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# Evolution of Modern Medicine in Ghana: 1880-1960

by

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## DECLARATION

I hereby declare that except for references to other works which have been duly acknowledged, this thesis is the result of my own original research, and that this study has not been presented, either in whole or in part, for another degree elsewhere.

.....

Candidate

.....

Supervisor

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## ABSTRACT

An attempt has been made in this work to narrate the evolution of modern medicine in Ghana between 1880 and 1960. The work deals with public health services only, government being the overwhelming provider of medical services. First, the Colonial Office's medical policies which guided the local colonial government in public health matters are described. This is followed by a description of the evolution and growth of public health infrastructure, curative and preventive health services, sanitation and health education. The special means by which public health services reached the rural community are described as are the development and growth of the professional and the supporting medical staff, tropical medical research, the major diseases of the time and how they were handled by the Medical Department. It ends with a description of medical education of the indigenous Africans, the early failed attempt by the colonial government, and the eventual success of the first African government, to establish a medical school in the country. Starting from scratch in the 1880s, the colonial governments built up a public health service, which, by 1930, could boast a quite modern complexion. From the 1920s, Africans increasingly embraced modern medicine and they, from then, became the chief users of the services. Sanitary reforms, though started from very primitive beginnings, had by 1950 become a regular feature of public health. By 1950, the major epidemic and certain hyperendemic diseases had been eliminated or tamed. The growth of the professional medical and subordinate staff was exceedingly slow and was never able to

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cope with the growing African population and the ever-lengthening queues of African patients. The colonial government bequeathed the first African government, from 1951, a health service which was largely curative-oriented; this was the greatest shortcoming of the colonial public medical service. By 1960, under the first African government, health facilities had been greatly expanded, particularly in the rural areas; medical personnel had also been greatly augmented. The first African government's greatest failure was its inability to shift its focus from curative medicine to preventive health; it passed on, in turn, to future African governments, the heavy burden of continued concentration on curative service with which governments increasingly found themselves unable to cope.

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# VITA

Stephen Kojo Addae was born in 1936. He had his primary education at the Methodist School, Tarkwa and secondary education at Achimota School. He obtained his medical education at University College, Ibadan, then a College of London University; he graduated MB BS of London University, with honours, in 1962. In 1967, he graduated MSc, PhD in physiology at the University of Rochester, Rochester, New York. In 1972, he obtained the MD of London University.

He was lecturer in physiology at the University of Ghana Medical School (1969), senior lecturer (1971), associate professor (1974) and full professor (1978). He was head of the Department of Physiology, University of Ghana Medical School between 1975 and 1982 and then of the College of Medicine King Saud University, Saudi Arabia, between 1983 and 1992.

He has published over 60 papers on sickle cell disease, tropical nephrology and kidney function, as well as eight books and monographs on the same subjects. He has been fellow of the Ghana Academy of Arts and Sciences since 1978 and of the New York Academy of Sciences since 1993.

He is married with a daughter and a son.

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## PREFACE

As a medical student, a teacher in medicine and physician, my knowledge of the medical history of Ghana amounted to anecdotal titbits. Over the past several years, medical history has gained progressive entry into medical curricula of schools of medicine the world over. Though recognised important, there is no organised systematic teaching of this increasingly-important subject in any of the medical schools of this country. Since nobody has written and published the medical history of this country, it is difficult to see how the medical history of our country could be properly taught, either to our students of medicine or history. Furthermore, to the historian, practising physician and the ordinary Ghanaian, the medical history of the country is a total void. It was the contemplation of these facts which eventually impelled me to attempt this work. And I thought the best way of doing it was to submit myself to the formal study of history.

The closest to the medical history of Ghana are publications of David Scott and the American, K D Patterson. Dr Scott was for many years a specialist epidemiologist of the Ministry of Health, Ghana, and was in charge of the Medical Field Units. His work Epidemic Diseases in Ghana 1901-1960 (London, 1965) speaks for itself. It deals with nothing else. Patterson's work Health in Colonial Ghana: Disease, Medicine and Socio-Economic Change, 1900-1955 (Waltham, Massachusetts, 1981) focuses on infectious diseases and the changes in the epidemiological environment which confronted Ghanaians between 1900 and 1955; this work has provided me very helpful

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background information. Apart from Scott's and Patterson's work, published materials on the medical history of Ghana can be written down to nil. My task has consequently required breaking new ground. My objective was to attempt a sytematic study of the development of modern medical services in colonial Ghana and during her immediate post-independent years, a task no one has thus far attempted.

In order to achieve my objective it became necessary for me to obtain material both in Ghana and the U.K.

My searches in the Public Records Office in Britain were assisted by the Valco Trust Fund, Barclays Bank and the Ghana Chamber of Mines; these organisations contributed generously towards my return air passage to Britain and my stay there. Their recognition of, what they say, `the importance of this work', gave me an impelling impetus which was even more important than the financial assistance given me by them. Assistance from the personnel of the P.R.O and the library of the School of Oriental and African Studies was unstinting. At Accra, I obtained ready assistance from the personnel of the National Archives of Ghana, the Balme Library of the University of Ghana and several individuals in the Ministry of Health. I also received assistance from the Nursing and Midwifery Councils of Ghana.

I received helpful guidance as to where to look for material from Mr Isaac Tufuoh of the History Department. But what really mattered more than anything else was the support and encouragement given me by Professor John Fynn, Head of the Department of History. My supervisor, Professor Robert Addo-Fening, of the History Department

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of the University of Ghana, used every opportunity and device to guide me and urge me on.It was these two historians who taught me to write up my work as a historian should. To them my gratitude is boundless.

I owe a very special debt to Mr D B Addo librarian of the University of Ghana Medical School. Mr Addo dug up for me Annual Medical and Sanitary Reports between 1898 and 1955, a period of 58 years.These reports, occupying some 8000 pages,included nosological returns every year of the period. This material provided the crucial invaluable main frame upon which I built my narrative.

The material is presented in nine chapters. They deal, in sequence, with the medical state of affairs prior to 1880, colonial medical policies and how they were applied; the evolution and growth of public health infrastructure, curative and preventive health services; sanitary reforms and rural medicine; the development and growth of the professional and supporting medical staff and tropical medical research; the major diseases of the time and how they were handled; medical education in the indigenous Africans.

A major problem arose as to the most effective way of presenting the enormous amount of statistical material with minimal distraction from the main narrative. For, without the statistics, the story would be far from complete, and to medical men, it would constitute an unpardonable gap. I have therefore presented the reported cases of all diseases in graphic form.This serves the double purpose of providing data in hard statistical figures as well as their easy appreciation in pictorial form, year by year.

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All appropriate health service indices have been calculated but have been only introduced judiciously wherever appropriate, in order not to interrupt the flow of the narrative. I have included a rather comprehensive appendix on essential material which would have ill-fitted the main narrative.

It is my hope that this work could be used as initial source material by others who might later wish to study chosen aspects of the medical history of Ghana in even greater detail. This explains the inevitable size of the thesis, the largish appendix and the many references and statistical material.

Finally I owe a debt of gratitude to the University of Ghana administration which, with little hesitation, allowed a university professor over 50 to take on a task usually given to much younger students.

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## ABBREVIATIONS

| | |
|---|---|
| ADMSS | Assistant Director of Medical and Sanitary Services |
| ARLS | Annual Report of Laboratory Services |
| AMO | African Medical Officer |
| CAR | Colonial Annual Report |
| CMO | Chief Medical Officer |
| CSO | Colonial Secretary's Office (Accra) |
| DESP | Despatch |
| DMS | Director of Medical Services |
| DMSS | Director of medical and Sanitary Services |
| DDMS | Deputy Director of Medical Services |
| GCGRMSD | Gold Coast Government Report of Medical and Sanitary Department |
| JSO | Junior Sanitary Officer |
| MHR | Ministry of Health Report |
| MO | Medical Officer |
| MOH | Medical Officer of Health |
| MRI | Medical Research Institute |
| NAG | National Archives of Ghana (Accra) |
| PMO | Principal Medical Officer |
| PRO | Public Records Office (Kew, England) |
| QRN | Qualified Registered Nurse |
| SRN | State Registered Nurse |
| WMO | Woman Medical Officer; also LMO Lady Medical Officer |

MAP OF GHANA SHOWING MAIN TOWNS

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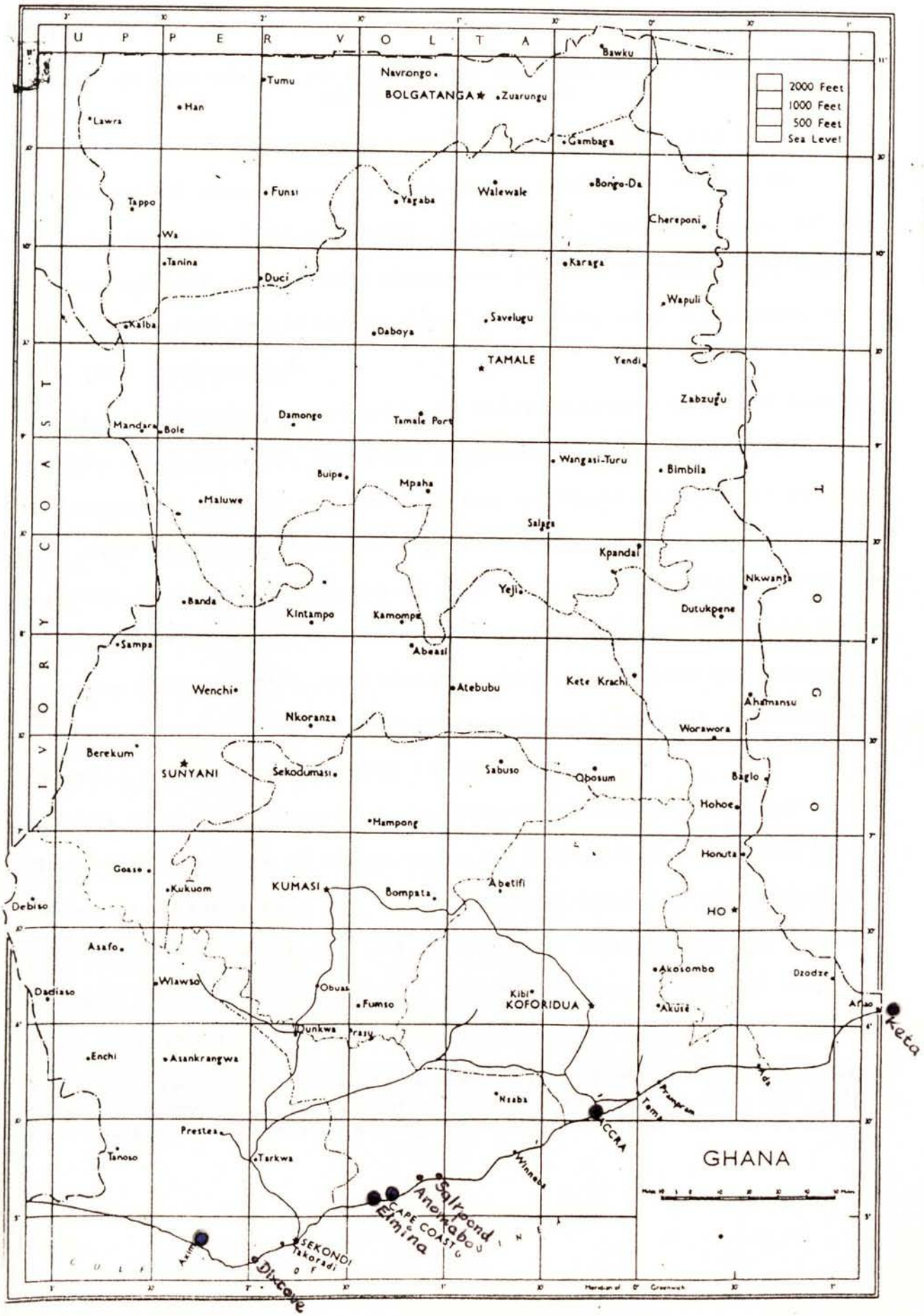


The first hospitals in 1880 at: AXIM, ELMINA, CAPE COAST, ACCRA, KETA, all coastal towns.

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# Chapter 1

## SURVEY OF THE STATUS OF HEALTH AND DISEASE ON THE WEST AFRICAN COAST PRIOR TO 1880

The objective of this chapter is to review briefly the primordial beginnings of modern medicine in Ghana (and West Africa in general) between 1480 and 1880. Inevitably, the treatment of such a large subject cannot be exhaustive in this thesis. This chapter can only provide the briefest bird's eyeview, only a glimpse, of it over this vast period.

It poses a number of questions, to which attempts shall be made to provide answers: What European countries, organisations and individuals, brought modern medicine to Ghana, and when? In what ways were Ghanaian Africans exposed to modern medicine and what were the Africans' responses to it ? What was the African attitude to disease and method of treatment and in what ways did they differ from the modern ? What were the European conceptions and misconceptions on the aetiology and pathogenesis of tropical diseases and the role of climate in their causation ?

In this review, the early descriptions of diseases in Ghana, and there were very few of these prior to 1880, shall be spoken of. Of obvious relevance here are the historical causes of the absence of public health facilities and services in Ghana prior to approximately 1880. The year 1880 is important because it was about then that the first civil colonial hospital was built at Accra.[1]

1. Actually the first hut-hospital was built in 1878 and it was in 1881 that Dr McCarthy,became the first substantive Chief Medical Officer. NAG, ADM 11/1/850, Gold Coast Hospital, Accra, Opening Ceremony by governor Guggisberg, 1923.

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It can be said with precision that Europeans established their first organised presence in Ghana, when the Portugese built the Elmina Castle in 1482.[2] The building of the castle was a completely official event. Its construction was ordered by King John II of Portugal. Diogo D'Azambuja was commissioned to carry it out. He set out with a force of 600 men and a fleet of six ships. Arriving at Mina (Elmina), they received permission from the local chief, Caramansa, for the construction of the castle. What is of interest here was the fact that within weeks of their arrival, the Portugese had built a good part of the castle, using, mostly, building materials they had brought with them from Portugal; then all but sixty of the members of the expedition returned to Portugal. Among those who remained to garrison the castle were Diogo D'Azambuja himself and three women. In 1886 King John was sufficiently impressed by the accomplishment to grant the castle at Mina the privileges of a city and John II himself's assumption of the title `Lord of Guinea'.[3] These facts suggest (but do not prove) that a ship's surgeon, who might have looked after the health of the leader and the men and women, must have been a member of the expedition and the garrison party.[4] Such primitive European

2. That activity heralded the permanent presence of various European powers in Ghana. See below.
3. J W Blake, West Africa: Quest for God and Gold 1454-1578, (London, 1977), pp. 98-9. According to Blake, the Portugese reached Ghana some ten years after discovering Sierra Leone. Though the great castle Jorge da Mina was built in 1482, there were Portugese exploring and trading activities along the more westerly parts of the West African coast a couple of decades before 1482.
4. It was normal practice for ship surgeons to accompany such parties. In 1780 the British Parliament made it law for all ships carrying slaves. On this, see R Schram, A History of the Nigerian Health Services, (Ibadan, 1971), p. 10.

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medical facilities of the 15th Century as existed in the castle at Mina must have catered, naturally, exclusively, for the Portugese garrison. It must be allowed however that, quite likely, Chief Caramansa's family and personages, as well, might have received some medical help or advice from the conjectured resident Portugese doctor. Such a favour would naturally bolster the Portugese position in the new settlement. It is, however,unlikely at this stage, that the ordinary African around Elmina would have been accorded any such service.[5]

European rivalry on the West African coast supervened. This was in respect to the spice, gold, and soon, the lucratve slave trade. It was on account of the pursuit and protection of trade more than anything else, that within three centuries, some sixty castles, forts and lodges, were built along the relatively short stretch of Ghanaian coast, extending from the Ghana-Ivorian border to Keta. The European powers which built these strong trading points were the Portugese, French, British, Dutch, Danes, Germans (Brandenburgers) and Swedes. The essential purpose of the outposts was their use as safe store-houses for goods brought from Europe to be traded for gold, spices, and later, slaves; and for the provision of permanent living quarters for the commercial staff and military garrisons. The arming of these strong points also provided the means of keeping away other European competitors, and protecting traders within them and the Africans of the local area, from

5. European medicine at this time was probably not much more superior to African traditional methods, except in organisational aspect.



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attacks from neighbouring African states.[6]

It is axiomatic that the early European settlements along the coast of Ghana provided for themselves some primitive form of permanent medical facilities. Or that visiting European ships, which conventionally had ship surgeons, provided, initially, intermittent medical assistance to the permanent occupants of the forts and castles.

The establishment of permanent settlements on the coast brought the European traders face to face with local diseases. And though there is no consistency in their reporting, many anecdotal accounts have been written on the havoc, particularly to European life, caused by the fevers of the West African Coast. Such accounts were on health privations suffered principally by Europeans on board trading ships and those Europeans who were engaged in various activities along the West African coast. And it is to such accounts we must turn for information.[7]

The first English ships (The Primrose, the Lion and the Moon) to attempt to trade along the West African coast, of which we have full evidence provided mainly by Richard Hakluy's PRINCIPAL NAVIGATIONS, were led by Captain Thomas Windham in 1553.The expedition was organised by a group of London merchants for the

6. A Van Dantzig, Forts and Castles of Ghana, (Accra, 1980), pp. vii-xiii.
7. Between 1482 (when the Portugese built the Elmina Castle) and 1874 (when the British took jurisdictional and administrative control of the Crown Colony of the Gold Coast), it is difficult to identify and follow any consistent thread of the development of medical services in Ghana. Between the date of the Dutch departure (1872) and the early 1880s, the administration of the Gold Coast Crown Colony was still in its formative stages of organisation and development; so that the records of even this period on medical matters remain exceedingly sketchy.

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purpose of buying gold at Elmina and pepper at Benin. The ships were piloted by a Portugese Captain Pinteado which had a crew of some 140 men. Many of the non-immune of the crew fell ill at Benin. Both Windham and Pinteado died, and so did some 100 of the crew. And of the forty or so who were able to return to England, many soon died. The remnant crew returned nevertheless with valuable cargo.[8] The 1588 expedition of Bird and Newton to the West African coast met with a similar medical disaster.[9]

These are among the earliest accounts of the fatal European susceptibility to the West Coast Fever. Dr H R Carter's studies on the place of origin of yellow fever, published in 1931, [10] (when the causative agent and pathogenesis of yellow fever was finally known) suggests that these early English medical disasters were caused by yellow fever although malaria cannot be ruled out. Yellow fever became a justly-feared disease as the following will indicate. Selwyn-Clarke's studies suggest that Senegal was the seat of the first authenticated outbreak of yellow fever.[11]

This outbreak occurred in 1778. There were of course many outbreaks amongst the indigenous Africans but whites became the indicators of the presence of the disease, partly because of the drama of the

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8. Blake, Quest for God and Gold, p. 143.
9. Schram, Nigeria Health Services, p. 8.
10. H R Carter, Yellow Fever:An Epidemiological and Historical Study of its Place of Origin, (Baltimore, 1931), p. 56.
11. Government of the Gold Coast, Report on the Medical and Sanitary Department, (Accra, 1935), p. 87. In the 15th and 16th Centuries, the disease was often confused with plague. It was known simply as the `contagion', and by some as `Siam disease'. In the 18th Century it was recognised as carried by ships and quarantine regulations established. On this, see J W W Stephens, Ghent Exhibition Handbook to the Tropical Diseases, (London, 1913), p. 26.

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devastation it caused that race and the publicity it roused; and partly because the indigenous Africans had acquired, at least partial, immunity to the disease. For a long time Sierra Leone had the ill reputation as the home of yellow fever. In 1824, surgeon Ferguson of the Royal African Corps reported 786 cases of fever, half of whom died. Of the 128 troops who disembarked at Cape Coast in 1823, there was only one survivor. The same year, 109 women and children landed at Cape Coast. Seventy of that number died within a few months' arrival. The presumptive cause of death in these disasters was yellow fever.[12]

Van Dantzig states that the Dutch first set foot on the Ghanaian coast by accident: In 1596, a Dutch captain on his way to Brazil, was driven off his course and landed by accident in Ghana. When he returned home to Holland eventually, he was able to show the richness of the coast by the quantity of gold he returned with. Dutch trade with Ghana started and prospered subsequently. In 1611, the Dutch built their first fort at Mori, commissioned by the Dutch Admiralty and under the leadership of Calantius. In 1637, they drove out the Portugese from Elmina.[13] The Dutch also experienced severe fevers, often with disastrous mortality, both on their ships and on land. For instance Admiral van der Does, on his way to West Africa in 1637, felt compelled to send half his ships back to Holland on account of disease. He continued his journey

12. GGCRMSD, (1935), p. 88.
13. Van Dantzig, Forts and Castles, pp. 11-14.

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with the rest of his ships but succumbed himself to fever.[14] It is likely these deaths were caused either by malaria or yellow fever or both. The Christiansborg Castle, built by the Danes, from 1661, remained their main foothold in Ghana for many years.[15] It was sold to the British in 1850 after changing hands several times. The Danes were the first to abandon, on humanitarian grounds, slave trading, in 1803. They were the first Europeans to turn to plantation farming from 1788 on, as an alternative to the slave trade. Their plantation scheme required that they moved inland, beyond the coast. The scheme failed largely because of the high mortality from local diseases.

The death rate at Christiansborg was excessively high: Between 1830 and 1840 alone, six successive Danish governors of Christiansborg died from what was presumed sleeping sickness.[16] The high mortality from local diseases in Ghana certainly contributed to the unprofitability of the continued Danish presence in Ghana, and in their eventual decision to sell Christiansborg and other Danish forts to the British in 1850.[17]

Medical men were certainly on duty around Accra in the late 18th

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14. Schram, Nigeria Health Services, p. 8.
15. Van Dantzig, Forts and Castles, p. 31.
16. ibid., p. 72. The aetiology of sleeping sickness was unknown at that time, though the disease's clinical features had become known by 1750: On this, see, Stephens in:Handbook Tropical Diseases, p. 14.It was not till 1901 that Dutton recognised as trypanosome, an organism seen previuosly by Forde in the blood of a European patient in the Gambia. Even so sleeping sickness was quite well recognised at the West Coast;it was variously described as `sleeping distemper', `Negro lethargy', `Narcotic Dropsy', `Hypnosis':That is to say the excessive sleepiness in those who contracted the disease was recognised as its main clinical feature.
17. loc. cit.

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and early 19th Centuries. For Dr Paul Isert, a German-born doctor was in Danish service at the Christiansborg Castle between 1783 and 1787; while Dr Peter Thonning, a Danish doctor was at post at Christiansborg between 1799 and 1803.[18] There is little doubt that these doctors, and others like them, provided some medical help to the local Africans even though their main duty lay in the care of their Danish employers.

But then the obvious question arises as to what Africans did, in their own traditional way, to attend to their sick, exclusive of European methods. This large question has been examined by Dr Twumasi in his recent book [19] and can only be touched upon very briefly here.

In its broadest perspective, the most important difference between the African and European approaches to medical care was an organisational one: European and other cultures invented hospitals, clinics and dispensaries or their equivalents where the sick could be attended in an organised way. No such equivalents appear to form a part of the Ghanaian African healing methods. It is next of interest to examine here, however briefly, African healing methods in the following broad areas: Surgical interventions, internal disturbances, contagious diseases, epidemics and parasitic infestations and therapeutics.

Dr Tedlie who accompanied the Bowdich Mission to Ashanti in 1817

18. Schram, Nigeria Health Services, p. 10.
19. P A Twumasi, Medical Systems in Ghana: A Study in Medical Sociology, (Accra, 1975). op. cit.

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had something definite to say about how the Ashantis dealt with such surgical problems as fractures and haemorrhage from physical trauma: The Ashantis bound up the broken limb with leaves and other herbs without any regular attempt at reducing the fracture. The attitude was taken that the patient would survive if God willed it. Many surely did survive but many died also. A haemorrhaging patient was treated even more casually. No attempt was made to arrest the bleeding, and the bleeding patient in battle, say, was left to his own devices. Hydrocele was treated (without any tangible benefit of course) by scarification and the rubbing in of powdered herbs and oils; and inguinal and umbilical hernias were left severely alone with the consequence that they were often very large, irreducible and the patient carried off if the hernia got strangulated.[20] Dr J G Forde, the medical officer who accompanied the Anglo-French Boundaries Commission in 1902-1903 reported similarly that the Awunas and other tribes handled fractures in ways similar to the Ashantis, with the result that many who survived were left with the most horrendous deformities. Dr Forde reported further that disclocations were handled similarly; no attempt was made at

20. T E Bowdich, Mission from Cape Coast Castle to Ashantee, (3rd edn., with notes and introduction by E F Ward), (London, 1966) pp. 370-80. These are of particular interest for the Ashanti kingdom's success rested largely on their success in warfare. Some rudimentary, at least, traumatogical techniques would have been expected to be practised by them. The technique for arresting the bleeding in a haemorrhaging warrior was the least that might be expected. Since speed was of the essence in such warfare, it is not improbable the Ashantis took the position that bleeding or fractured soldiers should not hamper war proceedings. In any case the attitude that left injured soldiers to die was in keeping with their ` Kum apem, apem beba', literally translated, `kill a thousand, and a thousand shall come'.

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reduction. And haemorrhages were treated by the application of a plug of powdered roots and juices to the bleeding part. The conclusion is inescapable that African traditional healers' knowledge of human anatomy could be written down to nil. Furthermore, no aseptic or antiseptic methods were employed, no attempt made at cleanliness, at any surgical intervention. And as a rule, the very nature of applications to wounds left no room for cleanliness. Such applications assured iatrogenic sepsis.[21]

Europeans introduced quarantine in the dealing with infectious diseases. Africans dealt with them differently. Although Africans knew a contagious disease when they saw one (such as leprosy and yaws), and epidemics when they occurred (such as smallpox), their traditional ways of dealing with them were unorganised and not particularly helpful. So for instance Dr Forde, of the Boundaries Commission, reported that though Africans knew it as contagious, they entertained little fear of the contagion of leprosy. Lepers were not isolated, they lived with other villagers and, unless crippled, worked in the fields with others. And a leprous chief was allegedly allowed to live undisturbed with his several wives and children in his village.[22] Similarly, although Africans knew yaws

21.J G Forde,`Native Methods of Treatment', J. Afr. Soc. 1903-04, op. cit. It is a marvel tetanus was not as common as it should have beeen. As late as the 1950s West Africans (at least in Nigeria) calmed tetanus spasms with orallly administered cow's urine,the sedative content of which then sent the patient into coma.The comatose patient was then roused by hot charcoal applied to the sole of the feet which caused serious burns.

22. It seems it was the Africans' tolerance of and compassion for lepers, rather than ignorance of its contagion, which allowed lepers to freely carry on their daily lives with their people. In the early 1920s, this was a common sight at Accra, where medical officers of health observed lepers openly selling their vegetable wares in the streets.

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was contagious, no effort was made to isolate infected children; parents allegedly encouraged its spread, under the impression that once recovered, the child enjoyed better health.[23] Such much-feared contagious diseases as smallpox were associated with magic and religion. And among the Gas for instance, when an infection was acquired by contact with a smallpox patient, it was believed the victim's spirit had been subjected to the influence of a Jinn (Akotia).And organisationally, it amounted to the community's women gathering together in the early hours of the morning and, in a procession through the town or village, shouting appeasive cries, and calling on the juju to have mercy on them and their children. Interestingly, the medicine or juju man, by his inoculatory practice with smallpox scabs, merely encouraged the spread of an epidemic. Smallpox attacked a person who was cursed and a person so cursed was bound to die.[24] Such attitude to contagious diseases and the method of dealing with them totally precluded any rational way of quarantine and treatment. African medicine men obtained some vague notion of internal cardiac disturbances from such features as a rapid pulse, easy fatiguability and a shift of the apex beat, but could do nothing about them. Respiratory ailments were treated with a variety of herbs in juice or powder form; and similarly abdominal ailments. Perhaps the only area where African treatment was no less superior to modern, perhaps even superior, was the method of dealing with

23. Forde, `Native Methods of Treatment', pp. 361-97.
24. GGCRMSD, (1912), p. 93.

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guinea worm. Even though Africans knew or suspected its mode of transmission, they yet did little or nothing at preventive measures.

