryl infection, remains one of our most efficient measures against fatal outbreaks of yellow fever. Towards the end of the year His Excellency decided that the following general principles should be adopted:—

(*i*) It is desirable that, in so far as may be practicable, all stations in which there is an European population should be provided with an area to be known as the Government Residential Area, protected by a building free zone.

(*ii*) These areas should be established by executive action where possible, rather than by action under section 60 of the Township Ordinance.

(*iii*) No buildings of the nature of barracks, prisons, or police lines should be included in such areas, nor any African dwelling houses. Offices should normally not be allowed in these areas, but in special circumstances they might be allowed, with the approval of the Health Authorities.

(*iv*) Normally residence in these areas should be confined to Europeans.

(*v*) The present practice of allowing the wives and children of servants to reside within the areas should continue until the matter has been further discussed at the next West African Medical Conference, which will probably meet towards the end of 1938.

76. Routine inspection of premises for the control of domestic mosquito-breeding has continued throughout the year.

77. In Lagos, Port Harcourt and Jos a campaign against water-bearing plants, which are potential mosquito-breeding foci has been carried out, about 64,000 of these plants being destroyed in Lagos. As a result of the intensive campaign against domestic mosquito-breeding which was instituted in the middle of the year, the larva index in Lagos dropped from 9.8 in June to 4 06 in July and 0.7 in August. Crab holes continue to breed prolifically, the predominant species being *Culex thalassius*, *Aedes irritans* and *Anopheles costalis;* in practice, control of crab-hole mosquito-breeding has been only partially efficient.

78. For underground sullage pits, the regular application of cyanogas dust has been continued, with resulting destruction of adult mosquitoes, cockroaches and other vermin sheltering in such pits. The effect of the dust on mosquito larvae, however, is doubtful.

79. In Port Harcourt, printed notices have been distributed urging the inhabitants to deal with mosquito-breeding on their premises.

80. Inoculation against yellow fever was made available locally during the last few months of the year. All inoculations were given by the Senior Pathologist.

(*c*) *Typhus Fever.*

81. Serum tests made after recovery proved the occurrence of this disease in two Europeans in Kano and one in Gboko (Benue Province).

(*d*) *Trypanosomiasis.*

82. The report of the Sleeping Sickness Service is given as an appendix to this report.

(*e*) *Dengue.*

83. Only one case, mild in character, has been reported from Jos during the year.

(*ii*) *Epidemic Diseases.*

(*a*) *Plague.*

84. No plague, human or rodent, was found in Nigeria during 1937. Some 50,900 rats were examined for plague amongst over 88,500 rats and mice caught in Lagos, Port Harcourt, Abeokuta, Ijebu-Ode and Ibadan.

85. About the middle of December, Zinder reported an outbreak of a disease resembling bubonic plague at Tanout, 100 miles north of Zinder. Immediate steps were taken to prevent the entry of the infection into the large northern Emirates. Sanitary control posts were

established and the District and Village Heads in and near the frontier were requested to report all suspicious cases and to take active steps for the reduction of the rat population. Stores and residential buildings in Nigeria having traffic with the infected area were frequently inspected. Notes on the symptoms of plague and the measures for its control were widely circulated. Later investigations have failed to prove that the outbreak was one of plague.

(*b*) *Smallpox.*

86. Smallpox was again prevalent throughout the year and was again particularly severe in the Northern Provinces (population eleven million) from which 3,095 cases with 439 deaths were reported as compared to 580 cases with eighty-eight deaths in the Southern Provinces including Lagos Colony (population nine million). Katsina and Sokoto Provinces were principally affected, especially the latter, the area from which the highest total was revealed being Gusau. The onset of the rains in July lead to a considerable reduction in the incidence up north, but in Southern Provinces no special seasonal prevalence occurred.

87. The comparative incidence for the past three years is shown in the following table:—

	Cases notified.			No. of deaths.			Case mortality.		
	1935.	1936.	1937.	1935.	1936.	1937.	1935.	1936.	1937.
Colony	26	17	16	1	2	0	3·4	11·8	0·0
Southern Provinces ...	411	514	564	57	53	88	13·9	10·3	15·6
Northern Provinces ...	5,061	4,352	3,095	1,345	556	439	26·6	12·8	14·2

88. Routine vaccination was continued by Government and Native Administration Vaccinators and in addition intensive campaigns were waged in epidemic areas. Wherever the Native Authorities have favoured the plan vaccinators have been attached to sleeping sickness teams in the Northern Provinces while in the South special village school visitations have been carried out in Owerri Province.

Owing to continued contamination with a haemolytic streptococcus the use of lymph prepared at Vom in Northern Nigeria was abandoned, only lymph procured from the Lister Institute being employed. The scheme to produce lymph at Vom has been given up, but experiments in the manufacture at Yaba, where sheep are being employed, have proved satisfactory and it is anticipated that in three or four years time there will be no need to import lymph into Nigeria: indeed it may be possible to extend supplies to other West African Colonies.

89. The following table sets out the details of vaccination performed during 1937:—

	Southern Provinces.	Northern Provinces	Colony.
No. performed	395,324	477,862	38,336
No. inspected for results ...	273,894	350,359	23,800
No. successful	217,746	287,320	19,586
No. failed	56,148	63,039	4,214
No. unknown	121,430	127,503	14,436
Percentage successful ...	79·5	82·06	82·29

(*c*) *Cerebro-spinal Meningitis.*

90. The cases of cerebro-spinal fever reported as occurring in the Northern Provinces towards the close of the year 1936 proved to be forerunners of a very severe epidemic which during the year was

responsible for 2,823 deaths in a total of known cases of 3,452. This was the first serious invasion since the period 1920 to 1924 when a most devastating epidemic occurred affecting Northern Provinces.

The disease first appeared in dimensions of severity in Benue Province in the month of February, but strangely enough, this outbreak very quickly subsided. In March and April it became more widespread in the more northerly areas, the provinces most seriously affected being Adamawa and Bauchi. In the former of these two areas the disease almost completely disappeared within the space of two months, but in Bauchi it continued with great severity, the peak of the epidemic being reached in the month of May when no fewer than 1,188 cases with 1,185 deaths were reported. The late advent of the rains accounted for the persistence of the disease in epidemic proportions until July, after which the number of cases very rapidly diminished. A fair number of cases also occurred in Plateau, Bornu and Kano Provinces, although outbreaks in these areas were never so large as in Bauchi or Adamawa.

91. From the figures reported it is certainly of great doubt whether all cases were reported, while on the other hand deaths due to other causes may have been erroneously attributed to this disease. Measures taken to limit spread, in addition to notification and isolation, included limitation of population movement, prohibition of large gatherings, reduction of overcrowding where possible. Until, however, considerable improvement in housing takes place with the provision of adequate ventilation and prevention of overcrowding, such epidemics are bound to make their appearance from time to time.

(*d*) *Enteric Fever.*

92. There were seven cases of enteric fever reported in the Northern Provinces, two being fatal. The cases were sporadic and occurred in the following provinces:—Kabba 2, Katsina 1, Plateau 3 and Benue 1. Four cases were reported in Lagos township, three being fatal: in two of these the diagnosis was only made post-mortem. There was only one case reported from the rest of the Southern Provinces.

93. Measures aimed against the prevalence of fly-borne, water-borne and food-borne diseases will be referred to in other parts of this report.

(*e*) *Dysentery.*

94. 1,290 cases were reported from the Northern Provinces and their incidence showed no appreciable seasonal changes. In Lagos, seventy-six cases were notified and forty deaths reported. In the rest of the Southern Provinces, 2,145 cases of dysentery were notified with thirty-four deaths.

95. Of 4,531 specimens of faeces examined at the Pathological Laboratory of the African Hospital:—

E. histolytica		was	found	in	42	cases
B. dysenteriæ	(*Flexner*)	,,	,,	,,	44	,,
,, ,,	(*Schmitz*)	,,	,,	,,	2	,,
,, ,,	(*Shiga*)	,,	,,	,,	8	,,
,, ,,	(*Newcastle*)	,,	,,	,,	1	case.

(*f*) *Yaws.*

96. The disease remains prevalent in many parts of Nigeria, more especially in the Eastern Provinces, and continues to be controlled as far as circumstances permit by specific treatment of large numbers of cases.

(iii) Other Diseases.

(*a*) *Leprosy.*

97. Anti-leprosy work is being gradually developed along the lines recommended by Dr. Muir after his visit to Nigeria. The policy has been continued of handing over anti-leprosy work to missions who are willing to undertake it. Various Native Administrations subsidise the work at Leper Settlements.

98. The leper population is very numerous and much discrimination is necessary if the best possible use is to be made, from a preventive point of view, of the facilities available. Efforts have to be concentrated on the segregation (voluntary) and treatment of the open, and therefore infectious, cases.

(*b*) *Tuberculosis and Pneumonia.*

99. In Lagos, 246 deaths from tuberculosis of which 173 were pulmonary and fifty-three disseminated were reported, and these represented 11.3 per cent of all deaths registered in Lagos.

100. 264 cases and five deaths were reported from the rest of the Southern Provinces. 325 cases and forty-four deaths were reported from the Northern Provinces.

101. Plans have been prepared for the erection of a small tuberculosis ward at Yaba—a suburb of Lagos—where a few of the most infectious cases of the disease would be treated. With so many other urgent claims on the country's revenue, more ambitious anti-tuberculosis measures of a specific nature cannot be considered yet. Prevention of this disease, however, is closely connected with the improvement of housing and other general sanitary conditions. The same remarks apply to preventive measures against pneumonia, which may be roughly calculated to account for twenty-five to thirty-three per cent of all native deaths.

(*c*) *Rabies.*

102. A total of 380 cases were given specific treatment for exposure to rabies infection during 1937. The dog was the infecting animal in all the cases but one where the patient had been bitten by a cat. The infection was demonstrated in thirty-three of the biting animals—thirty-two dogs and a cat. In two cases histological examination was negative but a positive result was obtained by inoculation into mice. Ten of the positive animals came from the Lagos area, five from Bamenda, three from Zaria, two from Ijebu-Ode, two from Ogbomosho and one each from Kano, Aba, Pankshin, Ilaro, Okigwi, Agbor, Ibadan, Sokoto, Umuahia, Ilesha, Calabar and Onitsha.

(*iv*) *Helminthic Diseases.*

103. The following figures kindly supplied by the Pathological Laboratories, Lagos, give some idea of the relative incidence of helminthic infestation in the municipal area which has a population representing most of the tribes of Nigeria:—

No. of blood specimens examined in 1937	6,000
,, in which microfilaria were found	73
,, of urine specimens examined in 1937	4,401
,, in which *S. hæmatobium* was found	178
,, of fæces specimens examined in 1937	4,531
,, in which Ova of *Tænia* were found	27
,, ,, ,, ,, ,, *Ascaris* ,, ,, ...	2,588
,, ,, ,, ,, ,, *Ankylostoma* were found	1,754
,, ,, ,, ,, ,, *T. dispar* ,, ,, ...	1,995
,, ,, ,, *Strongiloides* were found	283
,, ,, ,, Ova of *S. mansoni* occurred	32
,, ,, ,, ,, ,, *S. hæmatobium* ,, ...	2
,, ,, ,, *flagellates* were found	178

104. Ascariasis was more common in the Southern Provinces and Tæniasis was more prevalent in the Northern Provinces.

The preventive measures against these diseases are part of the general improvement in water supplies, food distribution, waste water disposal and other measures of sanitation which will be referred to in a later part of the report: the rate of progress in the introduction of such improvements depends to a large degree on economic factors.

II.—General Measures.

(*a*) *Sewage Disposal.*

105. The use of latrines has continued to advance gradually, but a large proportion of the population of Nigeria continue to pollute their land by indiscriminate defecation " in the bush ". The provision of latrines depends on funds available and the use of such conveniences by the people depends on health education.

As a general policy, the use of the communal in preference to the private latrine is advocated as the former can be better controlled than the latter.

106. Some tribes living in the vicinity of creeks, lagoons and other water courses have continued to make much use of these waters for the direct disposal of the nightsoil.

107. In a few places water latrines are in use—platforms built out on piers over the water into which the waste materials drop directly. The common fault of this method is the concentrated accumulation over a limited area of offensive wastes which gradually silt up until a stage is reached when the site under the latrine has ceased to be covered with water even at high tide.

108. In many towns and villages, especially in Northern Nigeria, the " salga " or cesspit has continued in use in the private compounds. The faults of the ordinary salga include fly-breeding which is usually very heavy. Provided the soil is suitable, however, salgas can be built of a type which is reasonably fly-proof, the fly nuisance being controlled by fitting the salga with a fly-trap and by making the latrine shelter over the salga as dark as possible. The health propaganda officer has been demonstrating the use of simple salga covers consisting of an inverted calabash bedded into sand covering the floor of the latrine house.

109. Bored hole latrines have not had a wide enough trial in Nigeria. On Lagos island the soil is too soft and sandy and the ground water usually at too high a level. In Agege—some twelve miles from Lagos, the soil (laterite) has been found too hard for easy boring with the drills usually provided for this purpose. There is no doubt, however, that there are many areas, e.g., in the Calabar and Owerri Provinces, where bored hole latrines may be found suitable. In these parts a trial of the bored hole type of latrine is all the more indicated, as in these provinces accidents have occurred in recent years through the collapse of the pits being prepared for the erection of pit latrines.

110. The policy has been continued of discouraging the multiplication of bucket latrines in rural areas, where revenue is usually inadequate for the cost of maintenance—labour and bucket renewal—which bucket latrines entail.

111. In built-up areas the wide use of bucket latrines has continued. Improvement has been directed chiefly to the abolition of the " perch " type of bucket latrine—with or without squatting blocks—and to the substitution of a structure where the floor is on one level with a slope towards the opening under which the bucket is set in a recess which has direct access to the outside.

112. Where a piped water supply is available more septic tanks with flush cisterns have been installed both by the Public Works Department and by private firms.

113. The common methods of disposal for the contents of night-soil buckets have been fly-trapped pits, trenching into the ground or disposal into sea, creek or other watercourse direct. A disintegrator has

continued to be used in Lagos. In Port Harcourt a proportion of the latrine buckets have been emptied into an experimental septic tank built on the bank of Dockyard Creek, the tank effluent running into this creek: the system has worked with satisfaction. In a few cases, e.g., at the Enugu Colliery, nightsoil is incinerated: the method is costly in fuel and cannot be generally adopted.

(*b*) *Disposal of Refuse and other Waste.*

114. Much useful reclamation by controlled filling with rubbish has been continued within the municipal area of Lagos, where adequate staff is available to supervise the dumping.

In other parts of the country the dumping of unburnt refuse has been discouraged and the building of incinerators, mainly of the simple barless type in mud, has been pushed. In Port Harcourt all domestic refuse has been carried to one site on the edge of swamp, which is being gradually but most permanently filled with the ashes from an advancing battery of barless incinerators. Suitable trees are planted on the reclaimed ground to guard against erosion.

115. Models of three types of simple incinerators, including the barless type are turned out in large numbers in the Health Propaganda Office at Headquarters and sent to all who are interested.

116. The use of movable tubs or other suitable receptacles for the disposal of domestic waste water has not proved practical and other alternative methods have been tried in substitution of the underground sullage pit which is a hidden menace in many areas. It is too early to judge of the efficiency of the various methods which are in use and such efficiency will vary with the varying soils. In devising means for the disposal of domestic waste water cheapness, simplicity and easy accessibility are to be aimed at.

(*c*) *Drainage.*

117. No major drainage works have been undertaken but minor drainage improvements have been continued in many areas.

(*d*) *Water Supplies.*

118. In the Northern Provinces, pipe-borne water supplies owned by Government have been available at Kaduna, Yola, Ilorin and Lokoja. Native Administrations have supplied pipe-borne water at Okene and Kano. Of these, only the Kaduna and Kano supplies have been submitted to purification treatment. The Railway Department has supplied a limited quantity of pipe-borne untreated water at Kafanchan, Gusau, Minna and Makurdi. The Geological Department has provided additional wells in the Emirates of Hadeija, Katsina, Katagum and Misau.

119. In Lagos, the pipe-borne water supply has been good and the results of frequent (weekly) bacteriological tests have shown no serious evidence of contamination.

120. For the rest of the Southern Provinces, Government-owned water supplies by a pipe-borne system have operated at Calabar, Port Harcourt, Enugu, Ibadan, Onitsha, Buea, Victoria, Akure, Aba and Umudike. Native Administrations have maintained the piped water supplies at Abeokuta, Oshogbo, Oyo, Iseyin, Ife, Ijebu-Ode and Benin. In none of these cases was the water satisfactorily treated against the danger of spreading disease.

121. Towards the middle of the year, a most useful principle was laid down by Government. His Excellency agreed that all pipe-borne public water supplies constructed by Government should be potable and that for this purpose potable water should be interpreted to mean water

which is " unlikely to be the carrier of any form of disease ". Government ruled that this standard should apply to all future supplies.

(e) Clearing of Bush and Undergrowth.

122. Attempts have continued to be made to control farming within compounds, within towns and villages and close to Government Reservations. In many rural areas, however, the practice of farming close to the houses and within the compounds is very strongly established and not easy to abolish at once.

(f) Domiciliary Inspections.

123. House-to-house inspection is very important owing to the modes of spread of many of the diseases prevalent in this country. These routine inspections have absorbed a large proportion of the working hours of the available sanitary staff. The township of Lagos has a larger inspecting staff than any other area: there are over 14,700 premises in this township as well as about 2,300 vacant plots of building land. A total of 188,050 routine inspections of these premises and vacant plots were made in Lagos in the course of the year.

(g) Offensive Trades.

124. The curing of hides and skins, though malodorous, cannot strictly be called offensive from the point of view of health. The same applies to the manufacture of ghee for export.

125. The native industry of cloth-dyeing favours a certain degree of mosquito-breeding.

III.—School Hygiene.

126. Close co-operation has been maintained between the two Departments of Education and Medical Services in connection with the hygiene of schools as well as with health education. The schools have continued to take a prominent part in connection with Health Weeks and other health propaganda activities. The health propaganda officer in his tours has generally centred his activities on the schools, used school buildings for demonstrating health exhibits and generally aimed at making use of the school teachers and pupils as a vehicle of health propaganda for the general public.

127. In Lagos a school clinic has been maintained and a medical assistant has attended to the children.

128. Conditions vary most widely in the various schools reported upon by medical officers. Thus the Medical Officer, Idah, reports:—

> " The only important school in the district is at Dekina. The general layout is eminently satisfactory and the health of the school is good. It is a fine example of what can be done by a willing body of men. Any minor complaints are dealt with at the Native Administration Dispensary situated close at hand and the school is inspected monthly by the Medical Officer when on tour.
>
> " The school consists of well fitted and lighted buildings situated in a well cleared area laid out as a garden. A bathing pool in a nearby river is cleared of bush. The whole area is a sanitary delight and the educational value should be of great assistance as most of the pupils are sons of chiefs who may one day put into practice some of the matters of hygiene which they have seen and learnt."

In contrast with this, may be quoted the report by the Medical Officer, Pankshin, who writes:—

> " There are two elementary schools and about a dozen mission schools. They are inspected as often as possible. Latrines and other sanitary facilities are the exception. The latrines at Pankshin school are in ruins. It is hoped to erect an incinerator and salgas both for example and use."

129. In the Northern Provinces, periodical medical inspection of school children has been carried out at Yola Middle School, the Middle School at Katsina Ala, the Wukari School and the Katsina Schools.

IV.—Labour Conditions.

130. The rates of pay for labour were raised generally throughout Nigeria in the course of the year mainly on account of the rise in the cost of living.

131. The United African Bulk Oil plant at Burutu where considerable numbers of labourers are employed was declared a Labour Health Area.

132. A programme of housing improvement has been started at the Enugu Colliery, owned by Government, where much overcrowding exists. Some improvement of housing conditions has been attained in the camps occupied by road gangs and other Public Works Department labour.

133. The Cameroons Plantations which are "labour health areas" under the Labour Ordinance have undertaken numerous improvements for the housing of their labour. Each plantation has submitted a two-year programme laying down a definite amount to be expended each year on the understanding that each year's programme would be subject to re-consideration in the light of trade conditions. To control these developments, a Medical Officer of Health has been posted to the Cameroons.

V.—Housing and Town Planning.

134. Though no final legislation had been actually enacted by the end of the year, much discussion has gone on over the details of Building Regulations that many Second-class and Third-class townships are willing to adopt. Rigid control over building has been maintained in Lagos and Port Harcourt and to a varying extent in Ibadan, Kano, Kaduna, Enugu, Zaria and a few other places.

135. The Lagos Executive Development Board has continued the gradual execution of its replanning schemes for Lagos.

136. The Building Lines Regulation Ordinance has been enforced throughout the province of Ijebu-Ode and is showing definite results.

137. In Ibadan, a Lands Committee has held fortnightly meetings and through the agency of this committee much useful information has been imparted to intending builders. Models of buildings and model plans were available for inspection by any applicant at the Ibadan Health Office. A layout was made for the Ijebu byepass area at Ibadan, plans for buildings thereon have been passed, and some construction has taken place. The Medical Officer of Health reports that zoning is becoming more urgently necessary for Ibadan.

138. Building rules have been enforced within certain limitations within the towns of Ibadan and Abeokuta.

139. A Barrack Accommodation Committee was established during the year to consider and standardise plans for the Government housing of troops, police and of marine and other artisans. Some, although not great, progress has been made with the improvement of the housing provided by Government for clerks and office employees in outstations.

Though much of the housing provided by Government for its European officers in outstations still remains very unsatisfactory, a number of new houses of "improved local construction" have been built.

140. A new Government residential area has been built in Yola, the houses being of the permanent type and enjoying such amenities as a piped water supply, electricity supply and water sanitation.

141. A new European residential area has been started in Minna with the erection of two new houses, the intention being gradually to transfer the residents from the very antiquated houses on the hot hill to more modern permanent houses to be built on the new site.

142. In connection with the keeping of horses, Government has now made certain rulings to apply to Government residential areas. Apart from the fly-nuisance, each horse kept in this country means one horse-boy, sometimes with his family, and the keeping of horses inside the segregated area therefore helps to augment the resident African population of the reservation.

Government has now ruled that:—

(1) where there is a Government residential area, except where there is only a very small number of horses, there should be communal stables built outside the Building Free Zone;

(2) the stables should be erected by Government and rent should be charged for the use thereof;

(3) officers who are required by the nature of their duty to keep a horse or horses should have free stabling for their animals;

(4) the communal stables should be constructed as and when funds are available.

143. In the Oyo Province byepasses have been established round many of the villages to avoid the cattle traffic crossing through the inhabited centre.

VI.—Food in relation to Health and Disease.

144. No serious scarcity of food has been reported from any part of the country.

145. Progress has continued to be made in many areas with the improvement of market buildings and slaughter places. The Senior Health Officer, Northern Provinces, records structural improvements of meat markets at Sokoto, Idah, Bauchi, Yola and Gusau.

146 Foodstuffs continue to be exposed under unhygienic conditions in the street even in the first class township of Lagos. The gradual abolition of such insanitary practices is in great part dependent on the health education of the general public.

147. The Medical Officer of Health, Ibadan, reports that new slaughter slabs have been provided at Oyo, Ikirun and Ilesha. The execution of the scheme for a large central abattoir for the city of Ibadan has had to be postponed until the major scheme for water supply which is under construction has made plentiful pipe-borne water available.

148. At Port Harcourt the last of the temporary market stalls have been removed.

149. Conditions indicating various degrees of avitaminosis and of lack of balance in the constituents of the local dietary continue to be observed in many areas, and a small simple pamphlet on local foodstuffs and their relative values for a balanced dietary is being issued for widespread distribution to medical officers and other persons interested.

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

I.—Training of Health Personnel.

150. A total of twenty-five pupils were in training at the Kano School of Hygiene during the year, thirty-eight at the Ibadan School, eighteen at the Umudike School: these pupils with the exception of two at Kano, were being trained for working under various Native Administrations, which pay for their training.

