

# **Report on the Medical and Sanitary Departments / Government of the Gold Coast.**

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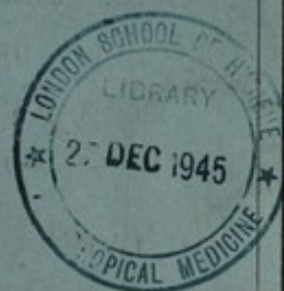
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GOLD COAST COLONY



Report  
on the  
Medical Department  
for the year  
1944

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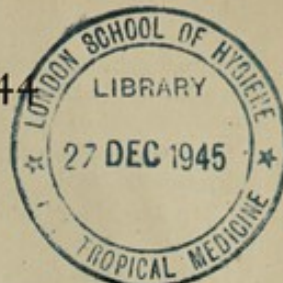
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# Annual Medical Report for the Year 1944



## I—PUBLIC HEALTH

### (I) GENERAL

Despite the disorganisation caused by the war the Medical Department continued to give as near a pre-war standard of service as possible in all its branches.

2. Several hospitals are still without resident medical officers owing to shortage of staff. These stations, however, are visited as often as possible by medical officers, and arrangements are made for emergency cases to be attended to at all times. No dispensaries have been closed during the year. A dispenser-in-charge of a rural dispensary not infrequently has one, or more, ancillary dispensaries under his charge; these he visits at regular intervals.

3. Certain war undertakings have now ceased to require assistance from the Department. But the staff liberated will not permit of any extension of medical activities as the small numbers involved will no more than assist in supplying the necessary reliefs for leave purposes. Long tours of service are the general rule; and it is difficult owing to staff shortage to permit of a medical officer proceeding on leave under two years.

4. Drugs and other medical equipment continued to arrive in the Gold Coast, being obtained through the Medical Bulk Depot. Uncertainty with regard to the time of arrival of supplies has, at times, been the cause of uneasiness; and on occasions essential drugs have been available in only limited quantities. These unavoidable, and at present to be expected, hindrances have not, however, interfered seriously with the public services.

5. During the year Dr. J. Balfour Kirk, C.M.G., Director of Medical Services, retired; and Dr. F. J. C. Johnstone was appointed to succeed him. Dr. J. M. Mackay, M.C., Deputy Director of Health Service; Dr. A. M. MacRae, Senior Surgical Specialist; one Medical Officer and one Medical Officer of Health were invalided. One Medical Officer was transferred to the Gambia; and one Medical Officer of Health was transferred on promotion, to Sierra Leone. Three Medical Officers (two African) and one African Dental Surgeon for the School Dental Service were appointed during the year. Four Medical Officers remained on military service.

6. The Dispensers' Instructor and the Chief Sanitary Superintendent retired during the year. Their successors have been appointed and have assumed duty. The new Dispensers' Instructor holds the qualification of Member of the Pharmaceutical Society of Great Britain, and it is intended to extend and amplify the course of training for dispensers in the future.

7. The new Matron, Gold Coast, assumed her duties during the year. Six Nursing Sisters were appointed and took up their duties. One Nursing Sister was promoted Senior Nursing Sister in the Gold Coast; and two Nursing Sisters were transferred to other West African Colonies. One Senior Nursing Sister retired on pension; and three Nursing Sisters were invalided. One Senior Nursing Sister and two Nursing Sisters have proceeded on leave prior to retirement. In two instances appointments have been terminated, one on the grounds of ill-health.

8. The great assistance rendered by Temporary Nursing Sisters throughout the year must be acknowledged. Without their help the work of the Department would have been seriously handicapped. Owing to the factors of sickness, retirements, leave, etc., there has been a constant, serious shortage of European Nursing Staff, and the Temporary Nursing Sister has proved invaluable. Again, the Army and the Royal Air Force have been generous in providing reliefs in emergencies when Temporary Nursing Sisters were not available.

9. When members of the African Nursing Staff have had to perform duties usually undertaken by European Nursing Sisters, a new temporary post with appropriate allowance has been created. The occupants of these posts are termed Temporary Staff Nurses and are selected from the most capable African Nurses. The added responsibility incurred, it is believed, will assist nurses who have filled such posts to further advancement in their profession.

10. Three Medical and two Dental Scholars proceeded to the United Kingdom in 1944 to commence their studies. This brings the total Medical Scholars and Dental Scholars to twelve and three respectively. Of the Medical Scholars two have qualified and are undertaking post-graduate studies in the United Kingdom. One Dental Scholar qualified during the year, but has not yet returned to the Gold Coast. There will be a vacancy for a second African Dental Surgeon in 1945-46 for the intended School Dental Service.

11. Two minor outbreaks of smallpox occurred during the year. The first came to notice in October in the Hohoe District in the north of the Southern Section of the Mandated Area of Togoland. The origin of this outbreak would appear to have been from French Territory. The outbreak did not quickly come to light owing to the failure of the local chief to report it. This outbreak and its extensions resulted in a total of 137 cases with 36 deaths. The second outbreak commenced in the Akyinasu area of the Central Province of the Colony in December. This outbreak resulted in six cases with two deaths. There were, also, a few sporadic cases, with no deaths, in the Wa and Navrongo Districts of the Northern Territories.

12. A major outbreak of cerebro-spinal meningitis occurred in the Wa and Lawra Districts of the Northern Territories, with a few cases in the Gonja District. The outbreak started in January, and was over by mid-April. The distribution of cases was as follows:—

Wa	...	...	710 cases (132 deaths).
Lawra	...	...	135 cases (31 deaths).
Gonja	...	...	8 cases (2 deaths).

This outbreak was very ably handled by the Medical Officer, Wa, and his staff.

During the second week in October sporadic cases were again reported, of which 15 with six deaths occurred in the Wa District, and eight cases with seven deaths in the Lawra District. These sporadic cases



occurring in the early part of the dry season, may or may not herald an impending, further major outbreak. In addition to the cases which occurred in the Wa-Lawra area, 47 sporadic cases with 13 deaths were reported from the rest of the Gold Coast.