Forde's report shows clearly that the main difference between African traditional and modern therapies was the order in the latter and its lack in the former. African methods were wholly trial and error, and herein lay its weakness. For, basically each system employed derivatives of plants and minerals. Africans, though, often threw in animal material such as an ashed lizard or scorpion and the like[25]. It must be said nevertheless that African healing methods were not completely useless; people got cured by traditional methods (till today, many healers have preserved a reputation of healing fractures by splint and herbs) and when modern methods have completely failed to cure, traditional methods have been used, allegedly, with success.

Perhaps the most important deficiency in African forms of treatment was the secrecy used by the healers. They had learned their art from their fathers and kept the healing secrets close to their chests. This attitude ensured that there was virtually no opportunity for such healers to learn from each other or improve on their methods. Furthermore nothing was ever written down; the culture of illiteracy was bound to preclude any documentation. An attempt was made in the 1930s, an attempt led by a J A Kwesi Aaba, a photographer, to modernise traditional remedies, validate them by

25. Forde, `Native Methods of Treatment', pp. 361-97.

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scientific procedures, through a society called The Society of African Herbalists. It failed.[26] The European healing methods were, until the latter part of the 19th century, primitive affairs and African methods, for a long period, offered significant competition.

In any case, till the latter part of the 19th Century, modern medicine had few answers to the West African fevers and mortality among whites in West Africa became a legend. In spite of the tremendous losses in men from disease at the West African coast, the European trading ventures continued. This was principally because of the high profitability of the slave trade. The profitability of the trade rested in the delivery of healthy,or tolerably-healthy, slaves to the Americas and the Carribean. The need to ensure that healthy slaves were bought and remained in good health at delivery on the other side of the Atlantic, made necessary the employment of ship surgeons by the slave traders. In this curious way, modern medicine began to be practised along the West African coast, albeit principally on slaves ready for shipment. William Bossman, chief Dutch merchant, and a slave dealer at Elmina by the end of the 17th Century and author of the ACCURATE DESCRIPTION OF THE COAST OF GUINEA,[27] had something to say about the role of the medical man in the slave trade: The slaves were thoroughly examined. Those who were found healthy and suitable were branded with branding irons under the doctors' supervision, for the

26. K D Patterson, Health In Colonial Ghana, (Waltham, Mass, 1981), pp. 28-29.
27. Van Dantzig, Forts and Castles, p. 15.

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sake of ease of identification and avoidance of mix-up with purchases of other traders. Though thought barbarous, branding was a considered necessity. The doctors were also called upon to decide, on medical grounds, whether a slave was fit to travel. The ship surgeons of course had to, as their duty required, look after the health of the crew of slave ships. But their main duty lay in maximising profits for the traders in human cargo. Slaves, bought but later pronounced unfit to travel by the surgeons, were often murdered at the beaches.[28] By helping preserve the lives of purchased slaves on the transatlantic voyage, thus ensuring maximum profits, the ship surgeons ensured for themselves future lucrative opportunities of work on slave ships. In the course of their work the surgeons often recorded, often inaccurately, their observations on such diseases as yaws and the diarrhoeas.[29] Maltreatment of slaves by the crew was common and the intervention of the surgeons probably minimal and ineffective. One such ship surgeon was Dr T Aubrey who was an English slave ship surgeon in the 1720s.[30] By an Act of Parliament in 1789, a Medical Examining Board was inaugurated which made it mandatory for all slave ships to have on board a licensed ship surgeon. This was obviously in cognizance of the primary need to purchase and transport, as far as possible, only healthy slaves and the ensuring of greater

28. Schram, Nigerian Health Services, pp. 8-10.
29. Diarrhoeas, most probably amoebic and bacillary dysentery, were rife in the African communities, their European treatment,no less antiquated than African.
30. T Aubrey, The Sea-Surgeon or the Guinea Man's Vade Mecum, Written for the use of Young Sea Surgeons, (London, 1729).op. cit.

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profitability. This move certainly improved the quality of surgeons employed and the services they rendered.[31] These ship surgeons gradually lost their employment when the slave trade was finally abolished by 1837.

We see therefore that ship surgeons, whose duty in medical work was to ensure healthy slaves reaching the New World, were unwittingly introducing modern medicine to the West African coast. But it remained for missionaries to introduce modern medical care in a real sense to the local Africans. In the earlier centuries, the missionary movement had begun and the provision of medical help to local Africans started. According to Schram, Catholic traders and Missionaries built a hospital in 1504 on St Thomas Island off Nigeria, and, apparently subsequently, on various islands off the West African coast. In keeping with the practice of the day, missionaries often doubled as lay physicians. We can assume then that wherever a Christian mission was established, mission schools were also established, and, as a rule, there was an accompanying medical service.

In 1751, Rev Thomas Thompson of the Society for the Propagation of the Gospel, at the request of the Royal African Company, engaged in brief activity in Ghana. He was stationed at Cape Coast.He remained in the country for five years but was obliged to leave on account of ill-health. In keeping with normal practice, he engaged in

31. Schram, Nigerian Medical Services, p. 10.

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regular missionary work, teaching and medical work. One of his pupils was afterwards sent to England for further education, returned and established a successful school at Cape Coast: He was Philip Quaque.[32] Though the records do not explicitly say so, the odds are that, with young people in his charge, Quaque either provided some simple medical treatment measures; or used for the purpose the Royal West African Army surgeon normally resident at Cape Coast Castle. The early missionaries usually included doctors, thus making it possible for them to handle the problems of the soul and the body and spread the humanitarian principles of Christianity. Mortality amongst these missionary doctors was initially high, the usual cause, malaria and yellow fever, not to speak of the dysenteries. Before 1850, such doctors as Dr van Cooten and Dr Hensman of the Church Missionary Society did not live beyond two years at their post. The opening of the Church Missionary Society's College of Higher Education in Freetown in 1827, was an important event which unwittingly made important contributions to the training of the first African doctors.[33] The Basel Missionary Society was founded in 1815. About 1827, one of their first missionaries was running a school started by the government. And by 1881, there were nearly 50 Basel Mission schools in Ghana. This progress was accomplished at a price. For during the first sixty years of its establishment, nearly 100 European missionaries died from disease in the country.The Wesleyan Mission

32. G E Metcalfe, Great Britain and Ghana, (London, 1964) doc. 459, p. 578.
33. Schram, Nigerian Medical Services, pp. 61-2.

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began educational work in Ghana in 1834. The first Methodist Missionary, Rev Joseph Dunwell, landed at Cape Coast in January 1835 but died within months. Three of the four others who followed also died in quick succession. During the first eight years of the Mission's establishment, 14 missionaries died from disease. The Bremen Missionary Society began work in 1847 and by 1881, had established four schools in the colony. The Roman Catholic Mission did not start educational work till 1881.[34]

All these missions performed most valuable medical work, both amongst their students and in the general population. It must be remembered that during this period, there was no public health service.[35]

Well aware of the health hazards of the West African Coast, Thomas Birch Freeman nevertheless agreed to be sent to Cape Coast in 1838 by the Methodist Conference of Leeds. He arrived only to find that the sole surviving member of the Mission he expected on arrival, Mr Wrigley, had died weeks earlier. Within a few weeks, Freeman's wife lay buried at Cape Coast. Freeman's father was African, and mother, British. He had a pale skin and was often taken for white by the Ghanaian Africans. He was able to withstand the climate and build up some immunity to local diseases.He lived till 1890 when he died from the influenza which was sweeping the country. Freeman was a lay doctor. Yet he did valuable medical work among the Africans. He is said to have successfully treated the female Paramount Chief of

34. Metcalfe, Great Britain and Ghana, doc. 459, p, 578.
35. Schram, Nigerian Medical Services, p. 71.

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Juabin. This caused his popularity as doctor to soar. Though death from disease was feared, the missionaries nevertheless came and continued to convert Africans to christianity, built schools and churches, educated African children and provided medical care to the common African.[36]

By the mid-1840s, colonial surgeons of the West African Army based in the larger towns such as Cape Coast were providing some form of medical assistance to the local African populations, but to what extent we do not know. It is certain however that Africans, particularly at the coast,were quite familiar with modern medicine. When Dr Horton and Dr Davies, the first African doctors were appointed into the West African Army Medical Service in 1859, there were military health facilities at Dixcove, Cape Coast, Anomabu, Accra and Keta. And in 1849, Grey, the Secretary of State for the Colonies, anxious for governor Winniett of Cape Coast Castle to establish a successful poll tax system in the colony, proposed the use of some of this tax to provide dispensaries with resident doctors for the African population.[37] But whether it was to be free or not we are not told. In any case the poll tax scheme failed and with it the possibility of providing dispensaries for ordinary Africans. It would seem certain however that Africans generally went shy of European doctors because in the 1850s, Africans would reportedly not use the services of a colonial

36. ibid., pp. 72-3.
37. Metcalfe, Great Britain and Ghana, doc. 168, p. 210.

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surgeon provided for them (probably at Cape Coast).[38] It was between these five stations the army medical officers were constantly shuttled. These health facilities were basically for use by military garrisons, the governor and his staff. Private practice was allowed the army surgeons, and Dr Horton was reputed to have, in 1874, taken legal action to recover a fee of 15 guineas from a private patient.[39] It is close to the truth to say that the military medical services within these five towns were out of reach of the ordinary African. Naturally those Africans who could afford it could be seen by the surgeons for a fee. It was not until 1878, when the first civil hospital was built at Accra, that Africans could begin to use public health facilities for which they were charged very nominal fees; but which, generally, they could ill-afford.[40]

The West African coast had the most evil reputation of being frighteningly unhealthy and for good reason. A few examples are sufficient to support this reputation. Successive Niger expeditions between 1832 and 1854 were disasters in the loss of life from the West Coast fevers and diarrhoeas. The very high mortality caused an investigation in England, led by Dr Alexander Bryson. He produced a report, in 1847, which compared the mortality amongst Royal Navy Personnel in West Africa, South America, the Mediterranean, the West Indies, the Home Fleet and the East Indies. Mortality in West

38. ibid., doc. 199, p. 250.
39. C Fyfe, Africanus Horton, (London, 1972), pp. 36-7.
40. On this, see Chapter 3.

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Africa was far and away the highest. In the West African coast, mortality was over 54 per thousand and less than 19 in all others.[41] Cobden, a Member of Parliament, had declared that expedition (Niger Expedition) as `little short of murder', and true it proved.[42] This view of the West African coast was nothing new: When in the 1820s, after governor MacCarthy's defeat in 1824, consideration was being given to British abandonment of her West African Coastal Settlements, one of the primary considerations was `the constant drain upon the troops and civil servants' employed in Ghana `arising from the destructive unhealthiness of the climate'.[43] The notoriety of Ghana as a health harzard was so well-known that for many years even men of only moderate ability, and seasoned in other colonies, were unwilling to come forward for service in Ghana. This was of particular concern to governor Benjamin Pine who failed to get good men to employ even when he offered deliberately attractive salaries.[44]

The most absurd notions were held about the nature of tropical climates and the mechanisms by which they produced their ill effects. Malaria,literally means `bad air'. Until Laveran announced to the French Academy of Medicine the discovery of the malaria parasite in 1880, and Ross demonstrated in 1898 that the parasite

41. Schram, Nigerian Health Services, pp. 35-53.
42. Metcalfe, Great Britain and Ghana, doc. 17, p. 215.
43. ibid., doc. 209, p. 265 and doc. 81, p. 112.
44. ibid., doc. 209, p. 267. Between 1880 and the 1940s, European medical officers serving in Ghana and other British West African colonies were accorded far more generous conditions of service than in any other British colony on account of the health hazards of the West African coast; even when by the 1910s, European mortality in Ghana was now no worse than it was in England.

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was conveyed by the mosquito[45] the miasmic theory was universally used to explain its aetiology. Malaria was the chief killer on the West African coast, and this contributed to the long reluctance of European traders to venture inland. Prior to the advent of quinine, the most elaborate precautions were advocated to prevent it and whereas the `air' in Europe was considered healthy and good for Europeans, that in tropical climates was held foul for them. Referring to tropical climates in general, and that of South America in particular, Meredith, writing in 1812 stated:

> `At no time of the year can Europeans breathe pure air; for when there is no rain to cause noxious exhalations, the various rivers, creeks and marshes will supply the surrounding atmosphere with abundance of gross and pestilential vapour'.[46]

The swamps and lagoons which characterised the West African coast,typical for a tropical environment, and possessed of `pestilential vapour' was held inimical to the health of Europeans. And everything must be done to combat or avoid the foul vapour. This included weekly fumigation with sulphorous acid, or oil of vitriol and nitre. Meredith recommended these measures for Cape Coast.Fumigation was held to reduce the severity of fevers and dysentery and abort infections. During the foggy season, the air in Ghana was `strongly impregnated with unwholesome vapours' and

45. J W W Stephens, In: Handbook of the Tropical Diseases, p. 7.
46. H Meredith, An Account of the Gold Coast of Africa with a Brief History of the African Company, (London, 1812), pp. 38-51.



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every art should be employed to purify it.A prescribed recipe for this, and guaranteed for efficacy, consisted of vinegar, sulphur, gunpowder and tobacco.

Inevitably, and not surprisingly, the West African climate was given an exceedingly bad press in Britain and Europe. The case for tropical bad air being the cause of malaria was universally accepted until Laveran exploded that myth in 1880. The bad press continued into the 1920s and beyond.[47] The unhealthiness of the climate was well-publicised. The literature on it is replete with accounts of death, adventure and heroics. They created the vision of an environment inhabited by savages, rife with horrible diseases which dealt death swiftly. These narratives often had inimical psychological impact on the would-be West African traveller. Meredith writes of a ship captain who was ordered to sail from England to Cape Coast in 1807. Considering the order a death sentence, he made his will, invited his friends to a farewell party at which he stated he would never return alive. He never did. He died within a few days of arriving at Cape Coast, after a brief illness.[48]

Through the rapid establishment of anti-malarial and other general prophylactic health measures, European mortality so fell that by the early 1910s the dreaded coast was now considered by some,

47. The bad press was held in some quarters as a deliberate ploy of traders and business people to scare off competitors. GGCRMSD, (1912), p. 12.
48. Meredith, Gold Coast of Africa, p. 39.

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rather exaggeratedly, `as healthy as Brighton'.[49] But the bad press for Ghana and West Africa persisted into the 1920s and 1930s.[50] The absence of palpable organised health facilities and near-total absence of medical education for Africans and its rarity even amongst Europeans, ensured the complete absence of any organised information on diseases: types of diseases, clinical and epidemiological patterns and medical statistical information. During this period then it was open season for explorers, travellers, adventurers and others, to provide anecdotal information on the climate and its hazards and diseases. The absence of medical-scientific information on the microbial causes of infective diseases, (such as malaria, yellow fever, sleeping sickness and many others) till the latter half of the 19th Century spawned and maintained the many false notions on the tropical climate and tropical diseases: hence the miasma theory of malaria causation for instance.

It was not till the 1830s that a scientific body of microscopical knowledge, pioneered by Lister and many others, began to be established.[51] Microscopes only began to enter into general use in Europe and America after 1870.[52] It was in the 1870s that the work

49. The African Mail, (London 30.5.1913). In PRO CO 554/13. The paper goes on to say that `...even those parts where tropical diseases are endemic,have ceased to deserve the name of "the white man's grave"...'

50. See Appendix I on the continued bad press on Ghana and the rest of West Africa,how it scared away potential European investors and created a monopoly for some, and Clifford's attempts to explode the myths on the West African climate.

51. B Bracegirdle, `The Microscopical Tradition', in Companion Encyclopaedia of the History of Medicine, (London & New York, 1993), p. 104.

52. ibid., p. 106. And the microscope figured little or not at all in medical courses before 1830.

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of Louis Pasteur, built on by Lister and others,[53] enabled the germ theory of disease to take root.[54] Similarly, the main developments in physiology, pathology and others occurred in the latter part of the 19th Century. It is of interest that the formalisation of the colonial status of Ghana coincided with the period of intense research and development of the medical sciences in Europe and America.

In the meanwhile the amateurish Europeans ideas on climate and disease in West Africa became established. In Ghana, because there were few medical men, and their work was mainly garrison work, no body of information on the diseases of the people was assembled and documented. And Dr Africanus Horton became the first African medical doctor to publish observations on climate and disease in West Africa. In 1866 he published his `Physical and Medical Climate and Meteorology of the West Coast of Africa'. In this work, he described diseases associated with the harmattan or cold season, such as `...the worst form of gout and rheumatism, with flying pains all over the body, swollen joints, intense local pains...'.[55] Like other medical men of the time, his views and ideas on malaria were conditioned by the poor state of knowledge on it.[56] While stationed at the old Danish fort at Keta he made observations and wrote. He assumed that the malaria at Keta arose from the banks

53. ibid., p. 110.
54. ibid., p. 112.
55. J A B Horton, Physical and Medical Climate and Meteorology of the West Coast of Africa, (London, 1866). Though he did not know it, Horton was certainly describing sickle cell disease. He also published a work on guinea worm in 1868.
56. J A B Horton, Guinea Worm or Dracunculus, (London 1868).

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of the lagoon and recommended that by planting coconut trees along the banks of the lagoon, the leaves might have the power of decomposing malaria.[57] From his researches and observations Dr J F Easmon wrote the first clinical analysis of blackwater fever in 1884. The term blackwater fever, also known as haemoglobinuric fever, was coined by him.[58]

Apart from these works by Horton and Easmon, it can be said that no work on the local diseases of Ghana appears to exist prior to the establishment of the Medical Department. Nevertheless the Bowdich Mission to Ashanti in 1817 and the Anglo-Ashanti Wars of 1863/64 and of 1874 provide some glimpses of disease in the colony.

It is clear from the foregoing survey that the scraps of information on diseases in Ghana up to the 1880s, were confined to the narrow coastline and its immediate interior. No information appears to exist on medical matters in the interior of Ghana prior to Bowdich's mission to Ashanti in 1817.

Bowdich's report, published in 1819, on his mission to Kumasi in 1817, is probably the earliest, comprehensive, extant source material touching on medical matters in the interior of Ghana, particularly Ashanti. His report provides the first glimpse of disease in the interior of the country.[59] Bowdich was the leader of a four-man British political mission sent from Cape Coast to

57. Fyfe, Africanus Horton , p. 44.
58. A Patton, `Dr John Farrell Easmon: Medical Professionalism and Colonial Racism in the Gold Coast, 1856-1900', The International Journal of African Historical Studies, xxii (1989), pp. 601-35.
59. Bowdich, Mission to Ashantee, pp. 370-80.

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Kumasi. Dr Tedlie, a physician, was a member of the mission. In those days, it had become the practice for a physician to accompany officials venturing beyond the European coastal settlements, since no medical help existed beyond the coast. The primary task of Dr Tedlie therefore was the seeing to the health needs of the mission. But an ancillary, and important, political task was to make available to the Ashanti King and people of Ashanti, such health services as the mission could provide. The medical aspect of the Bowdich mission, though a sideline, was, implicitly, an important contribution to the success of the mission. We are fortunate that Dr Tedlie, probably aware of the total absence of information on diseases in this part of the country, took extensive notes on medical matters during the mission. These were fortunately published in their entirety by Bowdich. Dr Tedlie himself died from dysentery soon after the mission's return to Cape Coast. He was only 27.

That the mission went to Kumasi prepared for a degree of medical activity is clear. Dr Tedlie commenced holding clinics the moment of arrival at Kumasi. His patients included the King himself, and the King's household, the royal personages, members of the King's court, commoners and their families and even slaves. There were patients from the surrounding towns and villages. It is interesting, judging from the accounts, the inevitable inference that word of Dr Tedlie's coming must have preceded his actual arrival at Kumasi; or word of the arrival of medical help must have spread quickly upon his arrival. For the Ashanti response to the

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offer of medical treatment was enthusiastic and immediate. Clearly, the fame and knowledge of the efficacy of European medicine in Ashanti must pre-date the arrival of the mission. The readiness and eagerness of the Ashantis to seek medical assistance from the British mission is a testimony to the supposition that modern medicine had already made an important and favourable impression in Ashanti by 1800 or earlier, before Bowdich's time.The evidence also indicates that the mission went to Kumasi with large stocks of drugs, again suggesting the Ashantis were long cognizant with modern medicine.[60] Among the diseases treated and noted by Dr Tedlie were: Dropsy, crawcraw, fever (probably malaria), bowel complaints (probably diarrhoeas and constipation), syphilis (probably syphilis and gonorrhoea), umbilical hernia, hydrocele, bronchiectasis, guinea worm, various skin diseases, hepatitis, cancer of the liver, urethral stricture (most probably resulting from chronic gonorrhoea), general oedema (probably nephrotic syndrome or cardiac failure), cataract, elephantiasis.The King's uncle was treated for urethral stricture by catheterisation, the King's treasurer for an inguinal hernia with a truss, and the King's brother for oedema of the feet. Dr Tedlie achieved such popularity that attempts were made to have him supply sexual stimulants, which he did not have.

A testimony of the popularity of modern medicine during that time in Ashanti was the request for the mission to leave behind large

60. op. cit.

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stocks of drugs for future use.

It would appear Dr Tedlie's was the first and earliest, fairly detailed general impression on disease in the forest belt of Ghana. Until 1880, even along the coast, where Europeans had been active for some 400 years, we find no systematic accounts, from a medical man's point of view. The evidence, put together, clearly suggests modern medicine was quite familiar to, at least, the coastal Africans. The medical aspects of the Bowdich mission to Ashanti attests to the Ashanti Africans' familiarity with modern medicine as well. There is no evidence, of the period we speak, of any experience of modern medicine by the people of the North.

As stated elsewhere, such medical facilities (and other facilities such as primary school) as existed along the coast, were confined to the forts. In the late 1840s, Lord Grey, the Secretary of State was anxious to extend them beyond the strict confines of the forts through the imposition of direct taxation. Such measures were expected to accelerate the civilising of the Africans.[61] But the Africans had to be persuaded of the wisdom and usefulness in their paying such tax. In his instructions to Winniett, in 1849, the governor of Cape Coast Castle was to point out to the Africans the '...great benefits the people [along the coast] have derived from the schools at Cape Coast and from the medical assistance afforded by the Colonial [Army] surgeon...'.[62] The tax was to be used for various visible improvements for the benefit and welfare of the

61. D Kimble, A Political History of Ghana, (Oxford, 1963), p. 169.
62. Metcalfe, Great Britain and Ghana, doc. 164, p. 207.

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Africans.

One major and important problem which confronted governor Hill, Winniett's successor in 1851[63] was how such a tax should be imposed by `...a government possessing no territorial jurisdiction, and the natives not being British subjects...'.[64] The poll tax system, appeared initially successful, but failed. Kimble states that it failed because of failure to eradicate abuses from the system of collection. For none of the supposed benefits,(including payment of stipends to the Chiefs) to Africans occurred. There was scarcely any expenditure for the public good.[65]

But the confusion and corruption surrounding the tax collection, and the Africans' opposition to its collection (based as it was, mainly on their seeing no visible benefits from it) ensured that Pine's reformed scheme also failed.[66]

Thus an important source of revenue,which could have initiated the provision of health facilities for Africans, even if only in the immediate environs of British settlements along the coast, vanished. Prospects for doing anything for Africans beyond the coast were even more dim.[67]

The ineffectiveness and inefficiency of the British West African

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63. Winniett died at he end of 1850. Kimble, Political History, p. 171.
64. ibid., p. 172.
65. ibid., p. 189. Under governor Pine's reformed system of the scheme, part of the tax was to be spent on medical officers and hospitals
66. Pine to Stanley, Desp. No. 39 of 28.4.1858, PRO CO 96/43.
67. For in 1880, governor Ussher was saying that next to nothing was being done for the people of the interior; only for the establishment and staff of the narrow coastline. Metcalfe, Great Britain and Ghana, doc. 327, p. 400. Ussher, an old Coaster, was governor between 1877 and 1881.

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Military Medical Service in the mid-19th Century was exposed when the British had to suspend hostilities in the 1864 Anglo-Ashanti War mainly on account of sickness among British troops. This war and that of 1874 provide us another source of glimpses into disease in Ghana prior to the establishment of the Medical Department.

The British withdrawal and defeat in 1864 was certainly caused by mass sickness among the British troops. The war was fought during the rainy season and descriptions suggest British troops died from dysentery, bronchopneumonia and malaria.[68] The lessons of this medical and military disaster were not lost, this time, on the British during the 1874 Anglo-Ashanti War. The 1874 campaign is of interest, medically, because it provides information on the state of knowledge on the medical and sanitary conditions in Ghana at that time.

Brackenbury leaves a detailed record on health matters associated with this war.[69] The medical arrangements and precautions, and the experience gained from them, provided precedents which were to be drawn on later by a future Medical Department. The medical and health preparations for this war also give a clear indication of

68. Pyfe, Africanus Horton, p. 54. Damp conditions encouraged upper respiratory infection, and even pneumonia among the troops, and no measures appear to have been taken to minimise the exposure of the troops to dampness. The wet season also encouraged the proliferation of mosquitoes, hence malaria infection; it is important to note that the malaria suffered by the troops would be blamed on the 'bad air' for the war was fought when the rains ensured plenty of fog.

69. He was a captain in the Royal Artillery, Assistant Military Secretary to Sir Garnet Wolseley during the war, and was formerly Professor of Military History at the Royal military Academy at Woolwich, England. He wrote the Ashanti War using official records of the campaign as well as his personal experience in the expedition: H Brackenbury, The Ashanti War, (London, 1874), pp. 308-76.

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the then current knowledge of health problems in Ghana. This was the first time white troops were used in strength in a military operation in Ghana. They were supported by troops from the West Indies. In contrast to the 1864 war, the carefully and elaborately planned logistics were integrated with meticulous arrangements for looking after the health of the troops. The lessons of 1864 were kept in mind; the campaign was planned for the dry season, in order to avoid the respiratory and malaria infections of the wet, hot, humid season. Before the commencement of hostilities, a Dr Gore prepared a careful plan, which was executed to the letter, on the sanitary measures for preserving the health of the troops.[70] The measures were designed to avoid water-borne diseases such as dysentery and enteric fever. Troops slept dry on raised beds and sheltered from rains to avoid respiratory infection. Arrangements for conservancy and drainage were elaborate. Through the advanced selection of camp sites and the provision of filters, pure drinking water was ensured.[71]

Smallpox was well-known at this time in the country and Brackenbury's report suggests it was common in the colony. Now, as he states, 'The immunity of the Expedition from smallpox was also of remarkable interest, for the disease ravaged the native community'.[72] All the troops were vaccinated against smallpox. Special hospital huts were organised in advance, for the isolation

70. ibid.
71. The problems of pure drinking water and conservancy were to sorely tax a future Medical Department for decades.
72. ibid.

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of any cases of infectious diseases, should there be an outbreak.[73] Yellow fever, also well-known, was feared and anticipated. A knowledge of its devastating effect and what havoc it could wreak on the expedition, provoked the most stringent quarantine and other precautions. There was already, at this crucial time, a yellow fever scare in the air.

For, a bad epidemic of the disease had broken out in Sierra Leone from December 1872 to February 1873, and there was fear of its recrudescence. Also a fearful epidemic had broken out in Nigeria in May 1873, in which two-thirds of the white residents of Bonny lost their lives. Dormant during the rains, it sprang up again the following dry weather. Sir Garnet Wolseley, now in Ghana, and the local government at Cape Coast, passed a quarantine ordinance with the objective of warding off the disease. But the machinery of inspection had been scarcely elaborated when on 31 October, the mail ship Ethiopia arrived off Cape Coast with four people, including the captain, dead from yellow fever. There were others who had contracted it on board. Under the energetic leadership of a doctor Home, the ship was immediately quarantined, invalided officers prevented from embarking on her, and persons already landed from the steamer isolated in a house outside Cape Coast. A sanitary cordon was drawn around it.[74] Ships subsequently arriving

73. This precedent was to be copied in later years by the Medical Department of the colony. It also presaged the building of contagious disease hospitals in later years.
74. The use of the military and police in sanitary cordons became a regular feature in the control of epidemics in subsequent years. For instance, it was effectively used at Accra during the plague outbreak of 1908.