151. At Lagos, in the Health Office of the Town Council, sanitary inspectors have been trained for the Central Government as well as for the municipality. There were ten inspectors in training at the Lagos Health Office at the end of 1937. Five of these were being trained for the Central Government.

152. It is felt that at the three schools outside Lagos the teaching given is still too overburdened with material which these rural sanitary inspectors will be unable to use when they return to their district and a policy is being aimed at which will make these courses a severely practical apprenticeship with a minimum of lectures and paper work.

So long as the trained sanitary staff available remains so disproportionately small in relation to the population of the country, efforts will continue to be made to utilise other staff for promoting rural sanitation. Thus, in Sokoto, for instance, Native Administration vaccinators have been trained to apply elementary sanitation measures.

II.—General Health Education.

153. In spreading the knowledge of sanitation and hygiene the two departments of education and medical services have continued to co-operate very closely.

154. The Health Propaganda Unit has continued to tour various provinces giving displays of locally taken health cinema films in many rural areas and demonstrating simple sanitary improvements which can be easily adopted by any rural householder. Concentrated efforts have been directed towards instilling health education into schools and thus reaching the inhabitants through the school teachers and school children. School buildings have been found very convenient for the holding of demonstrations.

155. The Rural Health Units formed at Ilaro and Ife have held regular meetings and have promoted the improvement of sanitation in their areas by example and precept.

156. Mention must here be made of the assistance given by sleeping sickness medical officers who have supervised large numbers of vaccinations against smallpox in the course of their sleeping sickness survey work and have, wherever possible, got villages cleaned up, simple incinerators built and other simple sanitary improvements in rural areas established.

157. The gradual evolution of the popular Native Administration Dispensaries into Rural Health Centres is aimed at, where the quarters provided for the dispenser and for other medical and health personnel, such as sanitary inspector and health visitor, would be simple models of a type that can be easily copied by other householders in the area. For these houses, the use of local materials and local methods of construction should be utilised, the necessity for special tools should be minimised and the use of cement and other imported materials should as far as possible be avoided.

158. In the Birnin Kebbi area, model compounds for the dispensary attendant and for the sanitary inspector at Argungu and for the dispensary attendant at Kamba have been provided. In the Bida area, under the supervision of a sleeping sickness medical officer, Kutigi was developed into a model of sanitation for the Emirate, and twelve public pit latrines, seven incinerators, a slaughter slab and fly-protected meat stalls were constructed. A model compound also was constructed for the attendant of the Kutigi dispensary and the Kutigi people were urged to copy this model.

IV.—PORT HEALTH WORK AND ADMINISTRATION.

159. Airport health work has continued smoothly at Apapa (Lagos), Kano and Maiduguri which have anti-amaryl aerodromes, and at the refuelling aerodromes of Kaduna, Oshogbo and Minna. An isolation block for yellow fever contacts or suspects has been maintained at Apapa and at Kano.

160. At Apapa and Maiduguri—the two terminal airports—119 planes were dealt with during the year.

Anti-mosquito measures have been maintained at all six airports.

161. At Oshogbo, the Sanitary Superintendent has performed the duties of Airport Control Officer.

162. In the *Port of Lagos* a total of 882 British and foreign vessels—aggregating 2,209,561 tons—called. Fumigation was applied to eleven vessels: three of these were completely fumigated and issued with deratisation certificates; in the other eight cases, one or two holds were treated at the request of the Agents prior to loading with cocoa. One deratisation exemption certificate was issued during the year.

163. All permanent harbour craft including lighters have been systematically trapped for rats and subjected to fumigation at least once during the year. Trapping for rats was systematically carried out in the port health area, including wharves, warehouses and other buildings. 498 rats and fifty-five mice were caught on board vessels in the harbour and 3,179 rats and 675 mice were caught ashore.

164. Anti-mosquito measures have been vigorously pursued in the port health area during the year and Lagos remained free from yellow fever.

Of the quarantinable infectious diseases, only four cases of smallpox were reported in the municipal area of Lagos during 1937. No case of such diseases was found on board vessels arriving in port.

165. A total of 32,268 passengers—mostly deckers and third-class—were medically inspected for the presence of infectious disease, but no cases were found. The personal belongings of 16,900 passengers were disinfected, and over 10,000 persons were vaccinated.

166. A seamen's clinic continued to be maintained at Apapa, where sixty-nine persons received treatment and 2,872 availed themselves of prophylactic measures in the course of the year.

167. At *Port Harcourt*, 445 ships called during the year. 393 passengers were vaccinated and anti-mosquito measures were energetically carried out.

168. At *Calabar*, 290 ships were boarded by the port health authority, and 415 passengers were vaccinated. In addition, 5,490 passengers by the Oron and Itu launches were made to undergo vaccination.

V.—MATERNITY AND CHILD WELFARE.

169. There were four certificates as Grade I Midwives and twenty-three certificates as Grade II Midwives granted during 1937.

One mission institution in the Southern Provinces was accorded recognition as a Grade II training centre during the year

170. The number of midwives registered under the Midwives Ordinance, 1930, has increased from seventy-one at the end of 1936 to ninety-eight at the end of 1937. Of these ninety-eight midwives, thirty-five possess the Grade I certificate. The Midwives Board held three meetings during the year.

171. Maternity and child welfare activities have continued to expand. There was a total of 2,331 normal deliveries in Government

and Native Administration hospitals and Maternity Centres in 1937, as against 1,893 deliveries in the course of the previous year.

172. Infant welfare clinics have been run in many medical stations, often with the assistance of medical officers' wives and other volunteers.

In Lagos 198 infant welfare clinics were held during the year at which 3,697 infants were brought an aggregate of 8,805 times. A total of 41,836 domiciliary visits were paid by the Health Visitors of the Infant Welfare Department of the Lagos Town Council during 1937.

173. A most successful Health and Baby Week was held in Lagos at the beginning of 1937 and this Week has been awarded the shields of both the Imperial Baby Week Competition (which Lagos also won for 1935) and the Bostock Hill Memorial Prize which is also competed for by all parts of the Empire.

GOVERNMENT AND NATIVE ADMINISTRATION MATERNITY WORK—1937.

Name of Institution.	No of Maternity Wards.	No of Beds.	No of Deliveries.	Remarks.
Aba Government Hospital ...	1	12		6 of these beds are reserved for anti-natal cases.
Abeokuta—Catholic Sacred Heart Hospital Midwifery Institute	6	24	70	96 cases of pregnancy treated as out-patients.
Abeokuta—Egba Native Administration Welfare Clinic	—	—	Over 100	
Abeokuta—African Hospital ...	1	4	9	
Akure Government Hospital ...	1	4	158	
Owo (Akure) Native Administration Dispensaries	—	—	137	Cases attended by Native Administration Grade II Midwives.
Ondo Native Administration Dispensaries	—	—	114	do.
Ilara Native Administration Dispensaries	—	—	126	do.
Azare Hospital	—	6	3	
Bamenda Hospital	—	—	—	
Calabar Government Maternity Hospital and Child Welfare Centre	2	14	138	
Enugu African Hospital ...	1	4	67	
Enugu C.M.S. Hospital ...	1	6	135	
Gusau Native Administration Hospital	—	—	3	
Ijebu-Ode Government African Hospital	1	9	293	
Ilorin Native Administration Welfare Centre	2	10	279	
Jos Hospital	—	—	13	
Kaduna African Hospital ...	1	3	34	
Katsina Native Administration Hospital	1	10	—	
Lagos European Hospital ...	1	2	4	
Maiduguri Native Administration Hospital	1	3	8	
Makurdi African Hospital ...	—	—	5	
Okigwi African Hospital ...	—	—	10	
Opobo Hospital	—	—	3	
Oshogbo Government Hospital	—	—	12	
Owerri Government Hospital ...	—	—	32	
Port Harcourt Government Hospital	1	4	45	
Umuahia Hospital	—	1	17	
Victoria Hospital	1	1	12	

VI. HOSPITAL STATISTICS.

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

European Hospital Statistics, 1937.

No.	Name of Hospital.	C. G. or N. A.	No. of Beds.	No. of Cots.	In-Patients treated. Remaining end 1936.	In-Patients treated. Male.	In-Patients treated. Female.	In-Patients treated. Total.	In-Patients treated. Remaining end 1937.	Out-Patients treated. Male.	Out-Patients treated. Female.	Out-Patients treated. Total.	Total Cases treated.	Number of Operations. Major.	Number of Operations. Minor.	Number of Operations. Total.	Nursing Staff. European Sisters.	Nursing Staff. Africans. Male.	Nursing Staff. Africans. Female.	Nursing Staff. Africans. Total.
1	Calabar	C.G.	8	—	—	17	4	21	1	223	32	255	276	—	—	—	1	—	—	—
2	Enugu	C.G.	12	—	2	88	14	102	1	322	86	408	510	—	—	—	1½	4	½	4½
3	Ibadan	C.G.	14	—	4	77	19	96	—	336	54	390	486	—	—	—	½	4	1	5
4	Jos	C.G.	18	—	5	129	36	165	1	451	102	553	718	—	22	22	2	5	1	6
5	Kaduna	C.G.	18	—	6	110	36	146	2	233	106	339	485	3	11	14	2	7	2	9
6	Kano	C.G.	12	—	4	69	22	91	—	416	92	508	599	14	5	19	2	6	2	8
7	Lagos	C.G.	30	2	10	425	85	510	7	1,207	213	1,420	1,930	13	38	51	3	6	1	7
7a	Lagos, Ebute Metta European Dispensary ...	C G.	—	—	—	—	—	—	—	317	75	392	392	—	—	—	—	—	—	—
8	Lokoja	C.G.	4	—	—	7	3	10	—	44	17	61	71	—	—	—	½	1	—	—
9	Onitsha	C.G.	4	—	—	13	3	16	—	91	13	104	120	—	—	—	1	—	—	—
10	Port Harcourt	C.G.	13	2	—	86	25	111	1	556	127	683	794	—	—	—	1	3	1	4
11	Victoria	C.G.	4	—	—	15	6	21	—	64	20	84	105	—	—	—	½	—	—	—
12	Warri	C.G.	8	—	—	56	7	63	—	159	30	189	252	—	—	—	½	3	—	3
	Total	...	145	4	31	1,092	260	1,352	13	4,419	967	5,386	6,738	30	76	106	15½	39	8½	46½

AFRICAN HOSPITAL STATISTICS, 1937.

Northern Provinces.

No.	Type of Hospital.	Name of Hospital.	C.G. or N.A.	No. of Beds.	No. of Cots.	In-Patients treated. Remaining end 1936.	In-Patients treated. Male.	In-Patients treated. Female.	In-Patients treated. Total.	In-Patients treated. Remaining end 1937.	Out-Patients treated. Male.	Out-Patients treated. Female.	Out-Patients treated. Total.	Total cases treated.	Operations. Major.	Operations. Minor.	Operations. Total.	Nursing Sisters Average No.	African Nursing Staff. Male.	African Nursing Staff. Female.	African Nursing Staff. Total.
1	C	Azare	N.A.	29	—	74	1,125	301	1,426	132	2,497	527	3,024	4,450	211	163	374	—	2	—	2
2	C	Bauchi	C.G.	45	—	53	650	135	785	73	3,152	1,831	4,983	5,768	121	70	191	—	3	—	3
3	C	Bida	N.A.	37	2	83	768	150	918	—	2,874	467	3,341	4,259	203	158	361	—	2	—	2
4	C	Gadau (Dispensary)	C.G.	5	—	4	48	2	50	—	1,119	444	1,563	1,613	—	—	—	—	1	—	1
5	D	Gusau	N.A.	35	—	19	347	53	400	24	3,418	975	4,393	4,793	63	165	228	—	2	—	2
6	—	Hadeija	N.A.	36	—	114	1,146	251	1,397	49	3,811	1,601	5,412	6,809	60	26	86	—	2	—	2
7	D	Idah	N.A.	25	—	27	228	62	290	16	1,979	887	2,866	3,156	163	81	244	—	1	—	1
8	B	Ilorin	N.A.	25	2	30	465	482	947	15	4,305	1,665	5,970	6,917	235	76	311	—	2	—	2
9	B	Jos	C.G.	113	4	118	2,237	334	2,571	139	9,161	2,260	11,421	13,992	496	534	1,030	2	2	2	4
10	B	Kaduna	C.G.	85	2	63	1,396	169	1,565	75	13,499	3,231	16,730	18,295	454	403	857	1	16	3	19
11	D	Kafanchan ...	C.G.	34	—	45	522	204	726	18	4,048	2,121	6,169	6,895	144	422	566	—	4	—	4
12	B	Kano Fagge ...	C.G.	2	—	—	—	—	—	—	2,848	1,139	3,987	3,987	—	—	—	—	1½	—	1½
13	B	Kano City ...	N.A.	190	12	248	3,689	1,427	5,116	156	9,796	3,491	13,287	18,403	—	—	—	2	1	2	3
14	B	Katsina	N.A.	184	6	177	2,153	990	3,143	160	6,833	1,712	8,545	11,688	535	161	696	1	½	1	1½
15	D	Lafia	C.G.	13	—	—	40	17	57	6	2,867	1,575	4,442	4,499	2	18	20	—	1	—	1
16	B	Lokoja	C.G.	43	—	40	350	158	508	—	1,917	1,001	2,918	3,426	122	55	177	½	7	2	9
17	C	Maiduguri ...	N.A.	81	4	114	972	307	1,279	99	10,309	3,230	13,539	14,818	279	70	349	—	3	1	4
18	C	Makurdi... ...	N.A.	91	—	57	459	122	581	37	4,532	1,622	6,154	6,735	165	154	319	—	8	—	8
19	C	Minna	C.G.	32	—	29	547	27	574	—	5,293	145	5,438	6,012	173	110	283	—	5	—	5
20	C	Pankshin ...	N.A.	60	—	57	542	165	707	60	2,062	811	2,873	3,580	214	140	354	—	1	—	1
21	C	Sokoto	N.A.	80	6	53	1,214	781	1,995	86	1,780	53	1,833	3,828	285	112	397	1	3	—	3
22	D	Wukari	N.A.	43	—	45	406	186	592	43	1,781	4,821	6,602	7,194	581	256	837	—	3	—	3
23	D	Yola	C.G.	48	—	30	569	81	650	36	2,508	472	2,980	3,630	38	34	72	—	3	—	3
24	B	Zaria	C.G.	122	2	82	1,305	146	1,451	67	7,763	1,307	9,070	10,521	226	319	545	1	15	3	18
		Total ...	...	1,458	40	1,562	21,178	6,550	27,728	1,291	110,152	37,388	147,540	175,268	4,770	3,527	8,297	8½	89	14	103

AFRICAN HOSPITAL STATISTICS, 1937.

Southern Provinces.

No.	Type of Hospital.	Name of Hospital.	C.G. or N.A.	No. of Beds.	No. of Cots.	Remaining end 1936.	In-Patients Treated.			Remaining end 1937.	Out-Patients Treated.			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	Aba	C.G.	80	4	69	806	758	1,564	59	11,289	6,458	17,747	19,311	404	892	1,296	1	7	7	14
2	C	Abakaliki	C.G.	16	—	11	213	47	260	22	5,358	2,155	7,513	7,773	47	132	179	—	2	—	2
3	B	Abeokuta	C.G.	100	8	—	584	146	730	33	4,436	1,288	5,724	6,454	174	140	314	1	9	2	11
4	D	Afikpo	C.G.	—	—	—	—	—	—	—	5,805	2,459	8,265	8,265	—	—	—	—	—	—	—
5	C	Agbor	C.G.	26	2	34	383	105	488	35	10,126	5,102	15,228	15,716	411	54	465	—	4	—	4
6	C	Akure	C.G.	38	—	30	356	339	695	26	3,663	2,540	6,203	6,898	398	35	433	—	3	2	5
7	C	Bamenda	N.A.	100	—	90	990	385	1,375	55	3,558	1,295	4,853	6,228	90	175	265	—	5	—	5
8	D	Banso	N.A.	50	—	58	568	314	882	37	2,816	1,695	4,511	5,393	438	54	492	—	2	—	2
9	C	Benin City	C.G.	25	—	16	293	92	385	5	12,487	6,979	19,466	19,851	25	83	108	—	3	1	4
10	B	Calabar	C.G.	166	10	118	1,142	471	1,613	98	14,906	6,100	21,006	22,619	776	344	1,120	1	16	5	21
11	C	Degema	C.G.& N.A.	38	—	29	283	164	447	17	5,098	2,826	7,924	8,371	84	100	184	—	3	—	3
12	B	Enugu	C.G.	72	20	80	2,076	456	2,532	114	20,313	4,817	25,130	27,662	606	396	1,002	1½	14	3	17
13	C	Forcados	C.G.	12	—	2	167	25	192	7	9,647	2,255	11,902	12,094	44	54	98	—	2	—	2
14	B	Ibadan, Adeoyo ...	N.A.	74	4	65	753	358	1,111	47	9,331	6,312	15,643	16,754	725	290	1,015	1	—	—	—
15	C	Ibadan, African ...	C.G.	33	—	34	707	115	822	38	7,685	2,410	10,095	10,917	155	206	361	½	7	—	7
16	C	Ijebu-Ode	C.G.	67	13	49	737	684	1,421	40	4,163	196	4,359	5,780	257	191	448	1	9	1	10
17	C	Ikot-Ekpene	C.G.	74	—	51	715	210	925	47	14,557	8,354	22,911	23,836	331	135	466	—	4	—	4
18	C	Kumba	C.G.	69	—	49	620	238	858	65	4,797	2,884	7,681	8,539	398	112	510	—	4	—	4
19	B	Lagos, African ...	C.G.	197	16	182	2,852	850	3,702	124	21,798	14,776	36,574	40,276	975	551	1,526	4	31	5	36
20	B	Lagos, Massey Street ...	C.G.	24	15	8	—	1,168	1,168	10	3,250	3,291	6,541	7,709	—	—	—	2	—	7	7
		Lagos Maternity	C.G.	—	—	—	8	400	408	11	180	921	1,101	1,509	25	10	35	—	—	—	—
	C	Lagos, I.D.H. (Yaba) ...	C.G.	112	—	5	199	30	229	3	—	—	—	229	—	—	—	—	3	1	4
20a	C	Lagos, Yaba Asylum ...	C.G.	6	—	238	242	98	340	192	897	417	1,314	1,654	—	—	—	—	—	—	—
	C	Lagos, Ebute Metta African Dispensary	C.G.	—	—	—	—	—	—	—	13,426	5,009	18,435	18,435	—	148	148	—	2	—	2
21	C	Mamfe	C.G.	61	—	33	445	148	593	32	5,159	2,121	7,280	7,873	214	133	347	—	4	—	4
22	C	Obubra	C.G.	16	—	20	208	85	293	7	9,034	5,667	14,701	14,994	243	86	329	—	1	—	1
23	C	Ogoja	N.A.	35	—	26	269	152	421	32	8,349	3,921	12,270	12,691	83	152	235	—	2	—	2
24	C	Okigwi	N.A.	77	8	170	1,031	254	1,285	33	10,600	5,459	16,059	17,344	559	345	904	—	5	—	5
25	C	Onitsha	N.A.& C.G.	61	3	159	680	252	932	43	13,395	10,033	23,428	24,360	127	542	669	1	9	2	11
26	D	Opobo	C.G.& N.A.	30	—	13	346	103	449	14	32,728	25,040	57,768	58,217	74	141	215	—	3	1	4
27	C	Oshogbo	C.G.	35	—	19	447	187	634	25	4,325	3,049	7,374	8,008	102	80	182	—	3	2	5
28	C	Owerri	N.A.	80	6	20	643	345	988	53	6,990	5,541	12,531	13,519	267	218	485	—	4	—	4
29	B	Port Harcourt	C.G.	130	32	131	1,998	660	2,658	105	17,595	5,624	23,219	25,877	1,389	755	2,144	1	25	4	29
30	C	Sapele	C.G.	30	—	8	258	38	296	13	5,952	2,923	8,875	9,171	104	49	153	—	4	—	4
31	C	Umuahia	C.G.	34	—	43	547	187	734	38	12,473	8,415	20,888	21,622	588	753	1,341	—	3	—	3
32	B	Victoria	C.G.	85	3	65	788	251	1,039	68	8,550	2,984	11,534	12,573	314	159	473	¼	9	2	11
33	B	Warri	C.G.	30	2	16	576	157	733	16	6,484	1,917	8,401	9,134	191	229	420	¼	6	3	9
		Total	...	2,023	146	1,941	22,930	10,272	33,202	1,564	331,221	173,233	504,454	537,656	10,618	7,744	18,362	15½	208	48	256

B.—NATIVE ADMINISTRATION DISPENSARY SYSTEM.

175. At the close of the year there were some 322 Native Administration Dispensaries in existence. Twenty-two new Native Administration Dispensaries were opened during the year in the Southern and Northern Provinces.

176. The total cases treated and total attendances at these dispensaries are as follows:—

Northern Provinces.		Southern Provinces.	
Total Cases Treated.	Total Attendances.	Total Cases Treated.	Total Attendances.
162,735	1,049,538	531,443	2,298,328

C.—MEDICAL WORK OF RELIGIOUS MISSIONS.

Mission.	No. of Stations performing Medical work.	No. of Doctors.	No. holding Missionary Permits.	Nature of Work.				Cases Treated.	Total Attendances.
				Hospitals.	Dispensaries.	Leprosy.	Maternity and Infant Welfare.		
Northern Provinces.									
Sudan Interior Mission ...	43	4	76	1	43	5	3	20,389	193,764
Sudan United Mission ...	1	...	2	...	1	1	1	170	2,593
Dutch Reformed Church Mission	6	1	15	2	4	1	32	13,481	140,393
Christian Missions in Many Lands	3	...	3	...	3	1	...	8,748	12,856
Church of the Brethren Mission	4	3	3	3	4	1	1	6,988	85,338
C.M.S. Hospital, Zaria ...	4	1	3	1	5	1	2	7,185	62,752
United Missionary Society, Yelwa	8	...	6	...	5	...	...	Information not available	30,656
Southern Provinces.									
Methodist Missionary Society, Lagos	11	2	...	1	10	1	11	13,075	61,958
Church of Scotland	5	3	3	3	8	2	1	23,796	85,986
Church Missionary Society ...	25	5	3	1	12	1	15	5,744	107,801
Amachara Medical Mission ...	1	...	1	1	1	...	1	7,232	20,822
Wesley Guild Hospital, Ilesha	1	1	...	1	3	1	1	9,586	50,558
Roman Catholic Mission, Abeokuta	2	1	1	1	...	1	1	2,852	12,199
Qua Iboe Mission, Ibiaku, Itam, Uyo	8	1	10	1	7	1	1	Not available	
American Baptist Mission, Ogbomosho	3	3	2	1	2	1	1	2,691	31,910

D.—DENTAL REPORT.

177. Of the two Dental Surgeons one, Mr. Cunningham was unfortunately invalided after ten months of his tour whilst Mr. Pearson was on leave. Thus the country was left for a time without a Dental Surgeon.

178. The following is a summary of the dental treatment for the year:—

	Fillings.	Dressings.	Scalings.	Root Treatments.	Extractions with local anæsthetics.	Extractions General anæsthetics.	Extractions ordinary.	Attendances for treatment.
European Officials ...	600	420	352	36	57	2	nil	876
African Officials ...	151	64	191	3	256	1	1	207
Wives and Children of African Officials ...	90	48	76	2	136	nil	15	150
School Children ...	23	45	130	nil	153	nil	2	176
Patients from Hospital	10	nil	180	nil	296	1	32	302

E.—SURGICAL OPERATIONS—1937.

179. The total number of surgical operations performed in Government and Native Administration hospitals during the year under review is as follows:—

Major Operations.		Minor Operations.	
Number performed.	Deaths.	Number performed.	Deaths.
15,418	336	11,337	5

F.—X-RAY DEPARTMENTS.