13. One confirmed case of yellow fever in an African adult male was reported during the year. The case proved fatal.

14. There have been no notable developments in the mining areas of the Gold Coast in the period under review.

15. Drs. A. J. Murray, Medical Officer, and J. A. Crocket, Tuberculosis Officer, have now submitted their final report on silicosis and tuberculosis in the Mining Areas, with general observations and recommendations covering the Gold Coast as a whole. This report is now in the hands of the Government Printer, and when published will receive the full consideration of Government.

16. Work has proceeded steadily in the campaign against trypanosomiasis, and it is becoming clear that, as far as the Northern Territories are concerned, the method of selective clearing will probably be the most important line of attack. The preventive results of the direct treatment of this disease have, however, not been overlooked. A few preliminary experiments have been carried out to ascertain the lethal effects of D.D.T. on tsetse flies. The results of these preliminary experiments have been encouraging. D.D.T. seems likely to prove of use in limited areas in the forest zone, but is, apparently, unlikely to become of major utility in extensive savannah country. The control of *Glossina morsitans* in the north will probably largely turn on the adoption of an established game policy. Anti-trypanosomiasis work in the forest zone is not yet sufficiently far advanced for the definition of a programme for future work in this area. The necessity for combined research in the West African Colonies is again stressed.

17. The scheme for the mass treatment of yaws, inaugurated last year in the Yendi area of the Northern Territories, is now in full operation. Some 6,487 cases have been treated. Of the original cases treated 10·6 per cent relapsed in six months. Relapse appeared to be equally distributed between cases that received sobita only, sobita and acetylarsan, and acetylarsan only. The highest infection rate found was 23 per cent at Sunson which yielded 2,292 cases. Five per cent of all cases that received sobita developed stomatitis. Much valuable information has been obtained for future extensions of the scheme as regards transport, staff and equipment. It is interesting to note that the people have fully appreciated a campaign devoted to the treatment of one disease only. Some 1·5 per cent of cases deserted without finishing the course. This percentage does not include those excused from finishing the course on account of other disease factors, or were prevented from attending by floods or other causes beyond their control. Some 17,604 cases of yaws were treated in the Wa, Lawra, Fian, Hian, Tumu and Bole areas, or 59 per cent of all cases treated. The Medical Officer, Wa, submitted a valuable paper on "Yaws and Bismuth Treatment in the Wa District of the Gold Coast." The Medical Officer comes to the conclusion that—

"casual voluntary treatment does little to eradicate yaws . . . and . . . in heavily infected areas, to reduce yaws to an easy maintenance level, whole villages should be mass treated at least two years running to eradicate cases which have occurred since the first mass treatment."

18. Conditions affecting labour are very much the same as in 1943. Extensive overcrowding exists in the larger centres, notably in Accra and in the Takoradi-Sekondi area. The cost of living is such that labourers and their families must find it a problem of some difficulty to provide themselves with an adequate and sufficiently nutritious diet.

19. Shortage of building material tends to hold up any very extensive rehousing schemes. Progress, however, at Accra, Sekondi, Tarkwa and Cape Coast has prepared the ground for building drives which will follow building materials once more becoming generally available. Much has been, and is being done with a view to the utilization of local building materials to a much greater extent than formerly.

20. There has been no progress under general sanitation which calls for comment. Shortage of European and senior staff together with the necessity of supplying personnel for various wartime projects preclude any general advance at present.

21. Considerable pressure has been brought to bear on the Department to assume control of extensive anti-malarial drainage schemes both at Takoradi and Accra. These schemes, which are partial only and in no way cover the total areas that it will be necessary to control for the requirements of the civil populations, were carried out by the Services under the auspices of the Resident Minister. Owing to staff shortage neither the Health Branch of the Medical Department nor the Public Works Department are in a position to take over the necessary maintenance and control. These schemes will be very costly to maintain; and their relative value and importance in relation to the Gold Coast's general malaria problem will require very careful consideration. In the Annual Report for 1937 the difficulty anticipated in connection with the mosquito control in the vicinity of airports was referred to as follows:—

"The difficulties of mosquito control in and surrounding these areas is not yet fully appreciated owing to lack of experience. It is thought possible, in a year of normal rainfall, that the run-off of storm water from the extensive tarmac surfaces of the runways may lead to water collections in low-lying surrounding areas from which its further drainage may be a matter of difficulty."

22. The numbers seen at the various maternal and child welfare centres are impressive. But a return to normal peacetime conditions will call for considerable reorganising measures at the various centres. The gradual distribution of qualified midwives in outlying rural areas is to be recorded. There is a pressing need for more health visitors, which cannot at present be met owing to staff and training considerations.

23. Relations with the Services' Medical Authorities continue to be of mutual benefit. Mention has already been made of the assistance rendered to the Department by the Army and Royal Air Force in lending the services of Nursing Sisters in times of acute staff shortage. The Medical Research Institute has had close relationship with the Army throughout the year. Army Orderlies have been trained at the Colonial Asylum in the care and supervision of mental cases. Clinical meetings and lectures have been organised, and have been well attended by both military and civil medical officers.

The Rehabilitation Centre, owing to the shortage of civil staff, has not yet been taken over by the Department. Two Medical Officers have, however, undertaken courses in rehabilitation in the United King-



dom and Canada respectively. The care of the ex-soldier incurable will shortly devolve on the Department; and a scheme has been prepared towards this end. This scheme involves additional bed accommodation at five large centres and the training of additional ward staff.

24. New legislation, affecting Medical and Health interests, has not been a prominent feature during the year. The only important legislation was the extension of the provisions of the Mosquitoes Ordinance to the whole of the Northern Territories, and a Regulation amending the Quarantine (Aerial Navigation) Regulations. This Regulation extends the period of validity, for the purposes of transit by air, of inoculation against yellow fever from two to four years. An Ordinance was also enacted prohibiting certain kinds of undesirable advertisements in connection with the treatment of venereal diseases, etc.

25. A new isolation block containing twelve beds has been erected at the Maternity Hospital, Accra. This extension has not yet been opened as the equipment has not yet been received. The necessary staff for this extension will be met by increasing the number of pupil midwives from 40 to 60. An extension of the Pupil Midwives' Hostel to accommodate this increase is in process of erection. A ward erected in connection with the African Hospital at Dunkwa, to accommodate the sick of the labour force employed in a railway extension scheme now completed, has been taken over by the Department. This additional ward accommodation houses the male patients, and the original Colonial Hospital has become the female wing.