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at Cape Coast had many cases of yellow fever and were immediately put in quarantine. From that time on, the quarantine law was rigidly enforced. By these measures, the European Expeditionary Force was completely free from yellow fever during the entire campaign.[75]

Another major problem which inhibited the establishment of public services, including health, was the fact of Ghana's coastline, as it then was, being an area of European rivalry. In the 19th century, up till 1872, the settlements of the principal European powers and their enclaves of jurisdiction (the British, Danish and Dutch) were interspersed along the coast: As it was not possible for them to cooperate in making uniform the collection of duties at the ports, indirect taxation could contribute little for the provision of social services. Moreover the different ethnic groups commanded different loyalties to the three European powers. From 1872 (when the Dutch left) the territory became more tidy; only the British now remained and their power and administration became increasing consolidated. Ghana formally became a Crown Colony when by Letters Patent all British settlements were transformed into the Gold Coast Colony, and with Lagos, constituted a separate administration.[76]

It is clear from the above that, until the formal colonial status

75. Brackenbury states that it was commonly held that yellow fever had never been known at Cape Coast; perhaps people were ignorant of the fact that there was only one survivor out of the 123 white troops that landed at Cape Coast, with the great likelihood they perished from yellow fever. GGCMSR, (1935), p. 87.
76. A Buahen, `Politics in Ghana 1800-1874', in History of West Africa, ii, ed. by J F A Ajayi and M Crowther, (Essex, 1974), p. 260.

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of Ghana was settled in 1874, the administrative machinery then in currency, and the then uncertain financial base, militated against the establishment of health services (there might be those who would say the British could have done so anyway if they had so wished). The survey shows that the trading activities of Europeans inevitably introduced modern medicine in its then primitive form. Medical activity evolved around the European settlements along the coast, the primary consideration being the health of the European residents in and around the forts and castles. Some of it certainly rubbed off on the Africans in the immediate vicinity. The need to transport healthy slaves to the New World added to the medical activity, as did the manning of the forts and castles with military garrisons. Till 1878, Military Medical Services became an organised institution, again, with the primary emphasis on the military, constabulary, and official personnel. It was the missionaries who, in the main, provided the ordinary Africans any modern medical care and treatment. In the Anglo-Ashanti wars of 1864 and 1874, health was a critical factor in their outcome. Climate and disease won the 1864 war for the Ashantis. The medical lessons of 1864 were well-learned; and the elaborate medical precautions taken by Sir Garnet Wolseley ensured that military expertise and means, rather than nature and fortune, determined the outcome of the 1874 war. The building of the first civil colonial hospital at Accra in 1878, followed by others in the 1880 (albeit only in the coastal towns) was a logical step in the administration of the country.

# European Population in Ghana: 1898-1952

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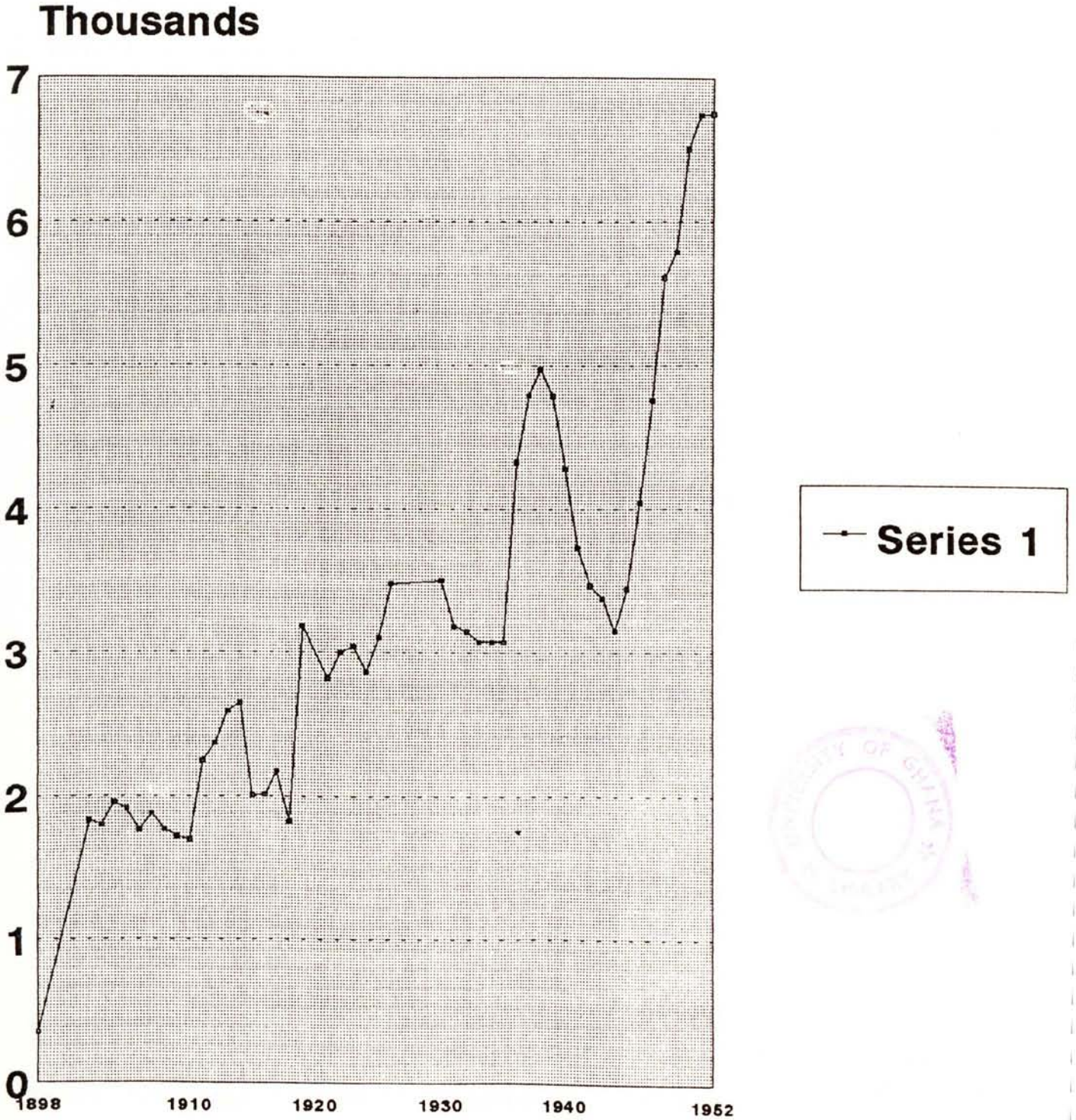
Figure 1




Includes Officials, Non-Officials and Missionaries

# Chapter 2

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## EVOLUTION OF COLONIAL MEDICAL POLICY IN GHANA:1880-1950

When Britain became the sole European power in the country (1872) and the area of British power began to spread beyond the coast (1874),it became possible for the British to administer the colony as a whole. Until 1874 no clear medical policy seems to have been formulated for the country. But from about 1890 an effective medical policy became not only necessary but urgent because of two principal reasons.

The first was that the consolidation of British power and influence in the colony began to increase the European population of British officials, missionaries and businessmen. By the late 1890s and early 1900s, the European population had risen six times what it was in the latter 1880s and the colonial government's responsibilities had expanded over a considerably larger area. Figure 1 shows the time-course of the growth of the European population.[1] The rise in the European population was caused by the rapidly-expanding British colonial administration and the significant increase in British business (commercial and mining)

1.The figure was drawn from a compilation from the Government of the Gold Coast Reports on the Medical and Sanitary Departments (1898 and 1955). About 30% were government officials, 30% and 25% respectively, employees of trading firms and mining companies, and rest Missionaries. Colonial Annual Reports Gold Coast, NAG, ADM 5/1/7 and GGCRMSD, (1915), p. 11.

and missionary activities.[2] And this influx of Europeans created concern for European well-being.

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The second reason for an effective medical policy was that European mortality had always been high as Table 1 shows.

Table 1

European Mortality Between 1893 and 1897

| Year | 1893 | 1894 | 1895 | 1896 | 1897 |
|---|---|---|---|---|---|
| Death Rate of European Officials/Thousand[3] | 31.2 | 33.7 | 66.9 | 60 | 37.5 |

It was caused principally by malaria. For it was not till after 1880 that the curative and preventive methods began to be developed and applied against malaria.[4] The high death rate in Europeans (shown in Table 1 above) was a problem in constant focus, a problem highlighted in 1899 when the Secretary of State, Joseph Chamberlain, stated in the House of Commons, that Ghana was a colony where every European carried his life in his hands. On account of the concern for the health of Europeans, Joseph Chamberlain promoted the establishment of Schools of Tropical Medicine in London and Liverpool in 1898, with the principal aim of reducing the abnormally high mortality of Europeans resident in

2. This is attested to by the fact that the annual revenue of the colony was 258,822 pounds in 1898 and had more than doubled to 673,102 pounds by 1906. Metcalfe, Great Britain and Ghana, p. 751. And in 1898 for instance the Ashanti Goldfield Corporation's first mine started operations; by 1901 some 400 gold mining companies had been formed. The removal of Prempeh in 1896, resulted in a more or less invitation by governor Maxwell to traders and prospectors to enter Ashanti and do business.Kimble, Political History, pp. 24-5.

3. These figures were obtained from GCGRMSD (1897), PRO, CO 98/9, p. 171.

4. Handbook of Tropical Diseases, pp. 7-13.

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colonial tropical climates.[5]

The great concern for European well-being in the country evidently determined that all medical resources of the colony should be directed to securing the health of Europeans. To do this required the build-up of a civil medical infrastructure, virtually from scratch, in the colony. This became possible because of improvement in revenue.[6]

The first attempt to provide civil health facilities was made in 1878 when the army medical service located at Keta, Accra, Cape Coast and Elmina metamorphosed into a civil one; that year the first embryonic civil hospital with admission facility was built at Accra.[7] And in the early 1890s, governor Griffith made a case for health facilities, where doctors were permanently stationed, for four more towns: Dixcove, Saltpond, Winneba and Ada.[8]

As the initial policy of the colonial government (1878-1913) was

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5. It was only in later years that an increased sense of responsibility for the welfare of the Africans began to enter the picture and a realisation of the economic value of health in a community began to be recognised. Colonial Office Conference 1927, Memorandum by the Chief Medical Adviser to the Secretary of State for the Colonies, PRO, CO 323/981/10.

6. Prior to 1872, when the Dutch finally sold their interests to the British, collections from import duty, from which most revenue derived, began to increase significantly. Prior to 1872, revenue never exceeded 40,000 pounds. In 1878, it exceeded 100,000 pounds for the first time and by 1900, was well above 300,000 pounds. For figures see Metcalfe, Great Britain and Ghana, p. 70. It was the paucity of revenue and failure of the poll tax which had militated against the establishment of civil health services in the earlier years.

7. Annual medical reports and primitive statistics on these hospitals and dispensaries in these towns appeared regularly in the Blue Books, (1878-1895), PRO, CO 100/28-45. Apart from inheriting the initial locations of the primitive health facilities from the erstwhile army medical service, the new Medical Department also inherited the nomenclature of its medical establishment. See Chapter 3 for details.

8. Griffith to Lord Knutsford, NAG, ADM 1/2/46, Desp. No. 380 of 23.12.1891.

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the concentration of the affordable medical resources on the European population, all health facilities were located only at centres of European population; it is clear from the many despatches to the Colonial Office in the 1890s that there was the fear for European lives in any town that did not have a medical officer, and all efforts were made to provide medical help wherever the size of the European population merited it.[9] Purely African townships had none, with the inevitable consequence that hospitals and other health facilities continued to preponderate along the coast in particular, and in the south of the country in general, into the 1950s. The medical facilities were primarily for the use of European officials and non-officials, African government officials, troops, police and the Hausa constabulary.[10] European nurses began to be provided regularly from 1897.[11]

As a result of the concentration on European health, between 1878 and 1915, a European had about 300 times greater chance of admission into a hospital bed than an African. Moreover while one hospital bed was available to some 70 Europeans, one bed was available to over 22,000 Africans.[12] Furthermore, some 15% of the European population received hospital admission while less than 0.1% of Africans did. By the mid-1900s nearly 40% of the European population and less than 1% of African were being accorded medical

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9. ibid.
10. On this, see GCGRMSD, (1899), p. 256. All reports of the 1890s show that non-official Africans did receive medical attention.
11. See Chapter 7 for details.
12. These figures were based on calculations from primary data on hospital beds and populations in GCGRMSD, (1884-1955).

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attention annually.[13]

In the 1890s non-official ordinary Africans began to be given limited attention and those of them who had access to these facilities were encouraged to use the service. When governor Griffith proposed the raising of duties in 1891, his important objective was to provide extra medical officers to afford Africans professional medical assistance and supervise sanitation in the towns.[14] And because Africans generally went shy of the early health facilities in 1880s and 1890s, governors Griffith and Young, Dr McCarthy and Dr J F Easmon, made determined effort to increase African patronage of the health facilities.[15] Initially, hospital accommodation was provided for Africans and Europeans in the same building with separate African and European wards. As the colony prospered, separate hospitals were built for the two races.[16]

Although some of the early governors showed some measure of interest in medical care for the ordinary Africans, the policy of European and Official preponderance in health care persisted into

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13. Calculations from primary data in Ibid, (1898-1904). The higher utilisation ratio for Europeans does not here indicate an inferior health status of Europeans. Or the robustness of Africans' health. Indeed the contrary was true. Evidently the figures indicate superior opportunities for Europeans to obtain medical attention. Since the African population receiving medical attention were mostly government employees, the non-official African, the huge majority, hardly received any medical service at all.

14. Griffith to Lord Knutsford, NAG, ADM 1/2/46, Desp. No. 380 of 23.12.1891.

15. Griffith to Lord Knutsford, NAG, ADM 1/2/47, Desp. No. 22 of 21.1.1892 and Young to Lord Derby, NAG, ADM 1/2/37, Desp. No. 45 of 9.2.1885.

16. In 1899, there were hospitals at Accra, Cape Coast, Axim, Keta, Saltpond and Elmina. Kumasi was the only inland town with a hospital. The Ashanti disturbances of 1900 ensured that, mainly for military reasons, a hospital began to appear in the town from about this date on. GGCRMSD, (1899) p. 257. Special hospitals for the Hausa Constabulary began to appear in the 1890s, at Accra and another at Kumasi. In 1899, that at Accra was moved to new premises in the cantonments.

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the early 1910s. By 1908-1912, however, the needs of the non-official African population began to be recognised. The grounds for the Colonial Office's acceptance of the need to change the policy received partial preparation in 1908 (when Roger was governor) when a committee charged with re-organising the West African Medical Service came out strongly in favour of the extension of medical and sanitary service to the indigenous Africans.[17]

When Clifford arrived in Ghana in 1912, he met, in contrast with his experience in Ceylon where he had been Colonial Secretary for several years, a Medical Department which was little used by the bulk of the Africans. It was his immediate stated policy to gradually extend the:

> `operations of the Medical Department among the natives of the colony, in places other than the immediate vicinity of our administrative stations, and to familiarise them with the advantages to be derived therefrom'[18]

In a long despatch to the Secretary of State for the Colonies in 1916, he produced statistical data to demonstrate the insignificant achievement of the Medical Department in so far as concerned medical service to Africans.[19] Clifford admitted the injustice of

17. British Medical Association, `Colonial Medical Service', Br. Med. J. xx (1908), p. 12. Guggisberg pointed out the change in policy. Governor's Annual Address to the Legislative Council, (1927), PRO, CO 98/52, p. 182.
18. Clifford to Harcourt, NAG, ADM 1/2/87, Desp. No. 573 of 12.8.1913.
19. Clifford to Bonar Law, NAG, ADM 1/2/112, Desp. No. 740 of 11.10.1916. Clifford showed 0.1% of Africans were treated as in-patients, some 2.55% as outpatients and only 2.7% received any medical treatment at all; in the hands of a Department whose budget had risen from 63,768 pounds in 1913 to 75,700 in 1915.

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a system in which those (Africans) who paid most of the tax were excluded from even elementary health facilities. He indicated his determination to remove this blot on his administration once and for all. It can be said that by 1917, Clifford's new policy had taken a firm stand on the issue and as Slater, Clifford's deputy, made clear in a despatch to Long, Secretary of State, in 1917, `Attention has recently been drawn to the desirability of extending the benefits of European medicine to the indigenous population of the colony and one way of doing this is to establish native dispensaries under reliable dispensers'.[20]

In persuant of this policy, Clifford immediately included in his estimates for 1914 provision for making an experimental beginning.[21] But his plan to extend medical facilities to the African population could not be achieved with the small European medical staff at his disposal: They were too expensive and the colony could never afford enough of them for the purpose. Accordingly he drew on his experience in Ceylon, proposing dispensary schemes in 1917 which had the merits of cheapness and greater spread.[22] This would involve the employment of great numbers of African Medical Auxiliaries: nurses, midwives, dispensers, vaccinators and other subordinate staff. Such staff did exist from the earliest days of the Medical

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My calculations agree with those of Clifford: The African case/population ratio was 3.3% and the fraction receiving in-patient treatment less than 1%. See Appendix for details decade by decade between 1880 and 1955.

20. Slater to Long, NAG, ADM 1/2/114, Desp. No. 90 of 1.2.1917.
21. Clifford to Bonar Law, NAG, ADM 1/2/112, Desp. No. 740 of 11.10.1916.
22. Clifford to Bonar Law, NAG, ADM 1/2/116, Desp. No. 376 of 11.6.1917 and encl. Minute by PMO Rice.

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Department. But the numbers were small until Clifford's time because of a variety of reasons.[23] These paramedicals were to be trained to run the dispensaries which were to be sited all over the country. When Clifford left office in 1919,there were 28 dispensers and 64 nurses in the major hospitals of the colony.[24] Clifford also laid plans for the building of a great African Hospital,the Gold Coast Hospital (Korle Bu Hospital).

The constraints of the First World War however did not allow much progress in the country-wide dispensary scheme or his plan for a large modern African hospital at Accra. It was not till after the war's end, with Guggisberg as governor, that these projects could be implemented.[25] It was also the acceptance by the colonial government to take full responsibility for the people it ruled that was to eventually lead to plans to start a West African Medical College at Accra in 1927.

It can be said that by 1920, a wind of change had begun sweeping the Colonial Office as regards the wider perception of the increased sense of responsibility for the welfare of the indigenous population in all colonies. The economic value of health in the colonial communities was increasingly recognised and the policy now aimed at `safeguarding and improving the health of all the inhabitants of the Tropics'.[26] This shift of gaze to the indigenous African's health was permitted largely by the phenomenal fall in

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23.See Chapter 7 for reasons.
24. GGCRMSD, (1919), p. 5.
25. R E Wraith, Guggisberg, (London, 1967), p. 83.
26. Colonial Office Conference, 1927, PRO, CO 323/981/10.

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the European mortality, the increasing prosperity of the colony and the institutionalising of residential segregation.[27]

Even though the colonial government of Guggisberg had shifted its main attention to the medical and health needs of Africans and their environment in general, the gaze was not completely off the European population. Table 2 below demonstrates the fact that in the 1920s and subsequent years, more resources were spent on every European patient than an African patient.

Table 2

Cost Per Patient Per Day During Hospital Admission[28] (Pence)

| Year | European Hospitals | African Hospitals | European/African Ratio |
|---|---|---|---|
| 1929 | 65 | 14 | 4.6 |
| 1930 | 60.5 | 13.5 | 4.5 |
| 1931 | 52 | 7.5 | 6.9 |
| 1932 | 61.8 | 7.5 | 8.2 |
| 1933 | 54 | 7 | 7.7 |

A most important policy designed mainly to safeguard the health of

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27. From about 30-60 per thousand prior to 1900, 20 in 1903 and 12 in 1924 (values as low as 5 per thousand or less were not unusual). Governor's Annual Address to the Legislative Council, (1927-29), PRO, CO 98/52, p. 196. As early as 1913, it was being pointed out that West Africa was no longer `the white man's grave'(The African Mail London, (30.5.1913), in PRO, CO 554/13, Clifford was doing battle to correct the outdated malignant view of the health and climate in Ghana (Clifford to Harcourt, NAG, ADM 1/2/87, Dep. No. 573 of 12.8.1913) and in the 1920s Guggisberg was saying publicly `It is persons of...timid nature who are responsible for the maintenance of such trash as "The White Man's Grave", a sensational expression which naturally appeals to the home public'. Governor's Annual Address to the Legislative Council, (1927-1929), PRO, CO 98/45, p. 89.

28. These figures were obtained from GCGRMSD (1929-1933). It is noted that: in the late 1920s, the upkeep of Europeans on admission cost about five times that for Africans; and during the worst period of the depression years, economy in the upkeep of patients admitted to hospital was made largely at the expense of Africans. Note the rise in European/African upkeep ratio from 4.6 in 1929 to 8.2 in 1932.

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Europeans was the policy of residential segregation. This policy could never lose the ill-complexion of racial segregation. It was defined by Dr Kirk, the Director of Medical Services in the early 1940s as ` the method [as a preventive measure] adopted... because the infected [Africans] are so widespread and in such large numbers that it is impossible to isolate them; we are therefore left with isolating en bloc the susceptible [European] community- that is, segregation'.[29] This method of isolating Europeans was first proposed by Dr J F Easmon the first Medical Officer of Health of Accra. In 1894, his proposal for moving European officials from the overcrowded African town to a new site mid-way between Accra and Christiansborg, Victoriaborg, was accepted.[30] Accra had become hopelessly insanitary. This novel measure for safeguarding Europeans' health was the first in West Africa, soon to be followed in other British West African Colonies. The understanding of the mode of transmission of malaria in the 1880s and 1890s provided another powerful reason for institutionalising residential segregation. The reasoning was that malaria was endemic in the Africans, and they formed a resevoir of the plasmodium parasite. Africans were purported by Boyce to be `as saturated with yellow fever as he is with malaria'.[31] By keeping of Europeans apart from the `malaria and yellow fever-infected Africans' it was hoped to reduce the incidence of both diseases in Europeans. Secondly, the

29. Burns to Viscount Cranborne, PRO, CO 96/774/11 of 28.7.1942.
30. Easmon to Colonial Secretary, PRO, CO 96/238 of 27.9.1893.
31. GCGRMSD, (1932-33), p. 89.Boyce was an expert on tropical diseases, especially yellow fever, in the 1900s and 1910s.

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mosquito was identified as the principal vector in the transmission of the plasmodium parasite and the yellow fever virus. Mosquito control became a most important feature of the prevention of both diseases. One way of minimising exposure of Europeans to mosquitoes was the segregation of European residences where mosquito control could be more effectively carried out. In reporting on the serious outbreak of yellow fever in 1910 at Sekondi in which nine out of ten Europeans who contracted it died, Dr Rice, the Senior Medical Officer in charge of sanitation, pointed out the importance of segregating whites from the Africans.[32]

Analysing the death and invaliding rates of the preceding five years for Sekondi, Dr Rice demonstrated that segregated Europeans had impressively lower death and invaliding rates than non-segregated Europeans.[33] Boyce, sent out by the Secretary of State for the Colonies to report and advise on the 1910 epidemic, recommended residential segregation as the most important, practicable and immediate measure.[34] This measure received strong support from Dr Hopkins, the Principal Medical Officer.[35]

When the Principal Medical Officers of the British West African colonies met in conference in Lagos in 1912, they passed a resolution which strongly recommended residential segregation and

32. ibid., (1935-36).
33. The death and invaliding rates for the former were 5 per thousand and 160 per thousand respectively; and for the latter, 230 and 860 per thousand: Ibid, p. 92. The segregated Europeans were mostly government officials and the non-segregated, non-officials.
34. ibid.
35. Clifford to Harcourt, NAG, ADM 1/2/84, Desp. No. 233, of 14.4.1913, encl. of P M O Dr Hopkins.

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urged colonial governments to institutionalise a policy for it.[36] Its usefulness was accepted by all the West African Administrations, French and British, represented at a conference held at Dakar in 1928.[37] It received further reinforcement at the Pan-African Health Conference held at Johannesburg in 1935.[38] Such residential areas were set a good distance from the African towns and, as far as possible, situated at the highest local elevation.[39] The advantage of locating such areas on high ground and ridges was two-fold: The higher altitudes were cooler, making houses on them more comfortable and relatively inhospitable to and difficult to reach by mosquitoes. The accommodation of whites in such special areas were separated by at least a quarter of a mile from the African townships. And separating them was a circular building-free zone not less than a quarter of a mile across, within which neither Africans nor Europeans were allowed to settle.[40]

The objective of this building-free zone was to minimise the danger of mosquitoes infected in the African quarter flying to the houses of whites. It was verified that rarely would the types of mosquitoes in Ghana be able to fly the distance of a quarter of a mile. Only the irreducible minimum of adult Africans were allowed to sleep at segregated residential areas. And vigorous but futile

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36. ibid.
37. GCGRMSD, (1935), p. 37.
38. Report of the Pan-African Conference held at Johannesburg in GCGRMSD, (1935), p. 100.
39. ibid., (1915), p. 19.
40. ibid., (1911), p. 63. and (1935), p. 92.

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steps were taken to keep away African children and wives from such areas.

As a result of the 1910 yellow fever outbreak at Sekondi, speedy official action began to be taken to strengthen residential segregation: In 1911, segregated areas for Europeans were, or were in the process of, being acquired at Kumasi, Dunkwa-on-Ofin, Sekondi,Tarkwa, Axim, Cape Coast, Saltpond, Winneba and Nsawam;[41] and 1914 saw the commencement of the exodus of Europeans from African townships to specially reserved segregated areas at Sekondi, Cape Coast, Axim, Saltpond, Winneba, Dunkwa, Tarkwa and Kumasi.[42]

Facing the concept of residential segregation were the problems of policy and cost. The concept was harshly criticised by governor Clifford though he was not completely opposed to it. He challenged that there was not sufficient statistical data actually proving improvement in the health of Europeans in practice to justify government embarking on the enormous expenditure which the policy required. Clifford pointed out furthermore that his government was not justified in imposing on the colony a financial burden more than the colony could bear, for the sake of European well-being only. He argued that Europeans came to Africa, knowing and accepting the risks involved and it was because of these risks that they were accorded unusually favourable conditions of service. He also questioned the policy's political wisdom and ethics of

41. ibid., (1911), p. 63-5.
42. ibid., (1914), p. 46.

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dispossessing large numbers of Africans of their homes as result of the scheme.[43] Mining companies, merchants and missionaries resisted long to submit to residential segregation principally on account of cost.[44] They, and not the Africans, were the bitterest opponents of residential segregation and sanitation.[45] They consequently suffered far more severely than officials from malaria, yellow fever and other illnesses. The government took steps to encourage European non-officials to live outside of the native towns, by offering land on easy terms for the erection of bungalows on approved plans.[46] Initially few firms took advantage of the offer. The mining companies were probably the first non-governmental concerns which instituted segregated residential accommodation with utmost seriousness. Other European companies which had previously resisted residential segregation began to respond to the need for it by the mid-1910s; one such firm took immediate action to segregate its European employees when some of its European staff

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43. Clifford to Harcourt, NAG, ADM 1/2/84, Desp. No.233 of 14.4.1913.
44. loc. cit. Mining companies were the first non-governmental concerns to embrace residential segregation. It was probably easier for mining companies because of their easier access to land. Aware of the land problem, government soon acquired land and offerred it cheaply to mercantile firms in the towns for the purpose of building separated European accommodation. It was easier to pursue this policy as regards government officials, less so for European non-officials. For at the turn of the 20th Century, the majority of European non-officials of the business community lived over their business premises which were situated in the heart of the African towns.
45. The European business agent usually lived in the African town, in quarters `...usually palatial whilst those occupied by his assistants (Africans) are often such as,could the shareholders at home realise their condition, they would blush to pocket their dividends...', GGCRMSD, (1911), p. 65.
46. ibid., (1908), p. 13.