180. The Government African Hospitals at Lagos, Kaduna, Calabar and Port Harcourt and the Kano Native Administration City Hospital are provided with X-ray plants.

(*a*) At Port Harcourt all the apparatus has worked very satisfactorily with the exception of the pantostat and the diathermy apparatus. A new mercury burner for ultra-violet radiation was installed and has given every satisfaction.

	X-ray examination.	Ultra Violet Radiation.	Diathermy.	Electro-Massage.	Total.
a. Cases	302	385	45	37	769
b. Attendances ...	361	1,812	178	557	2,908
c. Exposures ...	638	...	...	...	638
d. Apparatus Hours	...	700	178	304	1,182

(*b*) At Calabar the X-ray and electric light plant has worked fairly well.

(*c*) At Kano during the year 246 patients in all were examined by X-ray. Of this number twenty-four patients examined were Europeans. Six barium meal examinations of the stomach and duodenum were made and four examinations of the urinary tract by means of Uroselectan. 128 examinations were made for fracture and the remainder included examinations of the chest and teeth, ante-natal examinations, etc. In the Therapeutic Branch of the Electrical Department, a large number of patients were treated by diathermy, radiant heat and ultra-violet light.

(*d*) At Kaduna 208 cases were X-rayed of which ninety-two were Europeans, including fourteen barium meals.

(*e*) At Lagos, X-ray examinations were made of 1,089 persons. In addition there were 380 attendances for ultra-violet ray treatment, sixty for diathermy and 170 for other forms of electrical treatment. The layout of the Schall X-ray apparatus was redesigned with very satisfactory results; the Snooks X-ray apparatus does not function in a satisfactory manner during humid weather or heavy rains but, on the whole, the apparatus and general equipment is functioning well and is in a good state of repair.

VII.—PRISONS AND ASYLUMS.

181. The following figures show the general health and the death rate of prisoners in Government gaols during the year contrasted with figures for the previous two years:—

	Northern Provinces.			Southern Provinces.		
	1935.	1936.	1937.	1935.	1936.	1937.
Average daily number in Prison	566	699	706	6,366	6,330·24	5,864
Total number on sick list	350	310	333	24,100	21,003	22,324
Total number of days on sick list	3,120	3,959	3,916	38,059	38,384	47,049
Average daily sick ...	8·55	10·74	10·73	66·02	57·38	61·16
Total number of deaths	11	17	18	88	76	95
Death rate per thousand	19·4	24·3	25·4	13·8	12	16·2

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

Northern Provinces.	
Heart Failure	1
Hæmorrhage	1
Pulmonary Tuberculosis ...	1
Cerebro Spinal Fever ...	1
Nephritis	1
Pneumonia	2
Asthenia	4
Diarrhoea	1
Izal poisoning	1
Debility	3
General Paralysis of the insane	1
Chronic Osteomyelitis ...	1
Total	18
Southern Provinces.	
Heart Failure	11
Gangrene	2
Asthenia	5
Septicæmia	3
Erysipelas	1
Hyperpyrexia	1
Elephantiasis of the Scrotum	1
Paralysis	2
Carried forward ...	26

Brought forward ...	26
Self Starvation	3
Cerebral Hæmorrhage ...	2
Convulsion	1
Myocarditis	2
Broncho Pneumonia ...	6
Paraplegia	2
Chronic Bronchitis ...	3
Lobar Pneumonia	19
Chronic Phthisis	2
Pulmonary Tuberculosis ...	1
Dysentery	8
Bronchial Asthma... ...	1
Gastro Enteritis	2
Diarrhœa	2
Shock	3
Cirrhosis of the Liver ...	1
Intestinal Obstruction ...	1
Nephritis	2
Stricture of the Urethra ...	1
Pleurisy	2
Hæmorrhoid	1
Ventricular Fibrillation ...	1
Injuries to the brain ...	1
Dyspepsia	1
Cerebral Abscess	1
Total	95

VIII.—METEOROLOGY.

182. The comparative monthly Rainfall for Lagos, from 1927–1937 was as follows:—

Month.	YEAR.										
	1927.	1928.	1929.	1930.	1931.	1932.	1933.	1934.	1935.	1936.	1937.
January	2·49	1·77	·02	1·38	0·94	0·02	4·93	0·20	...	·93	...
February	2·35	2·22	1·46	2·21	1·47	0·44	2·05	...	1·24	1·54	2·77
March	2·78	8·20	1·73	3·27	5·89	2·61	4·67	4·75	8·36	5·78	5·05
April	3·37	6·96	7·04	5·01	7·16	3·80	3·95	5·73	6·27	2·57	4·81
May	8·19	15·33	11·34	8·61	8·87	11·34	6·61	5·38	13·99	12·08	10·02
June...	7·08	21·05	24·79	13·28	17·73	14·10	14·86	15·68	21·18	14·70	20·04
July	8·57	2·53	19·93	18·40	17·81	0·86	19·49	14·49	16·09	0·16	18·07
August	0·25	2·05	·81	·66	2·10	3·02	1·51	7·91	0·42	1·12	1·42
September	3·04	5·60	3·11	2·67	12·54	4·11	5·49	4·32	2·32	1·77	12·54
October	13·33	12·67	6·03	12·46	5·87	5·16	6·01	13·45	6·08	13·88	5·45
November	2·38	·54	4·10	1·88	2·24	2·63	5·31	1·17	2·33	5·33	0·38
December	1·17	·13	6·02	1·69	0·93	...	0·97	4·72	0·43	2·42	1·26
Total	55·00	79·05	86·38	71·52	83·55	48·09	75·85	77·80	78·71	62·28	81·81

METEOROLOGICAL RETURNS FOR 1937.

STATION.	Absolute Shade Max.	Absolute Shade Min.	Average Max.	Average Min.	Relative Humidity.	Rainfall inches.
Ilorin	102	50	82·4	63·6	83·9	60·28
Kaduna	101	50	93·7	60·5	69·4	44·93
Maiduguri	111	48	92·3	60·5	46·2	23·96
Kano	106	47	97·5	58·7	52·8	28·97
Lokoja	101	56	63·1	44·4	79·3	35·20
Yola	106	60	98·4	66·2	62	35·07
Lagos	94	68	89·5	71	87·1	81·81
Ibadan	99	56	91·8	64·8	44·49	94·5
Calabar	94	60	90·2	48	—	96·12
Enugu	100	59	92·6	62·3	77·7	70·88

X.—SCIENTIFIC.

182 The following abridged reports appear as appendices:—

A.—Report upon Laboratory Service.

B.—Report upon Tsetse Investigation and Sleeping Sickness work.

C.—Report upon Medical Schools.

R. BRIERCLIFFE,
Director of Medical Services.

RETURNS

TABLE I.

AUTHORISED ESTABLISHMENT OF THE DEPARTMENT.

(*a*) EUROPEAN STAFF.

Director of Medical Services.

Medical Service.

Deputy Director of Medical Service.
Assistant Director of Medical Service.
Senior Specialist.
Specialist.
8 Senior Medical Officers (1 vacant during the year).
77 Medical Officers (including 9 attached to Sleeping Sickness Service).
2 Lady Medical Officers.
1 Deputy Director of Medical School.
1 Superintendent, School of Pharmacy.
2 Government Dentists.
9 Senior Nursing Sisters (1 vacant during the year).
54 Nursing Sisters (4 vacant during the year).
2 Assistant Radiographers and Storekeepers, Grade I.
2 Assistant Radiographers and Storekeepers, Grade II.

Health Service.

Deputy Director of Health Service.
4 Senior Health Officers.
14 Medical Officers of Health (5 vacant during the year).
1 Chief Sanitary Superintendent.
8 Sanitary Superintendents, Grade I.
34 Sanitary Superintendents, Grade II.

Laboratory Service.

1 Senior Pathologist.
5 Pathologists.
3 Technical Assistants, Grade I.
3 Technical Assistants, Grade II (including 1 attached to Sleeping Sickness Service).

Sleeping Sickness Service.

Deputy Director of Sleeping Sickness Service.
9 Medical Officers.
1 Entomologist.
1 Technical Assistant.
10 Sleeping Sickness Control Officers (4 vacant during the year).
8 R.A.M.C. British non-Commissioned Officers (2 vacant during the year).

Clerical and Storekeeping Staff.

1 Accountant.
1 Medical Storekeeper.

(*b*) AFRICAN STAFF.

12 Medical Officers.
6 Junior Medical Officers (1 vacant during the year).
6 Senior Dispensers.
20 First-class Dispensers.
90 Second-class Dispensers (4 vacant during the year).
15 Third-class Dispensers (1 vacant during the year).
26 Medical Assistants.
8 Senior Nurses.
31 First-class Nurses.
74 Second-class Nurses.
381 Third-class Nurses.
9 Second-class Midwives.
32 Third-class Midwives.
1 First-class Lunatic Asylum Attendant.
12 Second-class Lunatic Asylum Attendant.
12 Third-class Lunatic Asylum Attendant.

Health Service.

1 Senior Sanitary Inspector.
8 First-class Sanitary Inspectors.
35 Second-class Sanitary Inspectors.
54 Third-class Sanitary Inspectors.
36 Sub-Inspectors of Sanitation.
64 Vaccinators.
1 Registrar of Vital Statistics.
2 Deputy Registrars of Vital Statistics.

Laboratory Service.

3 First-class Laboratory Attendants.
7 Second-class Laboratory Attendants.
13 Third-class Laboratory Attendants.

Sleeping Sickness Service.

2 First-class Clerks.
4 Second-class Clerks.
1 Second-class Dispenser.
2 Second-class Nurses.
20 Third-class Nurses.
1 First-class Laboratory Attendant.
2 Third-class Laboratory Attendants.

Clerical and Storekeeping Staff

1 Assistant Accountant.
1 Chief Clerk.
4 Assistant Chief Clerks.
14 First-class Clerks.
49 Second-class Clerks.
6 Third-class Clerks.
1 Chief Storekeeper.
2 Assistant Chief Storekeepers.
3 First-class Storekeepers.
4 Second-class Storekeepers.

Table II.

FINANCIAL.

Financial Year, 1936-37.

Revenue.

	£	s.	d.
Medical receipts	7,903	15	8
Births and deaths registration fees	19	6	0
Fumigation and deratisation fees	506	0	0
Sale of departmental stores (Medical)	1,082	15	10
Sale of anti-rabic vaccine	0	12	0
	£9,512	15	6

Expenditure.

	£	s.	d.	£	s.	d.
(*a*) Personal Emoluments				240,217	10	2
(*b*) Other Charges:—						
(1) Medical.						
Medical, surgical, dental, X-ray equipment and laundry	22,789	2	6			
Hospital diets	9,557	17	7			
Labour	13,771	7	6			
(2) Laboratory.						
Labour	352	10	9			
General laboratory	1,386	7	10			
(3) Health.						
Labour	18,966	8	2			
General sanitary	9,238	3	1			
(4) General.						
Railway transport	10,107	14	11			
Other items under Other Charges ...	38,259	18	6			
				124,429	10	10
(*c*) Special Expenditure:—						
Sleeping Sickness Service Team and drugs	17,421	8	8			
Anti-plague measures	3,610	11	6			
Other items under Special Expenditure	1,920	18	0			
				22,952	18	2
				£387,599	19	2

These amounts represent the net expenditure after deducting reimbursements credited.

TABLE IV.

RETURN OF DISEASES AND DEATHS (EUROPEAN) FOR THE YEAR 1937.

Diseases.	IN-PATIENTS.						OUT-PATIENTS.		
	Remaining in Hospital at end of 1936.	Total. Admissions. Male.	Total. Admissions. Female.	Deaths.	Total cases treated.	Remaining in Hospital at end of 1937.	Male.	Female.	Deaths.
I.—*Infectious and Parasitic Diseases.*									
1*a*. Typhoid fever	...	1	...	...	1	...	...	...	...
2*a*. Paratyphoid A.	...	1	...	...	1	...	...	...	...
2*b*. Paratyphoid B.	...	...	...	...	...	...	...	...	...
2*c*. Enteric fever, type not defined	...	...	...	...	...	...	1	...	...
3. Typhus fever	...	2	1	...	3	...	1	...	...
4. Relapsing fever	...	...	...	..	...	...	...	...	...
5. Undulant fever	...	...	...	...	...	...	...	...	...
Smallpox—									
6*a*. Variola major	...	...	...	...	...	...	...	...	...
6*b*. Variola minor	...	...	...	...	...	...	1	...	...
7. Measles	...	...	...	...	...	...	3	2	...
8. Scarlet fever	...	...	...	...	...	...	...	...	...
9. Whooping cough	...	...	...	...	...	...	4	...	...
10. Diphtheria	...	...	...	...	...	...	10	5	...
11. Influenza	...	35	5	...	40	...	163	24	...
12. Cholera	...	...	...	...	...	...	...	...	...
13*a*. Amœbic dysentery ...	...	23	6	...	29	1	29	8	...
13*b*. Bacillary dysentery ...	...	9	3	...	12	...	3	...	...
13*c*. Dysentery—type unspecified...	1	10	1	...	12	...	15	3	...
14*a*. Bubonic plague	...	...	...	...	...	...	...	...	...
14*b*. Pneumonic plague ...	...	...	...	...	...	...	...	...	...
14*c*. Septicaemic plague ...	...	...	...	...	...	...	...	...	...
15. Erysipelas	...	2	...	1	2	...	...	...	...
16. Acute poliomyelitis ...	...	...	...	...	...	...	...	...	...
17. Encephalitis lethargica ...	...	...	...	...	...	...	...	...	...
18. Cerebro-spinal fever ...	...	...	...	...	...	...	...	...	...
19. Glanders	...	...	...	...	...	...	...	...	...
20. Anthrax	...	1	...	...	1	...	5	...	...
21. Rabies	...	...	...	...	...	...	...	...	...
22. Tetanus	...	...	...	...	...	...	...	...	...
Tuberculosis of—									
23. Respiratory system ...	...	8	1	...	9	...	6	2	1
24. Central nervous system ...	...	...	...	...	...	...	...	...	...
25. Intestines and peritoneum ...	...	...	...	...	...	...	...	...	...
26. Vertebral column ...	...	...	...	...	...	...	...	...	...
27. Other bones and joints ...	...	...	...	...	...	...	...	...	...
28. Skin and subcutaneous tissues	...	...	...	...	...	...	1	...	...
29. Lymphatic system ...	...	...	...	...	...	...	...	...	...
30. Genito-urinary system ...	...	1	...	...	1	...	...	...	...
31. Other organs	...	1	...	...	1	...	...	...	...
32. Disseminated tuberculosis ...	...	...	...	..	...	...	...	...	...
33. Leprosy	...	...	...	...	...	...	...	...	...
34*a*. Primary syphilis	...	1	...	...	1	...	38	...	...
34*b*. Secondary syphilis ...	...	1	...	...	1	...	20	...	...
34*c*. Tertiary syphilis	1	4	...	...	5	...	6	...	...
34*d*. Congenital syphilis ...	...	...	...	...	...	...	6	...	...
35*a*. Gonorrhœa	...	11	...	...	11	...	142	...	...
35*b*. Gonorrhœa with complications	1	8	...	...	9	...	19	...	...
35*c*. Gonorrhœal arthritis ...	...	1	...	...	1	...	...	...	...
35*d*. Gonorrhœal ophthalmia ...	...	...	...	...	...	...	...	...	...
35*f*. Soft chancre	...	2	...	...	2	...	26	...	...
35*g*. Venereal bubo	1	2	...	...	3	...	2	...	...
Carried forward ...	4	124	17	1	145	1	501	44	1

Table IV.—Return of Diseases and Deaths (European) for the year 1937—*continued.*

Diseases.	IN-PATIENTS.						OUT-PATIENTS.		
	Remaining in Hospital at end of 1936.	Total Admissions. Male.	Total Admissions. Female.	Total Deaths.	Total cases treated.	Remaining in Hospital at end of 1937.	Male.	Female.	Deaths.
Brought forward ...	4	124	17	1	145	1	501	44	1
I.—*Infectious and Parasitic Diseases*—contd.									
35*b*. Other venereal diseases ...	...	...	...	...	...	...	...	...	...
36*a*. Septicæmia	1	1	...	...	2	...	...	1	...
36*b*. Pyæmia	...	...	...	...	...	...	...	...	...
36*c*. Gas gangrene	...	...	...	...	...	...	...	...	...
37. Yellow fever	...	7	1	5	8	...	3	1	1
38*a*. Tertian malaria (*P. vivax*) ...	...	5	...	...	5	...	2	1	...
38*b*. Quartan malaria (*P. malariæ*)	1	1	...	...	2	...	16	2	...
38*c*. Subtertian malaria (*P. falciparum*)	1	180	43	1	224	1	525	166	2
38*d*. Malaria—type unspecified ...	1	98	10	...	109	3	194	33	1
38*e*. Blackwater fever	2	7	...	...	9	...	5	...	2
39*a*. Leishmaniasis	...	...	...	...	...	...	...	...	...
39*b*. Spirochætosis ictero-hæmorrhagica	...	...	...	...	...	...	...	...	...
39*c*. Trypanosomiasis	...	1	1	...	2	...	1	...	...
39*d*. Yaws	...	...	...	...	...	...	...	...	...
39*e*. Other protozoal diseases ...	...	...	...	...	...	...	2	...	...
40. Ankylostomiasis	1	3	...	...	4	...	2	...	...
41. Hydatid cysts	...	...	...	...	...	...	...	...	...
42*a*. Ascariasis	...	2	...	...	2	...	7	1	...
42*b*. Dracontiasis (guinea-worm) ...	...	...	...	...	...	...	...	1	...
42*c*1. Filariasis (*bancrofti*)	...	...	...	...	...	...	1	...	...
42*c*2. Filariasis (*loa-loa*)	..	1	...	...	1	...	33	5	...
42*c*3. Onchocerciasis	...	...	...	...	...	...	...	1	...
42*d*. Schistosomiasis (*hæmatobium*)	...	...	...	...	...	...	1	...	...
42*e*. Schistosomiasis (*mansoni*) ...	...	1	...	...	1	...	1	...	...
42*f*. Taeniasis (tape-worm)	...	5	...	...	5	...	17	4	...
42*g*. Other helminthiasis (*oxyuris*, &c.)	...	1	1	...	2	...	4	4	...
43*a*. Actinomycosis	...	...	...	...	...	...	...	...	...
43*b*. Other mycoses (madura-foot, &c.)	...	...	...	...	...	...	1	...	...
44*a*. Sequelæ of vaccination ...	...	1	1	...	2	...	12	7	...
44*b*. German measles	...	5	1	...	6	...	19	6	...
44*c*. Chicken-pox	...	...	...	...	...	...	3	1	...
44*d*. Mumps	...	...	...	...	...	..	...	...	...
44*e*. Dengue	...	2	1	...	3	...	10	3	...
44*f*. Glandular fever	...	..	...	...	...	...	1	...	...
44*g*. Other infectious and parasitic diseases	...	2	...	...	2	...	...	1	...
II.—*Cancer and other Tumours.*									
Cancer of :—									
45. Buccal cavity and pharynx	...	...	...	...	...	...	...	...	...
46*a*. Oesophagus	...	...	...	...	...	...	...	...	...
46*b*. Stomach and duodenum ...	...	...	...	...	...	...	...	...	...
46*c*. Rectum	...	...	...	...	...	...	...	...	...
46*d*. Liver	...	1	...	1	1	...	...	...	...
46*e*. Pancreas	...	...	...	...	...	...	...	...	...
46*f*. Other digestive organs ...	...	...	...	...	...	...	...	...	...
47. Respiratory organs ...	...	...	...		...	...	...	...	...
48. Uterus	...	...	...	...	...	...	...	...	...
49. Other female genital organs	...	...	...	...	...	...	...	1	...
Carried forward ...	11	448	76	8	535	5	1,361	283	7

Table IV.—Return of Diseases and Deaths (European) for the year 1937—*continued.*

Diseases.	IN-PATIENTS.						OUT-PATIENTS.		
	Remaining in Hospital at end of 1936.	Total. Admissions. Male.	Total. Admissions. Female.	Total. Deaths.	Total cases treated.	Remaining in Hospital at end of 1937.	Male.	Female.	Deaths.
Brought forward	11	448	76	8	535	5	1,361	283	7
II.—*Cancer and other Tumours* —contd.									
Cancer of :—									
50. Breast	...	...	...	...	...	...	...	...	...
51. Male genito-urinary organs...	...	...	...	...	...	...	...	...	...
52. Skin	...	...	...	...	...	...	1	...	...
53. Other organs	...	...	...	...	...	...	...	...	...
54*a*. Dermoid cyst	...	...	...	...	...	...	...	...	...
54*b*. Fibroid, uterine	...	...	1	...	1	...	...	...	...
54*c*. Lipoma	...	...	...	...	...	...	1	...	...
54*d*. Other non-malignant tumours	...	1	...	...	1	...	28	5	...
55. Tumours of undetermined nature	...	...	...	...	...	...	2	1	...
III.—*Rheumatism, Diseases of Nutrition and of Endocrine Glands and other General Diseases.*									
56. Rheumatic fever	...	...	...	...	...	...	...	...	...
57*a*. Chronic rheumatism	1	8	...	...	9	...	111	20	...
57*b*. Rheumatoid arthritis, Osteo-arthritis, &c.	...	...	...	...	...	...	11	1	...
58. Gout	...	...	...	...	...	...	5	...	...
59. Diabetes mellitus	...	1	...	...	1	...	...	...	...
60*a*. Scurvy (*hypovitaminosis C*) ...	...	...	...	...	...	...	...	...	...
60*b*. Hypovitaminosis A	...	...	...	...	...	...	1	2	...
61*a*. Beri-beri (*hypovitaminosis* B_1)	...	...	...	...	...	...	...	...	...
61*b*. Epidemic dropsy (toxæmic) ...	...	...	...	...	...	...	...	...	...
62. Pellagra (*hypovitaminosis* B_2)	...	...	...	...	...	...	...	...	...
63. Rickets (*hypovitaminosis D*) ...	...	...	...	...	...	...	2	...	...
65. Diseases of the pituitary gland	...	...	...	...	...	...	...	...	...
66*a* Simple goitre	...	...	...	...	...	...	...	1	...
66*b*. Exophthalmic goitre	...	...	...	...	...	...	...	...	...
66*c*. Other diseases of thyroid and parathyroids	...	...	...	...	...	...	1	...	...
67. Diseases of the thymus ...	...	...	...	...	...	...	...	...	...
68. Diseases of the adrenals ...	...	...	...	...	...	...	...	...	...
69. Other general diseases... ...	...	...	...	...	...	...	1	...	...
IV.—*Diseases of the Blood and Blood Forming Organs.*									
70*a*. Purpura	...	...	...	...	...	...	...	...	...
70*b*. Hæmophilia	...	...	...	...	...	...	1	...	...
71*a*. Pernicious anæmia	...	...	...	...	...	...	...	...	...
71*b*. Anæmia—other types	...	4	6	1	10	...	88	44	...
72*a*. Leukæmia	...	...	...	...	...	...	...	...	...
72*b*. Lymphadenoma	...	...	...	...	...	...	...	...	...
73. Diseases of the spleen (splenomegaly, &c.)	...	2	...	...	2	1	6	1	...
74. Other diseases of the blood and blood forming organs ...	...	1	...	...	1	...	2	...	...
Carried forward	12	465	83	9	560	6	1,622	358	7

Table IV.—Return of Diseases and Deaths (European) for the year 1937—*continued.*