26. Owing to the non-arrival of European staff and equipment the opening of the Nurses' School and Hostel, Kumasi, had to be postponed. But it is anticipated that pupils will be in residence early in 1945. The new Sanitary Inspectors' School was opened at Adjabeng Lodge, Accra, in July. In 1945 it is hoped that this school will move into new premises which are shortly to be built. The officer at present undertaking the training at the school will, it is anticipated, be appointed Training Officer. The school is being operated on modern lines, and the high standard aimed at, it is considered, will have a great effect on the increased efficiency and future status of the Sanitary Inspector. It will provide the means whereby candidates will have a good opportunity of passing the examination of the Royal Sanitary Institute; and after further field experience will permit capable officers becoming eligible for promotion to the post of Sanitary Superintendent.

27. In January, 1944, eleven students trained at the Dispensers' School were successful in passing the Druggists' Examination. In the examination held in July there were no Government entrants, and none of the privately trained students were successful. An extension of the Dispensers' School is now overdue. There is a considerable demand for dispensers from commercial and mining concerns and no satisfactory private means of training pupil dispensers are available. Both male and female pupil dispensers are accepted at the Government Dispensers' School.

The Gold Coast Certificate of Nursing was awarded to five Second Division Nurses who attained the necessary marks at this examination.

28. The activities of the Gold Coast Branch of the Red Cross Society are closely linked up with those of the Department. The work of the Society comprises activities both within and outside the Gold Coast.

Within the Gold Coast it maintains three Clinics at Koforidua, Cape Coast and Sekondi. Donations have been given during the year for the purchase of amenities for the lepers; towards comforts for the Gold Coast troops in the field, and for the purchase of milk for the children of necessitous parents attending the various Clinics. Outside activities consist of the Flag Day collection for Red Cross activities throughout the world. This year's collection resulted in £8,404 12s. 5d. being collected. The sum of £840 was also sent to Mrs. Churchill's Aid to Russia Fund, and further collections were made for the Victoria League, the Merchant Navy Comforts Fund, etc. It should be noted that troops from the Gold Coast have received very large consignments of comforts and supplies from the United Kingdom. These have been sent both to the Gold Coast and to Burma. The Letter Bureau for Prisoners-of-War and Internees has grown extensively during the war.

## (II) IMPORTANT DISEASES TREATED

29. It will be appreciated that a fair proportion of the cases of important diseases recorded were diagnosed by dispensers-in-charge of small rural hospitals and dispensaries. This factor must be borne in mind throughout the following comments.

30. *Diseases of the Enteric Group* (1).—One hundred and eighty-seven cases were treated with 28 deaths. In 1943 the total cases treated were 169 with 16 deaths. As formerly, it is considered that the total cases treated hardly gives a clear indication of the prevalence of diseases of this important group.

31. *Smallpox* (5).—Sixty-nine cases with no deaths were treated in established hospitals. Usually, cases of smallpox are treated in improvised hospitals of bush type in far removed, rural areas. Last year six cases were treated with no death.

32. *Cerebro-spinal Fever* (16).—One hundred and thirty-eight cases with 28 deaths were treated, compared with 262 cases with 38 deaths in 1943. As in the case of smallpox, only a small proportion of cases are treated in connection with established hospitals.

33. *Rabies* (17).—One fatal, female case only was treated. In 1943, a total of 12 cases with one death was recorded. In spite of very active measures there was no apparent decrease in the incidence of canine rabies in 1944.

34. *Tetanus* (18).—Two hundred and twenty-four cases with 49 deaths were recorded, compared with 159 cases and 48 deaths in the previous year.

35. *Tuberculosis of the Respiratory System* (19).—Two thousand and eighty-six cases were treated with 309 deaths. In 1943, some 2,106 cases with 334 deaths were recorded. As in previous years, pulmonary tuberculosis accounted for the highest percentage of deaths resulting from any disease, surpassing the total resulting from the combined "bronchitis-broncho-pneumonia-pneumonia" group of diseases which were responsible for 289 deaths. The deaths resulting from pulmonary tuberculosis, represented 12.6 per cent of the total deaths from all causes which occurred in hospital. In 1943 the percentage was 13.2. Of the total



deaths recorded 276, or 89 per cent, were male deaths; in 1943 the percentage was 91. The marked disparity between the sexes is capable of ready explanation. The class of person chiefly affected is the itinerant labourer (for whom there is no female counterpart). On such class falls, to a very large extent, the brunt of the effects of overcrowding, lack of resistance, a faulty dietary, exposure, overstrain, ignorance of the rudimentary laws of health, the deadly results of the universal spitting habit, predisposing diseases, etc.

To quote from the last published Report (1938) of the Chief Registrar of Births, Deaths and Burials of the Gold Coast:—

"The disease attracts very little public notice, others—better advertised by reason of the international responsibilities attached to them—loom considerably larger. The question of pulmonary tuberculosis may well present the most difficult and important health problem for the future.

"The improvement of every factor constituting general environmental sanitation will play its part in the struggle, with particular emphasis on housing and the abolition of congested areas. Elevation of the general economic status of the people and the improvement of their dietary will be powerful adjuncts towards the desired end.

"Promiscuous spitting is one of the most potent causes of the spread of this disease. The habit is almost universal and may be indulged in, no matter where. Education on an increased scale, particularly of the school child, over a long period will be necessary to combat this deadly habit."

With our present knowledge little more can be added.

36. *Other Tuberculous Diseases* (20).—Three hundred and ninety-four cases were treated with 37 deaths. This total yields a percentage of 16 per cent to the total for all forms of tuberculosis. In 1943 the percentage was 12.1.

37. *Leprosy* (21).—Seven hundred and eighty-six in-patients were treated with 41 deaths, compared with 732 cases with 45 deaths in 1943. In addition 413 out-patients were treated. Leper settlements are situated at Accra, Kumasi, Yendi and Ho. The settlement at Ho, the only one of any size, accommodates 394 lepers. Of these, 100 were greatly improved during the year; 45 were arrested, and there were 24 deaths.

38. *Venereal Diseases* (22).—Seven hundred and ninety-six cases of syphilis were treated during the year and 19 deaths were recorded. In 1943 the figures were 963 and 18 respectively. Gonorrhoea and its complications were responsible for 8,917 cases with 20 deaths. In 1943 some 9,156 cases with 21 deaths were reported. These figures include the cases seen at the Special Clinic at the Gold Coast Hospital, Accra.