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died from yellow fever.[47] Yellow fever was proving a powerful ally on the side of advocates of residential segregation. By 1930 the lesson had been learnt and most non-official Europeans were living in segregated accommodation and there was little difference in death and invaliding rates in officials and non-officials.[48] Syrians however continued to prefer to live in the African towns. As consequence they continued to suffer considerably from various illnesses and, often, were the first attacked in yellow fever outbreaks.[49]

By the early 1920s, the value of segregatiion of whites, on purely scientific grounds, for medical and health reasons, was considered to have been repeatedly demonstrated and with finality.[50]

But there were those who considered the policy racially motivated. Apart from Clifford, governors Hodson and Burns were perhaps the greatest opponents of residential segregation because they, although accepting its merits in public health, thought the policy had outlived its day. Hodson was opposed to its rigid application.[51]

Burns, a strong opponent of racial bias and racial segregation,

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47. ibid., (1915), p. 20.
48. ibid., (1935), p. 87.
49. ibid., (1937), p. 17. There is no evidence Syrians and Lebanese figured in the colonial government's concern to segregate whites.And it is moot they were offered land on similar terms as European business firms.The evidence suggests Syrians lived at their business premises largely for security of their business premises and cheapness.
50. ibid., (1935), p. 87.
51. Exclusion of Africans from European Residential Areas: Encl.6, Minute by Hodson of 12.3.1938, PRO, CO 751/11. In 1938, the Central Board of Health refused permission for the installation of a Broadcasting Station in the cantonments on the grounds that it was in violation of the segregation law. Hodson opposed the Board. The matter went all the way to the Secretary of States in the Colonial Office, which, in the end upheld Hodson's objection. In the arguments which this

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stated as rash a statement by a Director of Medical Services that racial segregation did not exist in Ghana.[52] And in riposte to European resistance to the relaxation of the segregation laws said `Even a civil servant's cranium cannot hold out against the impact of a train'.[53]

It has to be stated that residential segregation in Ghana was initially designed to separate Europeans' accommodation from the chaotic insanitary African quarters in the hope of protecting Europeans' health. Political, social and racial factors contributed to its introduction. The advantages of the policy were later confirmed, supported, and justified by scientific fact. It is difficult not to say that racial considerations played a part in the initial justification of residential segregation. Some may say it was initially based on scientific considerations and racial bias a post facto justification.But it must be said that it was clearly impossible to reduce mortality and morbidity by a country-wide programme and campaign to root out malaria and yellow fever; without resorting to residential segregation.

Residential segregation thus became a huge cost to the colony's

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problem sparked, racial bias could no longer be ignored. Hodson, probably at his most sarcastic and mocking, asked the Central Health Board: `Do they [the Central Health Board] wish to prevent the Military Band from playing at government dances at the Residency, Kumasi,or in other Residential Areas ? If so this will prevent any dance being held as there are no European bands in this country. Do they wish to prohibit the Police from patrolling the Residential Areas at night in order that burglaries etc may not take place ? And if so who will be responsible for law and order in these areas ?'.

52. Burns to Viscount Cranborne, Gold Coast Confidential of 18.7.1943, PRO, CO 96/774/11.

53. PRO, CO 96/775/9.

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treasury.

It was during governor Guggisberg's administration that the clearest and the most comprehensive colonial medical policy was enunciated and prosecuted during the entire colonial experience of Ghana. His policies were to remain the basis of health services right into the 1950s and beyond. Guggisberg's public health policy came under eight headings:[54] The care of the sick: professional training of African medical and public health officers;infant welfare; general health education of the people; sanitation and improvement of towns and villages; medical research; epidemics and others. And significant strides were made in each policy area. The prosperity of the 1920s (helped in 1919-1922 by Clifford's careful husbanding of the colony's growing wealth), enabled Guggisberg's government to carry out far-reaching public health reforms.

54. Governor's Annual Address to the Legislative Council, (1927-29), p.184, PRO, CO 98/52.

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The data in Table 3 provides an overview of the results of this policy.

Table 3

Comparison of various public health indices between 1905 and 1935

| | 1905 | 1915 | 1925 | 1935 |
|---|---|---|---|---|
| Annual Revenue(Pounds)[55] | 572,462 | 1,456,130 | 4,116,442 | 3,268,378 |
| Medical Expenditure[56] | 36,054 | 116,656 | 277,484 | 293,431 |
| Afr.Per Capita Med Exp.[57] | 0.49d | 1.55d | 2.42d | 1.66d |
| Hospitals/Dispensaries[58] | c10 | 18 | 40 | 72 |
| African Hospital Beds[59] | c70 | c110 | c700 | 977 |
| No. African Patients[60] | 1989 | 48,461 | 97,443 | 271,490 |
| African Case/Pop Ratio%[61] | 0.13* | 3.2* | c6.5** | 7.7** |
| European Hospitals[62]: | 3 | 4 | 7 | 7 |

The figures speak for themselves. The care of the sick was no longer exclusively confined to Europeans in general and African officials. It was from now on open to all Africans. There was also a qualitative aspect to health policy of the 1920s. Prior to 1920, the majority of hospitals and dispensaries were poor and badly designed. By the end of the 1920s, the majority of hospitals and dispensaries were well-designed and well-built and in the larger

55.Metcalfe, Great Britain and Ghana, p. 751.
56.Gold Coast Annual Reports, NAG, ADM 5/1/82, 5/1/92, 5/1/102.
57.Calculated from primary data from GCGRMSD and Colonial Annual Reports on the Gold Coast of the years indicated.
58,59,60. 1905 and 1915 from: Statistics in Blue Book, PRO, CO 100/55 and 100/65; 1925 and 1935 from: GCGRMSD, 1925/26 and 1935/36.
61, 62.Calculated by author from primary data obtained from Colonial Annual Reports, Gold Coast, NAG, ADM 5/1/13*, 5/1/23*, and GCGRMSD, (1925/26 and 1935/36).

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towns maternity and child welfare centres facilities were well-established.[63] By 1930, the welfare service had reached its high water mark; though retrenchment of the 1930s threatened its extinction, it survived;[64] its activities broadened and extended to other towns in the 1930s, 1940s and 1950s.

One of the most important consequences of maternal and child welfare service was the beginning of the awakening of sanitation and health consciousness in Africans in their homes, a culture, which one might say, was wholly alien to the African community. For up to about 1910, no sanitation worthy of name existed in the country. Guggisberg was in a position to know something of the state of sanitation in the country because he himself had travelled up and down the colony in the 1900s and early 1910s as a surveyor. In his annual address to the Legislative Council in 1927, he described sanitary conditions in the country in the 1900s:

> `In Accra, the capital, and in all the coast towns the conditions were very bad. The conservancy system was primitive in the extreme...the water supply was rain water collected from the roof in storage tanks..tanks were frequently dry, and foul water from polluted wells was often sold...housing was extremely bad. No attempt had been made at town-planning. The native quarters consisted of dark, ill-ventilated hovels crowded together...merchants lived over their

63. Colonial Annual Report, Gold Coast, (1932/33), NAG, ADM 5/1/109.
64. See Chapter 6 for details.

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stores surrounded by insanitary native compounds... Government officials lived in bungalows made in England, brought out and re-erected outside the towns...'.[65]

The complete absence of competent leadership, and to some extent, financial stringencies, ensured nothing was done about sanitation till administrative changes commenced in the early 1880s.[66] Such progress as was made in sanitation and health was ultimately due to one single person: Joseph Chamberlain, the Secretary of State for the Colonies between 1896 and 1903 (vide supra); various governors made their contributions (see Chapter 4) which eventually led to the establishment of the Sanitary Branch in 1908. The most important and crucial initial steps were taken by governor Roger, but it was Clifford who first vigorously pursued the sanitary reforms started by Roger.Other subsequent administrations pursued the policy into the 1950s.[67]

One of the most important policies put into effect in the 1920s was the concept of mass disease eradication campaigns. The first, and eventually the most successful, was the yaws eradication campaign. Started in about the mid-1920s, it saw the incidence of yaws reduced in the urban centres from about 30% to close to 10% by 1930. The yaws campaign was carried into the rural areas with much vigour in the 1940s under governor Burns, particularly in Ashanti

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65. Governor's Annual Address, (1920-27), p. 182, PRO, CO 98/52.
66. T S Gale, 'The Struggle Against Disease in the Gold Coast', Unpublished paper, 1994.The first administrative change was the appointment of Dr J McCarthy as the colony's first Chief Medical Officer in 1883 and the second Dr J F Easmon as the first Medical Officer of Health in 1884.
67.See Chapter 4 for details.

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and the Northern Territories. The anti-trypanosomiasis campaign commenced in the mid-1930s, and along with the anti-yaws campaign, were very successful; resulting in the removal of yaws and trypanosomiasis as threats to the economic well-being of the country. In 1948, the two campaign teams were merged into what became the medical field units in the 1950s. The medical field units not only tracked down endemic diseases and treated them in the rural areas, they performed most valuable work in the area of preventive medicine, as well as being a most valuable source of statistical data on rural health and endemic diseases. There has been none of its kind in the country ever since, even though there is a crying need for it. The African government of the 1950s saw its importance and accepted and promoted the recommendation of the Maude Commission, of its strengthening and extension to various parts of the country.[68] This arm of the medical service was so important that it was strongly urged on government in 1961 to further strengthen it in the 10-year programme for health services for Ghana.[69] By the late 1940s, the concepts and practice of sanitation, preventive medicine, and health education had merged and begun to be handled under the umbrella of health centres, in the rural areas.

In the 1950s, the medical policy of the African government was clearly defined and based on the recommendations of the Maude

68. Statement by the Gold Coast Government on the Report of the Commission of Enquiry into the Health Needs of the Gold Coast, (Accra, 1955), p. 2.
69. The Health Services in Ghana: A ten-year programme 1961-1970, (Accra, 1961), p. 14.

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Commission of enquiry into the health needs of Ghana.[70] On top of the list was the expansion of the medical field units. Improvement of existing hospital facilities and a moratorium on the building of new ones, establishment of health centres throughout the country and an increase in the number of dressing stations, constituted the rest of the government's medical policy. By 1960, there were 23 health centres and another 23 under construction.They were evenly distributed in the country.[71]

Although the government of the 1950s considered that sanitation was a proper responsibility of local authorities, but because largely it is capital intensive and the local authorities were ill-organised to handle it, the central government continued to shoulder the responsibilities.

Medical research of the early days in Ghana, as it was in other British West African Colonies, was aimed at finding solutions to the high European mortality in West Africa. It was in an effort to find a solution to this that Chamberlain decided to establish the Schools of Tropical Medicine in 1899 and encourage the scientific enquiry into the causes of tropical diseases.[72] The establishment of a primitive laboratory at Accra in 1899, its graduation into a proper laboratory during the plague epidemic of 1908, its consolidation under Dr Scott MacFie from 1914 on, and its eventual achievement of the status of a Medical Research Institute in 1919,

70. Report of the Commission of Enquiry into the Health Needs of the Gold Coast, (Accra, 1952).
71. Ten-year health programme, p. 61.
72. Colonial Office Conference, (1927), PRO, CO 323/981/10.

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were a natural chain of events reflecting the policy of Chamberlain and his successors in the Colonial Office. The valuable work of the institute reached its acme when the Rockefeller Yellow Fever Commission demonstrated in 1927 at Accra that the macaque monkey was capable of being infected with the yellow fever virus, thus paving the way for the development of an effective vaccine against yellow fever. Medical research came into bad times in the 1930s and 1940s when policy saw the conversion of the institute's functions into mere pathological service laboratories. The attempts to revive medical research in the 1950s failed, although the African government accepted the Maude Commission's recommendation for a West African Council for Medical Research and '...agreed that research by individual officers should be given every encouragement and that the Medical Research Institute should as soon as possible, resume its original function'.[73]

We also note that the Clifford policy to extend the medical service to Africans evoked the need to evolve a policy for training African medical officers. Clifford's policy on this, by and large, did not go beyond the speculatory. Guggisberg knew precisely that it was only when indigenous African medical officers were trained in their own environment that the problem of the dearth of medical officers would be solved once and for all. As noted elsewhwere, his plans for a medical college at Accra came within an ace of consummation. In the 1930s and 1940s the government was reduced to providing

73 Government Statement on Maude Commission Report, (Accra, 1955), p. 3.



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training for one or two Africans each year. The African government of the 1950s went to all lengths to see to the establishment of a medical school. This finally happened in 1963.

It is clear that although the initial medical policy focused mainly on Europeans, within thirty years of the introduction of this policy, all Africans began to benefit from modern medicine. Unfortunately the colonial governments passed on to the new African government a medical legacy which was largely curative- rather than preventive-oriented. The result of this has been that government expenditure on curative medicine continues to be overwhelmingly greater than on preventive, and the medical problems (which are largely of preventive nature) of the rural majority remain largely untouched.

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# Chapter 3

## THE ORGANISATION AND DEVELOPMENT OF PUBLIC HEALTH SERVICES AND FACILITIES

The development of modern medicine in Ghana can be divided into four distinct phases spanning the periods 1880-1919, 1920-1930, 1931-1950, and 1951-1960.Each period had its distinct historical characteristics, each marked by changes and modifications in public health policy. The evolution of the medical services in the country is best analysed, narrated and understood within the framework of these phases. In this chapter, an account shall be given of the general public health services and facilities, commencing from about 1880 when the first primitive civil hospital was built at Accra, and ending in 1960 when Ghana had achieved political independence and had become a republic.

The period 1880-1919, a period with its own distinct historical characteristics, could be considered tentative years in the development of modern medical services in Ghana. The foundation of the administrative machinery, which was to guide in the governance of the country the next several decades was laid during this period. Since medical services went wherever the British went, the origins of modern medical services in Ghana can also be traced to this period:The development of the administrative machinery in general, and of the medical services in particular, went hand in hand.

The administrative arrangement of the new Medical Department was a simple one.The Secretary of State appointed all medical officers.

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The most senior medical officer was the Chief Medical Officer (CMO). He resided at Accra and advised the governor on all medical and sanitary matters.His main functions were the responsibility for advising on the formulation of government public health policy and its execution,and the administration of government health services.[1] Till the early 1920s, he was a statutary official member of the Legislative Council and till 1950, a member of the Executive Council.[2] The next most senior person was the Colonial Surgeon, who deputised for the Chief Medical Officer when the latter was on leave or unavailable for any reason. The rest of the medical staff consisted of several Assistant Colonial Surgeons. At the top of the staff list therefore was the CMO, followed by the Colonial Surgeon and Senior Assistant Colonial Surgeon, the most senior of the Assistant Colonial Surgeons, followed by the more junior in descending order.

The subordinate staff consisted of African dispensers who soon acquired a high reputation, ill-trained African male nurses who generally did not like their jobs because of poor pay and their contempt for nursing, dressers and labourers. It was not till 1897 that European nursing sisters began to enter the service regularly.[3] The first Chief Medical Officer of the new Medical Department was Dr J McCarthy who was transferred to Ghana from

1. Colonial Annual Reports, Gold Coast, (1884-1898).
2. In 1953, the first Ministry of Health was merged with the Medical Department and these functions passed to the Minister of Health. Report of the Ministry of Health, (1955), p. 7.
3. See Chapter 7 for details on the Supporting Medical Staff. The high reputation of dispensers is exemplified by the fact that Dr Nanka-Bruce and Dr Reindorf, the

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Lagos in 1883.[4] He was eight years, 1884-1892, Chief Medical Officer. When he resigned in 1892, he received a pension and was awarded CMG.In recommending Dr McCarthy for a pension even though he had not reached retirement age, governor Griffith praised his intimate acquaintance with the life and diseases of Africans, his zeal for sanitation and all matters a CMO was duty bound to perform.[5] Dr McCarthy was succeeded by Dr J F Easmon as Chief Medical Officer in 1892. The major achievements of Easmon were that: he was the first African Chief Medical Officer; he was the first to describe the clinical features of haemoglobinuric fever and coined the term `blackwater fever' for it; he was the first medical officer of health in Ghana with prime responsibility for sanitation. It was he who set in motion the concept and practice of segregating European residences from African for the purpose of protecting European health.And it was during his tenure that governor Griffith proposed, in 1894, the training of African doctors at Accra from the ranks of dispensers. Dr Easmon was however virtually run out of office in 1896 by governor Maxwell on grounds of being too close to his family's newspaper business and

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third and fourth Ghanaian-born medical officers were, initially, dispensers. Actually the first two European nursing sisters were brought out in 1878 to look after the health of government officials at Accra. Commission of Enquiry on the Health Needs of the Gold Coast, (Accra, 1952), p. 33. However, it was not till 1897 that an experiment began to be tried to ascertain whether European nurses could be relied upon to hold permanent appointments in the Medical Department. It was a success. GCGRMSD, (1899), p. 254.

4. Opening Ceremony of the Gold Coast Hospital, Accra, 1923, by HE Brig-Gen Sir Frederick Gordon Guggisberg, NAG, ADM 11/1/850.

5. Griffith to Marquis of Ripon, NAG, ADM 1/2/46, Desp. No. 81 of 26.11.1892.

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having engaged in private practice in contravention of regulations which forbade CMOs private practice.[6] Dr W R Henderson succeeded Dr Easmon in 1896. The important feature of Dr Henderson's tenure was his participation in the committee which recommended the establishment of the West African Medical Service (WAMS) in 1902. By the establishment of WAMS, service conditions of medical officers in West Africa were greatly improved making it easier to recruit British medical officers (and of much greater quality) into the service of the Medical Department.[7] The other Principal Medical Officers (PMOs) who followed were Dr Langley in 1907, Dr Hopkins in 1910 and Dr T E Rice in 1916.[8] Dr Langley oversaw the creation of the new Sanitary Branch and the Accra Laboratory in 1908, Dr Hopkins the beginnings of African inclusion in the medical services and the strengthening of the Laboratory Branch in 1914, and Dr Rice the beginnings of Clifford's country-wide dispensary scheme.

Medical officers performed a wide range of duties, professional and extra-professional. Their primary function was to look after the health needs of European officials for the great problem of the colonial government during this period was how to keep Europeans alive and healthy for decent periods in the colony; the European

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6. The real cause of Easmon's dismissal was racially-motivated. After the termination of Easmon's appointment in 1896, no African ever became CMO till Dr Eustace Akwei's appointment in 1955. For more on racism in the medical service in the late 1890s, and on Griffith's proposal of local medical training see Chapter 5.
7. See Chapter 5 on medical officers for details.
8. From 1902 till 1920, the Chief Medical Officer became known as the Principal Medical Officer, and then as Director of Medical and Sanitary Services.

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mortality was horrendously high, particularly prior to 1900.[9] Their next duty was to look after African officials, the military and police, inmates of gaols and asylums. The ordinary African was largely ignored for the time being.

A medical officer travelled constantly under primitive and difficult conditions to cover the wide area allotted to him.[10] The usual arrangement was that in between the doctor's visits, a dispenser remained in charge of the health outpost. Their many extra-professional duties coupled with poor salaries contributed to the reluctance of British doctors to serve in the colony.[11] But this reluctance was more than matched by African reluctance to use the health facilities.

For although it was true that during the first thirty odd years of the establishment of the Medical Department medical services were not for the consumption of the ordinary African by policy, the sick ordinary African was not turned away. But he was reluctant to use the service. While educated Africans, and there were very few, were often quick to seek medical attention, most uneducated ones were reticent for decades.[12] Outpatient service was not unpopular but

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9. See Chapter 2 on European mortality during this period.
10. Griffith to Marquis of Ripon, NAG, ADM 1/2/46, Desp. No. 81 of 18.3.1893. See Chapter 5 for details on the many duties of MOs.
11. See Chapter 5 for details on conditions of service and extra-professional duties of MOs. An important characteristic of this phase of public health services was the poor pay of MOs as result of the smallness of the colony's revenue: Between 1880 and 1909, annual revenue averaged some 300,000 pounds; the million pound mark was only reached in 1910. The mean was calculated from figures from Metcalf, Great Britain and Ghana, pp. 750-1.
12. Annual Report Northern Territories, 1901, ADM 56/1/212, Prov. M.O to Chief Commissioner Northern Territories, p. 9. This initial reticence was due to the African's reluctance to abandon his age-old traditional methods of healing.

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hospitals were feared, being a completely alien experience. Moreover, many who gained admission died there for the simple reason (unknown to patients at the time) that they resorted to hospital admission only when everything else had failed, often reaching hospital moribund. Africans initially generally viewed hospitals with suspicion and would not go near them and it took the considerable effort of Dr J F Easmon and his colleagues in the 1880s to initiate the gradual breaking down of their prejudices.[13] This was particularly true of chronic diseases for which prompt cure was impossible and requiring long tedious periods of hospitalisation. Even in the face of epidemics and death, Africans were loath to submit themselves to modern treatment.[14] Hospital fees contributed to African reluctance to use modern health facilities. They were small but expensive for Africans. African officials and their wives and children got free treatment and medicine and were charged small fees per diem for admission; in the 1910s this fee ranged from six pence to three shillings and sixpence per day.The first Hospital and Dispensary Fee Ordinance was enacted by governor William Maxwell in 1898 and Africans' immediate response to it was to further stay away from the health facilities,as reported for instance by Dr B W Quartey-Papafio from Saltpond and Anomabo in 1899.[15] In general, modern medicine competed

13. Young to Lord Derby, NAG, ADM 1/2/37, Desp. No. 45 of 9.2.1885.
14. See Chapter 9 under Influenza and Smallpox as an illustration and also GCGRMSD, (1912), p. 93; and Griffith to Lord Knutsford, NAG, ADM 1/2/47, Desp. No. 22 of 21.1.1892 on the same subject.
15. Clifford to Harcourt, NAG ADM 1/2/94, Desp. No. 780 of 19.10.1914. See also: Low to Chamberlain, NAG ADM 1/2/52, Desp. No. 226 of 11.6.1899 and Dr Quartey-

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with African traditional methods. Medical reports are replete with instances of Africans' pragmatic approach to cure: Trying cure by traditional methods, failing, and then and only then, submitting to modern mode of treatment, often when his condition had progressed irreversibly; alternating traditional and modern methods of treatment, or the two methods simultaneously and persisting in the mode considered more efficacious and producing faster relief. This attitude was particularly disastrous in tuberculous Africans.[16] It can be said that up to about 1900, attendance at hospitals and dispensaries was poor-to-nil and irregular. And in all this, what was the attitude of Africans to modern doctors ? As Patterson states: `The colonial physician [at this time] was often a puzzling figure for Africans. He was usually a white male, a stranger who had to use an interpreter. He often asked impolite questions, demanded, [for reasons unknown to patients], samples of blood, urine and faeces; and sometimes cut open the bodies of the dead. On the other hand, he frequently had great power over sickness and injury'.[17]

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Papafio's report of 1899 on African reluctance to use the dispensary serving Saltpond on account of fees : GCGRMSD, (1899), p. 261; and on the same subject, Hodgson to Chamberlain on Colonial Chaplain's complaint about hospital fees: NAG, ADM 1/2/51, No. 290 of 27.7.1899. European officials got treatment and medicines free, but paid a small fee per diem for admission. This fee depended on rank and salary. Treatment for non-official Europeans was not free. They paid a fee to the hospital and the MO who attended them. Europeans, including officials, often complained hospitalisation fees were excessive and preferred, when ill, to remain in their quarters rather than incur the hospital admissions fee.

16. The dramatic cure in the modern treatment of yaws in the 1920s produced two important effects: Africans began to clamour for modern treatment, particularly in treatment by injection. It also created the belief that all effective treatments must be by injection.

17. Patterson, Health in Colonial Ghana, p. 15.

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A brief review, at this juncture, is pertinent, to the state of affairs in Ghana prior to 1910, from the point of view of health, sanitation and medical facilities. For at this time, as Guggisberg said in the 1920s, Ghana was a colony of sinister obscurity. For prior to 1914, even the larger towns had no pipe-borne water whatsoever.[18] And neither did they have a lay-out. Housing was primitive and poor and bush grew practically everywhere. Tins, bottles and general rubbish were strewn around with abandon. The villages consisted of collections of huts, which could only be described as hovels with thatched roof; they had no streets and the dwellings had no regularity of alignment. Human excrement was deposited anywhere within and without places of dwelling. It can be said with confidence that sanitary conditions were appalling, the practice of sanitation non-existent and the new Sanitary Branch of the Medical Department (from 1908 onwards) faced the monumental task of instituting sanitary measures in a community with no sanitation culture and which had apparently come to terms with such conditions. In the event, the task was long, tedious and expensive; the Africans often demonstrating frank hostility.[19] Government hospitals and dispensaries existed in some of the government stations. They were poorly, badly designed and often consisting of converted old bungalows adapted for the purpose. They were often referred to as bush hospitals and sometimes built with

18. Accra acquired a pipe borne water in 1914, and Sekondi two years later. Obuasi was the first town provided piped unfiltered water in the mid-1900s by the Ashanti Goldfields Corporation.
19. See Chapter 4 on Sanitation for details.

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bamboo or swish with thatched roof. Equipment and drug stocks were poor and inadequate. Staff was in very short supply.The subordinate staff, Africans, were few, ill-trained and ill-paid. The stations (especially in the North) were distant from each other. During the rainy season travel was dangerous and difficult. Communication was poor to non-existent. It took a long time for messages summoning the medical officer to a medical emergency to reach him.[20]

Broadly speaking, hospitals and dispensaries in the colony during this period could be classified into three groups: Hospitals with attached dispensaries, dispensaries and `out-stations'.[21] The former dealt with in-patients and out-patients, and the latter two, with out-patients. Out-stations were crude and temporary affairs liable to closure, to be replaced or not, by a more proper and permanent health facility; they could be properly described as `frontier health outposts'.[22] During the very earliest years, 1880-1900, each hospital, for reasons of economy, had separate wards in the same hospital building for Europeans and Africans; separate hospitals for the two classes of patients were to come later when the colony

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20. Dr Garland, a senior medical officer on duty in the North in the 1900s, described service there as `tedious, exhausting and dangerous': GCGRMSD, (1902), p. 33. and ibid., (1904), p. 19. The late appearance of hospitals in the Northern Territories was due principally to three factors: It came late under British influence, its remoteness from the coast and, at that time, was of little economic value and tended to be seen more as a burden than an asset: Kimble, Political History, pp. 533-6.

21. The description following was constructed from scattered information obtained from the Blue Books, Colonial Annual Reports on the Gold Coast and Medical and Sanitary Reports of the years 1878 to 1915.

22. Each facility had, depending on the size of the town, one resident medical officer or received periodic visits from one. Larger towns such as Accra and Cape Coast, and later Sekondi and Kumasi, had more than one doctor.

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became more prosperous.[23] Table 4 below shows the number of hospitals, dispensaries, hospital beds and their utilisation between 1880 and 1920.

Table 4

Hospitals, Dispensaries and distribution 1880-1910

| Year | Number | Region |
|---|---|---|
| 1884 | 3 | All Colony[24] |
| 1892 | 8 | All Colony[25] |
| 1903 | 11 | 10 Colony, 1 Ashanti[26] |
| 1910 | 16 | 12 Colony, 1 Ashanti, 1 NT[27] |
| 1914 | 30 | 17 Colony, 4 Ashanti, 9 NT[28] |

Hospital Beds and Admission 1880-1920[29]

| | 1880-1910 | 1911-1920 |
|---|---|---|
| European Beds | 30 | 40 |
| African Beds | 70 | 87 |
| Total Beds | 100 | 127 |
| Annual European Admission | 50 | 1367 |
| Annual African Admission | 1423 | 48,605 |
| Europeans pop/bed | 61 | 62 |
| Africans pop/bed | 21,002 | 23,490 |
| % African Cases/African pop | 0.11 | 3.3 |

It shows that the number of persons per bed for Europeans was small, for Africans, large. Wards were consequently spacious for European patients, cramped for Africans. The number of hospitals and dispensaries was small as Table 4 shows.

23. Separation of the two classes was later justified by research which led to the understanding of the cause and transmission of malaria. On hospital and residential segregation, see Chapter 2.
24. The critical factor which determined whether a health facility remained operational or not was whether a District Commissioner was resident in the area. See Chapter 5 for details. In the 1890s in particular, the severe shortage of doctors caused such closures or downgrading. And similarly during the first and second world wars.
25. In the 1910s some 60% of health facilities were properly equipped. In 1914 for example, there were 18 properly built and equipped hospitals and 12 bush ones. Clifford to Harcourt, NAG, ADM 1/2/94, Desp. No. 780 of 19.10.1914.
26,27. PRO, CO 100/33 & 42; 28. GCGRMSD (1903), p. 21-29. 29. ibid., (1910), p. 13-24. ..