Diseases.	IN-PATIENTS.						OUT-PATIENTS.		
	Remaining in Hospital at end of 1936.	Total Admissions. Male.	Total Admissions. Female.	Total Deaths.	Total cases treated.	Remaining in Hospital at end of 1937.	Male.	Female	Deaths.
Brought forward	12	465	83	9	560	6	1,622	358	7
V.—*Chronic Poisoning.*									
75. Alcoholism (acute or chronic)	...	4	...	...	4	...	4	...	...
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) ...	...	1	...	1	1	...	...	...	...
80. Tabes dorsalis (Locomotor ataxy)	...	...	...	...	...	...	1	...	...
81. Other diseases of spinal cord (not including acute poliomyelitis; *see* 16) ...	...	...	...	...	...	...	1	...	...
82*a* Cerebral hæmorrhage. Apoplexy	...	1	...	1	1	...	...	...	...
82*b* Cerebral embolism ...	...	...	...	...	...	...	...	...	...
82*c* Cerebral thrombosis ...	...	1	...	...	1	...	...	...	...
82*d* Hemiplegia and other paralysis of unstated origin ...	...	..	...	...	...	...	2	...	...
83. General paralysis of the insane	...	...	...	...	...	...	...	...	...
84*a*. Dimentia præcox	...	...	...	...	...	...	...	...	...
84*b*. Paranoia	...	...	...	...	...	...	...	...	...
84*c*. Other forms of insanity ...	...	...	...	...	...	...	1	1	1
85. Epilepsy	...	...	...	...	...	...	2	...	...
86. Infantile convulsions (under five years of age) ..	...	...	...	...	...	...	...	...	...
87*a*. Chorea	...	...	...	...	...	...	...	...	...
87*b*. Neuritis. Neuralgia ...	1	11	3	...	15	...	133	28	...
87*c*. Disseminated sclerosis ...	...	...	...	...	...	...	...	...	...
87*d*. Amentia	...	...	...	...	...	...	...	...	...
87*e*. Hysteria	...	1	1	...	2	...	...	1	...
87*f*. Psychasthenia. Neurasthenia	...	27	5	...	32	...	97	19	...
87*g*. Other diseases of the nervous system	...	...	...	...	...	...	9	4	...
88*a*. Cataract	...	1	...	...	1	...	3	...	...
88*b*. Conjunctivitis	...	3	...	...	3	...	87	11	...
88*c*. Ectropion. Entropion ...	...	...	...	...	...	...	1	...	...
88*d*. Errors of refraction ...	...	...	...	...	...	...	13	4	...
88*e*. Glaucoma	...	...	...	...	...	...	1	...	...
88*f*. Iritis	...	...	1	...	1	...	6	1	...
88*g*. Keratitis	...	...	...	...	...	...	...	...	...
88*h*. Pterygium	...	...	...	...	...	...	...	...	...
88*i*. Trachoma	...	...	...	...	...	...	...	...	...
88*j*. Ulcer of cornea. Staphyloma. Leukoma	...	...	...	...	...	...	2	...	...
88*k*. Other diseases of the eye and annexa	...	1	1	...	2	...	56	9	...
Carried forward	13	516	94	11	623	6	2,041	436	8

Table IV.—Return of Diseases and Deaths (European) for the year 1937—*continued.*

Diseases.	IN-PATIENTS.						OUT-PATIENTS.		
	Remaining in Hospital at end of 1936.	Total Admissions. Male.	Total Admissions. Female.	Total Deaths.	Total cases treated.	Remaining in Hospital at end of 1937.	Male.	Female.	Deaths.
Brought forward ...	13	516	94	11	623	6	2,041	436	8
VI.—*Diseases of the Nervous System and Sense Organs*—contd.									
89*a*. Otitis	...	3	1	...	4	...	156	43	...
89*b*. Mastoiditis	...	...	...	...	...	...	8	2	...
89*c*. Other diseases of the ear ..	...	4	...	...	4	...	102	17	...
89*d*. Wax in ear	...	...	...	...	...	...	201	42	...
VII.—*Diseases of the Circulatory System.*									
90. Pericarditis	...	...	...	...	...	...	...	...	...
91. Acute endocarditis ...	...	...	1	1	1	...	1	...	...
92. Chronic endocarditis. Valvular heart disease	1	...	1	1	2	...	7	1	...
93. Myocardial degeneration. Chronic myocarditis ...	...	1	...	1	1	...	4	2	...
94. Diseases of the coronary arteries. Angina pectoris. Coronary thrombosis, &c. ...	...	...	...	...	...	...	3	...	...
95*a*. Disordered action of the heart	...	2	...	...	2	...	7	3	...
95*b*. Other diseases of the heart ...	...	4	...	...	4	...	7	...	...
96. Aneurysm	...	...	...	...	...	...	...	...	...
97. Arterio-sclerosis	...	1	...	...	1	...	1	...	...
98. Gangrene	...	...	...	...	...	...	...	...	...
99. Other diseases of the arteries ...	...	...	...	...	...	...	1	...	...
100*a*. Hæmorrhoids	1	11	2	...	14	...	72	7	..
100*b*. Varix. Varicose veins. Varicocele	...	...	...	...	...	...	9	3	...
100*c*. Phlebitis	...	2	...	...	2	...	7	1	...
100*d*. Other diseases of veins ...	...	...	...	...	...	...	...	...	...
101*a*. Bubo (non-specific) ...	...	23	...	...	23	...	4	...	...
101*b*. Adenitis and other diseases of the lymphatic system ...	...	...	...	...	...	...	30	2	...
102. Abnormalities of blood pressure, hyperpiesia, &c. ...	...	1	...	...	1	...	2	2	...
103*a*. Epistaxis	...	...	...	...	...	...	7	1	...
103*b*. Other diseases of the circulatory system	1	2	...	...	3	...	1	...	...
VIII.—*Diseases of the Respiratory System.*									
104*a*. Rhinitis. Coryza ...	1	11	...	...	12	...	181	27	...
104*b*. Other diseases of the nose ...	...	...	...	...	...	...	7	2	...
104*c*. Diseases of the accessory nasal sinuses	...	1	...	...	1	...	11	...	...
104*d*. Nasal polypus	...	1	...	...	1	...	...	...	...
104*e*. Gangosa	...	...	...	...	...	...	...	...	...
105*a*. Laryngitis	...	4	1	...	5	...	25	5	...
105*b*. Other diseases of the larynx ...	...	...	...	...	...	...	2	1	...
106*a*. Acute bronchitis	...	13	3	...	16	...	125	27	...
106*b*. Chronic bronchitis ...	...	5	...	...	5	...	49	5	...
106*c*. Bronchiectasis	...	...	...	...	...	...	...	...	...
107. Broncho-pneumonia	1	5	...	1	6	1	...	...	...
108. Lobar pneumonia	...	3	2	...	5	...	2	1	...
110*a*. Pleurisy	1	1	...	...	2	...	10	1	...
110*b*. Empyema	...	...	...	...	...	...	...	...	...
Carried forward	19	614	105	15	738	7	3,083	631	8

Table IV.—Return of Diseases and Deaths (European) for the year 1937—*continued.*

Diseases.	IN-PATIENTS.						OUT-PATIENTS.		
	Remaining in Hospital at end of 1936.	Totals.			Total cases treated.	Remaining in Hospital at end of 1937.	Male.	Female.	Deaths.
		Admissions.		Deaths.					
		Male.	Female.						
Brought forward	19	614	105	15	738	7	3,083	631	8
VIII.—*Diseases of the Respiratory System*—contd.									
111*a*. Hypostatic congestion of lungs	...	...	...	...	...	...	1	...	...
111*b*. Embolism of lung	...	...	...	...	...	...	...	...	...
112*a*. Asthma	...	5	...	1	5	...	25	3	...
112*b*. Hay fever	...	...	...	...	...	...	2	1	...
113. Pulmonary emphysema ...	...	1	...	...	1	...	...	...	...
114*a*. Gangrene or abscess of lung ...	...	...	...	...	...	...	...	...	...
114*b*. Other diseases of the respiratory system	...	1	1	...	2	...	6	...	...
IX.—*Diseases of the Digestive System.*									
115*a*. Dental caries. Alveolar abscess	...	12	3	...	15	...	233	57	...
115*b*. Pyorrhœa	...	...	...	...	...	...	17	3	...
115*c*. Stomatitis	...	...	...	...	...	...	24	4	...
115*d*. Tonsilitis. Pharyngitis. Quinsy	...	24	6	2	30	...	220	50	...
115*e*. Adenoids	...	...	...	...	...	...	...	...	...
115*f*. Other diseases of the buccal cavity, pharynx, etc.	...	...	...	...	...	...	6	1	...
116. Diseases of the œsophagus ...	...	...	...	...	...	...	...	...	...
117*a*. Ulcer of the stomach	1	4	2	...	7	...	2	...	...
117*b*. Ulcer of the duodenum ...	...	3	...	...	3	...	10	1	...
118*a*. Gastritis	...	24	3	...	27	1	118	24	...
118*b*. Dyspepsia	1	14	4	...	19	...	198	63	...
118*c*. Other diseases of the stomach	...	5	2	...	7	...	4	1	...
119. Infantile diarrhoea (under two years of age)	...	...	...	...	...	...	1	...	...
120*a*. Sprue	...	...	...	...	...	...	...	...	...
120*b*. Colitis	...	6	7	...	13	1	38	14	...
120*c*. Gastro-enteritis	...	26	11	...	37	...	62	21	1
120*d*. Diarrhœa	...	23	6	...	29	...	179	34	...
121. Appendicitis	1	22	6	...	29	...	16	7	...
122*a*. Hernia	...	4	...	...	4	...	17	...	...
122*b*. Strangulated hernia	...	...	...	...	...	...	...	...	...
122*c*. Intestinal obstruction	...	...	...	...	...	...	...	...	...
123*a*. Constipation	..	2	...	...	2	...	63	28	...
123*b*. Diverticulitis	...	...	...	...	...	...	...	1	...
123*c*. Fistula in ano	...	...	1	...	1	...	3	3	...
123*d*. Ischio-rectal abscess	...	2	...	...	2	...	2	...	...
123*e*. Other diseases of the intestines	1	4	1	...	6	...	12	4	...
124. Cirrhosis of the liver	...	...	...	...	...	...	2	...	...
125*a*. Acute yellow atrophy of the liver	...	...	...	...	...	...	...	...	...
125*b*. Hepatitis	...	7	...	...	7	...	15	...	...
125*c*. Abscess of the liver	...	...	...	...	...	...	...	...	...
125*d*. Other diseases of the liver ...	...	...	...	...	...	...	4	...	...
126. Biliary calculi	...	...	1	...	1	...	...	1	...
127*a*. Cholecystitis	...	2	2	...	4	...	5	2	...
127*b*. Catarrhal jaundice	...	14	4	...	18	2	25	1	...
127*c*. Other diseases of the gall bladder and ducts	...	...	...	...	...	...	2	4	...
128. Diseases of the pancreas ...	...	...	...	...	...	...	...	...	...
129. Peritonitis	...	...	...	...	...	...	...	...	...
Carried forward	23	819	165	18	1,007	11	4,395	959	9

TABLE IV.—RETURN OF DISEASES AND DEATHS (EUROPEAN) FOR THE YEAR 1937—*continued.*

Diseases.	IN-PATIENTS.						OUT-PATIENTS.		
	Remaining in Hospital at end of 1936.	TOTAL.			Total cases treated.	Remaining in Hospital at end of 1937.	Male.	Female.	Deaths.
		Admissions.		Deaths.					
		Male.	Female.						
Brought forward	23	819	165	18	1,007	11	4,395	959	9
X.—*Non-Venereal Diseases of the Genito-Urinary System and Annexa.*									
130. Acute nephritis	...	...	...	...	...	...	2	...	...
131. Chronic nephritis	...	1	...	...	1	...	3	1	...
133*a*. Pyelitis	...	4	1	...	5	...	9	7	...
133*b*. Other diseases of the kidney and annexa	...	3	3	1	6	...	9	1	...
134*a*. Calculi of the kidney and ureter	...	1	...	...	1	...	8	...	...
134*b*. Calculi of the bladder ...	...	1	...	...	1	...	1	...	...
135*a*. Cystitis	1	7	8	...	16	1	29	22	...
135*b*. Other diseases of the bladder	...	...	1	...	1	...	6	3	...
136*a*. Stricture of the urethra ...	...	...	...	...	...	...	3	...	...
136*b*. Urethral fistula	...	...	...	...	...	...	...	...	...
136*c*. Perineal abscess	...	...	...	...	...	...	2	...	...
136*d*. Other diseases of the urethra	...	2	...	...	2	...	35	...	...
137*a*. Hypertrophy of the prostate	...	...	...	...	...	...	4	...	...
137*b*. Prostatitis	...	3	...	...	3	...	10	...	...
137*c*. Other diseases of the prostate	...	...	...	...	...	...	...	...	...
138*a*. Phimosis	...	...	...	...	...	...	4	...	...
138*b*. Epididymitis, Orchitis ...	...	6	...	...	6	...	18	...	...
138*c*. Hydrocele	...	...	...	...	...	...	...	...	...
138*d*. Other non-venereal diseases of the male genital organs ...	...	...	1	...	1	...	5	...	...
138*e*. Granuloma venereum ...	...	...	...	...	...	...	...	...	...
139*a*. Diseases of the ovary	...	...	3	...	3	...	...	...	...
139*b*. Salpingitis and other diseases of the Fallopian tube	...	...	...	...	...	...	...	6	...
139*c*. Pelvic cellulitis, abscess, etc. ...	...	...	...	...	...	...	...	2	...
139*d*. Displacement of uterus ...	...	...	...	...	...	...	...	4	...
139*e*. Dysmenorrhœa	...	...	...	...	...	...	...	22	...
139*f*. Endometritis, Cervicitis ...	...	...	1	...	1	...	...	8	...
139*g*. Menorrhagia	...	...	2	...	2	...	...	17	...
139*h*. Mastitis, Abscess and other diseases of the breast ...	...	...	...	...	...	...	1	6	...
139*i*. Other diseases of the female genital organs	...	...	3	...	3	...	...	10	...
XI.—*Diseases of Pregnancy, Child Birth and the Puerperal State.*									
140. Post-abortive sepsis	...	...	...	...	...	...	...	2	...
141*a*. Abortion	...	...	2	...	2	...	...	10	...
141*b*. Ante-partum hæmorrhage ...	...	...	2	...	2	...	...	2	...
142. Ectopic gestation	...	...	...	...	...	...	...	...	...
143. Hydatid mole and other accidents of pregnancy ...	...	...	2	...	2	...	...	5	...
144*a*. Placenta prævia	...	...	...	...	...	...	...	...	...
144*b*. Other puerperal hæmorrhage ...	...	...	...	...	...	...	...	...	...
145. Puerperal sepsis	...	...	...	...	...	...	...	...	...
146. Puerperal albuminuria. Eclampsia	...	...	...	...	...	...	...	...	...
147. Other toxæmias of pregnancy	...	5	2	1	7	...	...	8	...
148*a*. Puerperal phlegmasia alba dolens	...	...	1	...	1	...	...	...	...
Carried forward	24	852	197	20	1,073	12	4,544	1,095	9

Table IV.—Return of Diseases and Deaths (European) for the year 1937—*continued.*

Diseases.	IN-PATIENTS.						OUT-PATIENTS.		
	Remaining in Hospital at end of 1936.	Total. Admissions. Male.	Total. Admissions. Female.	Total. Deaths.	Total cases treated.	Remaining in Hospital at end of 1937.	Male.	Female.	Deaths
Brought forward	24	852	197	20	1,073	12	4,544	1,095	9
XI.—*Diseases of Pregnancy, Child Birth and the Puerperal State*—contd.									
148*b*. Puerperal embolism	...	...	...	...	...	...	...	...	...
149*a*. Difficult labour	...	...	2	...	2	...	...	1	...
149*b*. Retained placenta	...	...	...	...	...	...	...	...	...
149*c*. Other accidents of child birth	...	...	2	...	2	...	...	...	...
150*a*. Puerperal insanity	...	...	...	...	...	...	...	...	...
150*b*. Puerperal diseases of the breast	...	...	...	...	...	...	...	1	...
150*c*. Normal labour	...	...	10	...	10	...	...	6	...
XII.—*Diseases of the Skin and Cellular Tissue.*									
151. Carbuncle. Boil	...	26	4	1	30	1	181	16	...
152*a*. Cellulitis	1	30	6	...	37	...	142	14	...
152*b*. Acute abscess	...	13	1	...	14	...	42	7	...
152*c*. Whitlow	...	3	...	...	3	...	37	13	...
153*a*. Ainhum	...	1	1	...	2	...	12	2	...
153*b*. Chigoes	...	...	...	...	...	...	43	17	...
153*c*. Eczema. Dermatitis	1	14	...	...	15	...	126	41	...
153*d*. Elephantiasis	...	...	...	...	...	...	6	...	...
153*e*. Herpes	...	1	...	...	1	...	12	8	...
153*f*. Impetigo	...	2	...	...	2	...	16	...	...
153*g*. Keloid	...	...	1	...	1	...	1	...	...
153*h*. Myiasis	...	1	...	...	1	...	2	...	...
153*i*. Pediculosis	...	...	...	...	...	...	4	...	...
153*j*. Psoriasis...	...	1	1	...	2	...	8	1	...
153*k*. Scabies	...	...	...	...	...	...	18	1	...
153*l*. Tinea	...	2	...	...	2	...	161	10	...
153*m*. Ulcer	...	9	...	...	9	1	60	10	...
153*n*. Urticaria	...	2	...	...	2	...	31	9	...
153*o*. Other diseases of the skin and its annexa	...	8	2	...	10	...	99	32	...
XIII.—*Diseases of the Bones and Organs of Locomotion.*									
154*a*. Osteomyelitis	...	2	1	...	3	...	3	...	...
154*b*. Periostitis	...	1	...	...	1	...	2	1	...
155. Other diseases of the bones ...	...	...	...	...	...	...	...	1	...
156*a*. Arthritis	...	4	...	...	4	...	18	2	...
156*b*. Synovitis	...	3	...	...	3	...	35	1	...
156*c* Other diseases of joints—loose cartilage, ankylosis, &c. ...	...	3	...	...	3	...	7	1	...
156*d*. Abscess of muscle	...	1	...	...	1	...	3	...	...
156*e*. Ganglion	...	...	...	...	...	...	...	1	...
156*f*. Lumbago	1	7	...	...	8	...	59	7	...
156*g*. Other diseases of other organs of locomotion	...	2	...	...	2	...	13	1	...
XIV.—*Congenital Malformations.*									
157*a*. Hydrocephalus...	...	...	...	...	...	...	...	...	...
157*b*. Spina bifida. Meningocele ...	...	...	...	...	...	...	...	..	...
Carried forward	27	988	228	21	1,243	14	5,685	1,299	9

Table IV.—Return of Diseases and Deaths (European) for the year 1937—*continued.*

Diseases.	IN-PATIENTS.						OUT-PATIENTS.		
	Remaining in Hospital at end of 1936.	Total. Admissions. Male.	Total. Admissions. Female.	Total. Deaths.	Total cases treated.	Remaining in Hospital at end of 1937.	Male.	Female.	Deaths.
Brought forward	27	988	228	21	1,243	14	5,685	1,299	9
XIV.—*Congenital Malformations*—contd.									
157*c*. Malformations of the heart ...	...	...	...	...	...	...	1	...	...
157*d*. Monstrosities	...	...	...	...	...	...	...	...	...
157*e*. Cleft palate. Harelip	...	...	...	...	...	...	...	...	...
157*f*. Imperforate anus	...	...	...	...	...	...	...	...	...
157*g*. Other congenital malformations	...	...	...	...	...	...	...	...	...
157*h*. Hæmatocolpos	...	...	...	...	...	...	...	...	...
XV.—*Diseases of Early Infancy.*									
158 Congenital debility	...	...	...	...	...	...	...	...	...
159 Premature birth	...	...	...	...	...	...	...	...	...
160 Injury at birth	...	...	...	...	...	...	1	...	...
161*a*. Icterus neonatorum	...	...	...	...	...	...	...	...	...
161*b*. Pemphigus neonatorum ...	...	...	...	...	...	...	...	...	...
161*c*. Other diseases peculiar to early infancy	...	...	...	...	...	...	1	...	...
XVI.—*Old Age.*									
162*a*. Senile dementia	...	...	...	...	...	...	...	...	...
162*b*. Other forms of senile decay	...	1	...	1	1	...	1	...	1
XVII.—*Affections due to Violence.*									
165*a*. Suicide	...	...	...	...	...	...	2	...	2
165*b*. Attempted suicide	...	...	...	...	...	...	...	...	...
172. Infanticide	...	...	...	...	...	...	...	...	...
173. Homicide	...	...	...	...	...	...	...	...	...
176*a*. Snake bite	...	1	...	...	1	...	8	2	...
176*b*. Insect bite or sting	...	1	...	...	1	...	42	19	...
177. Food poisoning	...	3	1	...	4	...	2	1	...
178. Accidental gas poisoning ...	...	...	...	...	...	...	1	...	...
179. Other acute accidental poisoning	...	...	...	...	...	...	1	...	...
181*a*. Burns by fire	...	1	...	...	1	...	16	1	...
181*b*. Other burns or scalds ...	...	2	...	...	2	...	16	...	...
182. Accidental mechanical suffocation	...	...	...	...	...	...	...	...	...
183. Accidental drowning ...	...	...	...	...	...	...	...	...	...
184. Accidental injury by firearms	...	1	...	...	1	...	1	...	...
Injuries :—									
185. By cutting or piercing instruments	...	2	...	...	2	...	38	5	...
186*a*. Due to falls, crushing, machinery, railways, &c.	...	11	4	...	15	...	54	7	...
186*b*. Due to motor accidents ...	...	6	1	...	7	...	9	3	...
188. By non-venomous animals...	...	...	1	...	1	...	17	5	...
Carried forward	27	1,017	235	22	1,279	14	5,896	1,342	12

Table IV.—Return of Diseases and Deaths (European) for the year 1937—*continued.*

Diseases.	IN-PATIENTS.						OUT-PATIENTS.		
	Remaining in Hospital at end of 1936.	Total. Admissions. Male.	Total. Admissions. Female.	Total. Deaths.	Total cases treated.	Remaining in Hospital at end of 1937.	Male.	Female.	Deaths.
Brought forward	27	1,017	235	22	1,279	14	5,896	1,342	12
XVII.—*Affections due to Violence*—contd.									
189. Hunger or thirst (starvation, privation)	...	...	...	...	...	...	...	...	...
191*a*. Heat stroke	...	...	...	...	...	...	3	...	...
191*b*. Sunstroke	...	...	1	...	1	...	2	1	...
192. Injuries by lightning ...	...	...	...	...	...	...	...	...	...
193. Injuries by electricity ...	...	...	...	...	...	...	1	...	...
194*a*. Dislocation	...	1	...	...	1	...	9	2	...
194*b*. Sprain	...	4	1	...	5	...	103	28	...
194*c*. Fracture	...	12	1	...	13	...	23	3	...
194*d*. Wounds and other external injuries	...	18	3	1	21	...	247	38	...
196. Wounds of war	...	...	...	...	...	...	6	...	...
198. Execution	...	...	...	...	...	...	...	...	...
XVIII.—*Ill-Defined Diseases.*									
200*a*. Asthenia	...	17	2	...	19	...	192	27	...
200*b*. Goundou	...	...	...	...	...	...	...	...	...
200*c*. Malingering	...	...	...	...	...	...	1	...	...
200*d*. Pyrexia of uncertain origin	...	3	2	...	5	...	6	2	...
200*e*. Shock	...	5	1	...	6	...	4	1	...
200*f*. Hyperpyrexia	...	...	...	...	...	...	1	...	...
Diseases not included above.									
201. Anti-rabic prophylaxis ...	...	1	1	...	2	...	36	8	...
210. Transferred cases already diagnosed by Medical Officer on other station	...	...	...	...	...	...	...	...	...
Total cases of Diseases treated ...	27	1,078	247	23	1,352	14	6,529	1,452	12

TABLE V.

RETURN OF DISEASES AND DEATHS (NON-EUROPEAN) FOR THE YEAR 1937.