39. *Yellow Fever* (23).—During the year under review one fatal, adult male case of yellow fever came to notice. This case did not survive long enough to permit admission to hospital, and it is, therefore, not recorded in Return A of this Report. In 1943 two fatal cases were reported.

40. *Malaria* (24).—Fifty thousand one hundred and ninety-three cases with 100 deaths were treated. In 1943 some 47,054 cases with 119 deaths were recorded. The percentage of deaths to total deaths from all causes was 4.0 per cent compared with 4.7 for the previous year.

41. *Blackwater Fever* (25).—Forty-four cases of blackwater fever were treated with three deaths; compared with 56 cases and seven deaths in 1943. The total cases treated represent 0.4 per cent of all cases of subtertian malaria seen, i.e. the same percentage as in 1943.

42. *Trypanosomiasis* (27).—During the year 4,092 cases were treated with 112 deaths, compared with 3,610 cases with 125 deaths in 1943. The percentage of deaths to the total number of deaths from all causes which occurred in hospital was 4.6, compared with 4.9 in 1943.

43. *Yaws* (28).—A total of 143,794 cases were treated during the year, compared with a total of 143,336 cases in 1943, i.e. an increase of 458. Ten deaths as a result of yaws were reported. Yaws has now been a free treatment disease for the past three years, and it would appear that the peak of normal attendances has been reached. When further mass treatment schemes are in operation in far removed rural areas it is likely that a further sharp rise in the total number of cases treated will result. The Medical Officer, Winneba, treated an experimental series of cases of yaws with Penicillin with great success, and it was also found that this drug was effective in cases of gangosa, cancrum oris and tropical ulcer.

44. *Helminthic Diseases* (30), (31) and (32).—Of the helminthic diseases treated, ankylostomiasis accounted for 1,751 cases with 14 deaths. Schistosomiasis yielded a total of 1,246 cases with five deaths. Other helminthic diseases produced 6,247 cases with seven deaths. In 1943 the totals were—ankylostomiasis 1,596 (34 deaths), schistosomiasis 1,070 (two deaths), and other helminthic diseases 4,996 (14 deaths). Clinical ankylostomiasis is not commonly seen, but the infestation is far more frequent than the figures indicate. Schistosomiasis, again, is much more generally distributed than may be supposed. Sufferers often do not complain of the condition; but mass-treatment methods would reveal a much higher infestation rate in several districts than has hitherto been imagined.

45. *Cancer and other tumours* (34).—Malignant tumours yielded a total of 108 cases with ten deaths. In 1943 some 157 cases with 17 deaths were recorded. Non-malignant tumours yielded a total of 914 cases with four deaths compared with 943 cases with 13 deaths in 1943.

46. *Rheumatic conditions* (35 (b)).—Some 11,848 cases of other rheumatic conditions with no deaths were recorded, compared with 10,457 cases and three deaths during the previous year. In all probability gonorrhoea and yaws play a not unimportant part in the production of these conditions.

47. *Nutritional diseases* (37), (38), (39) and (40).—For the purposes of comparison, the nutritional cases treated during the year under review and in 1943 are shown below in tabular form:—

	1943		1944		+ Increase — Decrease
	Cases	Deaths	Cases	Deaths	
Scurvy (37) ... ..	14	—	25	1	+ 11
Beriberi (38) ... ..	22	3	38	6	+ 16
Pellagra (39) ... ..	54	4	100	8	+ 46
Other nutritional diseases (40) ... ..	1,347	27	1,326	69	— 21
Total ... ..	1,437	34	1,489	84	+ 52



The total increase in the number of nutritional cases treated was 52. The number of deaths also rose by 50 over the total for 1943. It is extremely difficult under existing conditions adequately to comment on the general returns for 1944. For instance, a dispenser-in-charge of a small rural hospital reported over 400 cases of pellagra as having attended as out-patients during the year. It has been necessary to include these cases under (65) "Ill defined", as the evidence on which the diagnoses were made was extremely slender. There is no doubt that there is a basis of malnutrition in many cases grouped other than under this heading. The Medical Officer, Wa, commenting on the few cases of avitaminosis reported by him during the year, writes:—

"Three cases were diagnosed during the year, but so few cases cannot be regarded as an index of the incidence of avitaminosis, a condition which is undoubtedly more common and which probably predisposes to other illnesses by lowering resistance."

This is probably correct, and the deficiency factor, statistically, is frequently lost as a result of the grouping of the cases under heads appropriate to the superimposed conditions. The Medical Officer, Winneba, submitted an interesting report in which he discusses the effects of a general diet principally of cassava with small, intermittent intakes of "bush-meat". The resulting effects of such a diet, deficient in protein, calcium, phosphorus and iron were commented on relative, particularly, to the expectant mother, the unborn child, and the child during lactation. He also described cases of protein deficiency oedema almost always associated with ascariasis.

48. *Affections of the respiratory system* (49), (50) and (51).—Broncho-pneumonia accounted for 792 cases with 82 deaths; lobar pneumonia for 1,037 cases with 74 deaths; bronchitis for 19,540 cases with 13 deaths; "otherwise defined" for 879 cases with 83 deaths, and "other diseases of the respiratory tract" for 4,878 cases with 37 deaths. The total number of deaths resulting from diseases of this group were 289, or 11·8 per cent of the total number of deaths from all causes. In the previous year the percentage was 10·8.

49. *Nephritis, all forms* (58). During the year 844 cases of all forms of nephritis were treated with 97 deaths, compared with 1,133 cases and 86 deaths in 1943. In such countries as the Gold Coast, where yellow fever is endemic, acute nephritis assumes an importance not usually attained elsewhere.

50. *Pregnancy, child birth, etc.* (60).—Some 47,671 cases with 162 deaths were treated. For further particulars see Table (V).