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A centre might have a hospital one year, the next it might be downgraded to a dispensary, and a year later, once more a hospital with admission facilities. Also a station which might have had a dispensary or hospital a certain number of years might disappear altogether from the records; this usually indicates that that health facility was either temporarily closed down or that it was simply ignored from the records because of its unimportance.[30] Stations without district commissioners were usually those with ready liability to lose their hospital status or close down and there was, therefore, a close parallel between the number of administrative districts and the number of health facilities. The importance of a centre with a hospital bore direct proportionality to the size of its European population, and hence the degree of sophistication of health facilities. In this regard, many of the so-called hospitals and dispensaries (particularly in the North) were, what was described as, bush hospitals. They were rough and ready affairs which provided rude opportunities for crude medical assistance.[31] One can apply the rule of thumb that the further from the coast a health facility, the more primitive it was. And of course the more important the centre, the more modern its facilities.

Thus the hospitals at Accra and Cape Coast, during this period,

30. Clifford to Harcourt, NAG ADM 1/2/94, Desp. No. 780 of 19.10.1914.
31. These figures are mean values for the periods. There was little variation of figures from year to year during this period. The calculations were made from primary statistical data obtained from the Blue Book, (1880-1920), PRO, CO 100/30-70.

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were the most comprehensive and the best, and Kumasi was to achieve a similar status by 1910.[32] They were housed in superior structures, they had the best equipment and staff, possessed operation theatres and carried out surgical operations.[33] Thus in 1899 for instance, the Accra hospital was receiving new inventory in the form of furniture, linen, crockery, new bedsteds, new surgical instruments, an ice house under construction, the quality of water and food adjudged excellent.[34] European nursing sisters were stationed at the principal centres, Cape Coast, Accra and Kumasi. There were of course African dispensers, nurses and dressers.[35]

Another important determinant of the location of health facilities was the political and commercial importance of a town.[36] Thus a good hospital was built at Cape Coast in the 1880s. The movement of the government from Cape Coast to Accra (1877) extinguished Cape Coast's political importance as well as severely abbreviating its commercial life. On the other hand the importance of Accra grew and, with it, its medical facilities. Elmina's importance was historical but by 1900, its hospital was fast diminishing in

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32 .GCGRMSD, (1910), p. 32.

33. The precursors of these two hospitals dated back to the 1850s when health facilities were provided for military garrisons and European administrators of the erstwhile British settlements along the coast.

34. GCGRMSD, (1901), pp. 14-18.

35. ibid., (1899), p. 257.

36. Between 1878 and 1884, the colony had three hospitals with admission facilities at Accra, Cape Coast and Elmina. And by 1886, Axim and Keta had also acquired hospitals. Blue Books, (1878-1886), PRO, CO 100/28-36. See also Griffith to Stanhope, NAG ADM 1/2/40, Desp. No. 425 of 10.11.1886.

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importance.[37]

The importance of Axim rested in its commercial importance: it was a port which handled the export trade in rubber and timber. By 1910, the importance of both Elmina and Axim had so shrunk their hospitals became little more than dispensaries with a few beds and visiting, rather than resident, doctors. Akuse was one of the earliest inland towns which acquired a government hospital: its importance lay in it being an important commercial town with significant European mercantile activity.[38] Sekondi hospital assumes the sudden importance for two principal reasons: The first railway, the Sekondi-Kumasi railway, construction was begun in 1901, starting at Sekondi. The town became not only a railhead, but was soon to be the most important sea port of the colony, a state of affairs which involved significant numbers of Europeans in the area. These were very major determinants of a town's claim for a hospital.[39] A hospital at Keta was justified by the presence there of a district commissioner and the peculiarity of the location of the town. Situated not far from German Togo, it acquired some political importance. It was also a town from which operations against smuggling, rife in the area, were mounted. A hospital was opened there in 1885.[40] The situation of Anomabo was a curious and

37. GCGRMSD, (1900), p. 14. By 1900 Elmina had lost practically all its trade.
38. Akuse had become an important cocoa purchasing centre by 1900.
39. The hospital at Sekondi was built by the railway construction department and handed over to the government in 1903. GCGRMSD, (1903), p. 25.
40. Blue Book, PRO, CO 100/35. Damaged by sea and closed down in 1893, rented accommodation was then used for a hospital till a new one was opened in 1895.See also Colonial Annual Report, Gold Coast, NAG ADM 5/1/4, (1895), p. 25.

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interesting one. As early as the 1850s, the town had a colonial military hospital, a part of the British settlements around Fort Williams.[41] Yet Anomabo's name disappears from the medical records altogether, till 1899, a possible explanation being its diminished importance and its closeness to hospital facilities at Cape Coast, Saltpond and Elmina. By 1892, there were dispensaries at Saltpond, Winneba, Shama and Ada and by 1903, the number of hospitals and dispensaries had reached eleven.[42] All but three (Kumasi, Akuse and Tarkwa) were located in coastal towns. The reasons for a hospital at Tarkwa are clear. Not only did it have a district commissioner, several European companies had begun gold mining in the area.[43] Furthermore Tarkwa became a major town along the new Sekondi-Kumasi railway, with growing European population and thus increasing the town's importance.[44] By 1906, Saltpond and Winneba dispensaries had been upgraded to hospitals.The hospitals and dispensaries at Dixcove and Prampram suffered changing fortunes, having been closed down from time to time. It seems clear that Dixcove had lost its commercial importance to Axim by 1880, and therefore its claim for a health facility.

A stark fact emerging from a study of the records of these years

41. Like others such as Dixcove, Cape Coast and Axim, the Anomabo hospital, in the 1850s, 1860s and 1870s was part of the British Military Medical establishment around their settlements. It was to Anomabo and Dixcove that Horton and Davies were first posted in 1859. Fyfe, Africanus Horton, p. 39.
42. Colonial Annual Reports, Gold Coast, (1903), NAG ADM 5/1/80.
43. Experts from the Transvaal had visited Tarkwa in 1898 and had estimated that over 40 million pounds worth of gold could be extracted within ten years. Kimble, Political History, p. 25.
44. It was started in a bamboo structure. GCGRMSD, (1905), p. 15.

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is the total-to-near-total absence of government hospitals and dispensaries in the interior. The first reference to a hospital at Kumasi was in 1898.[45] It was certainly a primitive affair and also a temporary one, for by 1905, a new more permanent one had been built for the town and a site selected for the construction of a European hospital.[46] The reasons for the late entry of Kumasi are clear. It was in 1896 that a Resident Commissioner was appointed to administer the kingdom and a fort built and garrisoned at Kumasi.[47] By 1903, Kumasi had begun to be included regularly in official medical reports. Obuasi soon followed Kumasi. The appearance of Obuasi is explained by the fact that gold mining had begun there in a major way and was now an important town along the Sekondi-Kumasi railway. Apart from these, there were `outstation' health facilities at Atebubu, Odumasi, Kwissa, Mampong and Nkoranza. These were rough and ready affairs, more often manned by dressers and dispensers and liable to be abandoned when necessary.[48] The first town which claimed any health facility in the Northern Territories was Gambaga.[49] Described as an excellent hospital with 10 beds, it

45. ibid., (1898) p. 8. and PRO, CO 100/48.
46. GCGRMSD, (1905), p. 16.
47. Kumasi was virtually a garrison town in the late 1890s, and practically all medical activity centred on troops and European military officers. The point of relevance is the formal establishment of British administration and jurisdiction in Ashanti at this time, with a Chief Commissioner resident at Kumasi, its provincial capital. A hospital there denotes the health needs for the administering British officials, troops and constabularies.
The appearance of a full-fledged hospital, to be soon followed by a European hospital, at Kumasi at this time also correlates with the fact that it was in 1901 that Ashanti was annexed to the Crown and became part of the Gold Coast Colony.
48. GCGRMSD, (1905), p. 17.
49. ibid., (1904), p. 20.

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boasted an operation room, consulting room, a dispensary, a mortuary, a resident medical officer, a dispenser and a dresser. Because of the frequent epidemic outbreaks (of especially smallpox, cerebrospinal meningitis and trypanosomiasis) in this large area, Gambaga also early acquired a small isolation hospital. By 1905, there were four more primitive hospitals at Kintampo, Salaga, Wa and Yeji and five medical men in this large expanse of territory. As late as 1919, there were only eight medical officers in the entire Northern Territories, three of whom were stationed at Tamale, Gambaga and Wa. The remaining five served the rest of this large territory.[50] At the departure of Thoburn and the accession of Clifford in 1912 there were 23 government hospitals and dispensaries in the country, and, the most important achievement, European mortality had so improved the country was no longer `the white man's grave'.[51]

50. The North did not appeal to medical men and other civil servants and officials received some special financial compensations for service in the area. The special allowance was known as `bush allowance'. Medical officers in the North were treated with `exceptional liberality..[for] most MOs dislike going there in view of their banishment from opportunities from private practice, not solely or chiefly on account of monetary loss but because they get out of touch with modern practice'. As a rule, medical officers were not kept long in the North. Slater to Long, NAG ADM 1/2/113, Desp. No. 954 of 27.12.1916.

51. PRO, CO 554/13, Cutting from The West African Mail, (London,30 May 1913). An officer, returning from the once-dreaded coast, said West Africa was now `as healthy as Brighton'. See also Colonial Office Conference, (1927), PRO, CO 323/981/10.



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This is evident from Table 5 below which shows the improving European mortality between 1895 and 1930 in which the figures speak for themselves.

**Table 5**

**European Mortality between 1895 and 1920**

| Year | European Mortality/thousand | Reference |
|---|---|---|
| 1895 | 206 | 52 |
| 1900 | 80 | 53 |
| 1905 | 14.5 | 54 |
| 1910 | 8.1 | 55 |
| 1915 | 15.1 | 56 |
| 1920 | 10 | 57 |
| 1925 | 4.5 | 58 |
| 1930 | 4.0 | 59 |

The most important policy change during the Clifford era was the decision of the colonial government to extend health services to Africans in general, a policy change assisted largely by the great improvement in European mortality.[60] Important and vital assistance to the new policy was provided by improved fiscal conditions, for the Clifford years were also conspicuous for signs of the

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52-59. GCGRMSD, (1895).
53.ibid., (1900).
54.ibid., (1905).
55.ibid., (1910).
56.ibid., (1915).
57.ibid., (1920).
58.ibid., (1925-26).
59.ibid., (1930-31).
60. See Chapter 2 for details. The total focus on European health appeared no longer necessary.

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beginnings of prosperity, as Table 6 below demonstrates; the annual revenue averaged some 1.5 million pounds.[61]

Table 6

Annual revenue between 1900 and 1920

| Year | Pounds Sterling |
|---|---|
| 1900 | 333,283 |
| 1905 | 572,462 |
| 1910 | 1,006,633 |
| 1915 | 1,456,130 |
| 1920 | 3,721,722 |

The Clifford years saw some very important progress and changes. By the mid-1910s, the public health services had achieved a much more complex organisational structure and sophistication. The whole medical organisation of the Clifford period was under the control of the Principal Medical Officer.There was now a Deputy Principal Medical Officer whose duties were now also purely administrative, unlike previous years.[62] The Senior Sanitary Officer (there was none before 1910), later to be known as the Deputy Director of Sanitary Services, advised on matters of sanitation and preventive medicine. He however controlled his own officers and office.This period saw the creation of the important administrative offices of Provincial Medical Officer, one for the Colony,one for Ashanti and the other for the Northern Territories. Apart from superintending the medical and financial arrangements, they were in medical charge of the headquarters of each province of the colony (Cape Coast,

61. Figures from: Metcalfe, Great Britain and Ghana, p. 751.
62. We note that, in contrast to earlier decades, the P M O and his Deputy were now medical administrators excluded from clinical duties. The purely administrative type of medical officer originates from this time.

Kumasi and Tamale) as well as the European hospital in each town. There were 30 districts in the Colony, Ashanti and Northern Territories, a district commissioner and a medical officer in charge of each. The strength of the medical establishment was now determined by the local colonial government (in contrast to the earlier decades when this was determined by the Colonial Office in London) but sanctioned by the Secretary of State. The European staff continued to be selected and appointed, as in previous years, with the help of the Secretary of State and his Medical Advisory Board.The conditions of service for the medical staff remained unchanged.[63]

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It was principally under PMO Dr T E Rice, Dr Hopkins' successor, that Clifford's policies were executed. Dr Rice was the first head of the Sanitary Branch (Senior Sanitary Officer) on its formation in 1908. He was an able and energetic medical officer and to him was due the establishment of a strong foundation in sanitation in the colony. In 1913 he was appointed Principal Medical Officer to Sierra Leone and returned to Ghana in 1916 following Dr Hopkins' retirement and death.

Governor Clifford began to extend the medical services to the ordinary African, soon after taking office. To achieve this, he began his great country-wide dispensary scheme, as well as plans

63. Clifford strongly criticised the long leave of the European staff on the grounds that this arrangement had outlived its day because it was based on the high European mortality of earlier years, which was no longer the case by the early 1910s. Clifford to Harcourt, NAG ADM 1/2/573, Desp. No. 573 of 12.8.1913.

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for a great African hospital at Accra during this period.[64] But the pace of change was slow, as Table 7 below shows.

Table 7

Slow Pace of Change in Medical Facilities and Services: 1910-20

| | 1910 | 1915 | 1919 |
|---|---|---|---|
| Annual Medical Expenditure (pounds) | 52,931 | 116,565 | 120,300[65] |
| Total Number of Cases | 43,932 | 45,323 | 58,131[66] |
| Case/Population Ratio % | 2.95 | 3.2 | 4.0[67] |
| Number of African Beds | c 90 | c 100 | c 150[68] |

And all the parameters in the table demonstrate this and therefore need no further description. Perhaps the most important cause of the slowness of the change was the pressures caused by the First World War. These included the depletion of the medical staff as result of war-time duties.[69] The war also made it exceedingly difficult to engage in construction on account of war priorities.[70] An important cause of the slowness in the extension of the services to Africans was the general attitude of the medical staff: their racism, conservatism and complacency towards African health.[71]

64. Guggisberg built and opened this hospital, Korle Bu Hospital, in 1923.
65. GCGRMSD, (1910), p. 7; (1915); (1920), p. 6.
66. Calculated from nosological returns in:ibid., (1910), pp. 39-45; (1915), pp. 31-6; (1920), pp. 34-7.
67. Calculated from population data in Colonial Annual Reports, (1910), NAG ADM 5/1/87; (1915) NAG ADM 5/1/92; (1920) NAG ADM 5/1/97; and nosological returns of GCGRMSD, (1910, 1915 & 1920).
68. Estimated from various sources.
69. See Chapter 5 for details.
70. Clifford to Bonar Law, NAG ADM 1/2/116, Desp. No. 376 of 11.6.1917 and encl. Minute by Dr T E Rice 11.6.1917. See also: Metcalfe, Great Britain and Ghana, Doc. 454, p. 563; Clifford's Speech on 25.10.1917, Leg. Co. Debates, (1917-18).
71. Clifford to Bonar Law, NAG ADM 1/2/116, Desp. No. 376 of 11.6.1917 and encl. Minute by Dr T E Rice 11.6.1917.

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Finally, equally important, was the general African suspicious attitude to modern medicine; African convervatism was so ingrained it was to die a very slow death. On the issue of African inclusion in the health services, the 1910-1920 period could be said to constitute a transitional period, for real and substantial changes had to await the accession of Guggisberg to the governorship.[72] In summary, by 1919 there were over 20 stations with properly built and equipped hospitals and several bush hospitals and dispensaries for Africans. All principal stations had contagious disease hospitals, and five towns with European hospitals (Tamale, Kumasi, Sekondi, Cape Coast and Accra); the increasing prosperity of the colony allowed the carrying out of the policy of separate superior hospitals for Europeans, unlike the earlier years when African and European wards shared the same hospital building. The very important policy of providing large towns with pipe-borne water, begun by governor Roger, was pushed further by Clifford.[73] The Clifford years also saw the translation of Roger's sanitation policy into frenetic sanitation activity, upon which was built the sanitation programme of later decades.[74] In 1919 the Accra Pathological Laboratory, which had started as a Plague Laboratory in 1908, graduated into the Medical Research Institute.[75] By 1920

72. Clifford gave an exhaustive description of the organisation of health services in a despatch to the Secretary of State in 1914. Most of the foregoing account is based on this. Clifford to Harcourt, NAG ADM 1/2/94, Desp. No.780 of 19.10.1914. Supplementary information was obtained from GCGRMSD, (1910-1920).
73. See Chapter 4 for details. Roger had made sanitation a focus of medical policy during his tenure of office.
74. See Chapter 4 for details.
75 See Chapter 4 for details.

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therefore, the Medical Department consisted of three Branches: The Medical Branch, Sanitation Branch and the Medical Research Institute.[76]

The period 1920-1930, mostly under the administrative leadership of governor Guggisberg, saw the transformation of the medical service and facilities from a primitive state to modern, the substantive extension of the service to all Africans, African embracement of modern medicine, major attacks on important prevalent diseases and marked progress in sanitation and environmental health. These marked changes were aptly summarised by governor Guggisberg, who in his last Annual Address to the Legislative Council in 1927, said that Ghana had `....taken up her position as a flourishing colony, one which has earned the praise of the Mother Country and from which much is expected'.[77] When he returned to the country in 1919 as governor, he probably knew the country more than anyone else. A combination of Guggisberg's driving force, leadership and foresight on the one hand, and the prosperity of the colony in the 1920s on the other, accounts for the hitherto-unprecendented progress in development seen in the country.

Guggisberg's government was the first to enunciate, in clear terms,

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76. Each now headed by a Director; the Senior Sanitary Officer now became the Deputy Director of the Sanitary Branch.

77. Governor's Annual Address to Legislative Council, (1927-29), p. 180, PRO, CO 98/52. Governor Guggisberg was in a position to appraise the progress the country had made by the late 1920s. For he was a member of the first band of surveyors, under the leadership of Major Alan Watherston, that governor Nathan had employed in 1902, to undertake the first survey of the colony. Guggisberg travelled up and down and surveyed the colony between 1902 ad 1914, under the most unspeakable conditions: Wraith, Guggisberg, pp 26-7.

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a public health policy, a policy both comprehensive and largely executed.[78] Within weeks of arrival, Guggisberg announced a Ten Year Development Programme which would involve the expenditure of some 25 million pounds. He proposed the expenditure of some 3.5 million pounds on water supplies and town improvement and drainage,[79] key requisites in public health and sanitation. He projected the expenditure of nearly 16 million pounds on roads and railways. During his governorship, over 3000 miles of new motor roads were laid.[80] This, not only opened up the country in terms of general development. Many parts of the country were no longer isolated and medical services now began to reach them. In 1912 (at Clifford's accession) some 120,000 pounds, about ten per cent of revenue, had been spent on all services connected with public health, but in 1922-23 nearly 490,000 pounds.[81] Throughout Guggisberg's administration, expenditure on public health services varied between 16 and 18%, the highest ever. And the governor, in response to charges of `callous and inhuman attitude' of the government, that it was not spending enough on public health, from certain quarters, assured that he knew of no other country like Ghana which spent a greater proportion of its revenue on public health.[82]

78. Details of his eight-point the policy gave been given in Chapter 2.See also Governor's Annual Address 1927, p. 184, PRO, CO 98/52. This was Guggisberg's final address prior to departing the country.
79. Kimble, Political History, pp. 55-6.
80. Wraith, Guggisberg, pp. 114-17.
81. Governor's Annual Address, (1922/23), p. 86, PRO, CO 98/45.
82. ibid.

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Table 8 below shows various indices of the health service between 1919 and 1930. It demonstrates that the Guggisberg decade was one of unparalleled progress in the provision of public health services and their utilisation by Africans.[83]

Table 8

Medical Expenditure, Health Facilities and their Utilisation

1919-1930

| | 1919 | 1925 | 1930 |
|---|---|---|---|
| Annual Medical Recurrent Expenditure, Pounds Sterling[84] | 120,300 | 277,484 | 369,083 |
| Per Capita Medical Expenditure, shillings[85] | 1.2 | 2.0 | 2.4 |
| African Hospitals[86] | c 20* | 37** | 40*** |
| Hospital Beds[87] | c 100* | c 800** | 1061*** |
| No. Patients/Bed[88] | 23,490* | 4,213** | 2,925** |
| Annual No. of Cases[89] | 58,444 | 97,443 | 269,881 |
| Patient/Population Ratio %[90] | c 3.9 | c 6.0 | 9.4 |
| Number of Doctors[91] | 45 | 65 | 93 |
| Cases Treated per Doctor[92] | 1,292 | 1,499 | 2,902 |

83. Details of these health service indices, year by year, between 1898 and 1960 can be found in the form of Graphs and Tables in the appendix section of the thesis.
84. GCGRMSD, (1919, 1925/26, 1930/31).
85. Calculated from population figures in Colonial Annual Reports, NAG ADM 5/1/96 (1919); ADM 5/1/102 (1925); ADM 5/1/107 (1930). Recurrent medical expenditures in GCGRMSD, (1919, 1925/26, 1930/31).
86. *Estimated figure based on information in: Clifford to Harcourt NAG ADM 1/2/94, Desp. No. 780 of 19.10.1914; Governor's Annual Address, (1925), p. 132, PRO, CO 98/45; *** GCGRMSD, (1930/31).
87.* Approximate figure based on the study of the trends in growth of hospitals published in GCGRMSD, (1910-1914), PRO, CO 100/59-63; ** Based on Governor's Annual Address (1927), p. 184, PRO, CO 98/52. *** ibid., (1930/31).
88. * Based on study of trends in growth of hospital beds published in: Blue Book, (1910-1914), PRO, CO 100/59-63;** Calculated from figures on hospital admissions and number of beds in: ibid., (1925/26 & 1930/31).
89. GCGRMSD, (1898-1955).
90. Calculated from population figures in Colonial Annual Reports Gold Coast, (1895-1955), NAG ADM 5/1/92-137; and total treated cases in GCGRMSD, (1895-1955).
91. Based on data in GCGRMSD, (1895-1909), PRO, CO 100/45-58 and GCGRMSD and MHR, (1910-1955).
92. Patterson, Health in Colonial Ghana, Table 2.

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Table 8 demonstrates that in so far as concerned the care of the sick African, a great deal was achieved and the figures speak for themselves. Comparing the figures for 1919 and the decade which followed: Annual recurrent medical expenditure more than doubled, per capita medical expenditure doubled, hospital beds increased ten-fold, patient/bed ratio fell nearly ten-fold, annual number of cases doubled, the fraction of the population receiving medical attention rose three-fold, and the number of doctors about doubled (even in the face of recruitment difficulties). The Gold Coast Hospital (Korle Bu Hospital) was opened by Guggisberg in October 1923. It became the most important medical institution in the country. The government decided to build three large African Hospitals: at Tamale, Kumasi and Sekondi.[93] These would be the central hospitals to serve the Northern Territories, Ashanti and the Central-Western regions respectively, while Korle Bu served the Accra area, the Eastern and Volta regions. Additionally it became the policy to improve the existing few district hopitals as well as build new ones containing 20-50 beds, all well-equipped and provided with operating theatres and dispensaries. Finally the policy was to provide dispensaries for those parts far away from the district hospitals.[94] Between 1921 and 1927, Guggisberg's government had built 19 new hospitals providing over 800 hospital

93. These were never built till the late 1930s, (Sekondi hospital,taken over by the army at the outbreak of war, was eventually opened to civilians in 1948, GCGRMSD, 1948; Kumasi Central Hospital was opened in 1952; ibid., 1952; and Tamale Hospital in late 1950s.) because of the depression of the 1930s and the second world war.
94. Governor's Annuals Address, (1922-26), p. 134, PRO, CO 98/45.

beds, and 20 dispensaries.[95] The single most important hospital built by the Guggisberg administration was the Gold Coast Hospital, now known as the Korle Bu Hospital.

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The precursor of Korle Bu Hospital was the small Accra Hospital, built in 1883 and extended under the governorship of Sir Brandford Griffith in the 1890s.[96] The gradually growing popularity of modern medicine amongst Africans had made this necessary.[97] By 1910, responsible men in government, especially in the Medical Department, had recognised the need and advocating for Accra, a modern hospital capable of providing a medical service based on the most up to date scientific methods and which was credit-worthy to the government.[98] An opportunity for this occurred when an earthquake severely damaged part of the Accra hospital in 1913. The First World War virtually halted all major building operations but plans for the new hospital, the search for, and the identification of, a suitable site for it,continued under Dr T E Rice, Dr Hopkins' successor. Governor Clifford had taken the keenest interest in the scheme from its inception. In October 1916, a special Board for the purpose decided on the present site. The original plans and design of the hospital were drawn by Dr C V Le Fanu in the early 1910s, elaborated upon in detail in 1917 by the architect of the Public Works Department. Nothing further was done about it until the war's

95. ibid., (1927-29), p. 184, PRO, CO 98/52.
96. Dr J F Easmon was Chief Medical Officer when this hospital was enlarged. Africans were gradually accepting the efficacy of modern medicine.
97. Griffith to Lord Ripon, NAG ADM 1/2/47, Desp. No. 341 of 23.11.1894.
98. Dr Hopkins, P M O 1910-1916, and Dr C V Le Fanu, Senior Medical Officer, were among the major advocates of such a hospital.

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end.[99] In 1919, Guggisberg gave it top priority in his government's building programme.[100] As soon as he assumed office, he set in motion the re-workup of the building's plans. The final plan adopted was the result of the studies, consultations and modifications on blueprints by the Colonial Office's Medical Advisory Committee in London, the PWD and the Medical Department at Accra.[101] Contract for the construction of the hospital was awarded in August 1920. On 26 October 1923 the opening of Korle Bu Hospital became the most important event in Ghana that year.[102] By early 1924 the entire hospital with its complete staff was in full working order, its success immediate. The Gold Coast Hospital, equipped with the most modern and latest in technology of the time, for many years, was adjudged the most modern and sophisticated hospital in Africa. When it was opened in 1923, it had accommodation for 96 patients. Even as it scarcely opened its doors to the first patients in 1923, plans for its extension were already in progress. Today, as a result of periodic extension works, it accommodates over 2000 patients. It became, and remains, the focal point of medical activity in the country. The hospital became the base of initial experience in tropical medicine for all new doctors

99. Gold Coast Hospital, Accra, Opening Ceremony, 1923, NAG ADM 11/1/850.
100. Metcalfe, Great Britain and Ghana, doc. 458, The Ten Year Development Programme, p. 575.
101. Gold Coast Hospital, Accra, Opening Ceremony,1923, NAG ADM 11/1/850.
102. Most credit for this well laid-out and well-constructed hospital went to Dr A J R O'Brien (surgical specialist who was to administer the hospital in its first seven years), Dr C V Le Fanu, medical specialst, and W F Hedges, the architect. Governor Guggisberg was to name the first three wards of the hospital after these men, in recognition of the key roles they played in bringing off the great project.

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coming out to take up appointment in the Medical Department.[103] Guggisberg and his offcials were aiming that `the Gold Coast Hospital and its staff should acquire a reputation second to none in the medical world'. And that `it should be a model of the highest medical and surgical treatment for students of the (by now thoughts had turned to the training of African medical officers locally) medical school which will be built in the future outside its railings'.[104] Korle Bu was an instantaneous success from the first day of its opening and its popularity grew steadily. Its success derived not only from the treatment of diseases; it very quickly in the 1920s became a teaching centre of nurses, midwives, dispensers and sanitary inspectors.[105] This was in consonance with the fact that as early as 1923, the general African appreciation of government health facilities was rapidly increasing, and making it necessary for government to progressively increase hospital accommodation for existing hospitals or the building of new ones.[106] In the attempt to extend medical facilities to as wide an area as possible, particularly where none could ever be provided in the foreseeable future, travelling dispensaries began to be brought into service. In 1928, the first motor travelling dispensary in the charge of a medical officer, began work in the Northern Territories. It proved an immediate success and two more were soon

103. Governor's Annual Address, (1922-26), pp. 60-133, PRO, CO 98/45.
104. ibid., p. 105.
105. ibid., p. 79.
106. ibid., p. 104.