Diseases.	IN-PATIENTS.						OUT-PATIENTS.		
	Remaining in Hospital at end of 1936.	Total. Admissions. Male.	Total. Admissions. Female.	Total. Deaths.	Total cases treated.	Remaining in Hospital at end of 1937.	Male.	Female.	Deaths.
I.—*Infectious and Parasitic Diseases.*									
1*a*. Typhoid fever	...	15	4	4	19	...	3	...	.
2*a*. Paratyphoid A.	...	1	...	...	1	...	...	...	.
2*b*. Paratyphoid B.	...	3	...	...	3	...	...	...	..
2*c*. Enteric fever, type not defined	...	1	...	...	1	...	...	...	...
3. Typhus fever	...	...	...	...	...	...	...	...	...
4. Relapsing fever	...	...	...	...	...	...	...	...	...
5. Undulant fever	...	...	...	...	...	...	...	...	...
Smallpox:—									
6*a*. Variola major	...	31	9	9	40	1	69	27	24
6*b*. Variola minor	...	7	...	...	7	...	5	...	...
7. Measles	...	16	12	...	28	1	95	88	...
8. Scarlet Fever	...	...	...	...	...	...	...	...	...
9. Whooping Cough	4	22	10	1	36	...	284	370	...
10. Diphtheria	...	...	...	...	...	...	2	2	1
11. Influenza	...	127	27	4	154	2	673	141	...
12. Cholera	...	...	...	...	...	...	3	...	...
13*a*. Amœbic dysentery	26	519	171	98	716	10	1,840	666	...
13*b*. Bacillary dysentery	...	60	13	14	73	1	30	10	...
13*c*. Dysentery—type unspecified	2	192	54	34	248	...	1,680	963	1
14*a*. Bubonic plague	...	...	...	...	...	...	...	...	...
14*b*. Pneumonic plague	...	...	...	...	...	...	...	...	...
14*c*. Septicæmic plague	...	...	...	...	...	...	...	...	...
15. Erysipelas	...	5	5	1	10	...	3	1	...
16. Acute poliomyelitis	...	4	1	1	5	...	1	3	...
17. Encephalitis lethargica	...	...	...	...	...	...	...	...	...
18. Cerebro-spinal fever	...	189	37	124	226	3	13	5	...
19. Glanders	...	...	...	...	...	...	1	2	...
20. Anthrax	...	...	...	...	...	...	2	1	...
21. Rabies	...	1	1	2	2	...	11	5	...
22. Tetanus	4	80	28	59	112	9	22	7	...
Tuberculosis of:—									
23. Respiratory system	14	451	90	170	555	27	370	116	7
24. Central nervous system	2	5	...	1	7	...	3	3	...
25. Intestines and peritoneum	2	20	3	7	25	1	9	5	...
26. Vertebral column	4	42	18	3	64	5	39	14	...
27. Other bones and joints	11	45	16	6	72	3	28	9	...
28. Skin and subcutaneous tissues	...	4	2	...	6	2	3	6	...
29. Lymphatic system	4	46	21	7	71	3	62	40	...
30. Genito-urinary system	...	1	...	...	1	...	1	...	...
31. Other organs	...	13	11	7	24	2	4	9	...
32. Disseminated tuberculosis	...	16	3	2	19	1	5	1	...
33. Leprosy	270	470	171	16	911	88	1,047	350	...
34*a*. Primary syphilis	145	814	712	14	1,671	105	4,823	2,282	...
34*b*. Secondary syphilis	128	1,551	350	4	2,029	72	3,331	1,049	...
34*c*. Tertiary syphilis	37	419	122	11	578	26	1,579	961	1
34*d*. Congenital syphilis	2	159	44	9	205	13	393	177	...
35*a*. Gonorrhœa	103	1,086	268	12	1,457	55	12,229	2,644	...
35*b*. Gonorrhœa with complications	4	128	13	7	145	4	375	43	...
35*c*. Gonorrhœal arthritis	27	177	15	...	219	11	420	53	...
35*d*. Gonorrhœal opthalmia	2	55	19	...	76	5	191	94	...
35*f*. Soft chancre	19	99	5	1	123	9	1,223	108	...
35*g*. Venereal bubo	3	76	8	1	87	9	441	88	...
35*h*. Other venereal diseases	...	1	...	...	1	...	156	36	...
36*a*. Septicæmia	1	18	1	10	20	...	15	4	1
36*b*. Pyæmia	...	1	...	...	1	...	2	...	...
36*c*. Gas gangrene	...	...	...	...	...	...	...	...	...
Carried forward	814	6,970	2,264	639	10,048	468	31,486	10,383	35

TABLE V.—RETURN OF DISEASES AND DEATHS (NON-EUROPEAN) FOR THE YEAR 1937—*continued.*

Diseases.	IN-PATIENTS.						OUT-PATIENTS.		
	Remaining in Hospital at end of 1936.	TOTAL. Admissions. Male.	Female.	Deaths.	Total cases treated.	Remaining in Hospital at end of 1937.	Male.	Female.	Deaths.
Brought forward	814	6,970	2,264	639	10,048	468	31,486	10,383	35
I.—*Infectious and Parasitic Diseases*—contd.									
37. Yellow fever...	...	9	...	1	9	...	5	...	...
38*a*. Tertian malaria (*P. vivax*) ...	1	45	17	...	63	1	7	2	1
38*b*. Quartan malaria (*P. malariæ*) ...	3	33	13	...	49	...	594	105	...
38*c*. Subtertian malaria (*P. falciparum*)	35	1,132	296	27	1,463	30	16,336	7,040	9
38*d*. Malaria—type unspecified ...	20	767	244	8	1,031	12	12,055	6,634	...
38*e*. Blackwater fever	...	7	3	6	10	...	...	...	...
39*a*. Leishmaniasis	...	...	...	...	...	...	1	...	...
39*b*. Spirochætosis icterohæmorrhagica	...	...	...	...	...	...	...	...	...
39*c*. Trypanosomiasis	105	928	217	63	1,250	146	2,254	1,054	2
39*d*. Yaws	23	253	208	1	484	29	47,693	42,048	...
39*e*. Other protozoal diseases	...	...	...	...	...	...	...	...	...
40. Ankylostomiasis	37	560	130	14	727	44	1,592	732	...
41. Hydatid cysts	...	1	1	1	2	...	34	33	...
42*a*. Ascariasis	9	191	95	1	295	10	14,201	11,674	1
42*b*. Dracontiasis (guinea-worm) ...	24	523	39	...	586	14	1,685	272	...
42c1. Filariasis (*bancrofti*)	...	...	...	...	...	...	...	...	...
42c2. Filariasis (*loa-loa*)	1	19	2	...	22	...	492	212	...
42c3. Onchocerciasis	1	9	1	...	11	...	23	3	...
42*d*. Schistosomiasis (*hæmatobium*) ...	12	284	32	10	328	12	749	80	1
42*e*. Schistosomiasis (*mansoni*)... ...	2	99	8	3	109	7	200	15	...
42*f*. Tæniasis (tape-worm)	4	135	42	1	181	4	5,251	1,491	...
42*g*. Other helminthiasis (*oxyuris*, &c.)	1	23	6	...	30	...	259	87	...
43*a*. Actinomycosis	...	2	...	...	2	...	15	9	...
43*b*. Other mycoses (madura-foot, &c.)	...	14	1	...	15	...	196	181	2
44*a*. Sequelæ of vaccination	...	4	4	...	8	...	2,033	1,045	...
44*b*. German measles	...	8	1	...	9	...	6	1	...
44*c*. Chicken-pox...	34	1,256	227	...	1,517	50	658	133	...
44*d*. Mumps	...	51	1	...	52	6	513	230	...
44*e*. Dengue	...	...	...	...	...	...	...	...	...
44*f*. Glandular fever	...	...	...	...	...	...	...	...	...
44*g*. Other infectious and parasitic diseases	...	5	3	1	8	1	23	1	...
II.—*Cancer and other Tumours.*									
Cancer of—									
45. Buccal cavity and pharynx ...	...	11	2	3	13	2	8	3	...
46*a*. Œsophagus	1	1	...	1	2	...	1	...	...
46*b*. Stomach and duodenum	...	21	4	8	25	1	4	2	...
46*c*. Rectum	1	2	1	1	4	...	7	3	...
46*d*. Liver	...	21	7	8	28	1	5	2	...
46*e*. Pancreas	...	...	...	...	...	...	...	...	...
46*f*. Other digestive organs	...	3	2	...	5	...	...	1	...
47. Respiratory organs	...	2	...	1	2	...	...	...	...
48. Uterus	1	...	9	2	10	...	...	3	2
49. Other female genital organs ...	...	...	20	5	20	...	...	12	...
50. Breast	1	1	20	1	22	...	2	16	...
51. Male genito-urinary organs ...	1	13	...	6	14	...	2	...	...
52. Skin	1	9	3	1	13	...	1	2	...
53. Other organs	6	32	10	8	48	1	3	3	...
54*a*. Dermoid cyst	1	14	8	...	23	...	69	42	...
54*b*. Fibroid, uterine	11	...	91	12	102	4	...	165	...
54*c*. Lipoma	10	155	86	2	251	9	204	91	...
54*d*. Other non-malignant tumours ..	21	197	121	11	339	15	494	303	...
55. Tumours of undetermined nature	2	35	33	3	70	2	112	63	...
Carried forward	1,183	13,845	4,272	849	19,300	869	139,273	84,116	53

Table V.—Return of Diseases and Deaths (Non-European) for the year 1937—*continued.*

Diseases.	IN-PATIENTS.						OUT-PATIENTS.		
	Remaining in Hospital at end of 1936.	Total Admissions. Male.	Total Admissions. Female.	Deaths.	Total cases treated.	Remaining in Hospital at end of 1937.	Male.	Female.	Deaths.
Brought forward	1,183	13,845	4,272	849	19,300	869	139,273	84,116	53
III.—*Rheumatism, Diseases of Nutrition and of Endocrine Glands and other General Diseases.*									
56. Rheumatic fever	...	...	...	...	...	...	...	...	...
57*a*. Chronic rheumatism	36	656	182	10	874	30	27,656	13,837	...
57*b*. Rheumatoid arthritis, osteo-arthritis, &c.	...	32	8	2	40	1	212	74	...
58. Gout	...	1	...	...	1	...	7	2	...
59. Diabetes mellitus	2	38	1	7	41	2	29	11	1
60*a*. Scurvy (*hypovitaminosis C*) ...	...	3	1	...	4	...	7	8	...
60*b*. Hypovitaminosis A	...	...	...	...	...	...	323	318	...
61*a*. Beri-beri (*hypovitaminosis B_1*) ...	...	33	9	5	42	3	438	5	1
61*b*. Epidemic dropsy (toxæmic) ...	...	9	11	2	20	...	9	8	...
62. Pellagra (*hypovitaminosis B_2*) ...	...	2	1	...	3	...	214	78	...
63. Rickets (*hypovitaminosis D*) ...	...	3	2	...	5	...	20	18	...
65. Diseases of the pituitary gland ...	...	1	...	...	1	...	24	15	...
66*a*. Simple goitre	7	23	51	5	81	3	94	191	...
66*b*. Exophthalmic goitre	...	3	2	1	5	...	10	19	...
66*c*. Other diseases of thyroid and parathyroids	...	8	9	...	17	...	4	12	...
67. Diseases of the thymus	...	...	...	...	...	...	...	...	...
68. Diseases of the adrenals	..	1	...	1	1	...	...	...	...
69. Other general diseases	1	10	6	...	17	...	54	13	...
IV.—*Diseases of the Blood and Blood Forming Organs.*									
70*a*. Purpura	...	...	...	...	...	...	...	...	...
70*b*. Hæmophilia	...	1	...	...	1	...	1	1	...
71*a*. Pernicious anæmia	...	...	...	...	...	...	..	...	...
71*b*. Anæmia—other types	20	213	225	31	458	16	2,601	1,846	1
72*a*. Leukæmia	...	2	1	1	3	...	3	...	...
72*b*. Lymphadenoma	...	10	2	1	12	2	25	8	...
73. Diseases of the spleen (splenomegaly, &c.)	13	88	74	3	175	14	2,029	1,593	2
74. Other diseases of the blood and blood forming organs	...	7	...	1	7	...	4	...	...
V.—*Chronic Poisoning.*									
75. Alcoholism (acute or chronic) ...	...	11	...	1	11	...	...	...	...
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, &c. (not including encephalitis lethargica; *see* 17)	...	10	6	2	16	1	2	...	...
79. Meningitis (not including tubercular or cerebro-spinal meningitis; *see* 18)	...	29	13	23	42	1	6	3	..
80. Tabes dorsalis (Locomotor ataxy)	2	7	1	1	10	1	7	2	...
Carried forward	1,264	15,046	4,877	946	21,187	943	173,052	102,178	58

Table V.—Return of Diseases and Deaths (Non-European) for the year 1937—*continued.*

Diseases.	IN-PATIENTS.						OUT-PATIENTS.		
	Remaining in Hospital at end of 1936.	Total Admissions. Male.	Total Admissions. Female.	Deaths.	Total Cases treated.	Remaining in Hospital at end of 1937.	Male.	Female.	Deaths.
Brought forward	**1,264**	15,046	4,877	946	21,187	943	173,052	102,178	58
VI.—*Diseases of the Nervous System and Sense Organs*—contd.									
81. Other diseases of spinal cord (not including acute poliomyelitis; *see* 16)	...	9	1	...	10	1	2	1	..
82*a*. Cerebral hæmorrhage. Apoplexy	2	19	7	16	28	2	4	2	2
82*b*. Cerebral embolism	...	7	1	6	8	...	...	...	...
82*c*. Cerebral thrombosis	...	25	3	2	28	1	1	1	...
82*d*. Hemiplegia and other paralysis of unstated origin	22	167	28	17	217	13	218	62	...
83. General paralysis of the insane ...	...	3	...	...	3	1	3	1	...
84*a*. Dimentia præcox	...	3	...	...	3	...	...	...	...
84*b*. Paranoia	1	...	...	...	1	...	3	...	...
84*c*. Other forms of insanity	...	235	112	32	347	30	48	19	...
85. Epilepsy	9	131	41	13	181	7	323	93	...
86. Infantile convulsions (under five years of age)	...	19	17	12	36	3	33	42	...
87*a*. Chorea	...	...	...	...	...	...	16	14	...
87*b*. Neuritis. Neuralgia	2	74	26	...	102	5	2,297	952	...
87*c*. Disseminated sclerosis	1	3	1	1	5	...	7	12	...
87*d*. Amentia	...	4	4	...	8	...	4	3	...
87*e*. Hysteria	...	14	6	...	20	1	20	10	...
87*f*. Psychasthenia Neurasthenia ...	3	32	14	...	49	5	224	123	...
87*g*. Other diseases of the nervous system	2	43	8	10	53	2	150	47	...
88*a*. Cataract	9	100	30	...	139	5	466	230	...
88*b*. Conjunctivitis	18	342	143	...	503	19	8,703	4,498	...
88*c*. Ectropion. Entropion	1	21	13	...	35	2	219	108	...
88*d*. Errors of refraction	...	10	2	...	12	...	134	31	...
88*e*. Glaucoma	5	10	6	...	21	...	38	27	...
88*f*. Iritis	3	41	7	...	51	4	118	50	...
88*g*. Keratitis	4	53	11	...	68	4	129	59	...
88*h*. Pterygium	1	23	2	...	26	...	88	30	...
88*i*. Trachoma	1	8	5	...	14	...	66	57	...
88*j*. Ulcer of cornea. Staphyloma. Leukoma	3	73	26	...	102	3	231	102	...
88*k*. Other diseases of the eye and annexa	11	126	41	...	178	6	2,070	958	...
89*a*. Otitis	4	93	29	1	126	7	6,566	3,166	...
89*b*. Mastoiditis	...	4	3	...	7	1	154	70	...
89*c*. Other diseases of the ear	1	21	15	...	37	1	733	589	...
89*d*. Wax in ear	...	7	1	...	8	...	876	435	...
VII.—*Diseases of the Circulatory System.*									
90. Pericarditis	...	8	...	2	1	...	34	11	..
91. Acute endocarditis	1	12	10	5	23	...	18	19	..
92. Chronic endocarditis. Valvular heart disease	6	178	53	77	237	7	227	149	5
93. Myocardial degeneration. Chronic myocarditis	16	153	45	58	214	12	296	147	...
94. Diseases of the coronary arteries. Angina pectoris. Coronary thrombosis, &c.	...	7	4	5	11	...	15	6	...
95 . Disordered action of the heart ...	...	26	17	...	43	5	104	69	...
95*b*. Other diseases of the heart ...	3	29	17	13	49	4	166	103	2
96. Aneurysm	2	17	3	6	22	1	13	3	...
97. Arterio-sclerosis	...	6	1	...	7	...	4	1	1
98. Gangrene	12	62	13	22	87	6	22	12	...
99. Other diseases of the arteries ...	...	3	1	...	4	...	10	5	1
100*a*. Hæmorrhoids	6	166	55	2	227	15	876	341	...
Carried forward	1,413	17,433	5,699	1,246	24,545	1,116	198,781	114,836	69

TABLE V.—RETURN OF DISEASES AND DEATHS (NON-EUROPEAN) FOR THE YEAR 1937—*continued*.

Diseases.	IN-PATIENTS.						OUT-PATIENTS.		
	Remaining in Hospital at end of 1936.	TOTAL. Admissions. Male.	Female.	Deaths.	Total cases treated.	Remaining in Hospital at end of 1937.	Male.	Female.	Deaths
Brought forward	1,413	17,433	5,699	1,246	24,545	1,116	198,781	114,836	69
VII.—*Diseases of the Circulatory System*—contd.									
100*b*. Varix. Varicose veins. Varicocele	...	11	3	...	14	...	45	14	...
100*c*. Phlebitis	...	12	3	1	15	...	16	4	...
100*d*. Other diseases of veins	...	27	2	1	29	1	4	1	...
101*a*. Bubo (non-specific)	17	316	74	...	407	18	931	108	...
101*b*. Adenitis and other diseases of the lymphatic system	22	319	46	2	387	17	1,996	639	...
102. Abnormalities of blood pressure, hyperpiesia, &c.	...	1	...	...	1	...	16	6	...
103*a*. Epistaxis	...	6	2	...	8	...	30	9	...
103*b*. Other diseases of the circulatory system	...	4	3	1	7	...	34	30	...
VIII.—*Diseases of the Respiratory System.*									
104*a*. Rhinitis. Coryza	...	64	6	...	70	2	3,562	1,713	...
104*b*. Other diseases of the nose ...	...	9	...	...	9	...	26	14	...
104*c*. Diseases of the accessory nasal sinuses	...	4	7	...	11	1	12	12	...
104*d*. Nasal polypus	11	3	8	...	22	...	11	11	...
104*e*. Gangosa	...	8	2	3	10	...	46	66	...
105*a*. Laryngitis	2	30	10	1	42	4	867	284	...
105*b*. Other diseases of the larynx ...	...	6	...	1	6	...	3	1	...
106*a*. Acute bronchitis	36	950	182	36	1,168	33	22,878	12,103	13
106*b*. Chronic bronchitis	26	336	64	20	426	28	9,138	4,911	18
106*c*. Bronchiectasis	...	2	1	1	3	...	25	6	...
107. Broncho-pneumonia	17	508	160	206	685	19	262	112	11
108. Lobar pneumonia	44	1,295	223	415	1,562	51	384	181	9
110*a*. Pleurisy	4	176	16	9	196	8	679	125	...
110*b*. Empyema	4	24	4	5	32	3	5	...	...
111*a*. Hypostatic congestion of lungs...	...	7	3	2	10	...	3	1	...
111*b*. Embolism of lung	...	1	...	1	1	...	...	...	...
112*a*. Asthma	3	84	16	9	103	4	247	92	...
112*b*. Hay fever	...	...	...	...	...	...	4	1	...
113. Pulmonary emphysema	...	6	...	1	6	...	6	4	...
114*a*. Gangrene or abscess of lung ...	...	5	2	7	7	...	4	1	...
114*b*. Other diseases of the respiratory system	...	10	10	2	20	...	602	273	1
IX.—*Diseases of the Digestive System.*									
115*a*. Dental caries. Alveolar abscess	12	123	20	...	155	...	3,613	1,357	...
115*b*. Pyorrhœa	1	18	2	1	21	...	1,016	571	...
115*c*. Stomatitis	5	85	47	14	137	8	1,884	1,377	...
115*d*. Tonsillitis. Pharyngitis. Quinsy	4	149	49	2	202	2	1,888	834	...
115*e*. Adenoids	...	3	...	...	3	...	42	13	...
115*f*. Other diseases of the buccal cavity, pharynx, etc.	...	12	14	3	26	...	504	301	...
116. Diseases of the œsophagus ...	..	2	2	...	4	...	9	5	...
117*a*. Ulcer of the stomach	...	11	5	3	16	...	6	1	...
117*b*. Ulcer of the duodenum	2	29	6	1	37	1	14	2	...
118*a*. Gastritis	12	157	46	10	215	5	1,486	609	...
118*b*. Dyspepsia	7	136	55	1	198	3	5,136	3,266	...
118*c*. Other diseases of the stomach ...	...	31	9	4	40	1	295	261	...
119. Infantile diarrhœa (under two years of age)	2	25	19	14	46	1	1,047	263	1
Carried forward	1,641	22,438	6,820	2,023	30,902	1,326	257,557	144,418	122

TABLE V.—RETURN OF DISEASES AND DEATHS (NON-EUROPEAN) FOR THE YEAR 1937—*continued.*

Diseases.	IN-PATIENTS.						OUT-PATIENTS.		
	Remaining in Hospital at end of 1936.	TOTAL. Admissions. Male.	Female.	Deaths.	Total cases treated.	Remaining in Hospital at end of 1937.	Male.	Female.	Deaths.
Brought forward ...	1,644	22,438	6,820	2,023	30,902	1,326	257,557	144,418	122
IX.—*Diseases of the Digestive System*—contd.									
120*a*. Sprue...	...	...	...	...	...	...	...	...	...
120*b*. Colitis	4	62	31	9	97	2	787	398	...
120*c*. Gastro-enteritis	9	91	45	27	145	4	623	418	4
120*d*. Diarrhœa	5	363	101	45	469	3	5,244	2,944	2
121. Appendicitis	15	50	13	4	78	1	36	13	...
122*a*. Hernia	209	3,512	204	69	3,925	160	2,531	163	...
122*b*. Strangulated hernia	4	146	7	57	157	7	28	..	1
122*c*. Intestinal obstruction	...	29	10	18	39	...	10	7	...
123*a*. Constipation	1	179	139	4	319	5	25,527	9,935	...
123*b*. Diverticulitis	...	...	...	...	...	...	...	...	...
123*c*. Fistula in ano	9	74	21	3	104	5	96	26	...
123*d*. Ischio-rectal abscess	...	18	5	2	23	...	7	5	...
123*e*. Other diseases of the intestines	...	41	61	8	102	3	174	103	...
124. Cirrhosis of the liver	4	95	28	17	127	15	56	23	...
125*a*. Acute yellow atrophy of the liver	...	2	...	1	2	...	...	...	...
125*b*. Hepatitis	13	126	26	18	165	6	217	62	2
125*c*. Abscess of the liver	1	42	4	7	47	3	25	4	1
125*d*. Other diseases of the liver ...	...	23	7	7	30	...	24	8	..
126. Biliary calculi	...	1	...	...	1	...	...	...	...
127*a*. Cholecystitis	...	18	4	4	22	1	28	14	...
127*b*. Catarrhal jaundice	7	124	20	10	151	3	315	109	...
127*c*. Other diseases of the gall bladder and ducts	..	1	1	1	2	...	...	4	..
128. Diseases of pancreas	...	2	...	1	2	...	...	...	...
129. Peritonitis	2	24	15	18	41	1	21	17	...
X.—*Non-Venereal Diseases of the Genito-Urinary System and Annexa.*									
130. Acute nephritis	14	104	47	33	165	6	161	70	1
131. Chronic nephritis	21	153	78	56	252	9	199	57	3
133*a*. Pyelitis	1	15	7	3	23	...	11	8	...
133*b*. Other diseases of the kidney and annexa	2	16	5	3	23	1	22	5	...
134*a*. Calculi of the kidney and ureter	...	2	...	...	2	...	2	1	...
134*b*. Calculi of the bladder	...	10	..	3	10	2	10	13	...
135*a*. Cystitis	3	101	45	4	149	7	457	249	...
135*b*. Other diseases of the bladder	...	39	13	12	52	5	51	31	...
136*a*. Stricture of the urethra	24	475	3	28	502	28	553	...	...
136*b*. Urethral fistula	5	89	10	9	104	1	64	...	...
136*c*. Perineal abscess	...	33	1	1	34	...	23	1	...
136*d*. Other diseases of the urethra ...	...	51	5	1	56	5	314	...	...
137*a*. Hypertrophy of the prostate ...	...	7	...	...	7	1	1	...	...
137*b*. Prostatitis	...	17	...	...	17	1	20	...	...
137*c*. Other diseases of the prostate ...	...	5	...	1	5	...	3	...	...
138*a*. Phimosis	17	580	...	...	597	16	2,073	...	...
138*b*. Epididymitis. Orchitis	7	296	...	1	303	12	695	...	...
138*c*. Hydrocele	47	981	...	8	1,028	40	597	...	...
138*d*. Other non-venereal diseases of the male genital organs ...	4	71	...	2	75	1	232	...	...
138*e*. Granuloma venereum	4	39	12	3	55	8	22	8	...
139*a*. Diseases of the ovary	2	...	50	7	52	10	...	138	...
139*b*. Salpingitis and other diseases of the Fallopian tube	4	...	119	4	123	5	...	303	1
139*c*. Pelvic cellulitis, abscess, etc. ...	1	...	102	8	103	10	...	211	...
139*d*. Displacement of uterus	2	...	96	...	98	1	...	405	...
Carried forward	2,085	30,545	8,155	2,540	40,785	1,714	298,816	160,171	137