### (III) VITAL STATISTICS

#### (I) GENERAL POPULATION :

TABLE II

	1944	
		Total number registered
Total estimated population	3,962,692	—
Estimated population of registration areas	355,780	—
Birth-rate (weighted average) per 1,000 persons living	37·2	13,526
Death-rate (weighted average) per 1,000 persons living	27·8	10,093
Infantile mortality rate	125	1,694
Still birth-rate per 1,000 total births	67	904
Maternal mortality per 1,000 total births	16·0	228
Deaths from respiratory diseases (general) per 1,000 deaths registered	125	1,259
Deaths from pulmonary tuberculosis per 1,000 deaths registered	104	1,048
Deaths from intestinal diseases per 1,000 deaths registered	69	697
Deaths from malaria per 1,000 deaths registered	110	1,109
Deaths due to starvation	—	31

51. The estimated population must be regarded as liable to increasing error as no census has been taken since the 1931 decennial Census. The birth-rate rose to 37·2 from 35·7. The death-rate fell from 28·7 to 27·8. The infantile mortality-rate fell from 129 to 125. The still birth-rate fell from 68 to 67. The maternal mortality-rate remained the same at 16. Deaths from respiratory diseases fell from 137 to 125. Deaths from pulmonary tuberculosis fell from 105 to 104. Deaths from intestinal diseases fell from 78 to 69. Deaths from malaria rose from 103 to 110. Deaths registered as due to starvation increased from 27 to 31. The figures quoted above as due to certain diseases and disease groups are per 1,000 deaths registered. Comparison is made between the figures for 1943 and the year under review. It cannot be said from the available figures that the health of the population resident in the registration areas (some tenth of the total population of the Gold Coast) showed any general decline in 1944.

#### (II) GENERAL EUROPEAN POPULATION :

The following table gives particulars of the civil European population during the year:—

TABLE III

	Official	Non-official	Total
Number of Europeans resident	826	2,321	3,147
Number invalided	33	27	60
Number of deaths	4	15	19

52. The total number of Europeans resident fell from 3,377 in 1943 to 3,147, i.e. by 230. The number of invalidings fell from 95 to 60. But the total number of European deaths rose sharply from 7 to 19. Two deaths, however, were in young infants. The causes of death of the four European officials who died were—carcinoma of the stomach; myocarditis; cerebral malaria, and cerebral thrombosis. The principal causes of the invaliding of European officials were: cardio-vascular conditions 5; nervous conditions 4; diseases of the gastro-intestinal tract 4; chronic malaria 4, and enteric fever 2.



Nervous conditions were not so prominent a cause of invaliding as in 1943, when the total number invalided for this cause was 12. The four European officials who died were senior officials of long service.

53. The causes of death in the 15 fatal cases of non-official Europeans were, cerebral haemorrhage 2; myocarditis 2; malaria 2; fracture of skull 2; lobar pneumonia, pulmonary tuberculosis, appendicitis, silicosis and myocarditis, chronic nephritis, premature birth and exomphalos one each.

The principal causes of the invaliding of non-official Europeans were—malaria 5; pulmonary tuberculosis 3; peripheral neuritis 2 and debility 2.

### (III) OFFICIAL AFRICAN POPULATION :

TABLE IV

Number resident	Number invalided	Number of deaths
5,167	40	10

54. The number of African officials rose from 4,801 to 5,167. The total invalidings rose from 37 to 40. The number of deaths fell from 14 to 10.

The principal causes of the invalidings of African officials were—cardio-vascular conditions 9; pulmonary tuberculosis 6; defective vision 4; syphilitic affections 4, and mental derangement 3. The causes of death of African officials were—pulmonary tuberculosis 3; pneumonia 2; and stricture of the urethra, myocarditis, cerebral syphilis, enteric fever and hyperpiesis one each. The prominence of pulmonary tuberculosis as a cause of invalidings and deaths among African officials calls for attention.

### (IV) HYGIENE AND SANITATION :

55. *Labour conditions.*—Apparently, the peak period of employment is passed, but from the observations of this Department there appears to have been no large-scale permanent unemployment. Overcrowding in the large centres still exists, and instances have come to notice of the effects of the cupidity of house-owners in letting every available square foot of accommodation. The result is that good class, African residential areas, laid out with little provision for public sanitary sites, have become overcrowded with members of the labouring and "foreign" classes. The open spaces in the vicinity of some of these areas as a result tend to become indescribably filthy, and a solution of the problem is a matter of difficulty. With existing prices the average labourer must have considerable difficulty in housing and clothing himself and obtaining for himself an adequate diet. Thirty-one cases of deaths as a result of starvation were recorded as compared with 27 in 1943.

56. *Housing and town planning.*—Overcrowding and congestion is the rule rather than the exception in the larger centres. The Town Planning Adviser to the Resident Minister has been engaged in schemes for Accra, Takoradi, Sekondi, Kumasi and Tarkwa and the results of his activities should rapidly show themselves when building materials again become more readily available.

57. *Sewage disposal.*—Water-borne sewage systems are now long overdue in the larger centres. This want is particularly noticeable in the central congested area of Accra where the only solution is the early installation of a water-borne system. The cramped sanitary sites and the repeated emptyings of the over-worked bucket latrines constitute a nuisance of the first order. Steady progress has been made towards the substitution of the septic latrine for the unsatisfactory bucket and pit latrine wherever possible. A comprehensive scheme for the installation of septic latrines in all centres of any importance throughout the Colony is in process of being drawn up. Experimental work on bore-hole latrines continued, and the method has proved of some value in limited areas.

58. *Refuse disposal.*—Incineration, or organised dumping, are the systems chiefly employed in the larger centres. When the septic latrine has generally been adapted, composting is likely to be largely indulged in. In the Northern Territories a considerable amount of composting is already taking place, but the people are slow in making use of the compost produced. Progress in composting must of a necessity be slow. Considerable skill and supervision will always be required to prevent the activities producing conditions of the privy-midden type.

59. *Water supplies.*—The Temporary Water Supply Department among its major activities now also interests itself in the smaller rural water supply schemes once handled by the Health Branch and the Public Works Department. Throughout the year the activities of the Health Branch have to a great extent been confined to the maintenance and repair of existing rural supplies.

60. *Food in relation to health and disease.*—Much could be written on this subject. Since the outbreak of the war, however, there has been little general indication that the incidence of malnutrition has increased to any appreciable extent. It can safely be said, it is thought, that malnutrition is at present not so generally noticeable as it was during the slump period of twelve years ago, i.e. before food farming had become more general. Difficulties of transport and rising costs, however, do make it a matter of considerable difficulty for the average African to feed himself adequately in the larger centres. Again, the African, who has accustomed himself largely to European habits of diet, finds it increasingly difficult to maintain these under present conditions.