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added. Unfortunately this means of providing medical service, a method particularly most useful in, relevant and suited to, the North, could not be expanded, on account of medical staff shortage. It had to await the establishment of the Medical Field Units in the late 1940s.[107] It can be said that the African's confidence in modern medicine had been won by 1930.[108] The graph shown in the Figure in Appendix XII demonstrates the steady increase in the number of Africans seeking treatment. That many villages, in the 1920s, began to apply for dispensaries and hospitals, is a testimony of this fact.

But the general medical policy of the Guggisberg government was to `deal with diseases in the order in which they most affect the general life of the people'.[109] Consequently it had, virtually, to shut its eyes, for the moment, in the case of those diseases which did not fit into this broad policy. Thus because yaws permeated the African society at every level in the 1920s, the great anti-yaws campaign was under way by the mid-1920s and was to continue, mainly under Burns, into the 1940s. And similarly the campaign to reduce maternal and infant mortality; by 1930, the Welfare Centres had become an embarassment to the government when it looked they could not escape the retrenchment exercise, so successful and popular they were. In antithesis, the handling of leprosy, though recognised as important, could only make its debut in a very small

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107. Gold Coast Annual Reports, (1930/31), NAG ADM 5/1/107.
108. ibid., (1932/33), NAG ADM 5/1/109.
109. Governor's Annual Address, (1922-26), p. 153, PRO, CO 98/45.

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way, in 1926, when Dr Cooke started his leper settlement at Ho, on his own initiative.[110]

The work of the Medical Department increased greatly in volume and complexity in the 1920s. This necessitated some modification in its administrative structure. The Medical Department inherited its division into three branches from the Clifford administration.[111] Because of the increasing complexity in the operations of the department, there were now two Assistant Directors of Medical Services, one usually responsible for the medical administration of the Northern Territories, and the other in charge of Ashanti.[112] Depending on the exigencies of the occasion, an Assistant Director might act for the Deputy Director of Medical and Sanitary Services. All these officers were Europeans and their duties were administrative. Specialists began to make their appearance in Ghana in the early 1920s.[113] The building of the Gold Coast Hospital created the opportunity for introducing specialised medical work into the

110. By the mid-1930s, the Ho leper settlement was well-established and was providing the model for similar settlements in the country. Leprosy began to be taken seriously in the early 1930s. See Chapter 8 on leprosy.
111. The Medical Department had been set up in 1880, the Sanitary Branch in 1908 and the MRI in 1919. As in the previous decade, all three branches were, in the 1920s (and subsequent years) under one head, the DMSS. His nomenclature had changed once more, from PMO, from 1921. The DMSS, as in the past and right into the 1950s, advised the governor on all medical and sanitary matters and was a member of the Executive Council. Up to the end of the Clifford administration, the DMSS (PMO of that time) was also an official member of the Legislative Council. The evolution of sanitation is told separately in Chapter 4.
112. These had replaced the Provincial Medical Officers for Ashanti and NTs of the 1910s, who were often also political officers. The positions of Assistant Director of Medical Services were new creations of the 1920s.
113. Around 1900, Dr A J Chalmers, MD, FRCS, doing duty at Accra, researched, administered and did regular work of a medical officer. GCGRMSD, (1899).

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country; this step was in keeping with Guggisberg's policy of making this hospital one of the best in the world. There were two surgical specialists and two medical. One of the surgical specialists was always on duty at Accra and was responsible for the working of the Gold Coast Hospital. The first surgical specialist was Dr A J R O'Brien, who also was the first Resident Medical Officer administering the hospital. Closely associated with the design and the building of the hospital, he was much respected by governor and all, for his work and personality. He retired in 1928, having been in the colony since 1908, and subsequently became, for many years, a member of the Colonial Office's Medical and Sanitary Advisory Committee in London. Among the first surgical specialists were Dr H W Gush and Dr H W Patterson.[114] Of the two medical specialists, one resided at Accra and was in charge of the European hospital of the town. Dr C V Le Fanu, also closely-identified with the conception, design and building of the Korle Bu Hospital, was one of the first medical specialists. He retired in 1924, having seen duty in Ghana since 1905.[115] There were usually six senior medical officers, usually placed in the large coastal towns such as Sekondi and Cape Coast, or Provincial headquarters such as Kumasi, Koforidua and Tamale. In districts where there were no medical

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114. Governor's Annual Address, (1922-26), p. 133, PRO, CO 98/45.
115. When Guggisberg returned in 1930 to Britain from British Guiana a sick man (probably with amoebic hepatitis, and some form of cardiopathy) it was at Bexhill-on Sea he settled (in a boarding house) where Dr C V Le Fanu had also retired. Dr Le Fanu was to administer treatment to his old Chief there till his death in April 1930. Wraith, Guggisberg, p. 333.

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officers of health, the medical officers were also the Health or Sanitary Officers, a sensible arrangement carried over from previous decades. Medical officers were distributed for duty throughout the colony. In nearly all cases, they were stationed at the political headquarters of their respective districts which they toured at frequent intervals. Perennial staff shortage made their work onerous. As Table 8 (page 82) shows, the number of patients seen by medical officers rose steadily during the 1920s. In the 1910s, the Department had no African medical officer. In 1925, there were two,[116] in the 1930s they averaged about ten, most of whom were not Ghanaians. By 1925, there were 15 European nursing sisters. The explosive increase in the number of hospitals and dispensaries was met by increased numbers, though not equally, of trained nurses and dispensers.

In contrast to earlier years, from the 1920s on, every station at which a medical officer was stationed was provided with a hospital for Africans and a dispensary and nearly all had a modern operating theatre and regular supplies of drugs.

116. Though vacancies existed for seven that year.

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The south's continued preponderance in medical facilities and the relative dearth in Ashanti and the North is demonstrated by Table 9.

**Table 9**

**Hospital Beds and Medical Staff and their Distribution in 1926** [117]

| | Colony | Ashanti | NT |
|---|---|---|---|
| European Hospital | 5 | 1 | 1 |
| African Hospitals | 18 | 4 | 4 |
| Dispensaries | 19 | 5 | 6 |
| No. Beds-Cots | 477 | 154 | 34 |
| Medical Officers** | 28 | 8* | 6 |

Although a general improvement in the provision of health services (and in their quality as well) was occurring, the North continued to be the worst off. In his tour of the North in 1929, governor Slater was shocked by what he saw, which he described as `nothing short of scandal' especially since the area was the chief source of labour supply to Ashanti and the Colony. `There is only one hospital worth the name, viz at Tamale. At Wa there is a so-called hospital full of people sleeping on the floor, but the building is an ancient ramshackle one badly situated next to the noisy centre of town....at Lawra..an old bush school building...here a totally illiterate but faithful, old retainer (whether in the Medical Department or on the District Commissioner's staff I did not gather) attends regularly every morning with lint to give a little

117. Organisation and Activities of the Public Health Services of the Gold Coast, (Accra,1926), p. 8.* At Obuasi, in Ashanti, significant medical service was provided by Ashanti Goldfield.**There were 12 medical officers on leave. Further skewing in the distribution is provided by the fact that mining companies, of which there were several and nearly all located in the colony, provided medical services as well. None existed in the North.

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elementary aid to persons suffering from sores etc. This is the sum total of the hospital facilities in a district with nearly 100,000 inhabitants, for at Tumu there is nothing...'.[118] In the event, Slater ordered the immediate construction of good quality bush hospitals at Lawra and Wa and a permanent one at Zuarungu and placed a temporary hold on further new hospital construction in Ashanti and the Colony until the Northern Territories had been given more attention.[119]

In 1927, the Chief Medical Adviser to the Secretary of State stated that although the initial colonial medical policy had been directed primarily to safeguarding of the health of Europeans, this was no longer its sole aim. He stated:

> `In later years, an increased sense of responsibility for the welfare of native peoples and a recognition of the economic value of health in a community have led to a considerable extension of the measures at first contemplated. The present policy aims at safeguarding and improving the health

118. Acting DMSS to Chief Commissioner Northern Territories, NAG ADM 56/1/405 of 3.5.1932. Minute by His Excellency the Governor of 6.5.1929. Slater's observations give some insight into the state of medical matters in the North in the 1910s and the change there of the Africans' attitude to western medicine. He stated: `Before the war (1914-1918) there were medical officers at most if not all the district headquarters in the Northern Territories but their duties appear to have been confined almost entirely to care of the European and native officials (including the constabulary). I am told that in those days the ordinary native fought shy of European medicine. Now all this is changed and the chiefs and natives are all clamouring for European doctors and European treatment. It is a demand which we must honour and in common humanity meet...'

119. op. cit.

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of all inhabitants of the Tropics...'[120]

It can be said that this policy guided, in a broad sense, the public health services activities of the colonial governments of the 1920s. And the momentum of these activities of the 1920s carried into the early 1950s.

The public health policies of governments between 1930 and 1950 were essentially a continuation of those of the 1920s, though necessarily modified by the exigencies of the period. The three most important general factors which shaped the policies, the general course of health services and the development of medical facilities,were the depression of the 1930s, the supplanting of the West African Medical Service with the Unified Colonial Medical Service in 1934, and the Second World War.[121] Overall, these factors exposed the fragility of the health system, its gross inadequacy and its many problems: The depression and the second world war caused a reduction in revenue that virtually halted expansion of public health structures; and even several previously existing hospitals and dispensaries were closed down or downgraded. The depression resulted in a retrenchment policy in the 1930s which in turn resulted in the reduction of the medical staff to the barest minimum. And the introduction of the Unified Colonial Medical Service (whose conditions of service were considered inferior to those of WAMS) ensured that from 1934, recruitment of

120. Colonial Office Conference 1927 (CO.12), PRO, CO 323/981/10.
121. The nature of the Unified Colonial Medical Service and its impact on job satisfaction and recruitment of European medical officers are dealt with in Chapter 5.

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medical men became very difficult. The second world war almost completely halted recruitment of British doctors.[122] The effects of the depression and the second world war on medical expenditure, health facilities and the medical staff are shown in Table 10a and Table 10b below. They show the changes in certain medical staff positions in the 1930s, demonstrate the deep cuts made during the early 1930s, and the freezing of these positions during the war.

Table 10a

Medical Expenditure, Health Facilities and their Utilisation 1930-1951

| | 1930 | 1940 | 1950 |
|---|---|---|---|
| Annual Medical Recurrent Expenditure, Pounds Sterling[123] | 369,083 | 304,603 | 965,020 |
| Per Capita Medical Expenditure, shillings,[124] | 2.4 | 1.5 | 4.2 |
| African Hospitals[125] | 40** | 33** | 33* |
| Hospital Beds-Cots[126] | 1061 | 1390 | 1866 |
| Population/Bed Ratio[127] | 2,925 | 2,752 | 2,571 |
| Annual No. of Cases[128] | 269,881 | 341,039 | 805,838 |
| Patient/Population Ratio %[129] | 9.4 | 8.6 | 17.4 |
| Number of Doctors[130] | 93 | 72 | 84 |
| Cases Treated per Doctor[131] | 2,902 | 4,737 | 9,593 |

122. See Chapter 5 for details on the effects of the Unified Colonial Medical Service and the Second World War on recruitment of British medical officers.
123. GCGRMSD, (1930/31, 1940 and 1950).
124. Calculated from population figures in Colonial Annual Reports, NAG ADM 5/1/107 (1930), 5/1/117 (1940) and 5/1/126 (1950); and Recurrent medical expenditures in GCGRMSD, (1930/31, 1940, 1950).
125. op. cit. * Includes European Hospitals; from 1946 on exclusive European hospitals were now open to Africans of the better class. ** Excludes European hospitals of which there were seven.
126, 127, 128. op. cit.
129. Calculated from population figures in Colonial Annual Reports Gold Coast, (1930/31, 1940 and 1950), NAG ADM 5/1/107, 5/1/117 and 5/1/126 and total treated cases in GCGRMSD, (1930/31, 1940 and 1950).
130. Based on data in GCGRMSD, (1930/31, 1940 and 1950).
131. Patterson, Health in Colonial Ghana, Table 2.

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Table 10b

Effects of the Depression and the Second World War on the Authorised Medical Staff Establishments

| | 1930 | 1933 | 1935 | 1938 | 1951 |
|---|---|---|---|---|---|
| Reference (Footnote) | 132 | 133 | 134 | 135 | 136 |
| Pathologist | 7 | 3 | 3 | 3 | 4 |
| Specialist (Surgical & Medical) | 3 | 2 | 2 | 3 | 15 |
| Entomologist | 1 | 0 | 0 | 0 | 2 |
| Assistant Entomologist | 1 | 0 | 0 | 0 | - |
| Medical Officers (clinical) | 47 | 35 | 37 | 41 | 62 |
| Medical Officers of Health | 15 | 8 | 8 | 10 | 11 |
| Women Medical Officers | 11 | 5 | 5 | 3 | |
| African Medical Officers | 9 | 4 | 5 | 10 | |
| Dispensers & Dispensers in Training | 99 | 75 | 99 | 100 | |
| Superintending Sanitary Inspectors | 24 | 20 | 20 | 21 | |
| Sanitary Inspectors | 110 | 92 | 104 | 118 | |

The thirties and forties were therefore largely a period of marking time, and of difficulties and problems which were several. We shall examine here, first the specific difficulties and problems, and then how governments attempted to handle them.

The key specific problems and difficulties faced were several: Of these the most important was revenue inadequacy. The others, virtually all a corollary of this, were inadequacy of public health facilities and overcrowding at hospitals and dispensaries,

132. GCGRMSD, (1930-31), p. 126;
133.ibid.,(1933-34),p. 58;
134.ibid.,(1935-36), p. 51.
135. ibid., (1938), p. 67.
136. ibid., (1951), p. 22.

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inadequacy of the medical staff and deterioration of sanitary conditions.

Inadequate revenue was a bedevilling problem throughout the period and this affected adversely how much the government could spend on public health services. As Table 10a above also shows, the per capita medical expenditure, always low, was further eroded.[137] In the late 1920s,only some 8% of annual revenue constituted recurrent medical expenditure but in the 1930s and 1940s, some 10-13% of it was required to maintain what retrenchment had spared and wartime conditions would allow.[138] Thus in the 1930s and 1940s then, an increased proportion of dwindling revenue was spent on health. The government's own reluctance to degrade health services and political pressure from African Legislators offer explanations for this.[139] In consequence of the fiscal situation, the entire 1931-1945 period was characterised by the total absence of the construction of any major hospital. Such activity as occurred consisted of repairs, maintenance and extensions to existing structures. It was a period when all developments, including the

137. In 1929, the annual revenue was 3.4 million pounds, between 1931 and 1934 it averaged some 2.5 million pounds. It was not till 1935 and following years that the colony's annual revenue once more exceeded 3 million pounds. The 1927 figure of over 5 million pounds was not to be reached again till 1944. The post-war boom in the colony's economy commenced in 1945, achieving a revenue of 20 million pounds in 1950. Metacalfe, Great Britain and Ghana, pp. 751-2.

138. Details of medical expenditures and annual revenue are shown in graphic and tabular forms in the appendix.

139. The African Members of the Legislative Council criticised the government for reducing expenditure on medical and sanitary services even after the government had pointed out that, even at that reduced level, Ghana continued to spend considerably more per head population on medical services than any other colony. While Ghana was spending 3s. 2d, Nigeria was spending 6.75 pence per head. Metcalfe, Great Britain and Ghana, doc. 477a, p. 629.

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building of more hospital facilities, remained more or less frozen.[140] The gross inadequacy of the medical staff, public health facilities and overcrowding in the thirties and forties is evident from Table 10a: The fraction of the population seeking medical treatment more than doubled, producing excessively-high population/bed ratio. In the face of the above astonishing figures, the number of doctors rose from 72 to only 84; of these, only some 40-50 of them were actually performing clinical work and this in the face of rising case numbers. Consequently, the patient/doctor ratio rose from 4,737/1 to the extraordinary figure of 9,593/1,far in excess of that recommended by the British Medical Council; this situation persisted throughout the war. Doctors certainly worked much harder in the 1930s and during the war than at any other time in the country's history.But little could be done about the staff situation till the early 1950s.[141] Though it was clear that the African's confidence in modern medicine had been won, the available public health facilities were most inadequate to meet the demand thus created; the number of African hospitals and

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140. The only major hospital built during the entire period was the Sekondi (Effia-Nkwanta) Hospital which was opened in 1948. GCGRMSD, (1948), p. 6. Various governors, from Slater to Burns, tried to increase revenue through direct taxation. This was consistently opposed by Africans in the Legislative Council. It was not till 1943 that governor Burns was able to carry the first income tax bill in the Legislative Council, a bill tied, among other things, to the concern with the inadequacy of hospital accommodation and health measures in the country. Metcalfe, Great Britain and Ghana, doc. 491, pp. 666-8, Speech of Governor Sir Alan Burns in Legislative Council, 23.2.1943.

141. GCGRMSD, (1939), p. 1. At the outbreak of war in 1939,a significant proportion of European medical officers and African nursing staff were seconded for military service for the duration of hostilities. Also see Chapter 5 on the futile attempts at increasing the medical staff between 1945 and 1950.

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hospital beds remained small and static, yet the annual number of patients rose astronomically. Consequently, excessive overcrowding in hospitals and dispensaries became an unsavoury feature of the public health system. The problem of overcrowding of the thirties and forties was classically demonstrated when governor Burns toured the country in 1942 and 1943 and saw for himself this deplorable state of affairs. At Oda hospital for instance `the 18 beds with which it is provided were all occupied, and there were no less than 30 other patients lying on mats on the floor of the wards or of the narrow, open, verandah which surrounds the wards. Two of the patients were lying under the tables in the middle of the male ward...when it rained the patients on the verandah to windward were pulled round on their mats to the other side'. And the eastern part of the Northern Territories, an area with 450,000 people, was served by two small hospitals, one with 18 beds and another with 14. The Keta hospital had 34 beds with 15 patients lying on the floor.And the Director of Medical Services observed a lamentable lack of hospital provision `wherever His Excellency (the Governor) goes'.[142] The general standard of sanitation suffered a setback.Definite deterioration of sanitary conditions were evident, especially in the rural areas;[143] and the recorded rise in death rates in 1934 and 1935, shared by Africans and Europeans alike, was

142. Burns to Viscount Cranborne of 8.10.1942, on Hospital Accommodation, encl. in PRO CO 96/776/3. Burns' verdict on the state of the public health services was that `there is a minimum of decency which must be attained (and maintained) in government institutions.. this minimum has not been reached in most of the "African" hospitals of the Gold Coast'.
143. GCGRMSD, (1934), p. 19.

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noted by Dr David Duff, the DMS, in his 1934 report. For the Africans, this was mainly explained, in part, by falling standard in rural hygiene occasioned by the reduction in sanitary staff.[144] Owing to the shortage of money and staff, it became more difficult to maintain the former standard of mosquito control.

How were these myriad problems and difficulties handled by the various governments during these difficult years, what measures were taken ?

In spite of the depletion of the medical staff great effort was made to maintain the medical and health services. This was achieved through various devices: Districts of responsibility of various medical officers were extended and the responsibilities of junior personnel such as dispensers, nurses and nurse-dispensers were widened.[145] Furthermore new nurses-in-training and new dispensers were engaged [146]. Those hospitals which went without medical officers were run with skeleton staff on the lines of dispensaries but containing beds for emergencies. These hospitals were visited from time to time by medical officers who could also be summoned for emergencies. Village dispensaries were put in the charge of nurse-dispensers.[147]

One of the most important policies of the government, when it was strapped for cash, was that of encouraging Native Authorities to

144. ibid., (1935-36), p. 4. The Registrar of Births and Deaths reported that in 1935, in one populous centre the death rate rose 50% above the previous year's.
145. ibid., (1939), p. 1.
146. ibid., (1940), p. 2. See Chapter 7 on the increasing role of nurse-dispensers in manning village dispensaries.
147. ibid., (1943), p. 1.

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build their own village dispensaries; and Africans' preference for out-patient treatment did a lot to encourage this. Communities, encouraged by the local and regional administrations, were provided subsidised building materials, drugs, dressings and equipment as well as trained medical personnel, built their own dispensaries according to approved plans. This scheme first took root in the Northern Territories in the mid-1930s, to be followed by others in other parts of the country in later years.[148]

All these were palliative for the problems were deepseated and enormous and required major policy change. Governor Burns was responsible for most of the important changes in policy. A governor very much in sympathy and tune with African opinions, he advocated and obtained the abolition of the segregated hospitals, against the stiff opposition of the Medical Department.This measure made available additional hospital accommodation for Africans.[149] And by 1946, those Africans who could afford it could now be admitted to such hospitals; from this time on, European hospitals were no longer exclusively for Europeans, and the nomenclature `European Hospital' was abolished.[150] On his insistence a major hospital

148. ibid., (1933/34), p. 44. These dispensaries were run by Nurse-Dispensers whose training had commenced in 1931, when the scheme for the commencement of the Accra Medical College was postponed indefinitely. By the end of 1935, fourteen such nurse-dispensers had been trained and were available for the running of village dispensaries.It was not till 1935 that the scheme actually commenced, thanks to some improvement in the financial situation and the increase in the number of trained nurse-dispensers. ibid, (1935/36), p. 36.
149. Burns to Chairman, West African Governors Conference Lagos, of 29.7.1942 and Burns to Viscount Cranborne of 8.10.1942. Enclosures in Hospital Accommodation, PRO, CO 96/776/3. Burns gave an example of the Asantehene withdrawing his wife from Kumasi Hospital on account of the unsatisfactory hospital conditions.
150. The European Hospital at Accra for instance became the Ridge Hospital.

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building programme was launched in 1947;it was as result of this scheme that hospital accommodation was greatly improved in the 1950s, and inherited by the first African government.

He insisted on the immediate and long-term remedy of the scandalous overcrowding: The upgrading and extension of existing hospitals and construction of several new ones.But Burn's policy to increase hospital accommodation was in opposition to that advocated by Dr Balfour Kirk, the DMS, which was to concentrate on preventive work and restrict curative work to a minimum. To carry out the policy advocated by Kirk, the Department was to turn away some six patients out of every seven presenting for treatment and give decent creditable attention of higher standard to the lucky 15%. While resources were concentrated on developing the preventive measures the Department was to have no concern for the majority of those needing treatment.[151] The governor, on the other hand, was certainly not opposed to a long-term preventive policy. But he was not prepared to, while preventive measures took root, `fail to do whatever we can with what is available'; the higher standards of

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151. The measures proposed by Dr Balfour Kirk formed the basis of the establishment of Health Centres commencing in 1948. Vide Infra.It became obvious that governor Burns and Dr Kirk could not work together and the Colonial Medical Advisory Committee tacitly advocating the removal of Dr Kirk. Dr Kirk was seen by various members of the Committee (as as well as Governor Burns) as `cantankerous', `doctrinaire', with `exceptional powers of seeing the difficulties against any proposed action', and `hardly fitted to deal with the onerous responsibilities falling on the Head of the Medical Department in the Gold Coast'. In the celebrated case of Dr Griffith and the Dunkwa Hospital: Dr Griffith the MO in charge of the hospital was censured by Dr Kirk for allowing overcrowding and that Dr Griffith was `temperamentally not suited' to his work. Dr Griffith was stoutly defended by the governor and members of the Advisory Committee and exonerated by the Secretary of State.

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medical care would be achieved if the measures he had advocated were implemented. The governor considered that acceptance of the policy advocated by Dr Kirk `would provoke a storm of indignation and gravely imperil the reputation of government in the eyes of Africans'.[152] In the event, the Secretary of State gave support to immediate and long-term measures to improve hospital accommodation as well as measures to promote preventive medicine, but that a proper balance be struck between the two approaches.[153]

In the event then, the mid-1940s saw the work-up of plans to build new hospitals and health centres and in 1946 a programme for hospital development over a period of ten years was ready. The building programme started in 1947.[154] The plans included the building of a large General Hospital and a mental hospital at Kumasi.But the shortage of material hampered construction work for some years.[155] Nevertheless, in keeping with the 1946 programme, 1948 saw major and extensive constructional work.[156] Dr Balfour

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152. New hospitals were to be built at the following centres where none existed: Mpraeso, Kpandu, Jasikan, Ajumako, Asankragwa, Ashanti Mampong, Zuarungu and Kete Krachi, one in Krobo country and a maternity ward for the Keta Hospital. The following hospitals were to be rebuilt: Nsawam, Bekwai, Lawra and Wa. A large Central Hospital was also proposed for Kumasi: London to Oliver Stanley of 16.11.1943 and Burns to Oliver Stanley of 20.6.1943: encl. on Hospital Accommodation, PRO, CO 96/776/3.

153. op. cit.

154. GCGRMSD, (1946), p. 6.

155. ibid., (1947), p. 4.

156. In 1948 alone major extension work was done at Korle Bu Hospital, the Accra mental hospital, the Accra Maternity Hospital, Winneba, Koforidua, Axim, Kumasi, Oda, Takoradi, Tamale and Bolgatanga hospitals as well as the opening of the Sekondi Effia-Nkwanta Hospital. The same year plans were under way for the construction of a 60-bed hospital at Bolgatanga and further major extension work on hospitals at Oda, Winneba, Ho and Keta. GCGRMSD, (1948), p. 5.

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Kirk's grand plan was his proposal of a rural health scheme. In 1943, he proposed the establishment of a network of several health centres in small communities around every major hospital. Each centre was to have a sanitary inspector, nurse, dispenser, and if possible, a midwife. These centres would provide health care for locals and those referred from village dispensaries. In turn the health centres would act as a screening body. Treating minor complaints themselves, the health centres would send those patients requiring more complex care to the nearest district hospitals. The centres would also educate the local public on the causes and prevention of common disease while sanitary inspectors did their usual work as well as teach some hygiene to the community. A medical officer of health would visit the centre weekly.[157] Although in the event, by 1950, only two such centres were in operation, by 1960, there were nearly 60.By 1950 therefore both Burn's hospital expansion scheme and Kirk's rural health scheme were being carried out.

The foregoing shows that the period 1930-1950 was marked, in spite of the grave fiscal and personnel problems of the economic depression of the 1930s and the second world war, by the consolidation of most of the gains of the 1920s; a certain degree of marking time up to 1945, with serious regression in certain areas of medical activity (when the war was over); further attacks

157. BF 3839 J Balfour Kirk (5.7.1943) `Memorandum on the type of department which will be necessary to implement a Policy of Preventive Medicine in the Gold Coast'.

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on major diseases such as yaws, trypanosomiasis and smallpox; the carrying of the medical services to rural communities by means of rural dispensaries, health centres and the Medical Field Units; major efforts in the development of the supporting medical staff; and the abolition of exclusive residential and hospital facilities for Europeans. Of the governors who supervised these developments, governors Hodson and Burns deserve the pride of place. The effect of retrenchment, provoked by the economic slump, on health facilities and services, was painful but not disastrous. Similarly, as a result of reorganisation measures, the grave shortage of staff in the 1940s occassioned by the war, permitted the provision of reasonably adequate health services. Also, although plans for a medical college had been dropped, the scholarship scheme for the regular training of African medical officers had taken root and African medical officers begun slowly to enter the Medical Department.

When the first African government took power in 1951, it inherited a medical service which had evolved over some 70 years. What were the state of the service and the organisational structure that the new government inherited ? And what were the weaknesses in the system ?