Table V.—Return of Diseases and Deaths (Non-European) for the year 1937—*continued.*

Diseases.	IN-PATIENTS.						OUT-PATIENTS.		
	Remaining in Hospital at end of 1936.	Total Admissions. Male.	Total Admissions. Female.	Deaths.	Total cases treated.	Remaining in Hospital at end of 1937.	Male.	Female.	Deaths.
Brought forward	2,085	30,545	8,155	2,540	40,785	1,714	298,816	160,171	137
X.—*Non-Venereal Diseases of the Genito-Urinary System and Annexa*—contd.									
139*e*. Dysmenorrhœa	10	...	128	...	138	2	...	2,634	...
139*f*. Endometritis. Cervicitis ...	13	...	237	2	250	12	...	734	...
139*g*. Menorrhagia	...	...	28	...	28	...	...	361	...
139*h*. Mastitis. Abscess and other diseases of the breast	2	6	104	...	112	5	26	772	...
139*i*. Other diseases of the female genital organs	7	...	231	11	238	14	...	868	...
XI.—*Diseases of Pregnancy, Child Birth and the Puerperal State.*									
140. Post-abortive sepsis	...	...	15	...	15	...	...	38	...
141*a*. Abortion	4	...	285	5	289	5	...	418	4
141*b*. Ante-partum hæmorrhage ...	2	...	36	1	38	...	...	22	...
142. Ectopic gestation	1	...	5	2	6	...	...	13	...
143. Hydatid mole and other accidents of pregnancy	3	...	81	...	84	...	...	319	...
144*a*. Placenta prævia	...	...	19	1	19	...	...	...	...
144*b*. Other puerperal hæmorrhage ...	...	...	11	...	11	...	...	2	...
145. Puerperal sepsis	1	...	41	11	42	...	...	25	...
146. Puerperal albuminuria. Eclampsia	...	...	61	9	61	...	...	6	...
147. Other toxæmias of pregnancy ...	1	...	95	2	96	1	...	353	...
148*a*. Puerperal phlegmasia alba dolens	...	...	4	...	4	...	...	...	...
148*b*. Puerperal embolism	...	...	4	1	4	...	...	...	...
149*a*. Difficult labour	2	...	215	51	217	13	...	9	...
149*b*. Retained placenta	4	...	95	19	99	...	...	10	...
149*c*. Other accidents of child birth ...	2	...	83	10	85	5	...	62	...
150*a*. Puerperal insanity	...	...	4	1	4	...	...	1	...
150*b*. Puerperal diseases of the breast	...	...	12	...	12	...	...	5	...
150*c*. Normal labour	18	...	2,182	...	2,200	27	...	115	...
XII.—*Diseases of the Skin and Cellular Tissue.*									
151. Carbuncle. Boil	3	85	28	...	116	7	3,138	890	...
152*a*. Cellulitis	30	568	91	24	689	20	2,982	870	...
152*b*. Acute abscess	55	991	178	25	1,224	56	4,745	1,421	1
152*c*. Whitlow	2	158	38	...	198	14	2,419	1,105	...
153*a*. Ainhum	1	43	8	...	52	4	156	53	...
153*b*. Chigoes	3	14	4	...	21	1	200	46	...
153*c*. Eczema. Dermatitis	7	110	53	1	170	11	4,095	788	...
153*d*. Elephantiasis	49	395	61	8	505	35	352	73	...
153*e*. Herpes	...	21	3	...	24	1	192	53	...
153*f*. Impetigo	1	19	9	...	29	...	425	284	...
153*g*. Keloid	...	10	10	...	20	1	76	67	...
153*h*. Myiasis	...	1	...	...	1	...	6	3	...
153*i*. Pediculosis	...	...	.	...	...	...	415	450	...
153*j*. Psoriasis	...	1	1	...	2	...	68	44	...
153*k*. Scabies	14	233	77	...	324	9	14,171	5,149	...
153*l*. Tinea	2	76	23	...	101	1	7,347	2,143	...
153*m*. Ulcer	439	2,550	1,044	39	4,033	389	38,609	14,858	...
153*n*. Urticaria	15	38	26	...	79	4	1,169	403	...
153*o*. Other diseases of the skin and its annexa	...	45	21	...	66	2	1,057	587	... 1
Carried forward	2,776	35,909	13,806	2,763	52,491	2,353	380,461	196,225	143

TABLE V.—RETURN OF DISEASES AND DEATHS (NON-EUROPEAN) FOR THE YEAR 1937—*continued.*

Diseases.	IN-PATIENTS.						OUT-PATIENTS.		
	Remaining in Hospital at end of 1936.	TOTAL. Admissions. Male.	Female.	Deaths.	Total cases treated.	Remaining in Hospital at end of 1937.	Male.	Female.	Deaths
Brought forward	2,776	35,909	13,806	2,763	52,491	2,353	380,464	196,225	143
XIII.—*Diseases of the Bones and Organs of Locomotion.*									
154*a*. Osteomyelitis	36	252	94	12	382	42	351	162	...
154*b*. Periostitis	4	32	12	1	48	1	477	244	...
155. Other diseases of the bones ...	9	46	21	2	76	6	102	33	...
156*a*. Arthritis	22	350	46	4	418	35	3,274	1,228	...
156*b*. Synovitis	11	132	18	1	161	9	904	293	...
156*c*. Other diseases of joints—loose cartilage, ankylosis, etc. ...	2	18	16	...	36	2	121	37	...
156*d*. Abscess of muscle	22	349	74	23	445	27	660	266	...
156*e*. Ganglion	...	27	7	...	34	1	525	185	...
156*f*. Lumbago	1	54	3	...	58	...	1,828	529	...
156*g*. Other diseases of other organs of locomotion	1	27	15	...	43	2	379	121	...
XIV.—*Congenital Malformations.*									
157*a*. Hydrocephalus	...	3	2	...	5	...	7	5	...
157*b*. Spina bifida. Meningocele ...	...	...	...	...	...	...	1	1	...
157*c*. Malformations of the heart ...	...	1	...	...	1	...	1	1	...
157*d*. Monstrosities	...	...	1	...	1	...	...	...	...
157*e*. Cleft palate. Harelip	...	2	2	...	4	...	1	6	...
157*f*. Imperforate anus	...	...	2	...	2	...	...	3	...
157*g*. Other congenital malformations	...	9	12	1	21	...	28	11	...
157*h*. Hæmatocolpos	...	...	2	...	2	...	...	1	...
XV.—*Diseases of Early Infancy.*									
158. Congenital debility	7	53	42	39	102	10	202	137	13
159. Premature birth	...	...	60	6	60	...	...	13	...
160. Injury at birth	...	1	31	4	32	...	4	5	...
161*a*. Icterus neonatorum	...	2	4	3	6	...	...	6	...
161*b*. Pemphigus neonatorum	...	1	...	...	1	...	3	2	1
161*c*. Other diseases peculiar to early infancy	5	60	63	32	128	21	481	597	8
XVI.—*Old Age.*									
162*a*. Senile dementia	1	5	4	4	10	...	36	8	...
162*b*. Other forms of senile decay ...	1	20	7	6	28	...	47	36	1
XVII.—*Affections due to Violence.*									
165*a*. Suicide	...	3	...	3	3	...	3	...	3
165*b*. Attempted suicide	2	7	7	2	16	...	2	1	...
172. Infanticide	...	...	...	...	...	...	...	1	1
173. Homicide	...	1	1	2	2	...	22	14	26
176*a*. Snake bite	2	68	14	8	84	..	123	33	1
176*b*. Insect bite or sting	...	15	...	...	15	...	439	116	...
177. Food poisoning	...	23	3	2	26	...	6	2	...
178. Accidental gas poisoning	...	5	8	1	13	...	2	...	...
179. Other acute accidental poisoning	...	11	11	5	22	1	66	17	1
181*a*. Burns by fire	20	174	106	43	300	27	375	799	...
181*b*. Other burns or scalds	5	39	23	5	67	4	552	284	...
182. Accidental mechanical suffocation	...	23	6	...	29	...	8	5	...
Carried forward	2,927	37,722	14,523	2,972	55,172	2,541	392, 91	201,427	198

TABLE V.—RETURN OF DISEASES AND DEATHS (NON-EUROPEAN) FOR THE YEAR 1937—*continued.*

Diseases.	IN-PATIENTS.						OUT-PATIENTS.		
	Remaining in Hospital at end of 1936.	TOTAL. Admissions. Male.	TOTAL. Admissions. Female.	Deaths.	Total cases treated.	Remaining in Hospital at end of 1937.	Male.	Female.	Deaths.
Brought forward	2,927	37,722	14,523	2,972	55,172	2,541	392,494	201,427	198
XVII.—*Affections due to Violence*—contd.									
183. Accidental drowning	1	1	1	3	3	...	...	...	...
184. Accidental injury by firearms ...	17	177	25	19	219	7	317	75	...
Injuries:—									
185. By cutting or piercing instruments	42	1,128	142	36	1,312	83	9,656	1,651	...
186*a*. Due to falls, crushing, machinery, railways, &c. ...	46	560	84	28	690	23	6,143	856	1
186*b*. Due to motor accidents ...	13	293	56	29	362	11	289	41	1
188. By non-venomous animals ...	3	55	28	8	86	2	477	242	...
189. Hunger or thirst (starvation, privation)	...	18	6	7	24	2	6	2	...
191*a*. Heat stroke	...	...	...	...	...	...	2	1	...
191*b*. Sunstroke	...	...	...	...	...	...	1	...	...
192. Injuries by lightning	...	2	...	...	2	...	2	1	...
193. Injuries by electricity	1	10	1	...	12	...	2	11	...
194*a*. Dislocation	5	75	21	1	101	8	132	112	...
194*b*. Sprain	11	124	11	...	146	1	4,131	456	...
194*c*. Fracture	85	730	149	42	964	91	406	90	1
194*d*. Wounds and other external injuries	77	1,217	256	20	1,550	78	23,855	4,132	...
196. Wounds of war	...	2	1	...	3	...	1,737	85	...
198. Execution	...	...	...	...	...	...	8	10	...
XVIII.—*Ill-Defined Diseases.*									
200*a*. Asthenia	4	148	50	41	202	3	1,279	1,396	...
200*b*. Goundou	...	2	1	...	3	...	11	15	...
200*c*. Malingering	...	28	3	...	31	3	163	4	...
200*d*. Pyrexia of uncertain origin ...	...	22	5	3	27	1	107	57	...
200*e*. Shock	...	5	...	...	5	..	5	1	1
200*f*. Hyperpyrexia	...	4	...	...	4	...	22	1	...
Diseases not included above.									
201. Anti-rabic prophylaxis ...	...	8	2	...	10	1	128	45	...
202. Ascitis	2	...	...	...	2	...	...	...	...
210. Transferred cases already diagnosed by Medical Officer on other station...	...	...	...	...	...	...	...	...	...
Total cases of Diseases treated	3,234	42,331	15,365	3,209	60,930	2,855	441,373	210,621	202

APPENDICES

APPENDIX A.

Laboratory Service.

The Laboratory Service during 1937, consisted of the following sections:—

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

The laboratory at Port Harcourt was in charge of a Pathologist until November when he was transferred to Lagos for relief purposes. The routine duties of this laboratory were then taken over by a Technical Assistant.

The remainder of the clinical laboratories were staffed by African Laboratory Assistants.

The routine work carried out at the laboratory of the Senior Pathologist, included:—

1. The examination of brains for rabies.
2. Yellow fever protection tests, the histological diagnosis of this disease and prophylactive inoculations.

Rabies.—Sixty-nine brains were received during the year, three of which were useless. Of the remainder, three specimens were from cats, one was from a horse and one from a human.

Thirty-two (one from cat) were positive on histological examination. Two specimens which were negative on histological examination were positive on animal inoculation (white mice).

Yellow Fever Protection Tests.—Specimens of blood received for this test numbered 235, of these 101 were from Europeans, the remainder from Africans. Twenty-six specimens were useless either on account of gross contamination or due to an insufficient quantity of serum.

Tissues for Examination from Suspected Cases of Yellow Fever.—Tissues were received for examination from twenty-two cases. Two of these were useless owing to decomposition. Of the remainder, eleven were positive (seven Europeans and four Africans). In each case, fat sections for the liver were prepared on arrival of the tissues. In the absence of fatty changes a negative report was made the same day. When the fat sections were suspicious, paraffin sections were prepared from a further portion of liver. The use of " Cellosolve " hastened the process and a final report was invariably made the day following the receipt of the specimen.

Prophylactive Inoculations.—Using dried vaccine, kindly supplied by Dr. Findlay, ninety-seven Europeans were inoculated. As a precautionary measure, those inoculated were quarantined in screened quarters for ten days after injection.

Most of those inoculated developed a temperature (99°-102° F.), headache, generalised pains, marked lassitude, etc., within a few days. All those inoculated are requested to send blood samples for protection tests and a questionnaire dealing with the appearance of jaundice is sent out two months after inoculation. The replies so far received have been negative. In order to ascertain how soon immunity developed in those inoculated, blood samples were taken from volunteers from the fourth day after inoculation to the nineth day inclusive. It was found that protection had not developed within this period.

Vaccinia Vaccine.—The laboratory at Vom has been closed and experiments in the production of this vaccine from sheep have been carried out at Yaba. An average of twenty-five grams of pulp per animal has been obtained. The material has proved satisfactory bacteriologically and as regards potency after six months storage in the refrigerator.

Experiments with a view to the ultimate average production of a million doses annually will be carried out during 1938. Sheep which have been used for vaccinia vaccine production are available for use in connection with the manufacture of rabies vaccine.

Infant Mortality.—An investigation was commenced into the causes of death in African children up to three years of age in Lagos. Through the kindness of the Medical Officer of Health, Lagos, all such children who died without being certified were brought for autopsy.

One hundred post-mortems have been made during the year. The examination is made as complete as possible and promises to yield useful information with regard to the incidence of malaria and the pneumonias and the relationship of these diseases to age, climatic conditions, etc.

Tropical Ulcer.—In a recent article by F. W. Clements in the *Medical Journal of Australia* the interesting theory is put forward that the source of origin of the spirochaetes and fusiform bacilli, found in this type of ulcer, is the mouth. Infection is thought to take place by the accidental inoculation of wounds or abrasions with expectorated material.

Smears from the gums of fifty-eight labourers were examined in Lagos by the dark-ground method and forty-three were found to harbour numerous spirochaetes and fusiform bacilli. In most of the labourers with positive smears there was no evidence of pyorrhoea or other infection of the teeth or gums.

Material from the gums of four heavily infected labourers was pooled and diluted with an equal quantity of nutrient broth. Seven African volunteers were inoculated intradermally in the skin of the arm with 0.25 c.c. of the mixture (previously examined by the dark-ground method and found to contain numerous fusiform bacilli and actively motile spirochaetes).

Small ulcers resulted in every individual but the spirochaetes and fusiform bacilli rapidly died out after a few days and in no instance did the lesion assume the characteristic appearance of a tropical ulcer. It may be argued that a dietetic factor is necessary for infection to take place and that this was absent in the volunteers in question.

On the other hand, it has been shown that if material from a tropical ulcer which contains fusiform bacilli and active spirochaetes is inoculated in a manner similar to above in volunteers living under the same conditions, the resultant ulcers are clinically comparable to a tropical ulcer and spirochaetes and fusiform bacilli are found in large numbers and are present until healing commences.

A further point which seems to differentiate the mouth spirochaetes from those found in tropical ulcer is the fact that they will proliferate when inoculated into guinea-pigs and can be passaged with ease whereas the reverse is the case in regard to the spirochaetes obtained from a tropical ulcer. Microscopically the oral spirochaetes appear shorter and more slender in type. It seems doubtful if the source of infection in Nigeria is an oral one.

BACTERIOLOGICAL UNIT.

Routine Work.—

(*a*) *Faeces.*—183 specimens were cultured and the following strains of Dysentery Organisms were isolated:—

B. dysenteriæ (Flexner)	...	...	...	...	"V"	4
,,	,,	,,	...	...	...	...	"W"	28
,,	,,	,,	...	...	...	...	"X"	3
,,	,,	,,	...	...	...	...	"Y"	—
,,	,,	,,	...	...	...	...	"Z"	2
,,	,,	,,	...	...	...	...	"VZ"	1
,,	,,	,,	...	...	...	...	"WZ"	1
,,	,,	,,	...	...	...	...	"G"	7
		Inagglutinable	...	...	...	...		8
,,	,,	(Shiga)	...	...	...	...	...	9
,,	,,	(Schmitz)		...	...	...	...	2
,,	,,	(Newcastle)		...	...	...	...	1
								66

(*b*) *Urine.*—Thirty specimens were cultured. B. coli was recovered from nine and a streptococcus from six.

(*c*) *Blood.*—Forty-four specimens were cultured from twelve, of which pneumococci were isolated.

(*d*) *Vaccines.*—Four autogenous vaccines were prepared.

(*e*) *Widal Tests.*—Sixty-seven sera were received of which four had to be discarded. There were nineteen positive results, eight doubtful, and thirty-six negative.

(*f*) *Kahn Tests.*—3,652 sera were received of which eighty-three were, for various reasons, discarded. The results were as follows:—

Total sera, 3,569
Positive sera, 1,491
Doubtful sera, 381.

Anti-Rabies Vaccine.—24,370 c.c. were prepared during the year. Supplies were regularly sent to the Gold Coast and to Sierra Leone. At the end of the year Sierra Leone requested that supplies be discontinued.

Tuberculosis.—Work was continued on the study of types of strains of the tubercle bacillus isolated from varying clinical types of cases and once more, as in earlier work there appeared to be considerable correlation between the colonial appearance of strains in primary cultures and the type of cases from which they were isolated.

Cases of the chronic pulmonary type tended to yield cultures showing little colonial variation. Cases of acute generalised type tended to yield cultures showing a marked colonial variation.

The possibility of this variation having arisen as a result of isolation by passage through the guinea-pig, has been negatived by more successful attempts at direct culture from human tissues. In certain cases where cultures were obtained both by direct culture and by indirect culture, the colonial variation was even more noticeable in the cultures obtained by the direct method than in those obtained by the indirect.

Seventeen strains isolated early in the year were forwarded to Dr. A. S. Griffith who very kindly typed them with the following results:—

Eugonic human	...	...	...	6
Dysgonic human	...	...	...	10
Bovine	...	...	...	1

The high percentage of dysgonic human strains from cases of systemic infection in a race showing little or no resistance to tuberculosis would appear to be a matter worthy of further investigation.

The encouragement shown and the assistance given by Dr. A. S. Griffith is gratefully acknowledged.

Pneumonia.—During the period extending from the end of August, 1936, until June, 1937, an investigation of the types of pneumococci prevalent in Lagos was commenced and the following type were isolated. Type 2, one, Type 5, three, Type 11, one, Type 12, four, " Group IV ", two.

A note on the subject has been submitted to the transaction of the Royal Society of Tropical Medicine and Hygiene for publication.

LABORATORY OF THE AFRICAN HOSPITAL, LAGOS.

Teaching.—Instruction in pathology was given to six post-graduate Medical Assistants, arranged in sets of two. One set attended during one of the months April, July, and October. They were instructed in routine pathological work; in addition, tutorial lectures in Pathology were given by Dr. Elmes, and in Dermatology by Dr. Smith, Senior Pathologist.

Additional specimens have been added to the Museum during the year, as opportunity offered.

Routine work.—

1. *Histological examinations.*—404 specimens were reported on. 148 of these specimens were from tumours of which thirty-nine were benign and 109 were malignant (Carcinomas 73, Sarcomas 29, Melanomas 7).

The regional distribution of the malignant neoplasms is shown in the following table:—

Site.	Carcinoma.	Sarcoma.	Melanoma.
Alimentary tract	4	...	1 (mouth)
Bladder	6	...	...
Bones and Joints	2 (Adamantinoma)	2	...
Breast (Female)...	14	...	...
„ (Male)	1	...	...
Carotid	...	1	...
Genitals (Female)	4	2	...
„ (Male)	5	...	...
Heart (Secondary)	1	...	...
Liver (Primary)	7	...	...
„ (Secondary)	...	1	...
Lymph nodes (Primary) ...	...	8	...
„ „ (Secondary) ...	5	...	1
Orbit (including eye and retina)	2	3	1
Pancreas	2	...	...
Parotid	4	...	...
Skin, subcutaneous and muscle	13	11	4
Spleen (Secondary)	...	1	...
Thyroid	1	...	...
Veterinary (Horse's face, etc.)	2	...	...
Total	73	29	7

Post-mortem Examinations.—During the year 460 autopsies were performed in the African Hospital as compared with 303 in 1936. Of these 188 were Coroner's, 188 were Health and the remainder Hospital cases. One of the Coroner's cases was an European, the cause of death being drowning

In addition fifty-seven autopsies were performed at Ebute Metta, of which thirty-seven were Health and twenty Coroner's. These are included in the appended summary:—

Abscess	7	(Muscle 1, cerebral 2, lung 2, kidney 1, liver 1).
Accidents	31	
Acute yellow atrophy	1	
Addison's disease	1	
Anæmia	7	(Sickle cell 2, primary 5).
Aneurysm	1	
Ankylostomiasis	1	
Ante-partum hæmorrhage	1	
Appendicitis (acute)	2	
Arterio-sclerosis	1	
Asphyxia	4	
Atheroma	20	(Simple 4, syphilitic 16).
Birth injuries	2	
Blackwater fever	1	
Broncho-pneumonia	126	(Simple 66, Haemorrhagic 53, with abdominal syndrome 7).
Carditis	1	
Cerebral hæmorrhage	1	
Cerebral softening	3	
Chronic intestinal obstruction	1	
Chronic mediastino-pericarditis	1	
Cirrhosis of liver	5	
Colitis	4	
Congenital deformities	3	
Duodenal ulcer	1	
Dysentery, amœbic	7	
Dysentery, bacillary	8	
Empyema	1	
Enteric fever	2	
Enteritis	3	
Fatty degeneration of the heart	16	
Hæmorrhage	2	(Subdural 1, pulmonary 1).
Intussusception	2	
Leprosy	1	
Lobar pneumonia	38	
Malaria	16	
Malignant disease	10	(Carcinoma 9, sarcoma 1).
Marasmus	1	
Meningitis	3	(Pneumococcal 1, other 2).
Nephritis	23	(Suppurative 7).
Peritonitis	11	(Pneumococcal 1).
Pleurisy	2	
Poisoning	3	(Cause unknown 1, chloroform 1, chenopodium 1).
Prematurity	1	
Puerperal sepsis	6	
Pyæmia	3	
Pylephlebitis	1	
Renal amyloid disease	1	
Ruptured uterus	1	
Septicæmia	1	
Starvation	4	
Stillborn	1	
Strangulated hernia	4	
Tetanus	3	
Toxæmia	4	
Tuberculosis	90	(Bladder 1, generalised 29, glandular 3, intestinal 1, meningeal 1, eniliary 6, peritoneal 1, pulmonary 47, salpingeal 1).
Unknown	14	
Valvular disease of the heart	7	(Sub-acute bacterial endocarditis 3).
Volvulus	1	

Miscellaneous Bacteriological Examinations.—233 were made including seventy-two for mycobacterium lepræ (eighteen positive, seventeen of which were Africans, one in a European female).