61. *Mosquito control.*—The Senior Health Officer, Western Province, remained in control of the Takoradi-Sekondi anti-malarial drainage scheme throughout the year. This scheme was devised and carried out by the Services for their immediate protection, and was completed in 1943. It will not be possible to spare an officer for this control in the future owing to staff shortage. Again, the maintenance and control of the



Accra scheme, which is nearing completion, cannot be assumed by the Department for the same reason. These two schemes, inaugurated by the Services, will be exceedingly costly to maintain as civil concerns. The question as to whether they shall be taken over in due course, by the civil Departments is at present under the consideration of Government. Some 588,340 yards of new earth drains were completed, and 2,726,028 yards of existing earth drains were maintained and regraded. In addition filling, oil spraying and the use of other larvicides continued to play their part. Experiments in the use of D.D.T. were commenced during the year, and will be continued steadily.

The control of domestic mosquito breeding proceeded as usual, throughout the year. Some 3,301,423 house and compound inspections were made. On 10,793 occasions mosquito breeding was found yielding an index of 0.33, substantially the same as in 1943.

62. *School Hygiene*.—Health officers keep in as close touch with the schools as possible, but there is no organised school medical service as yet. Possibly, the closest school health control is in Kumasi, where regular examinations are carried out in the Government schools and where a School Nurse makes regular visits. An African Dental Surgeon was appointed during the year, and he is at present undertaking a dental survey of the pupils in the Government schools in the Accra area.

63. *Vaccination*.—Some 323,457 vaccinations against smallpox were performed during the year. Of this total 135,371 persons examined later gave a positive rate of 90.29 per cent.

## II—SPECIAL SERVICES

### (V) PORT HEALTH AND AIR TRAFFIC

64. No port or airport was declared infected during the year under review.

### (VI) MATERNITY AND CHILD WELFARE

TABLE V

Type of Centre	ATTENDANCES	
	Children	Expectant Mothers
Government Centres ... ..	45,793	24,830
Red Cross Centres ... ..	43,957	33,784
Mission Centres ... ..	57,916	4,759
Total ... ..	147,666	63,373

65. In 1943 the totals were 149,504 and 54,843 respectively.

In Kumasi and Accra where well organised infant weighing centres are in existence the total attendances during the year were 157,193 as compared with 109,644 in 1943.

### (VII) HOSPITALS, DISPENSARIES, LABORATORIES, Etc.

66. There are 38 Government hospitals in the Gold Coast and its Dependencies. Of these hospitals 33 are African and five are European hospitals. One European hospital, i.e. Winneba Hospital, has ceased to function as a hospital, owing to the greatly improved road communications with Accra, and has been taken over by the Military Authorities as a recuperative rest house.

There is, in addition to the four European hospitals at present in use, a small European annexe attached to the African hospital at Cape Coast. The African hospitals accommodate 1,373 beds and 161 cots; and the European hospitals 92 beds.

67. Return A of this Report shows the diseases treated at all Government Hospitals and Dispensaries throughout the year grouped under 65 heads. The total number of in-patients treated was 33,871 compared with 32,873 in 1943, i.e. an increase of 998.

The constant demand for admission throws an almost insurmountable burden on the existing bed establishment, and overcrowding often results. It is difficult to see, with the present limited bed establishment, how the number of in-patient admissions can continue to mount year by year as in the past.

A feature of the year's working has been the number of seriously sick Europeans who have been transported by air from the far North direct to hospital on the coast. This method of transportation, it is considered, will become the rule rather than the exception in the future. The thanks of the Department are due to the Royal Air Force for making this means of transport available for the seriously sick.

68. The total number of deaths which occurred in hospital during the year was 2,449, yielding a percentage of 7.2 to the total number of in-patients treated. In 1943 the percentage was 7.7.

69. The total number of out-patients treated was 466,237 compared with 461,582 for the previous year, i.e. an increase of 4,655. Many hospitals are short-handed, and at these the Medical Officers find very much of their time taken up by routine out-patient work and examinations which tend to encroach on the time at their disposal for special and operative work. Most hospitals are also in need of skilled, clinical pathological and general clerical assistance. Help in these branches would do much to lighten the burden of the single-handed Medical Officer.



70. There are 30 village dispensaries distributed in isolated, rural areas throughout the Gold Coast. These dispensaries are in charge of dispensers, and they are visited as often as possible by the Medical Officers-in-charge of the respective districts. Under present conditions visits by Medical Officers cannot be made as frequently, or regularly, as desired. During the year 88,269 cases were seen and treated at the village dispensaries compared with 80,858 in 1943, i.e. an increase of 7,411.

71. The Medical Research Institute during the year carried out 20,762 miscellaneous examinations and 272 post-mortem examinations, compared with 34,695 examinations and 331 post mortems in 1943. Occasionally, there are two Pathologists on duty, but the incidence of leaves often results in one Pathologist single-handed having to perform the extensive duties devolving on the Institute. Laboratory Attendants are also stationed at Sekondi, Takoradi, Cape Coast, Kumasi and Tamale, and annually carry out large numbers of miscellaneous examinations in connection with the busy hospitals at these centres.

72. The Chemical Laboratory carried out a total of 542 examinations during the year, compared with 662 in 1943. The preparation of 80 per cent spirit by redistillation of seized illicit spirit has been continued, 969 gallons of illicit spirit having given 268 gallons of 80 per cent spirit. The fisheries work of the Laboratory has been continued and extended. This is being described in a separate report.

73. The Government Dental Surgeon, who proceeded on leave on the 21st March, 1944, treated 821 cases, compared with 5,183 cases treated during the previous year, when he was on duty over the full twelve months. An African Dental Surgeon has been appointed for the future School Dental Service. He has commenced a survey beginning with the dental condition of the Accra school children. On the result of his survey, which will include the schools of the Eastern Province, a school dental scheme for this area will be planned. It is hoped to appoint a second African Dental Surgeon in 1945-46, who will commence a similar survey elsewhere in the Gold Coast. When the whole area of the Colony, Ashanti and the Northern Territories has been surveyed, a School Dental Service for the Gold Coast as a whole will be elaborated. When not engaged on his school duties, the School Dental Surgeon has carried on the dental practice at the Gold Coast Hospital in the absence of the Government Dental Surgeon who has proceeded on leave prior to retirement.