The Department was a large heterogeneous organisation, headquartered at Accra, with a wide range of services and headed by a European Director. Its organisational and administrative structure were essentially not unlike those of the mid-1920s (vide supra). Hospitals (and Maternal and Child Welfare Centres) were scattered

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all over the country with some 20 in the south, six in Ashanti and eight in the Northern Territories. In 1951 there were a total of 1300 hospital beds in the south, 339 in Ashanti and 139 in the Northern Territories. The population-bed ratios were 1 to 1500 for the whole country, 1 to 1200 for the south, 1 to 1500 for Ashanti and 1 to 4300 for the North.[158] It inherited the chronic shortage of the general medical staff of the 1930s and 1940s, the distribution of which continued strongly weighted in favour of the south of the country.[159] The population/doctor ratio was similarly skewed. The proportion of African medical officers to European was fast-shifting in favour of African practitioners.[160] We have seen that up to the 1930s and most of the 1940s, there were no more than two medical specialists and two surgical specialists at any one time. By the early 1950s however, there was a minor explosion of specialist positions: There were establishments for four surgeons, two physicians; specialists in obstetrics and gynaecology (obstetrical and gynaecological work was hitherto done by surgical specialists);a radiologist (not to be confused with a radiographer) for the first time; two ophthalmologists; pathologists; malariologists; tuberculosis specialist; psychiatrist; leprologist and epidemiologist and seven dental surgeons. There were about 10 medical officers of health. There were a host of other personnel,

158. Maude Commission Report on Commission of Enquiry into the Health Needs of the Gold Coast, (1952), p. 5.
159. There were about 20 clinical medical officers in the south (Colony) and ten each in Ashanti and the Northern Territories. This strength and distribution differed little from those of the 1910s.
160. Explanations for the shift have been provided in Chapter 5.

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including, importantly, European nurses, matrons, nursing sisters and tutors and mistresses for the school of nursing, radiographers, health staff, laboratory staff and pharmacists.[161]

Apart from growth of population, major demographic changes had also occurred. During the preceding decade or two, there was an immense shift from the remote countryside, and to a significant extent, from neighbouring territories, into the towns of Ghana, a shift which, in the 1950s, showed little sign of abating. This meant that thousands of Africans, previously effectively cut off from medical services, were now in a position to lengthen the queues for hospital treatment and strain the resources of the service.[162] Clearly the success which attended the yaws, trypanosomiasis and smallpox campaigns and the use of modern treatment of these diseases as well as others such as leprosy, venereal diseases and pneumonia, led to a much higher proportion of the population taking advantage of the medical services.In a real sense the success of the service in commanding confidence of the public was proving an embarassment.[163] It is clear from the above that in spite of the

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161. GCGRMSD, (1951), p. 22.

162. Maude Commission, p. 9. Other statistical figures illuminate the problem: In 1946, one person in every 104 of the population was admitted as an in-patient, one in eight treated as an out-patient. The corresponding figures in 1949 were one in 71 and one in five. The figures were calculated from population figures and cases treated in 1946 and 1949. GCGRMSD, (1946 and 1949).

163. See appendix section for relevant Tables and Graphs on these diseases and Chapter 8 for narrative of the causes and courses of these diseases between 1898 and 1955. The data on hospital admissions and out-patient cases are also supportive of these facts. As pointed out again and again elsewhere, it was evident from the early 1930s that the service had created a demand which it found itself unable to meet; the first major 'embarassment' actually occurred during the retrenchment of the early 1930s when the very successful and popular Maternal and Child Welfare centres were threatened with closure.

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many gains of the colony, in the health service over the years, the first African government inherited a service with many weaknesses. It is also clear from the above analysis, and from the studies of the Maude Commission, that the services had not kept pace with the country's growing wealth, general development and the increasing embracement of modern medicine. The relevant statistical data bear this out: The morbidity and mortality, including infant and maternal death were very high. Average life expectancy was less than 40 years. Between 1930 and 1950, government expenditure on medical services increased nearly five-fold while annual revenue rose over ten-fold. The percentage of medical expenditure to total revenue fell from 7.8 to 4.6 between those dates, while the medical expenditure to total expenditure fell from 9.7 to 7.1%.[164] It is evident from these figures that government was, for whatever reason, spending proportionately less on health compared with other areas of expenditure.[165]

Another important weakness in the system, and this relates to the 1940s, was leadership instability in the Medical Department. Between 1883 and 1939 the office of the Director remained quite stable. A Director held that office an average of five continuous years, often longer. When Dr David Duff became Director in 1932, he held that office till 1939 when he retired after nearly 30 years in the service. Between 1939 and 1949, there were no less than five

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164. Maude Commission, p. 9.

165. By comparison, it is interesting to note that in the 1920s, Guggisberg's government was spending some 16-18% of revenue on health.

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Directors and five Acting Directors.[166] These constant changes were largely caused by the early retirements and resignations from the service of medical officers with experience; the replacement of the West African Medical Service in 1934 by the Unified Colonial Medical Service, with its less attractive service conditions, caused not only recruitment difficulties, the second world war and its demands merely accelerated the process. From 1939 on then the Medical Department laboured under the handicap of frequent changes in leadership.[167] A serious aspect of the frequent changes in leadership was that, not infrequently, substantial intervals occurred between the departure of one officer and the appointment of his successor, several officers acting in the meanwhile. These constant changes meant that a Director could seldom carry through to completion any substantial new programme which he had initiated;he entered office then hampered by the psychological burden that this would be the case. This situation probably offered the subtle temptation to officers to leave things as they found them.[168]

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166. GCGRMSD, (1940-1950).

167. In the post-war 1940s, the Colonial Office had great difficulty filling vacant medical positions for the reason that the NHS, introduced by the Labour Government, included a pension scheme which had hitherto been only available in the colonial service. This important incentive for recruitment was consequently lost in the 1940s: The Secretary of State Creech Jones' circular despatch No. 27215/206/49, PRO, CO 850/233/8.Long periods of leadership was the rule than the exception between 1880 and 1910. Tenures were as follows: 1883-1892, Dr McCarthy; 1892-1896, Dr J F Easmon;1896-1906, Dr Henderson; 1907-1910, Dr Langley. In contrast:1939-1940,Harkness; 1941-1942,Kirk; 1943,Ag Mackay; 1944,Ag Howells; 1945,Ag Turner; 1946,Ag Macleod; 1947,Turner; 1948,Ag Ormiston; 1949, Cheverton.

168. A classic example: Dr Kirk's proposal of a country-wide rural health centres scheme. The first two rural health centres were built only in the late 1940s.

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An important shortcoming of the Medical Department was medical staff shortage with the consequent instability of the department. The weakness of the administration at headquarters, narrated above, carried into professional and administrative operations in the districts. A constant affliction of the positions of district commissioners and medical officers since the 1880s was the chronic shortage of officers. This was the major cause of medical officers often doubling as district commissioners and the constant moving of officers from station to station. It meant that the medical officer of a district was nearly always a newcomer who had little knowledge of the earlier history of the people and diseases of his medical district. When, during the immediate post-war years, it became clear specialist positions could never be adequately filled through fresh recruitment, it became the policy to encourage specialisation by medical officers already within the service. Year by year, many medical officers were allowed study leave by government to undertake post-graduate courses in England. This laudable and necessary exercise added significantly to the shortage of the general medical staff. So for instance in 1952, while eleven specialist positions remained unfilled, there were eight medical officers on study leave in addition to the numbers already on normal leave.[169] There was therefore a wide discrepancy between the number of posts in the medical establishment and the number of

169. Figures from: Minutes of the 5th Conference of West African D M Ss held at Lagos 24-25 February 1954, PRO, CO 554/1186, Appendix II and GCGRMSD, (1952), p. 20.

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officers actually giving service at any moment. Superadded was the shortcoming of the skewed regional distribution of medical facilities and staff, in which the south was heavily favoured and the North thinly-provided for.

Other important weaknesses in the administrative system were the grossly-inadequate physical facilities at headquarters at Accra and its record system in the 1940s. In 1950, the Medical Department continued to be housed in a small building at Victoriaburg never intended and quite unsuitable for an office to accommodate its staff.[170] Many of the junior staff consequently worked under physical conditions so cramped as to reduce considerably their output. Because of this reason and because there had been no thorough overhaul of the department for many years, by 1950 the organisation of the department was out of date and overburdened. A natural consequence of this state of affairs was that senior staff engaged in work inappropriate to officers of their rank, the work of the department escaped full documentation and records could not be kept up to date. This situation is exemplified by the Annual Reports of the Department. These important documents, the milestones marking the progress of a medical and health service, should provide a general body of knowledge and experience gathered over the years by the whole medical staff of the country and should form a permanent corpus of information from which the country's medical history could be built up and medical experience drawn on.

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170. Maude Commission, p. 9.

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True, the exigencies of the second world war were the major contributor to the severely abbreviated annual reports produced by the department from 1939 on. The fact remains that the standard of medical reports during the war years were nowhere near those between 1910 and 1938.[171]

When sanitary reforms were launched in 1910, and right up to the early 1930s, it became regulation that any project having a bearing on pulic health must be subjected to the scrutiny of the Sanitary Branch and sanctioned by that Branch prior to execution. For 25 years or so this principle was adhered to with exceptional vigour and vigilance. From the mid-1930s however the prosecution of this valuable principle had lost steam. Liaison between the medical and other departments was all but lost. Projects with obvious public health bearing were pushed forward without prior consultation with the Medical Department.[172] Native Authority Dispensaries sprang up after the war in large numbers with no effective machinery for consulting the Medical Department, although sensible cooperation occurred occasionally.

Another weakness in the organisation of medical services was the poverty of information on responsibilities of medical officers. The

171. The Report of 1914 occupies 187 pages, of 1926, 194 pages with an index for easy reference, of 1935, 103 pages, of 1939-1945, about 10 pages and of 1950, 20 pages.

172. Maude Commission, p. 10. In the case of rural water supplies for example, a matter of first rate importance to a health service, projects were pushed without prior consultation of the Medical Department by the Department of Rural Water Development. A Temporary Water Supplies Department was formed in 1943 with special interest in rural water supply. Up till this time, questions of water supply were the purview of the Sanitary Branch of the Medical Department.

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first Chief Medical Officer of the Medical Department, Dr McCarthy, in 1883, wrote a handbook for the guidance of medical officers fresh into the service. It was so successful that it required only minor revision in 1905 before a new version was published and issued under PMO Dr Henderson. Such handbook offered its medical and other officers posted throughout the country a simple explanation of the duties which they were expected to perform. In 1932, the preparation of a new handbook was started, its issue was postponed by the war, and by 1952, it remained unissued. Thus up to the early 1950s, medical officers could only obtain information through circulars and General Orders; there was nothing to help medical officers newly come to the country, and possibly newly-qualified, to discover from a bewildering mass of Ordinances, Regulations, Orders, Gazette Notices and other documents, what exactly he was supposed to be doing and what his relations were to officers of other departments, to the Native Authorities or to other local bodies.[173]

These weaknesses and failures of the system received a large contribution from the immense burden posed in the early 1950s by the rapid constitutional changes then occurring. Though the constitutional changes were to lead to the general improvement in the health services,the immediate effect of the changes was to tax, to the utmost, government and health officials in the unavoidable reorganisation of the health services.

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173. Maude Commission, p. 10.

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When a new constitution for the colony came into force in 1950 therefore, the first African government of the colony inherited a medical service which was curative-oriented, favoured the south of the country, could handle about 20% of the population, whose organisation was clearly outdated, and which had a grossly-inadequate medical staff consisting mostly of European doctors and a small cadre of auxiliary medical staff.

The most important change of the fifties was the metamorphosis of the Medical Department to a Ministry of Health headed by an African (Mr K A Gbedemah) with the administrative machinery also headed by an African (Dr Eustace Akwei).The African government's public health policies were two-phased. The first was interim, covering the government's first few years in office, the policy for this phase based on the recommendations of the Maude Commission. The second phase longer-term, covering the period 1960 to 1970, was based on the proposals of Dr Brachott. We shall examine, first the initial phase, then the 10-year policies, and how each was implemented.

After only a few months in office under the new constitution,the African government decided there was the need for a declaration of policy, in detail, on the development of health services in the country. Accordingly, the services were obtained of Sir John Maude, chairman of the commission, a former Permanent Secretary of the Ministry of Health in the United Kingdom; Dr Albert Lorenzen, a serving Principal Medical Officer of the Ministry of Health who was also a member of the General Medical Council in the United Kingdom;

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Dr George Albert Clarke, a medical officer with experience as Director of Medical Services in the Sudan and as an adviser elsewhere in the tropics; and Mr K G Konuah, a well-known lay Ghanaian. By a letter of February 1952, governor Arden-Clarke appointed these men to hold a commission of enquiry into the health needs of the country.[174] The Minister of Health and Labour at the time was Mr K A Gbedemah. The commission's terms of reference were:

> `To review the measures taken and projected in the Gold Coast, either by government or by private enterprise: for the development of preventive and social medicine, including health education; for the development of curative medicine, including provisions for hospitals, health centres and dressing stations and the training of personnel; for medical research; to examine the adequacy of the administrative structure and organisation of the Medical Department in relation to such development; and make recommendations'.[175] The commission began their work February 1952 and completed their report July that year. The commission held their enquiry partly in public and partly in private, evidences collected formal and informal, and eyewitnesses heard in private. At a conference at Accra 20 February, the commission requested the press to provide publicity

174. Gold Coast Gazette Extraordinary, of 11.2.1952.
175. op. cit.

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to the enquiry and inform readers of the commission's willingness to consider constructive suggestions. As a result of this, large volumes of letters and memoranda were received, in many cases the writers invited to confer with the commission. The commission at the very onset spent much time visiting different parts of the country, sometimes together, other times in separate parties. Altogether they visited about 45 places: from Accra in the south to Bawku and Nandom in the North; from Takoradi in the west to Keta in the east.[176] The enquiry was the most exhaustive study on medical matters ever undertaken in the colony's history. The commission's report was equally exhaustive and detailed. It analysed the problems which had come to their notice and gave recommendations which were realistic in relation to the economy of Ghana at the time of the enquiry. In view chiefly of the financial circumstances of the country to which their attention was drawn right at the onset of their enquiries,[177] the commission recommended that the immediate and most urgent medical needs of Ghana could be met by the expansion of the **Medical Field Units**, improvement of **Hospital Facilities**, the setting up of **Health Centres** at nodal points in a network which embraced hospitals and dressing stations, and an increase in the number of **Dressing Station.**[178] Although aware that curative and preventive medicine can never be completely separated, in view of the underdeveloped nature of the country with low

176. Maude Commission, p. 2.
177. Letter of K A Gbedemah, Minister of Health, to governor C N Arden-Clarke. In: Maude Commission, pp. 1-2.
178. GCGRMSD, (1952), p. 1. See also Maude Report for details.

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educational standards, the commission recommended a conscious shift of emphasis from curative to preventive service, a policy advocated by DMS Dr Balfour Kirk in 1943.

With only a few exceptions the report was accepted by the new government as the basis of the policy on which the health services of Ghana should be developed in the few years which followed.[179]

It was considered that the enlargement of the Medical Field Units and the widening of its scope offered the best and rapid method of attacking endemic disease and the apathy with which it was accepted. Whereas the Medical Field Units' actvities were confined almost wholly to the Northern Territories and parts of Ashanti, to the virtual exclusion of the south, it was now time to extend it to the latter as well. The advantages of the proposed extension of activity lay in opportunities of collecting statistical data on the endemic diseases, hitherto almost totally lacking, as well as the clearing up of a vast amount of endemic diseases.[180] By 1960 the Medical Field Units were in the process of regionalising. Its regional headquarters was transferred from Kintampo to Accra to facilitate coordination of the service at the headquarters level with the teaching and research activities of the National Institute of Health and a future Medical School.More medical officers were appointed to the unit for stationing in the North, Ashanti, the Western and Eastern regions.[181] More microscopists staff were

179. Government Statement on the Maude Commission Report,( Accra, 1955).
180. Maude Commission, p. 17.
181. op. cit. Also interview of Dr A A Akiwumi, Accra, 1995.

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trained for deployment and biologists and entomologists were employed. The plan was therefore to develop it to cover rural areas throughout the country. By 1960 the MFU had achieved striking success.[182] When the Nkrumah government fell in 1966, the Medical Field Units fell into desuetude. It must be stated that if this recommendation had been sustained with energy, the question of endemic diseases in Ghana would have been vastly different from what it is today. This together with sustained instruction of people in hygiene and preventive methods of combating disease would have vastly reduced the burden on hospital out-patient departments and special clinics today; the financial outlay on curative medical facilities would have been most appreciably reduced.

The Medical Department adopted a rural health centre programme in the late 1940s. It was to be the principal means of carrying medical and health services to the rural communities. In 1951 there were three health centres in the country, two in the Volta Region and one in Ashanti. The government implemented the recommendation of the expansion of rural health centres with singular vigour. It was a more effective and rapid way of carrying health services to the people, the vast majority of who lived in the rural areas. It was also the cheaper and the most cost-effective way.[183] By 1960, there were 23 health centres in operation and 23 under construction. A Ministry of Health Committee in 1958 drew plans for locating 63 additional health centres spread over the entire

182. See Chapter 4 for details.
183. Government Statement on Maude Commission Report, p. 2.

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country. In 1962-1963 alone 42 additional health centres were proposed by the Ministry of Health.[184]

The new government decided, in consonance with the recommendation of the Maude Commission, that no new hospitals would be built the next five years. The principal explanation underlying this policy was the appreciation of the important fact that already, at this time, enough trained staff could not be provided even for the hospitals already built since the end of the war and for those already projected.[185] It was thought unwise to build more hospitals until the training of nurses and other auxilliary staff was organised to produce a steady and reliable annual output. Another powerful reason for placing a moratorium on the building of new hospitals was the simple fact that the country, for some years to come, could not afford the capital cost of additional new hospitals. A further reason which placed a damper on the construction of new hospitals was: Small hospitals are normally uneconomic both in staffing and administration; larger ones can provide satisfactory service only if easily accessible to a wide community.[186] The country lacked roads and many of those which existed created serious difficulties in transporting patients to hospital. The building of new hospitals had therefore to await the development of roads and railways. Communication development would

184. Health Services in Ghana, pp. 62-5.
185. It will be recalled governor Alan Burns had determinedly expanded hosptal facilities, in the teeth of stiff opposition from Dr Balfour Kirk, the DMS of the mid-1940s, whose preferred policy was the establishment of health centres and augmentation of the subordinate staff.
186. Maude Commission, p. 19.

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materially affect the choice of site and size of new hospitals since the development of roads and railways have an important effect on local population densities. It was largely the temporary halt to the construction of new hospitals which froze the expenditure on health during most of the 1950s. As Table 11

Table 11

Government and Non-Governmental Health Facilities 1951 and 1960 [187]

| | 1951 | 1960 |
|---|---|---|
| **Government Hospitals** | | |
| Number | 31 | 33 |
| Beds/cots | 1,878 | 2,354 |
| **Quasi Government Hospitals** | | |
| Number | 1 | 5 |
| Beds/cots | 30 | 378 |
| **Mission Hospitals** | | |
| Number | 3 | 27 |
| Beds | 132 | 1,494 |
| **Mines and other Private Hospitals** | | |
| Number | 14 | 24 |
| Beds/cots | 492 | 651 |
| **Total** | | |
| Number | 49 | 89 |
| Beds/cots | 2532 | 4877 |

shows, the number of government hospitals hardly increased between 1951 and 1960. But while government paused in hospital construction and their associated physical medical facilities, the Christian Missions did exactly the opposite.

For many years the only mission hospital in the colony was the Agogo Hospital. By 1951 there were two more, at Jirapa (maternity) and Worawora. Between them these had 132 beds. Between 1951 and 1960 the growth of mission hospitals was phenomenal: By 1960 there

187. The data were obtained from the Maude Commission (1952) and Health Service in Ghana (1961).

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were 27 of them distributed all over the country, particularly in the Northern Territories, Ashanti and the Volta Region. The number of beds increased over 10-fold. This growth in mission hospitals was the result of the government's endorsement of the policy, advocated by the Maude Commission, of enlisting the aid of missionary societies and other voluntary agencies in the provision of health facilities.[188] Although the missions built and ran these hospitals, the government also provided grants-in-aid to them to facilitate their work. But apart from the Christian Missions, quasi government concerns, mining companies and private individuals also made modest but important contribution to the growth of non-governmental health facilities in the 1950s.

When Achimota School was built it had, with it, its own hospital. By 1950 it was the sole quasi government hospital with a total of some 30 beds. But by 1960 the new port of Tema had been built, the College of Technology at Kumasi and the Univeristy College of the Gold Coast had also been established, along with their own hospitals; these had between them a total of some 140 beds.In addition the military hospital had been firmly established. So that by 1960 there were five quasi government hospitals with over 450 beds.[189] Mines hospitals dated back to the 1900s when gold mining companies began serious operations. Other mining activities such as bauxite and manganese commenced when Kitson discovered these minerals in the mid-1910s resulting in the building of hospitals at

188. Government Statement on the Maude Commission Report, p. 5.
189. Health Services in Ghana, Appendix 1.

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Awaso and Nsuta. By 1950 gold, diamond, bauxite, manganese and timber concerns had 12 hospitals with a total number of 485 beds between them. But by 1960 their bed capacity had increased only slightly. In 1950 there were a few private hospitals-nursing homes with a total bed capacity of 147. By 1960 these had increased to eleven with over 180 beds.All these hospitals were located in the Colony and Ashanti.

The overwhelming majority were in the Colony for the reason that it was in this part of the country that most mines were located. The fact that the major educational institutions were located in the Colony and Ashanti determined their location there of the associated quasi government hospitals. The country's seaboard being in the Colony determined that the Tema hospital was built there. Demographic factors determined that all private hospitals and nursing homes were located in the urban centres Accra and Kumasi. In all these considerations the Northern Teritories were excluded: There were no mines, no higher educational institutions and it would be an unprofitable venture for anybody to establish private health institutions in that part of the country.

In 1960, the infant mortality was 110 per thousand (down from 350 per thousand in 1915, but still excessively high), the still-birth rate was some 60 per thousand total births and maternal death rate 10 per 1000 deliveries. The prevalence of tuberculosis and leprosy was about 1% of the population, an unacceptably high rate.[190]

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190. ibid., p. 9.

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The problems of malaria and the many other tropical endemic diseases continued their steadfast grip on the Ghanaian community; their grinding effect on morbidity and mortality continued in spite of fifty years' unending labour of the colonial Medical Department to control them.In the face of these facts and sobering statistics, the African government had little hope of realising their objective of achieving a rapid improvement of the physical and material welfare of their people if they did not undertake a very major health programme for the country. It is not surprising then that by 1960, the government held the health service one of their foremost priorities. And vigorous steps began to be taken in pursuance of a ten-year Health Programme.[191]

In March 1961,the government engaged the services of Dr D Brachott, an Israeli, to help reorganise the Ministry of Health, to assist in planning for the future health services and to initiate its implementation.[192] Dr Brachott was a high civil servant of the Israeli medical services, a deputy for medical planning in Jerusalem, who also taught in the school of public health at Jerusalem. He was part of an Israeli medical and technical assistance team sent to Ghana. Dr Easmon was the Director of

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191. ibid., p. 52. 1950-1960 was a waiting period. For until the latter 1950s, expenditure on health services was held in abeyance, in contrast to the great strides made in other areas. Eg Compulsory primary education had been introduced; enrolment in primary schools had more than doubled, in middle schools tripled and in secondary schools had risen from 6,000 in 1950 to 15,000 in 1959: Health Services in Ghana, p. 9.

192. ibid., p. 5.In this exercise, prominent assistance was given by Dr C O Easmon, Chief Medical Officer, Dr F T Sai, Deputy Chief Medical Officer and Miss D A N Kisseih, Chief Nursing Officer.The result of Dr Brachott's work was A Ten Year Programme for Health Service Development in Ghana.

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Medical Services and Dr Sai, the then Deputy Director of Medical Services.[193] Dr Brachott stayed and worked in Ghana for two years. He was given the specific assignment by the Ghana government to develop a 10-year medical plan for the country. He was virtually a one-man team, conducted extensive investigations in his task, travelled the length and breadth of the country and held endless discussions with many people, including those normally only remotely connected with medical services. He held many discussion sessions with Dr Easmon, Dr Sai and many others. Apart from the general urgency of the need for the health services to catch up with other areas of development, Brachott considered there were other compelling reasons for urgency: Between 1948 and 1960, the population had grown from 4.8 million to 6.7 million, an annual increase of some 160,000. Over the same period urbanisation had increased three-fold in the principal towns of Accra, Kumasi and Sekondi-Takoradi. Furthermore as or result of heavy demand for modern medical services, considerable overcrowding once more now characterised out-patient departments, hospitals and health centres.

193. Personal Communication, Professor Sai interview in January 1995.

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This state of affairs is demonstrated in Table 12 which presents a bird's eye view of the relentless pressures on health facilities between the mid-1920s, and the early 1950s. Table 12 demonstrates a progressively-worsening situation.

Table 12

Data showing pressure on health facilities 1926-1961

| | 1926 | 1935 | 1945 | 1953 | 1961 |
|---|---|---|---|---|---|
| Population, millions[194] | 2.3+ | 3.5 | 4.0+ | 6.0 | 6.7+* |
| Pop/Doctor Ratio[195] | 46,836 | 53,200 | 61,647 | 55,433 | 18,000 |
| Ann No. Cases[196] | 105,300 | 271,490 | 528,519 | 833,034 | NA |
| Case/Pop Ratio %[197] | 3.7 | 7.9 | 12.6 | 15.5 | NA |
| Cases/Doctor[198] | 1,499 | 4,177 | 7,772 | 8,588 | NA |

The ten-year health service development programme sought to deal with three major aspects of health service: A rural health service integrated into the system of hospitals, health centres and other medical units; a country-wide hospital plan based on the health needs of the population and on sound medical and economic considerations; and a training programme for medical and paramedical personnel capable of handling the 10-year health programme.[199] The proponents of the programme kept a hawk's eye on environmental

194. GCGRMSD, (1926/27, 1935, 1945) and MHR, (1953).
195. Patterson, Health in Colonial Ghana.
196. GCGRMSD, (1926/27, 1935,1945) and MHR, (1953).
197 & 198. Patterson, Health in Colonial Ghana.
We see here a steady increase in population, annual number of cases, a worsening population/doctor ratio till the late 1950s, a worsening case/doctor ratio and a rising population/case ratio.
198. Calculated from GCGRMSD, (1926, 1935, 1945) and MHR (1953).
199. Health Services in Ghana, p. 10.

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sanitation, child and maternal welfare, food and nutrition, control of endemic diseases and health education.[200] In the ten-year health programme the concept of health centres was to be employed to the full. Its overall purpose was to help improve the social and health standards of the rural community. In addition, urban health centres were to be created. These would be located in larger municipalities, each centre to serve some 50,000 people initially, some 20,000 people later. They were to be provided full health services except hospitalisation. All health centres, rural and urban, would be related to hospitals and would be responsible for a total health programme, curative and preventive.[201]

The ten-year programme proposed a geographical distribution and extension of government hospitals of three types: Twenty-five area hospitals, six regional hospitals and three central hospitals.[202] The programme saw the decentralisation of the health service administration as an important aspect of the health programme: It proposed a Regional Health Department, Regional Advisory Health Council and the distribution of Medical Officers of Health in the health areas.[203] The medical field units were to continue their regionalisation and further strengthening.

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200. The master plan called for `the close integration of the health programme with policies affecting agriculture, food and nutrition, industrialisation, distribution of population, road-building, education and community development ....national research schemes...and higher education and training',ibid., p. 11.
201. ibid., p. 18. See Appendix for functions of Health Centres.
202. ibid., p. 22. See Appendix for details.
203. ibid., p. 33. The health areas were considered critical to the health programme. In these areas `the area hospital with the area MOH would be fully integrated with the responsibility for the preventive and curative medical activities of the health centres...'.

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By 1961, as a result of the African government's measures, the population/doctor ratio had fallen impressively to 1/18,000. The new health programme aimed at a target of 1/7000 for the whole country by 1970.[204] And the plan called for a total of 429 specialists of all grades by this date. A considerable expansion of professional nursing and midwifery training programme was the only way of providing the basic need for nursing in the programme. For nurses were in grave short supply and the annual turn-out of trained nurses miniscule. Similarly the scheme required great effort in the training of other personnel such as those for laboratory, radiological, dispensary, dental health, pharmacies and so on. The programme also called for an extension of tuberculosis hospital facilities, the expansion of domiciliary treatment and preventive early case finding. A similar principle was to be used to tackle the leprosy problem. The government, in concert with other West African governments, was to participate in the WHO malaria eradication projects which involved residual spraying and the trial of the Pinotti `medicated salt' project. Finally, the programme saw as vital, a strengthening and extension of the machinery for birth and death registration.[205]

That the government was already committed to a major reform of the health services even prior to the Brachott Development Programme is clear from the records. For vigorous steps in construction were already under way in 1961: Seven training schools and hostels for

204. ibid., p. 37.
205. ibid., pp. 37-51.