Biochemical.—132 examinations (seventeen cerebro-spinal fluids) were made during the year.

Venereal Diseases.—275 smears were examined for gonococci, of which seventy-one were positive (12 European and fifty-nine Africans) twenty-seven dark ground examinations were made for Spirochæta pallida, five were positive.

Bacilli of the Ducrey type were found in eight cases of venereal ulcer in Africans.

Examination of the blood, stools, urine and sputum are shown in tabular form. (Table 1). The out-station figures are grouped together in Table 2.

MEDICAL, LABORATORY SERVICE, NIGERIA.

Lagos Area.

Table 1.

Blood Examinations.	No. of Examinations.	Subtertian.	Crescents.	Quartan.	Benign tertian.	Trypanosomes.	Microfilariæ.	Spironemata.	Total R.B.C.	Total W.B.C.	Differential W.B.C.
European male	610	83	...	1	...	...	2	...	28	20	26
„ female	149	21	...	...	...	...	...	...	11	12	15
Total	759	104	...	1	...	...	2	...	39	32	41
African male	3,139	209	...	...	1	...	55	...	130	139	129
„ female	2,104	292	...	...	...	...	16	...	43	45	42
Total	5,241	501	...	...	...	...	71	...	173	184	171
Total	6,000	605	...	1	1	...	73	...	212	216	212

Remarks:—*Fragility Tests*—5 African Males. *Sickling*—15 African Males, 6 African Females. Positive=10 Males and 6 Females.

Stool Examinations.	No. of Examinations.	T. saginata.	Ascaris.	Ancylostome.	T. trichiura.	Strongyloides.	Flagellates.	E. histolytica.		E. coli.		S. mansoni.	Blood.	Mucus.	Cellular exudate.	Other protozoa.
								Free.	Encysted.	Free.	Encysted.					
European male ...	477	1	16	8	32	2	2	2	1	4	16	...	34	70	30	2
„ female	104	1	1	3	5	1	2	...	...	1	4	...	10	20	8	...
Total .	581	2	17	11	37	3	4	2	1	5	20	...	44	90	38	2
African male ...	3,071	20	1,737	1,414	1,556	246	144	13	20	69	399	30	190	488	194	17
„ female ...	879	5	734	329	402	34	20	4	2	12	79	2	56	159	74	...
Total ...	3,950	25	2,471	1,743	1,958	280	164	17	22	81	478	32	246	647	268	17
Total	4,531	27	2,488	1,754	1,995	283	168	19	23	86	498	32	290	737	306	19

Remarks:—*Balantidium Coli*—8 Africans, 1 European male. *Iodamœbæ butschlii*—3 Africans. *Giardia lamblia*—6 Africans, 1 European. *Other Helminths*—*Strongyloides stecoralis*=2 African Male. *Oxyuris vermicularis*=4 African Male. Ova of *S. haematobium*=2 African 1 Male and 1 Female. *Occult Blood Test*—Africans 7, Positive 2, European 21, Positive 4.

Urine Examinations.	No. of Examinations.	Albumen.	Sugar.	Phosphates.	Casts.	Pus.	Blood.	S. haematobium.	Bile salts.	Bile pigments.	Acetone.	Di-acetic acid.
European male ...	85	42	5	...	13	50	9	...	4	2	...	...
„ female ...	31	16	1	...	1	14	2	...	1	1	...	...
Total ..	116	58	6	...	14	64	11	...	5	3	...	...
African male ...	3,438	2,606	22	...	345	2,364	422	153	22	20	...	1
„ female ...	874	716	17	...	108	605	107	25	9	6	...	...
Total ...	4,312	3,322	39	...	453	2,969	529	178	31	26	...	1
Total	4,401	3,380	45	...	467	3,033	540	178	36	29	...	1

Sputum Examinations.	No. of Examinations.	Tubercle bacilli.	P. pestis.	Spironemata.	Remarks.
European male	32	6	...	...	For concentration tests and animal inoculations please *see* report of Pathologist in charge Bacteriological Unit, Medical Research Institute, Yaba.
„ female	1	...	...	...	
African male	581	103	...	6	
„ female	123	25	...	2	

MEDICAL, LABORATORY SERVICE, NIGERIA.

Outstations.

Table 2.

Blood Examinations.	No. of Examinations.	Subtertian.	Crescents.	Quartan.	Benign tertian.	Trypanosomes.	Microfilariae.	Spironemata.	Total R.B.C.	Total W.B.C.	Differential W.B.C.
European male ...	397	71	...	...	...	1	4	...	29	34	82
„ female ...	134	14	...	1	...	1	...	...	28	22	44
Total ...	531	85	...	1	...	2	4	...	57	56	126
African male ...	6,198	2,705	13	5	2	175	461	...	87	91	86
„ female ...	1,516	458	11	7	...	32	56	...	28	26	27
Total ...	7,714	3,163	24	12	2	207	517	...	115	117	113
Total	8,245	3,248	24	13	2	209	521	...	172	173	239

Stool Examinations.	No. of Examinations.	T. saginata.	Ascaris.	Ancylostome.	T. trichiura.	Strongyloides.	Flagellates.	E. histolytica.		E. coli.		S. mansoni.	Blood.	Mucus.	Cellular exudate.	Other protozoa.
								Free.	Encysted.	Free.	Encysted.					
European male ...	288	...	3	2	8	1	6	6	10	2	2	...	54	37	42	1
,, female	96	...	...	...	6	...	3	1	8	...	2	...	21	17	15	...
Total ...	384	...	3	2	14	1	9	7	18	2	4	...	75	54	57	1
African male ...	6,764	387	718	2,808	958	153	217	122	326	99	509	90	382	292	348	36
,, female ...	1,005	34	206	495	309	12	43	12	31	32	84	5	205	186	180	12
Total ...	7,769	421	924	3,303	1,267	165	260	134	357	131	593	95	587	578	528	48
Total	8,153	421	927	3,305	1,281	166	269	141	375	133	597	95	662	632	585	49

Urine Examinations.	No. of Examinations.	Albumen.	Sugar.	Phosphates.	Casts.	Pus.	Blood.	S. hæmatobium.	Bile salts.	Bile pigments.	Acetone.	Di-acetic acid.
European male ...	294	154	15	33	35	162	23	...	12	9	1	...
,, female ...	104	63	5	18	12	64	13	...	6	5	12	1
Total ...	398	217	20	51	47	226	36	...	18	14	13	1
African male ...	6,811	3,227	134	1,762	338	2,515	851	381	53	46	1	...
,, female ...	1,264	796	12	172	114	758	230	33	21	16	...	...
Total ...	8,075	4,023	146	1,934	452	3,273	1,081	414	74	62	1	...
Total	8,473	4,240	166	1,985	499	3,499	1,117	414	92	76	14	1

Kahn Tests.	No. of Examinations.	Positive.	Negative.	Doubtful.
European	106	19	85	2
African	2,450	1,255	1,164	31
Total	2,556	1,274	1,249	33

Agglutination Tests.	No. of Examinations.	Positive.	Negative.
European	6	2	4
African	12	2	10
Total	18	4	14

Sputum Examinations.	No. of Examinations.	Tubercle bacilli.	P. pestis.	Spironemata.	Remarks.
European male	27	...	...	...	
„ female	4	...	...	...	
African male	1,071	109	...	20	
„ female	95	18	...	...	

Sections.

Nature of tissue.	Diagnosis.
7 dogs' brains	Positive for negri-bodies in 2.
21 lymph glands (cattle)	Positive for tuberculosis in 4.

Tumours.	Innocent.	Malignant.
European	...	...
African	59	32

Classification.	Simple :—		Malignant :—	
	Papilloma	5	Squamous carcinoma	1
	Fibroma	9	Glandular carcinoma	16
	Chondroma	2	Rodent ulcer	1
	Angioma	3	Melanoma	4
	Glioma	3	Sarcoma	10
	Adenoma	1		
	Mixed parotid	1		
	Cystic tumour	5		

Bacteriological Examinations.

Faeces 124. Bacillary dysentery 30.

Waters 112. B. coli in 10. B. aerogenes in 43.

Blood cultures 3. B. typhosum in 1.

Pus smears 926.

Positive.	
Gonococci	387
Meningococci	77
Pneumococci	18
B. leprae	3
Ducrey bacillus	1
Spirochaetes	5

Post-Mortem Examinations.

Causes of death.

Amaryl	1
Accidents	42
Acute pancreatitis	1
Broncho-pneumonia	3
Cardiac failure	14
Cerebral haemorrhage	2
Carcinoma	3
Colitis	2
Dysentery Bacillary	2
,, Amoebic	1
Endocarditis	1
Gastro-enteritis	2
Gas gangrene	1
Lobar pneumonia	10
Malaria	1
Meningitis Meningococcal	8
,, Tuberculous	1
Nephritis	2
Peritonitis	3
Poisoning	4
Pulmonary Embolism	2
Pulmonary Tuberculosis	1
Prostatic abscess	1
Strangulation	3
Sub-acute necrosis (liver)	2
Unknown	2
Total	117

Miscellaneous.

Gland punctures	730
Positive for trypanosomes	472

APPENDIX B.

Report of the Sleeping Sickness Service, 1937.

The year has been a period of transition. The scheme for the expansion of the service came into operation in April. The Colonial Development Fund is providing £19,000 per annum for five years for sleeping sickness control measures on the understanding that Nigeria provides a further £11,000 for the expansion and improvement of treatment in addition to maintaining the normal running of the service.

2. The appointment of a second Entomologist, ten Sleeping Sickness Control Officers and a foreman water supplies were approved for work in connection with settlement schemes and protective clearing. Immediate steps were taken to fill the new appointments but naturally there has been a considerable lag while the new officers were being selected and trained. The Entomologist and five of the Control Officers and the Foreman arrived in October. Six out of the eight Royal Army Medical Corps British Non-Commissioned Officers who are to take over the sleeping sickness teams arrived towards the end of the year. Each of these officers will run a sleeping sickness team, two teams being supervised by one Sleeping Sickness Medical Officer.

3. While the new officers were being trained work was continued on the same lines as in 1936. Except for short intervals, five sleeping sickness teams have been kept continuously in the field. A sixth Medical Officer has carried out preliminary surveys in Sokoto, Ilorin and Adamawa Provinces. Very little infection was found in these areas and as there is little of the disease in Bornu and in the Northern parts of Kano and Katsina Emirates it is evident that Sleeping Sickness is confined to the central areas. The connection between the incidence of the disease and the lines of communication, railway and road, and mining areas is remarkable. In many of the peripheral parts of the Northern Provinces, tsetse are very numerous but there is no infection at present.

RESEARCH WORK.

4. Owing to shortage of staff and incidence of leave, it was rarely possible to keep more than one officer at Gadau. A full programme of entomological work has been continued there and some chemotherapeutic research has been done. The Medical Officer in charge of the station has to run the small hospital and out-patients dispensary and also visits an outlying sleeping sickness dispensary. Lately, he has had to concentrate on the teaching of new dispensary attendants in training, and so has not been able to devote much time to research. Arrangements have been made to post the Technical Assistant to Kaduna in order that chemotherapeutic research may be continued there.

(1) Resistance to Tryparsamide.

5. In the 1936 report mention was made of an experiment in which thirty monkeys were injected with blood from untreated sleeping sickness patients diagnosed at a sleeping sickness survey in Zaria Emirate. After the patients had received four 2-gramme injections of tryparsamide, another series of monkeys was injected with their blood. In two instances the strain was isolated both before and after treatment. For the purpose of this experiment patients were given the course of tryparsamide before having their course of antrypol, the converse of the usual procedure. At a subsequent examination after all patients had received their full treatment, none was found to be infected and a further series of monkeys did not take. It seemed that although two patients were still positive after four doses of tryparsamide, they were sterilised by the subsequent doses of antrypol.

6. The characteristics of the two strains, isolated both before and after the patients were treated with tryparsamide have been studied. No significant differences could be detected. Their reactions to tryparsamide were tested in guinea pigs and by the *in vitro* method. In one case minimum effective dose in guinea pigs was 0.04 grammes per kilogram and in vitro practically all trypanosomes were destroyed by a .25% solution of tryparsamide in ten hours. With the other strain the resistance to tryparsamide was rather less; but again there was no significant difference before and after treatment. It would appear then that in these two patients four 2-grammes dose of tryparsamide did not increase the resistance of the parasite to the drug.

(2) Entomological Work.

7. During the last three months of the year the Entomologist was in charge of the Anchau Settlement Scheme. Owing to his absence from Gadau, there was no opportunity of working out the research data which had been accumulating.

His report follows:—

(*a*) *Partial Clearing Experiment.*

8. For a year two separate residual forest islands were kept under close observation. Detailed meteorological data were recorded in addition to data on the density of tsetse and their sexual reproduction. At the end of this period, one of these residual forests was partially cleared, the other being kept as a control.

9. The partial clearing consisted in the removal of dense masses of thicket without the destruction of any of the valuable timber trees; their seedlings were also left untouched. It is hoped that the removal of the thicket wind break will result in the occurrence of much higher temperature within the forest island, resulting in the extermination of tsetse during the hot season. If these results are achieved, it will enable a great reduction of cost (as well as a saving of valuable timber) to be made in future clearing in those latitudes where very high temperatures occur.

10. Should it be found that tsetse can survive, it will be necessary to try the effect of removing the seedlings as to leave the ground completely open beneath the trees.

(b) Investigation into breeding sites and pupal viability.

11. It has long been a problem as to where *G. morsitans* and *G. tachinoides* breed during the rains.

12. In 1936 it was found that *G. morsitans* evacuated the residual forest islands and thickets and breed in dry places under logs in the open woodland savannah; thus for a few weeks it resembles in habit the East African race of this species.

13. In the rains of 1937 the breeding site of *G. tachinoides* was discovered. It breeds under the fan shaped leaves of seedling palm trees growing in the woodland outside the forest islands. These leaves resemble a hand inclined downwards with the fingers separated; each finger is V shaped in section and forms a gutter; the rain pours down these gutters cascades off the tips and leaves a completely dry patch of soil beneath the base. Puparia were unearthed in these minute dry patches throughout the rains.

14. It has been found that at the end of the rains *G. tachinoides* evacuate the seedling palms breeding sites and reproduce in the small thickets; these are then evacuated in favour of the more extensive forest islands which in turn are evacuated in the hot season in favour of the moist sand of the river bed beneath the banks. Each evacuation is preceded by a sudden increase in pupal mortality. It is believed that this increase in pupal mortality is due to the soil water content falling below a certain safety level. The approach of this condition of dangerous soil dryness is in some manner associated with the females' evacuation of the site, as breeding is invariably on the wane before the high pupal mortalities occur. Possibly when the soil is becoming too dry the surface evaporation is becoming too great for the female who consequently evacuates the site in favour of one that presents a better micro-climate. The whole of this problem is being investigated in great detail.

FIELD WORK.

15. During the year 447,358 people have been examined by the sleeping sickness teams and 29,011 were found to be infected. Of these 28,426 had completed treatment at the end of the year. A further 8,187 cases were diagnosed and treated at field dispensaries and 4,460 at general medical stations. This brings the total for the year to 41,658.

THERAPEUTIC MEASURES.

(1) Treatment Teams.

16. On the arrival of the six Royal Army Medical Corps British Non-Commissioned Officers at the end of the year they were sent to the teams to start training under the supervision of the Sleeping Sickness Medical Officers. It is anticipated that they should be ready to take over the teams early in 1938. A good deal of time has been devoted to this training of staff as the re-organisation of the treatment service has meant the appointment of some seventy Africans who are being trained as dispensary attendants, scribes, etc.

17. Owing partly to the above and partly to the fact that several of the teams have been working in areas on the fringe of the main sleeping sickness belt, the number of cases found in the field was less than in 1936. The work of the teams is shown in the following table.

WORK OF SLEEPING SICKNESS TEAMS.

Unit.	Locality.	No. examined.	No. cases of S.S.	Infection rate.	No. treated.
				%	
TEAM 1.	KATSINA EMIRATE:—				
	Maska	34,945	3,112	8·9	4,190
	Kogo	18,241	1,668	9·14	1,653
	Kakara	35,971	4,098	11·23	4,061
	Musawa	31,037	327	1·05	—
	Yandaka	3,548	4	—	—
TEAM 2.	BIDA EMIRATE:—				
	Kutigi	—	—	—	2,116
	Kede	350	17	5·5	17
	KEFFI EMIRATE:—				
	Karu	6,846	893	13·0	892
	Karshi	4,673	466	9·9	411
	Keffi West	13,860	3,141	22·6	3,070
	Keffi East	7,887	2,111	26·7	2,111
	Yaskwa	8,527	3,829	41·9	—
TEAM 3.	KANO EMIRATE:—				
	Rano	64,016	245	0·38	234
	Kura	3,517	38	1·08	38
	Karaye	72,457	1,292	1·7	...
TEAM 4.	ZARIA EMIRATE:—				
	Kauru	25,516	3,858	15·1	3,792
	Jaba	14,735	318	2·16	316
	Kagoro	9,651	253	2·6	252
TEAM 5.	KONTAGORA DIVISION.				
	Rigau	—	—	—	2,563
	Ibelu	5,573	61	1·09	60
	Auna	9,277	331	3·5	330
	Zugurma	4,619	420	9·1	415
	S. Mashega	2,851	74	2·7	74
	Wusheshi	8,622	1,175	13·6	1,170
	MINNA DIVISION.				
	Tegina	3,074	240	7·7	—
	Manta	1,005	177	17·6	574
	Gumna	3,238	173	5·3	—
	Kusheriki	2,831	59	2·1	—
	Kwongoma	2,338	176	7·5	—
	Ungwe	993	132	13·3	—
	Kamuku	6,284	164	2·6	—
	PRELIMINARY SURVEYS.				
	Adamawa	27,607	137	·5	110
	Borgu	9,813	22	—	22
	S.E. Sokoto	3,456	—	—	—
	Total ...	447,358	29,011	6·3	28,426

18. It will be seen that much time had to be taken up in surveying districts in which, although the general infection was low, the sporadic distribution of the disease was such that at any moment a high incidence of infection might have been encountered. In localities where the infection was very scanty, only those people with large soft cervical glands were gland punctured. As soon as such patients became at all numerous, all patients with puncturable cervical glands had to submit to this examination.

19. In addition, several of the teams have done general medical and health work. In all about 40,000 vaccinations have been done; in some districts it was easy to arrange for the vaccination of all children seen at the survey. Practically all cases were seen again a week later, and as re-vaccination could be done where necessary, the percentage of takes was very high.

(2) PRELIMINARY SURVEYS.

20. Preliminary surveys at which only a sample of the population is examined, have been carried out in a large part of Adamawa

Province, nearly the whole of Borgu Division of Ilorin Province, and in the south-east part of Sokoto Province, areas about which there was little accurate information previously. Only very occasional sporadic infection was found. This is most encouraging, as it means that extensive campaigns will not have to be undertaken in these areas.

21. The limits of the disease in the Northern Provinces are now more clearly defined. The comparative absence of infection in the peripheral parts of the country makes the whole outlook much more hopeful. We should now be able to concentrate on the more heavily infected areas and the expansion and re-organisation of the service should give a real opportunity of controlling the disease.

(3) Dispensaries.

22. Sleeping Sickness work has been carried out at twenty-six specially built dispensaries and at a number of the Native Administration dispensaries. As much general medical work as possible is being done and an effort is being made to improve this. A number of sleeping sickness dispensary attendants have received a course of training at general hospitals. Arrangements are being made to train some of the staff as sanitary inspectors. Plans are being made to open a special training school at Zaria. It is hoped later that it may be possible to post additional attendants trained in this manner to some of the dispensaries with a view to making them real centres of health work.

(4) The Control of Mines Labour in Southern Division, Plateau Province.

23. The system of control of tin mining labour started in 1935 continues to work well. The six-weekly examinations of all labour employed on the mines have been carried out by a Sleeping Sickness Medical Officer as latterly the Health Department were unable to spare a Sanitary Superintendent for this work. Few labourers escaped examination both before and after their period of employment and all cases found received a full course of treatment.

24. For ten years the Mama area of Southern Division has been closed to mining, owing to risk of spread of sleeping sickness. In 1937, the Mining Community asked that the area should be re-opened to mining and pointed to the success of the system of control of labour in the Wamba Area. They were prepared to agree to a similar system of control for Mama and undertook to provide their own Medical Officer to examine labourers. Arrangements have been made to re-open the area, the control of labour being regulated by sections 10-15 of the Sleeping Sickness Ordinance, No. 1 of 1937.

SLEEPING SICKNESS CONTROL.

25. The grant of funds from the Colonial Development Fund and the appointment of new staff has allowed the protective campaign to be placed upon a proper footing. In the past protective clearing has been handicapped by the absence of trained staff to supervise this work. At the time of mass surveys recommendations had been made for the clearing required to protect the larger villages. Local Communities were usually willing to do the work but except in those places where administrative staff could be spared to visit the villages to see the work done, very little was accomplished. The supervision of such protective clearing campaigns is one of the functions of the new Sleeping Sickness Control Officers. A number of African headmen and skilled labourers have been trained to assist them.

26. In many localities the inhabitants have left their old walled towns and now live in small scattered hamlets. Where the population

is too scattered adequate protective clearing becomes impossible. In places where the disease has been causing a high mortality it may be necessary to move the people and concentrate them in such a manner that the new settlements will remain permanently free from tsetse. The opportunity is to be taken to plan the new settlements on hygienic lines and to encourage as much agricultural and economic development as possible. The Sleeping Sickness Control Officers will also work in these settlement schemes.

ANCHAU SETTLEMENT SCHEME.

27. At the survey of the Eastern districts of Zaria Emirate infection rates of 20%-40% were found and there was ample evidence that the disease was doing very serious damage. Later investigations were carried out by the Entomologist and by officers of the Geological Surveys and Forestry Departments. As a result of their findings it was decided that some movement and concentration of population would be necessary. It was suggested tentatively that an attempt should be made to form a fly free corridor linking up Ikara district, Anchau, and Kudaru (now combined and renamed Kubau district) and north-eastern Lere. Some 70,000 people would be effected; population being moved into a corridor sixty to seventy miles long by about ten miles wide. This would give a fly free trade route. It was decided that Anchau district should be the first to be tackled, contiguous districts being dealt with later.