### (VIII) TRAINING OF MEDICAL AND HEALTH PERSONNEL

74. The training of staff has been discussed previously in this report: *vide* (26) and (27) of Part I (General). A brief summary will, therefore, only be given here. As previously, the training of nurses was carried out at the principal hospitals and chiefly at the Gold Coast Hospital, Accra.

The Gold Coast Certificate of Nursing, the highest nursing qualification in the Gold Coast, was awarded after examination to five Second Division Nurses.

75. Examinations for the Pharmaceutical Diploma of the Gold Coast were held in January and July, and eleven candidates were successful.

76. The total number of Pupil Midwives under training at the Maternity Hospital, Accra, during the year was 63, of whom ten obtained the Certificate of the Midwives Board.

77. Health Visitors continue to be trained at the Princess Marie Louise Welfare Centre, Accra. No Health Visitors' Certificates were granted during the period under review.

78. The School at Tamale from which Sanitary Overseers are turned out for the Native Administration continued its activities throughout the year.

79. The School for Sanitary Inspectors at Accra, in abeyance since the retirement of the former Training Officer in 1939, was reopened in July. Considerable work was done towards the elaboration of a modern, comprehensive curriculum for the future. In 1945-46, it is hoped to move into a new building, the cost of which has been approved for Estimates. The appointment of a Training Officer has, also, been provided for in 1945-46.

80. Owing to delay in the arrival of the teaching staff and equipment, the new Nurses' School and Hostel did not open in Kumasi before the end of the year. It is anticipated that the first pupils will come into residence early in 1945, and that training will be commenced.

### III—FINANCE

Branch						Actual Expenditure 1/1/44 to 30/9/44
						£
Medical	...	...	...	...	...	189,689
Health	...	...	...	...	...	154,922
Research	...	...	...	...	...	7,775
Nurses' Training School and Hostel	...	...	...	...	...	409
Total	...	...	...	...	...	352,795
Total Colony	...	...	...	...	...	3,327,558
Percentage of total to total for Colony for the period 1/1/44 to 30/9/44						10.6

81. The expenditure shown on the medical services does not include the cost of buildings, water supplies, town improvements and other public works of health importance.

W. M. HOWELLS  
Acting Director of Medical Services.



## RETURN A

## Return of Diseases and Deaths (In-patients) and Diseases (Out-patients) for the Year 1944

Diseases	IN-PATIENTS						OUT-PATIENTS		
	Remaining in hospital on 31st Dec. 1943	Yearly Total				Total cases treated	Remaining in hospital on 31st Dec. 1944	Males	Females
		Admissions		Deaths					
		Males	Females	Males	Females				
1. (a) Typhoid fever ... ..	7	92	40	19	8	139	9	19	11
(b) Paratyphoid fever ... ..	—	5	2	1	—	7	—	1	—
(c) Type not defined ... ..	2	5	1	—	—	8	—	2	—
2. Typhus fever ... ..	1	9	—	—	—	10	—	—	—
3. Relapsing fever ... ..	—	1	—	—	—	1	—	—	—
4. Undulant fever ... ..	—	—	—	—	—	—	—	—	—
5. Small-pox ... ..	—	—	—	—	—	—	—	33	36
6. Measles ... ..	—	59	15	—	—	74	—	482	306
7. Scarlet fever ... ..	—	—	—	—	—	—	—	—	—
8. Whooping cough ... ..	—	10	7	2	—	17	—	695	625
9. Diphtheria ... ..	—	2	3	1	—	5	—	2	2
10. Influenza—	—	—	—	—	—	—	—	—	—
(a) with respiratory complications	—	45	7	3	1	52	2	84	24
(b) without respiratory complica- tions ... ..	—	19	8	—	—	27	—	227	84
11. Cholera ... ..	—	—	—	—	—	—	—	—	—
12. Dysentery :—	—	—	—	—	—	—	—	—	—
(a) Amoebic ... ..	7	193	105	12	9	305	9	272	178
(b) Bacillary ... ..	1	61	24	10	3	86	3	99	64
(c) Unclassified ... ..	—	39	17	8	3	56	2	487	302
13. Plague :—	—	—	—	—	—	—	—	—	—
(a) Bubonic ... ..	—	—	—	—	—	—	—	—	—
(b) Pneumonic ... ..	—	—	—	—	—	—	—	—	—
(c) Septicæmic ... ..	—	—	—	—	—	—	—	—	—
14. Acute poliomyelitis ... ..	—	3	3	—	—	6	—	4	6
15. Encephalitis lethargica ... ..	—	6	—	1	—	6	—	4	—
16. Cerebro-spinal fever ... ..	1	64	29	18	10	94	5	30	14
17. Rabies ... ..	—	—	1	—	1	1	—	—	—
18. Tetanus ... ..	2	81	40	30	19	123	4	63	38
19. Tuberculosis of the respiratory system ... ..	40	439	130	276	33	609	56	1,148	329
20. Other tuberculous diseases ... ..	32	125	43	32	5	200	33	128	66
21. Leprosy ... ..	591	143	52	30	11	786	562	272	141
22. Venereal diseases :—	—	—	—	—	—	—	—	—	—
(a) Syphilis ... ..	10	132	24	15	4	166	12	474	156
(b) Gonorrhoea, complications and sequelæ ... ..	37	1,093	187	16	4	1,317	42	6,312	1,288
(c) Other V. D. ... ..	9	227	58	—	—	294	9	867	247
23. Yellow fever ... ..	—	—	—	—	—	—	—	—	—
24. Malaria :—	—	—	—	—	—	—	—	—	—
(a) Benign tertian ... ..	—	—	—	—	—	—	—	110	70
(b) Subtertian ... ..	21	1,125	392	20	17	1,538	12	6,469	3,694
(c) Quartan ... ..	—	18	4	6	1	22	—	149	112
(d) Unclassified ... ..	9	942	477	34	22	1,428	26	21,771	14,830
25. Blackwater fever ... ..	—	16	12	2	1	28	1	7	9
26. Kala-azar ... ..	—	—	—	—	—	—	—	—	—
27. Trypanosomiasis ... ..	198	869	344	82	30	1,411	193	1,761	920
28. Yaws ... ..	12	216	105	8	2	333	24	79,555	63,906
29. Other protozoal diseases ... ..	—	27	9	—	—	36	5	409	339
30. Ankylostomiasis ... ..	5	226	92	13	1	323	9	911	517
31. Schistosomiasis ... ..	2	143	33	5	—	178	3	817	251
32. Other helminthic diseases ... ..	16	339	115	5	3	470	9	3,603	2,174
33. Other infectious and/or parasitic diseases ... ..	30	266	82	1	2	378	28	895	687
34. Cancer and other tumours :—	—	—	—	—	—	—	—	—	—
(a) Malignant ... ..	4	28	30	7	3	62	2	27	19
(b) Non-malignant ... ..	8	138	144	2	2	290	5	356	268
(c) Undetermined ... ..	—	9	41	—	1	50	2	41	38
35. Rheumatic conditions :—	—	—	—	—	—	—	—	—	—
(a) Rheumatic fever ... ..	—	—	—	—	—	—	—	—	—
(b) Other rheumatic conditions ... ..	3	255	92	—	—	350	—	7,380	4,118
36. Diabetes ... ..	2	20	9	5	—	31	—	40	17
37. Scurvy ... ..	—	—	3	—	1	3	—	15	7
38. Beriberi ... ..	—	8	6	5	1	14	—	19	5
39. Pellagra ... ..	—	22	10	7	1	32	1	34	34
40. Other diseases :—	—	—	—	—	—	—	—	—	—
(a) Nutritional ... ..	5	233	107	53	16	345	18	595	386
(b) Endocrine glands and general	1	62	48	2	3	111	—	234	149
41. Diseases of the blood and blood- forming organs ... ..	17	290	223	48	23	530	25	1,065	1,100
42. Acute and chronic poisoning ... ..	1	35	24	11	5	60	1	23	13
43. Cerebral hæmorrhage ... ..	3	39	12	25	6	54	—	22	4
44. Other diseases of the nervous system	472	381	112	40	11	965	507	1,301	684
45. Trachoma ... ..	1	27	2	1	—	30	1	166	73
46. Other diseases of the eye and annexa	11	385	310	1	2	706	14	8,133	5,554
47. Diseases of the ear and mastoid sinus	4	94	61	2	1	159	5	3,193	1,720
48. Diseases of the circulatory system :—	—	—	—	—	—	—	—	—	—
(a) Heart diseases ... ..	16	210	72	81	23	298	10	498	290
(b) Other circulatory diseases ... ..	1	91	50	18	7	142	4	433	162
49. Bronchitis ... ..	10	290	117	9	4	417	9	11,998	7,125
50. Pneumonia :—	—	—	—	—	—	—	—	—	—
(a) Broncho-pneumonia ... ..	5	204	142	49	33	351	10	282	15