28. Work in Anchau district was started immediately on the arrival of the new staff. For the time being the Entomologist is the officer in charge of the scheme. Later a District Officer is to be posted to take charge of the actual move of population. A temporary headquarters has been made near Anchau town and temporary buildings and quarters have been constructed. Old Anchau district has an area of 377 square miles. The whole district has been mapped to show all streams, hamlets, wells, tsetse distribution and most native paths. It is noteworthy that since the mass treatment in 1934, the population has increased from 10,550 to 12,159.

29. During the first few months the new staff have to become familiar with local conditions and have to learn Hausa. They are being given a training in anti-tsetse work. The Control Officers hold degrees or diplomas in agriculture. Later they are to be given a special training by the Agricultural Department at Samaru in methods applicable to Nigeria.

30. As there is no completely fly free area in the locality sufficient initial clearing has to be done to make the area selected for settlement free from tsetse. The new villages would then be sited in such a manner that the local population should have no difficulty in keeping it free. The Control Officers have started this preliminary clearing and this is giving an opportunity for the necessary training, etc. Valuable timber trees occur only in the upper reaches of the streams. Accordingly every effort has been made to spare all mahogany and other useful species near the source of the streams where erosion might occur whereas lower down where there is nothing worth sparing the clearing is drastic. It is thought that when the trash has been burnt tsetse will not survive the hot season in the partially cleared upper reaches and the drastic clearing lower down will prevent them spreading into the settlement areas during the rain.

31. Later the Control Officers are to undertake a full agricultural and economic survey of sample areas in the district. In the proposed settlement area very detailed investigations will have to be made and sample plots cultivated to help assess the suitability for farming of land

at present uncultivated. As soon as sufficient information has been obtained the various departments concerned will be consulted in order to draw up detailed plans for the settlements. An Advisory Committee consisting of the Secretary, Northern Provinces, the Resident, Zaria Province, the Assistant Director of Agriculture, Samaru, and the Deputy Director, Sleeping Sickness Service, is being formed to settle general matters of policy.

32. The Geological Survey Department has advised as to where water can be obtained by sinking wells. A special foreman has been appointed. After a preliminary training in Kano Province he has started a well boring programme. He is responsible to the Director of Geological Survey who supervises all his activities. It is hoped that much of the land at present unoccupied may be suitable for farming once adequate supplies of water are available.

33. Every effort will be made to ensure that in planning the new communities sufficiently extensive areas of fertile land will be allocated to each village unit to eliminate the danger of erosion, land hunger, fuel shortage and insufficient grazing. Room will have to be left for expansion. At present the average density of population in the district is thirty-two per square mile; it is thought that the density in the new settlements may be about 100 per square mile. However, at this stage, it is essential that the greatest possible elasticity should be preserved in all matters relating to the settlements.

PROTECTIVE CLEARING.

34. New staff did not arrive in time to be available for the protective clearing campaign in 1937. Work has been carried on similar lines as before in Illo, Kaoge, Kwanji districts of Sokoto Province. Considerable amounts of valuable clearing have also been done by the Communities in Maska, Kogo, Kankara and Musawa districts of Katsina Province. In Kano Emirate some clearing has been done to protect villages, roads and crossing in Rano and Karaye districts. Here paid labour only was employed.

APPENDIX C.

Report on the Schools of Medicine and Pharmacy.

This report deals with the following institutions:—

A.—School of Medicine, Yaba and Lagos.

B.—School of Pharmacy, Yaba.

SCHOOL OF MEDICINE.

I.—Premises.

A new temporary building, specially designed for instruction in human physiology and histology, was erected during the latter part of 1937. Built of Yaba brick with a shell of concrete, it is a great improvement on the wooden structures in which these subjects were formally taught. A special feature is parquet floors throughout. The new building, which was formally opened by Professor Jameson, Dean of the London School of Hygiene and Tropical Medicine, contains a main laboratory for practical histology and experimental physiology, lecture room, combined demonstration laboratory and office, preparation room, photographic room, dark room, and store room. The equipment consists of microscopes, physiological apparatus, microtomes, micro-photographic apparatus, drying and paraffin ovens, lantern projector, diagram table, microscope slide cabinets, etc. The building will comfortably accommodate eighteen students.

II.—Staff.

The permanent staff consisted of the Principal of the Medical School, the Medical Tutor, the Surgical Tutor, the Lecturer in Physiology, and the Technical Instructor. In addition to their normal duties, a number of Medical Officers rendered valuable assistance by conducting special classes or by offering helpful criticisms.

III.—Students.

The academic year opened with six Medical Assistants and twenty-three Medical Students on the roll. The former began courses of instruction in accordance with section 4 (2) of the Medical Practitioners and Dentists Ordinance in February. Of the latter, fifteen were in their final year, three in the first clinical year, and five in the preclinical year.

IV.—Examinations.

Examinations under the Medical Practitioners and Dentists Ordinance were conducted in January, June and December. The details were as follows:—

January.

Section (*i*)—Medical Assistant's Certificate. Three admissions—three successful.

Section (*ii*)—Medical Assistant's Certificate. Fifteen admissions—seven successful in all three parts; three referred for six months in one part only; five referred for one year in two parts.

June.

Section (*ii*)—Medical Assistant's Certificate. Three admissions, one in each part of the Examination—All three successful.

Examination for the Medical Practitioner's Diploma.

December.

Six admissions—All referred for six months. Of these one candidate was referred in one part only, two in two parts, and the rest in three of the four parts of the Examination.

V.—Professor Jameson's Visit.

In November the School was honoured with a visit by Professor W. W. Jameson, M.D., F.R.C.P., Dean of the London School of Hygiene and Tropical Medicine.

The new physiology block, which had just then been completed, was formally opened by him in the presence of a distinguished gathering including the Director of Medical Services and other members of the medical profession—officials and non-officials.

The professor made an inspiring speech, in the course of which he urged a high standard of professional training.

A full report of the opening was published in the *Nigerian Daily Times* on the 26th November.

VI.—Medical School Prizes.

The Medical School has 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.

In accordance with the donor's wishes, the grant was utilised for the purchase of standard medical text books which were presented as prizes to candidates who obtained the highest aggregate of marks in the several subjects of the professional examinations for the Medical Assistant's Certificate.

VII.—General.

Reference was made in the report for 1936 to schemes appertaining to the reorganisation of the School and calculated to raise the standard of professional training.

The first step in this direction was taken early in the year when it was decided to dispense with the substandard course of training, and to provide a full course comparable, as far as possible, with similar courses obtaining in the United Kingdom. Whereas, hitherto, only three years were devoted to the study of professional subjects, under the new arrangement five years is the minimum provided. As legislation has yet to be introduced in this connection, it is not possible at this stage to make any further statement on the subject.

The greatest need of the moment, however, is the provision of adequate buildings and equipment. The matter is receiving consideration.

The health of the staff and students has been generally good.

SCHOOL OF PHARMACY.

At the beginning of the year nineteen students were in attendance, twelve of whom were preparing for the Chemists' and Druggists' Diploma and seven for the Dispensers' Certificate. In April, thirteen new students were admitted, of whom two were women, and the staff was increased by the appointment of a European woman as a part-time lecturer in Botany, and of a Higher College graduate as lecturer in Physics.

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

Dispensers' Qualifying Examination, Part One.

Date.	No. of Entrants.	Failed.	Passed.
June	1	—	1

Dispensers' Qualifying Examination, Part Two.

Date.	No. of Entrants.	Failed	Passed.
June	4	1	3
December	1	—	1

Dispensers' Examination, Old Regulations.

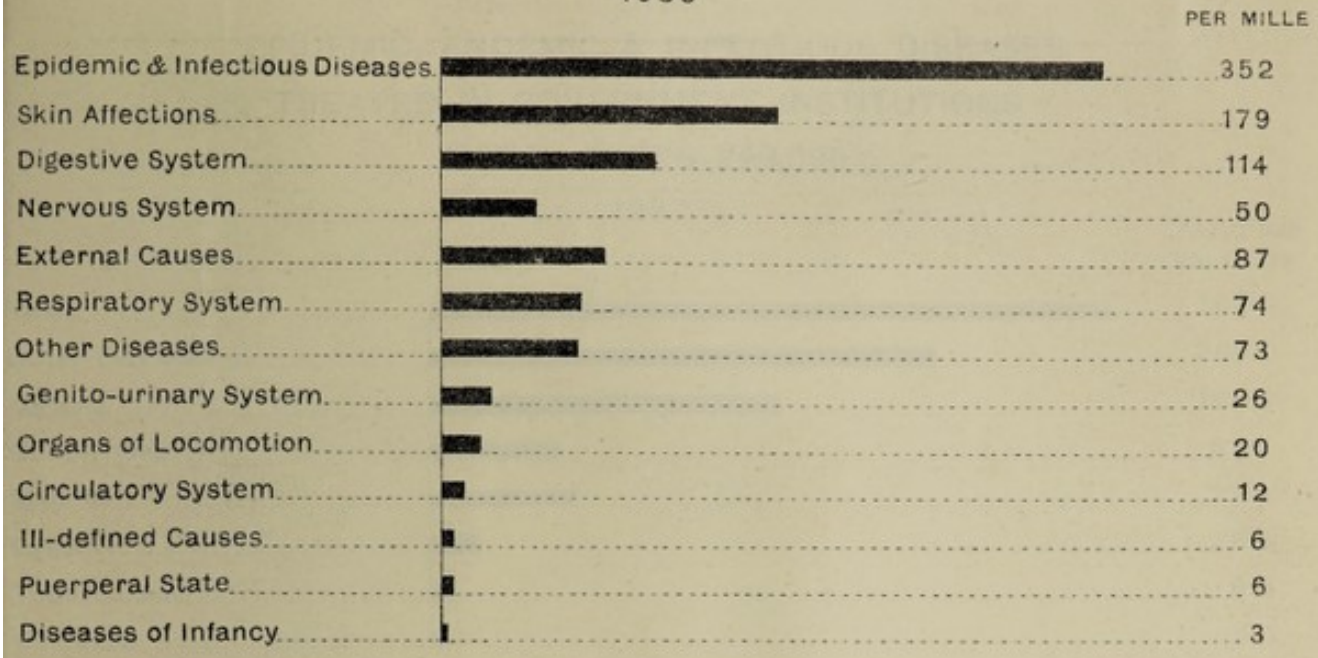
Date.	No of Entrants.	Failed.	Passed	Dismissed.
June	2	2	—	2

Chemists' and Druggists' Examination.

Date.	No. of Entrants.	Failed.	Passed.
June	12	—	12

COMPARATIVE DIAGRAMS OF DISEASE GROUPS TREATED IN GOVERNMENT INSTITUTIONS 1936 & 1937

1936



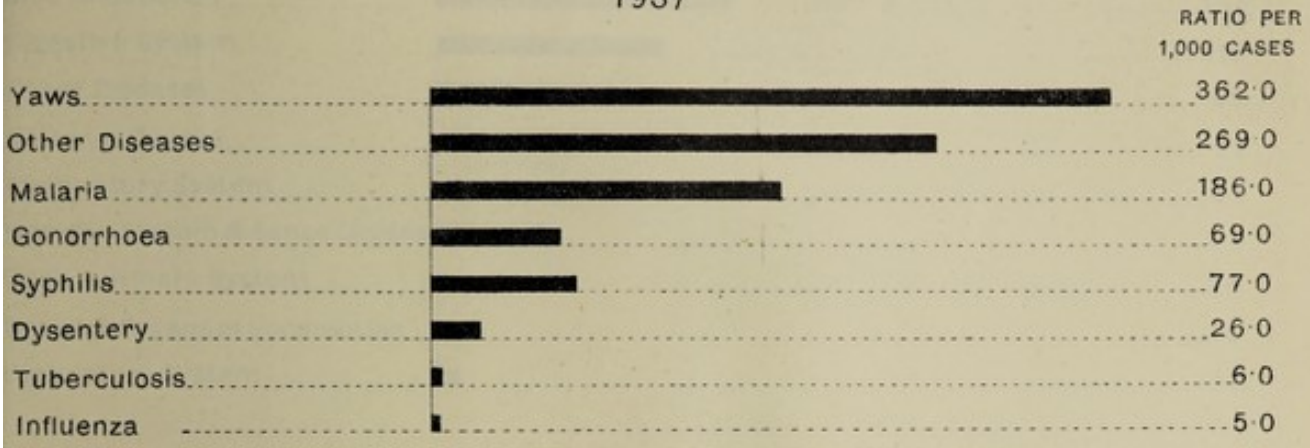
1937

Drawn & Reproduced by Land & Survey Dept., Lagos; 1938.

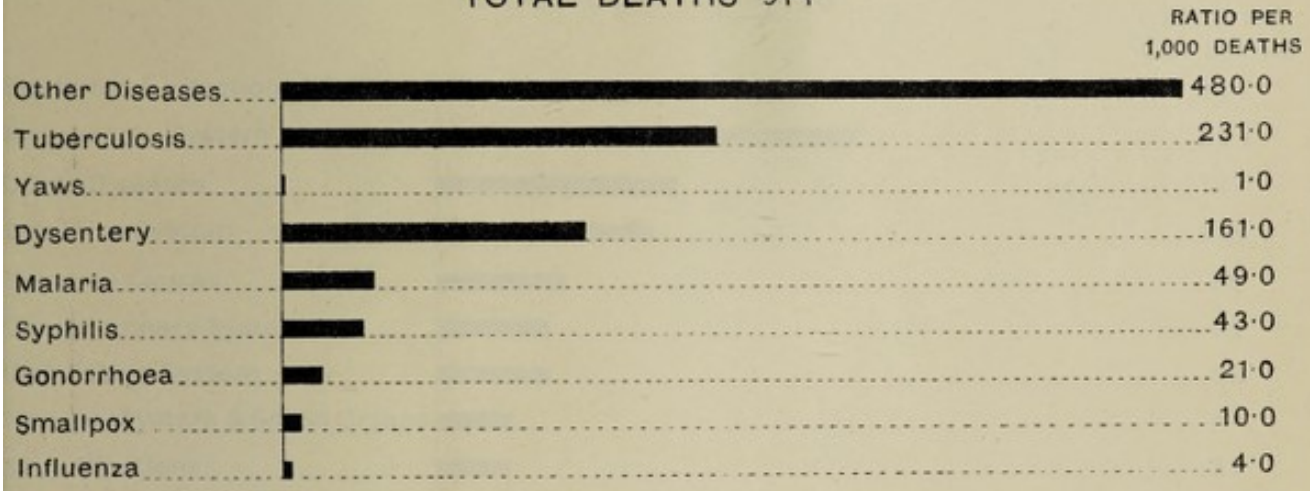
EPIDEMIC, ENDEMIC & INFECTIOUS DISEASES TREATED IN GOVERNMENT INSTITUTIONS

TOTAL CASES 249,096

1937



TOTAL DEATHS 914



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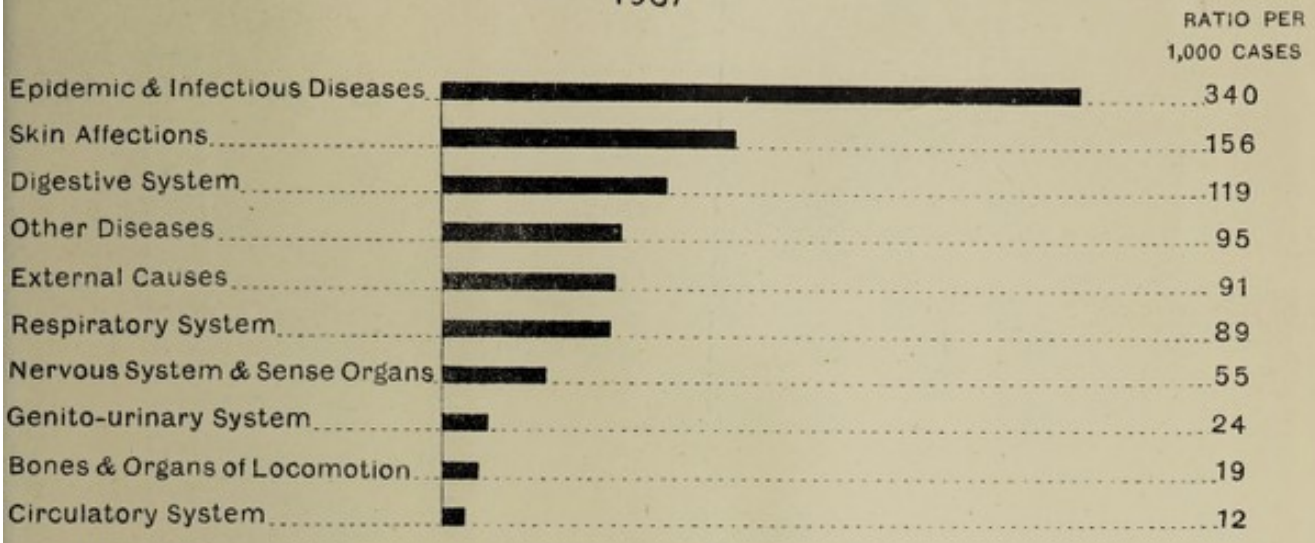
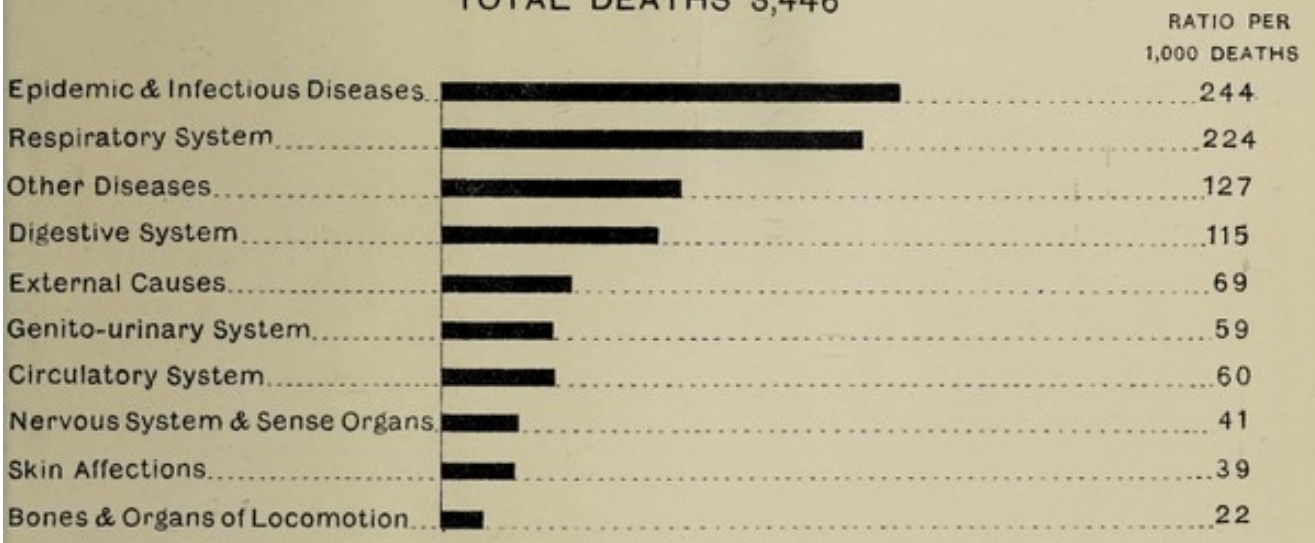
GENERAL SYSTEMATIC & PREVENTABLE DISEASES TREATED IN GOVERNMENT INSTITUTIONS

TOTAL CASES 712,257

1937



TOTAL DEATHS 3,446



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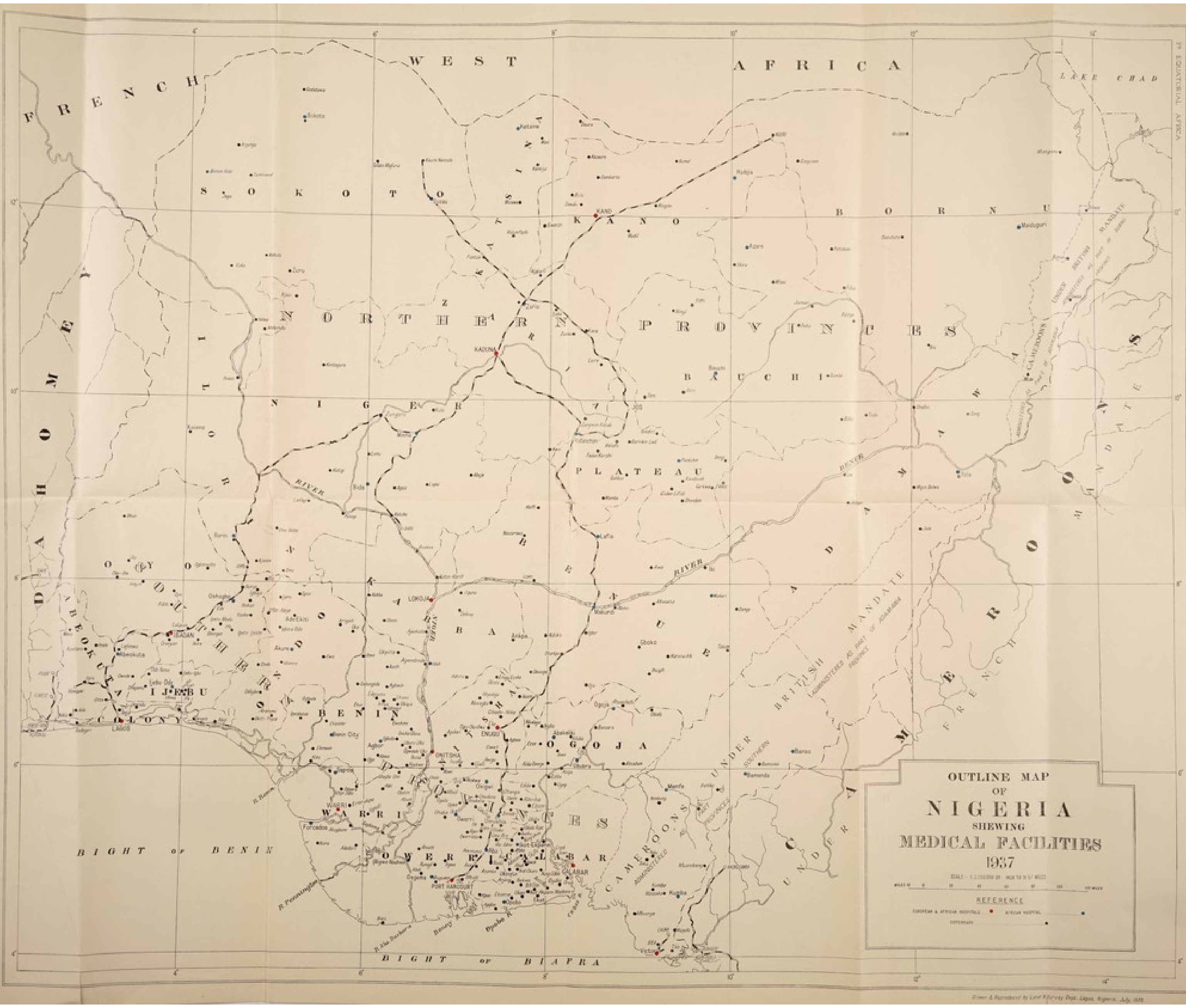

OUTLINE MAP
OF
NIGERIA
SHEWING
MEDICAL FACILITIES
1937
REFERENCE
FRENCH WEST AFRICA
SOKOTO
KANO
BORNU
NORTHERN PROVINCES
BAUCHI
NIGER
PLATEAU
ILORIN
OYO
ABEOKUTA
IJEBU
COLONY
BENIN
WARRI
OWERRI
CALABAR
OGOJA
ADAMAWA
BIGHT OF BENIN
BIGHT OF BIAFRA
LAKE CHAD
DAHOMEY
FRENCH CAMEROONS
RIVER BENUE
KADUNA
LAGOS
IBADAN
ENUGU
PORT HARCOURT
CALABAR