## RETURN A

Return of Diseases and Deaths (In-patients) and Diseases (Out-patients) for the Year 1944—*contd.*

Diseases	IN-PATIENTS							OUT-PATIENTS	
	Remaining in hospital on 31st Dec. 1943	Yearly Total				Total cases treated	Remaining in hospital on 31st Dec. 1944	Males	Females
		Admissions		Deaths					
		Males	Females	Males	Females				
(b) Lobar-pneumonia ... ..	10	395	180	45	29	585	20	314	138
(c) Otherwise defined ... ..	18	290	111	57	26	419	6	296	164
51. Other diseases of the respiratory system ... ..	19	330	164	26	11	513	16	2,844	1,521
52. Diarrhoea and enteritis :—									
(a) Under 2 years of age ... ..	3	31	38	4	4	72	—	1,622	1,415
(b) Over 2 years of age ... ..	4	316	130	20	18	450	11	2,705	1,391
53. Appendicitis ... ..	1	80	16	6	2	97	4	57	18
54. Hernia, intestinal obstruction ... ..	46	797	29	64	8	872	39	1,017	63
55. Cirrhosis of the liver ... ..	7	59	12	26	4	78	2	46	9
56. Other diseases of the liver and biliary passages ... ..	6	175	51	19	8	232	6	386	223
57. Other diseases of the digestive system ... ..	25	596	314	39	26	935	43	19,935	8,293
58. Nephritis (all forms) :—									
(a) Acute ... ..	2	55	38	12	7	95	5	125	79
(b) Chronic ... ..	10	144	55	63	15	209	15	225	111
59. Other non-venereal diseases of the genito-urinary system ... ..	71	730	716	40	16	1,517	46	2,489	5,282
60. Pregnancy, child-birth, and the puerperal state (including normal labour and maternal welfare) ... ..	75	—	2,781	—	85	2,856	61	—	42,204
(a) Abortion ... ..	9	—	408	—	4	417	9	—	601
(b) Ectopic gestation ... ..	2	—	86	—	10	88	—	—	13
(c) Toxæmias of pregnancy ... ..	—	—	106	—	14	106	3	—	43
(d) Other conditions of the puer- peral state ... ..	14	—	430	—	49	444	19	—	807
61. Diseases of the skin, cellular tissue, bones and organs of locomotion	247	3,258	1,149	96	24	4,654	301	44,797	23,162
62. Congenital malformations and dis- eases of early infancy (including infant welfare) ... ..	3	40	34	11	11	77	6	3,794	3,671
(a) Congenital debility (children under 1 year) ... ..	—	17	19	3	1	36	—	59	70
(b) Premature birth (children under 1 year) ... ..	2	17	28	6	15	47	2	17	25
(c) Injury at birth (children under 1 year) ... ..	—	2	6	1	3	8	—	7	2
63. Senility ... ..	8	13	5	10	—	26	11	48	34
64. External causes :—									
(a) Suicide ... ..	—	1	—	1	—	1	—	—	—
(b) Other forms of violence ... ..	145	1,829	373	103	34	2,347	224	9,815	2,262
65. Ill-defined ... ..	30	723	403	21	3	1,156	29	4,257	2,413
Total ... ..	2,354	19,759	11,758	1,689	760	33,871	2,550	258,872	207,365