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nurses*; modernisation and expansion of existing hospitals in nine hospitals**; extension of Korle Bu Central Hospital***; a new mental hospital at Ankaful****; and 100 bungalows and flats for doctors in the health centres and hospitals*****. In addition contracts were awarded for 15 health centres and four dental clinics that year.[206] Moreover working drawings for new area hospitals in Nsawam, Wiawso, Tarkwa, Mampong and the central hospital at Tamale were in their final stages that year. Looked at in budgetary terms, the Ministry of Health was spending in 1960-61 and 1961-62, twice and three times respectively, what it spent annualy between 1957 and 1960.[207] It was estimated that the implementation of the ten-year development programme would entail the conservative expenditure of nearly 53 million pounds, at an annual capital investment of some 5 million pounds.[208] A key problem which dogged the health development programme, as it did all others, was the shortage of professional, sub-professional and technical personnel.Fortunately, the Manpower Survey of Ghana in 1960 produced statistics which demonstrated that Ghana's manpower resources would make the implementation of the training programme

206. ibid., p. 52. A total of over 5.5 million pounds were spent that year. Its breakdown was as follows in millions of pounds: *:0.77; **: 0.54; ***: 2.8; ****: 1.0; *****: 0.45.

207. Total expenditures (including recurrent and development) were in millions of pounds: 1957-58, 3.0; 1958-59, 3.4; 1959-60, 4.2; 1960-61, 6.2; 1961-62, 10.5. Health Services in Ghana, p. 52.

208. This yearly capital investment would allow an increase in the capacity of nursing training schools by some 220 students, construction of 22 rural and urban health centres, addition of 800 beds in area, regional and mental hospitals and provision of requisite accommodation and equipment for the annual expansion: op. cit.

possible.[209] The critical role of a medical school for the country in the development programme cannot be overstated. The establishment of this valuable institution had been postponed in 1929, and again 1950 and 1952. By 1960 plans were well under way for the commencement of the country's first medical school (See Chapter 9 for details) and by 1969, its first graduates. By 1961, the population/doctor ratio had more than halved, hospital accommodation and the fraction of the population receiving medical attention had increased substantially. Perhaps the most important achievement was the tremendous increase in the number and spread of rural health centres; this allowed health services to reach many more rural communities.Specialised medical services in tuberculosis and leprosy were strengthened and maternal and child welfare centres became more widespread.Another important achievement was a major increase in the quantity and quality of specialised medical services, most of which, by 1960, had begun to be manned by Africans. And the government's Africanisation policy saw to the training of Ghanaians in all aspects of medical services, professional, technical and administrative. From about 1961, practically all European medical personnel had been replaced by African. Figures 1-3 summarise the overall changes in the medical

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209. op. cit. According to The Survey of High Level Manpower in Ghana (Accra, 1960) there would be some 180,000 middle school graduates by 1965. This group of students would be the manpower source for the training of nurses etc. The survey also provided statistics which showed that manpower supply for the training of doctors, senior and technical staff would be adequate to meet the requirement of the ten-year health development programme.

210. The concentration of the colonial governments on curative medicine had the unfortunate effect that the African governments which followed found it easier

Total number of cases seen annually in the Gold Coast

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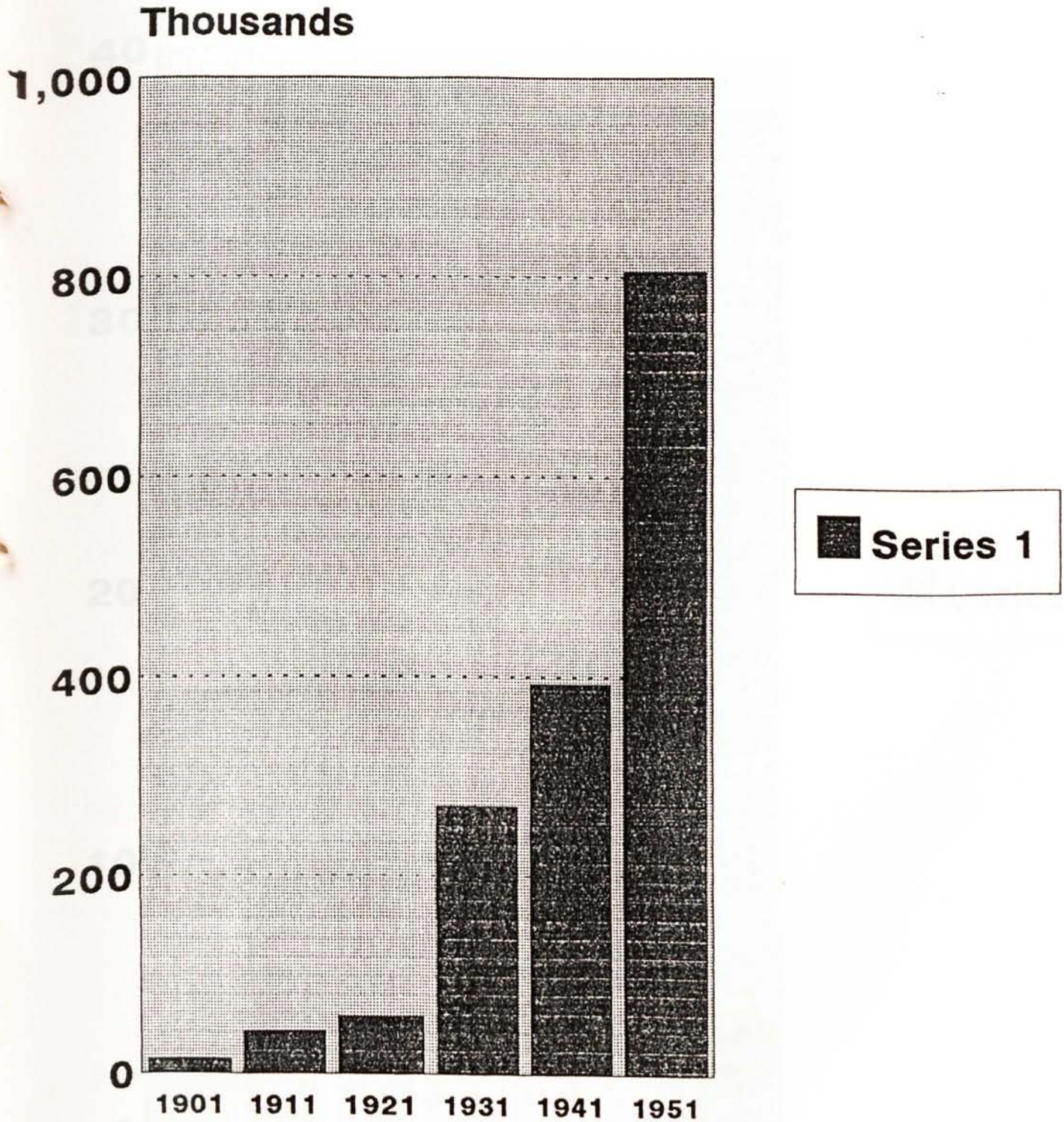
Figure 2




ases seen in government health facilities 1901-1951

# Number of Government Hospitals:1900-1960

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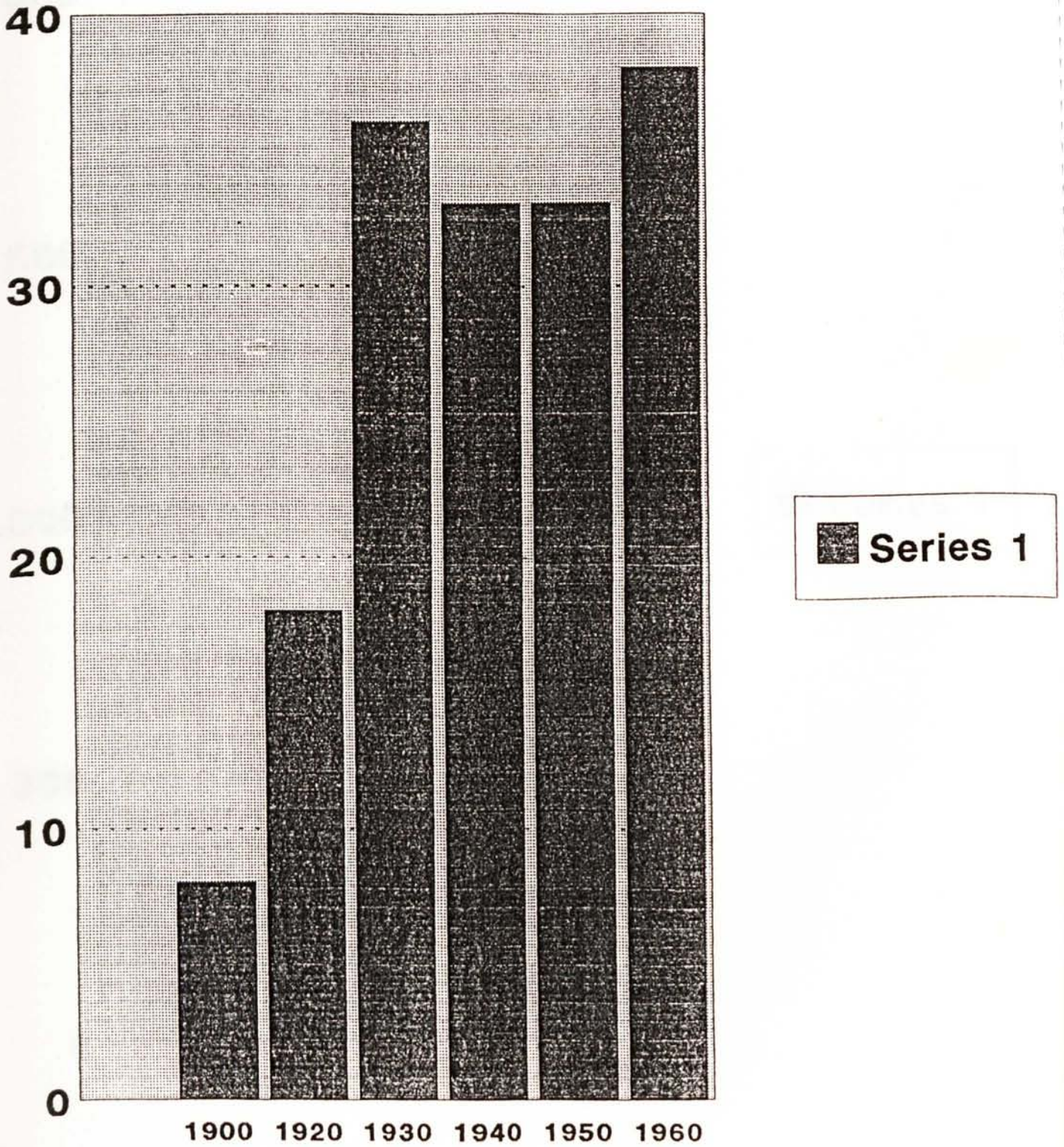
Figure 3



# Patients as fraction of 100,000 population: 1900-1960

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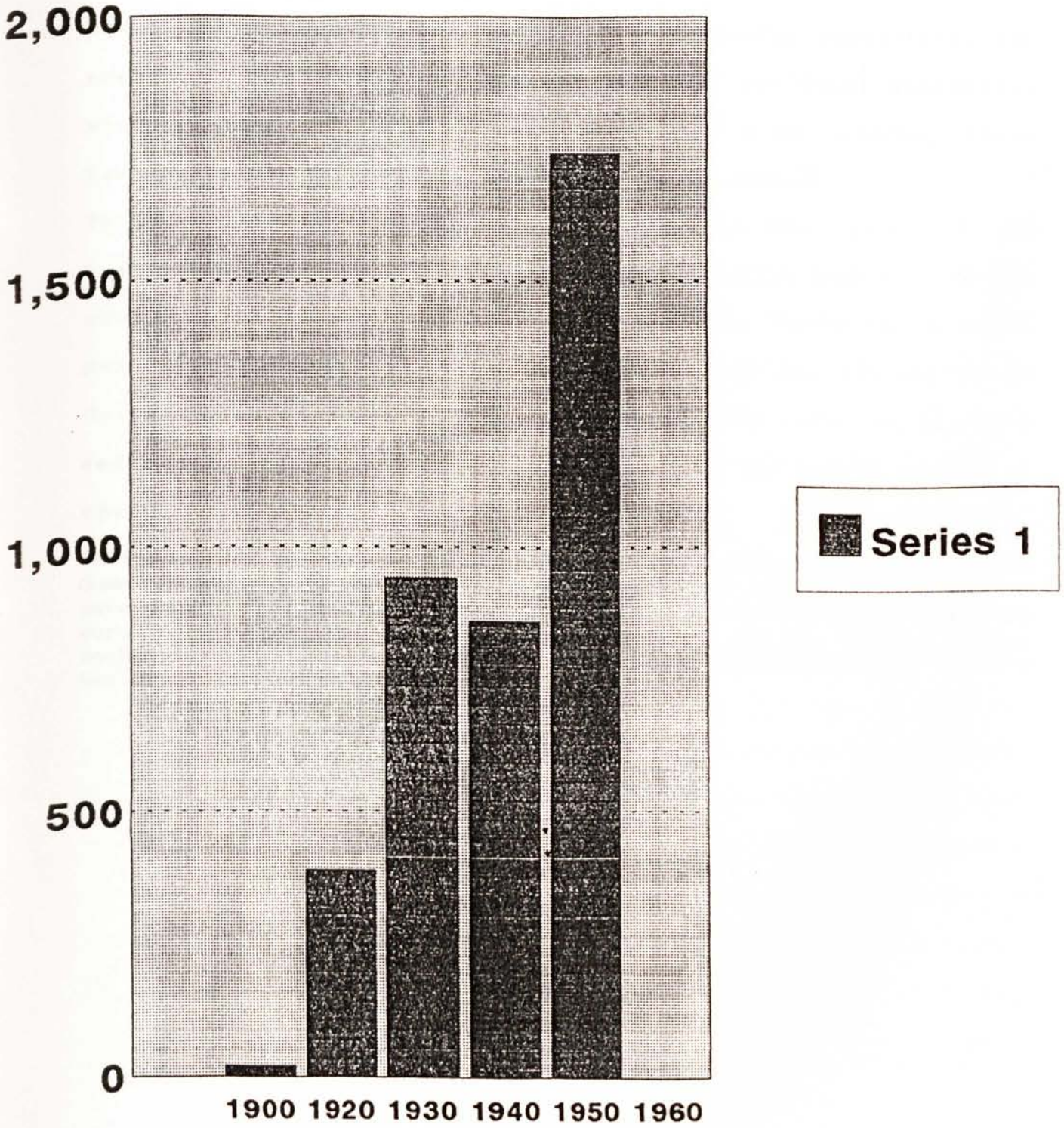
Figure 4




Data unavailable for 1960. Figure for 1900 is less than shown.

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facilities (hospitals), their utilisation (number of African patients provided the service) and the fraction of the population which used the health facilities, between 1900 and 1960.

It was clear however that the rapidly-increasing population, the emerging unfavourable economic climate and political instablity would becloud or soon put a halt to, or even reverse, these favourable but expensive changes. And so it proved.

The narrative in the next chapter describes the causes of the initial tardy and slow introduction of preventive medicine in the country, the course of sanitary reforms, the carrying to rural people the benefits of modern medicine through the Medical Field Units and role played by medical research into tropical diseases and medical laboratory services in improving the health status of the Ghanaian African.

to follow this policy than abandoning it for a preventive policy. The Maude Commission proposed a conscious shift in policy in 1952 and although the African government did accept this recommendation, there was no bold shift away from curative medicine. The psychological moment passed and the country remains anchored to the expensive, ineffective and futile policy of providing a curative health service for a galloping population.

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# Chapter 4

## THE EVOLUTION AND WORK OF THE SPECIAL MEDICAL SERVICES

### Sanitation, Laboratory Services, Medical Research and Medical Field Units

As stated in Chapter 2, in 1898, Joseph Chamberlain, Secretary of State for the Colonies between 1895 and 1903, decided to take action on the problem of the abnormally high European mortality in the tropical colonies in two ways: The establishment of Schools of Tropical Medicine where medical officers would receive special instructions in the treatment of tropical diseases, and the encouragement of research into the causes of tropical diseases. By 1908 Sanitary Branches had been established in all Medical Departments of the British West African Colonies, for the promotion of environmental health. And by 1920, colonial medical policy had begun to be directed increasingly towards the safeguarding and improving the health of all inhabitants of the tropics.[1] It is on account of the clear inter-relations between sanitation, medical laboratory diagnosis and research and the carrying of medical services to rural Africans (by means of what became known as the Medical Field Units which was part of the Sanitary Branch) that these three important special services of the Medical Department are brought together in this chapter. Their evolutional and service inter-relations shall become evident in the narrative that follows. Because of its extreme complexity, the evolution of sanitation is

1. This important policy of Chamberlain, enunciated in 1898, was quoted at length in the minutes of the Colonial Office Conference of 1927, PRO, CO 323/981/10.

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narrated in the following manner: First, the sanitary conditions in the country (leaving no doubt about their abysmal state prior to 1910), the events and activities which led to the establishment of the Sanitary Branch and other sanitary institutions, are told. This is followed by a narrative of the functions, operations, problems, successes and failures of sanitary reforms, between 1910 and 1960, in the area of general sanitation. The third part of the narrative on sanitation deals with the four special and complex areas of drainage and mosquito control, sewage and sewage disposal, water supply and health education.

**Sanitation and Health Education**

Before approximately 1880, the towns along the coast of Ghana were notorious for their insanitary state. All had similar unhealthy features: They all contained lagoons which bred swarms of mosquitoes and gave off pungent disagreeable odours. No public or private latrines existed. Excreta was deposited anywhere: in alleys within African precincts, in town outskirts, on beaches. Rubbish was similarly deposited anywhere and everywhere: there was no organised collection of wastes and rubbish. Animals,including vultures, were depended upon to scavenge them. Except Cape Coast, which was the seat of government till 1877, none had streets. Thoroughfares consisted of crooked paths and alleys running between collections of huts built to no overall plan: no organised lay-out existed for any town. There were no drains. Drinking water was abominable, consisting of brackish water obtained from ponds and swamps. Cape Coast, though the capital, was little better,

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perhaps worse, than other small towns along the coast. The celebrated sanitary infamy of Cape Coast carried into the 20th century. It was a subject of regular reporting by the Medical Department.[2,3] In 1911, Dr Beringer, the medical officer, Cape Coast, submitted a report on the sanitary state of the town,a report which sought to shock the government into recognising the problem and instituting major sanitary measures.[4] When the Secretary of State for the Colonies, Lord Carnavon, decided to bring together Ghana and Lagos as one crown colony under one administration, the capital was moved from Cape Coast to Accra, in 1877, partly because the new capital, Accra, offered the advantage that its environment was held far healthier than that of Cape Coast.[5] Accra was deemed comparatively healthier largely because of the absence of serious swampland around it.[6] But the sanitary status of the new capital, Accra, was no better than that of Cape

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2.Blue Book, (1883), PRO, CO 100/33. In 1871,F Fitzgerald,London editor of the African Times, described Cape Coast as`one vast public privy and dunghill' where European officials could enjoy their mistresses and drink champagne upon a dungheap provided they may occupy the highest positions on the stinking mess'. The African Times, 24 April 1871.

3.The Sanitary Report of 1900 described the town `From a sanitary point as the bugbear of the colony...The only possible way to improve the health of the native town is to clear away half the houses': GCGRMSD, (1900), p. 17.

4.He stated: `The hovels are placed without any relation... to one another.Where there was room, a house was built. It might touch a neighbouring house... block up a passage...stop ventilation and intrude upon the yard of neighbouring houses or prevent the entrance of light...it might do anything. Only one question appeared to matter: was there space for a room or two of any sort? If there was no space, on the ground, it was put on top of another house': GCRMSD, (1911), p. 193.

5.Metcalfe, Great Britain and Ghana, doc. 302, pp. 364-5, Speech by The Earl of Carnarvon, House of Lords, 12.5.1874. Although the decicion to transfer the capital was taken in 1874, it was not till 1877 when implemented.

6.op. cit.

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Coast and other towns. It competed closely with Cape Coast in its insanitariness. The `...the whole native town [Accra] is one built on the most insanitary conditions that ingenuity for that purpose could device. The mudhuts - for they are very nearly all mud - are huddled together in the greatest confusion and in heavy rain the narrow and tortuous pathways between the houses are converted into rivulets of dirty water... There is a large accummulation of water just beyond the market, of the dirtiest and filthiest kind, in which pigs rejoice to wallow and natives to bathe: and...they even drink this stuff...It is not surprising the natives get guinea worm when compelled to drink this semi-fluid.'[7] Ghana passed its first public health law in 1878. This was the Towns, Police and Public Health Ordinance. Under this law, buildings could only be erected with permission of the governor, decayed buildings must be repaired or demolished, the Colonial Surveyor was responsible for clearing and draining the streets, and the government could impose fines on those committing public nuisances. The law was immediately applied to Cape Coast, Accra, Elmina and Lagos and gradually extended to other towns.[8] It was however rarely enforced.The apathy of the colonial government to sanitary matters, which closely matched that of the Africans, did not escape the notice of the British government and the British press which, in 1881, accused the colonial government of total neglect of all sanitary laws,

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7.First sanitary report on Ghana: Blue Book (1883), PRO, CO 100/33.
8.Lees to Hicks-Beach, 16.7.1878, PRO, CO.96/124. At this time Lagos was administered from Accra.

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inexcusable apathy and wilful violation of the laws of health.[9] The primitive pre-Medical Department of the colony of 1878 was headed by Dr Jeans, described incompetent by Gale.[10] Neither Dr Jeans nor governor Rowe (himself a former army staff surgeon) took much interest in sanitary matters;[11] for Ghana and the rest of West Africa attracted only the poorest specimens of colonial officials.[12] The complete absence of competent leadership, not financial stringencies, ensured nothing was done about sanitation till administrative changes commenced in the early 1880s.[13]

The first administrative change which began to permit Ghana's colonial government to address the sanitation issue was the appointment in 1883 of Dr J. McCarthy as the colony's first Chief Medical Officer. He was required to report on the sanitary needs of the colony, draw up recommendations and to see that reforms were carried out.[14] The second administrative arrangement was the appointment of Dr J F Easmon as the first medical officer of health of Accra in 1884; hitherto, practically all sanitary work was the responsibility of district commissioners.[15]

It can be said that governor Griffith was the first administrator who began to take appreciable steps to improve sanitation in the

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9.Daily News, London, 19.9.1881.
10.Gale, `The Struggle Against Disease in the Gold Coast:Early attempts at Urban Sanitary Reforms', 1993.Unpublished paper. See Chapter 3 on the inception of the Medical Department.
11.Rowe to Derby, 1.10.1883, PRO, CO 96/152.
12.Pine to Labouchere, 10.10.1857, PRO, CO 96/41.
13.Gale, `The Struggle Against Disease', 1993.
14.Young to Derby & Minutes, 17.6.1884, PRO, CO 96/158.
15.Hodgson to Ripon, 27.7.1893, PRO, CO 96/235, encl.

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colony, though, admittedly, the economic exigencies of his tenure did not permit the formulation and execution of any grand sanitation strategy. He certainly was in grasp of the total sanitation picture. In 1893, he began to take the first steps towards the adoption of a system for the disposal of sewage, and the strengthening of the staff of the Public Works Department as an essential step in sanitary reforms. Griffith recognised the serious sanitation problems overcrowding, which was a legendary unsavoury feature of African dwellings, created in all major towns of the colony. He was interested in the laying out of streets and the preservation of open spaces, but these tasks and projects were made doubly difficult by African overcrowding, indiscipline and disorder. He tried and carried out what he could. He could only begin with the limited means then available to him.[16] By the end of his tenure of office, a few improvements had been made: The European quarters and main streets were cleaner, pig nuisances were being held in check, public cemeteries replacing home burial. Some towns had street lamps, others public latrines and dustbins and, some, the occasional water tank and public well.[17] These reforms can only be described as embryonic.

By the late 1890s and early 1900s sanitation was seriously, albeit slowly, engaging the attention of the Medical Department.[18] But the cost of comprehensive sanitation, with its enormous price tag,

16.Griffith to Marquis of Ripon, NAG ADM 1/2/47, Desp. No. 246 of 27.7.1893.
17.Hodgson to Ripon, 27.7.1893, PRO, CO 96/235, encl.
18.Colonial Annual Reports, Gold Coast, (1898). See Appendix for details.

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and which each colony had to bear from their own resources, posed a major problem which Secretary of State Chamberlain could not ignore. Chamberlain was not opposed to sanitary reform. He encouraged it, but his policy was to proceed gradually, because the colonies had very limited means.[19] And Nathan, in keeping with this policy, limited the scope of sanitary activity only to those principal towns with `considerable European population'.[20] He however recognised the sanitation problem as basically the absence of a well-worked out sanitary organisation and of keen and sufficient European supervision to seeing them carried out. In 1902 he proposed a Health Department for Ghana: He requested a Dr C Balfour Stewart, who was on a visit to Ghana (sent there by the Liverpool School of Tropical Medicine) to prepare a scheme. In particular, Nathan wanted to know how to improve the sanitation of the coast towns. But the Acting Principal Medical Officer, Dr Murray, considered the adoption of the scheme Dr Stewart proposed impracticable, why, we are not told. In any case Nathan was not prepared to spend some 10,000 pounds a year `...at the present stage of the colony's development..' on European Sanitary Staff which the scheme would have involved.[21] During the administration

19.The policy of sanitary reforms, yes, but gradualism, was the response and policy of Joseph Chamberlain, (a former Mayor of Birmingham who oversaw the successful but costly sanitary arrangements and habilitation of that city, was in a position to know all about sanitation) to the resolutions of the African Trade Section of the Liverpool Chamber of Commerce. Sanitation: West Africa, vi, 22.7.1903, PRO, CO 96/411. See Appendix II for Resolutions.
20.Nathan to Chamberlain, NAG ADM 1/2/55, Desp. No. 435, of 6.9.1901. These towns were Accra, Cape Coast, Sekondi, Kumasi and Axim.
21.Nathan to Chamberlain, NAG ADM 1/2/56, Desp. No. 112, 11.3.1902.

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of Nathan and the early years of Roger therefore,preventive health activities consisted of some measure of general sanitation, mosquito control and residential segregation limited to the larger coastal towns with significant European population.[22]

The outbreak of plague in 1908 furnished governor Roger the fine opportunity to establish the administrative basis of sanitary reforms. For he was stating in a despatch that year that he was `strongly of the opinion that the only method of securing really efficient and continuous sanitary work is by means of a comprehensive scheme; establishing a special Sanitary Branch of the West African Medical Service...and the standardising of the whole system of sanitation...'.[23] For the first time an administrator of the colony, Roger, put sanitation on top of priorities of the country. He considered effective sanitation, including good water supply, the most urgent need of the colony.[24]

Governor Roger, with the help of Professor William Simpson, played the most crucial role in pushing through the plans for reforms: Professor Simpson, sent out to the colony to handle the plague outbreak, recommended the establishment of a Sanitary Branch of the Medical Department, with strong encouragement from Roger.[25] Apart

22.This is clearly evident from reports on sanitation in all GCGRMSD between 1900 and 1910.
23.Roger to Elgin, NAG ADM 1/2/69, Desp. No.355 of 20.7.1908.
24.He had stated in an address to the Legislative Council in 1905 that `...until better water supplies can be provided; until the sewerage and drainage systems have been further improved; and until the general standard of living is raised...I am afraid no marked improvement can be expected (in sanitation)': op. cit. What Roger said in the 1900s applies with equal force today.
25.GCGRMSD, (1908), p. 5. See details on the roles of the 1908 plague and Professor Simpson in Chapter 2.

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from the strong urging of governor Roger for reforms, several other factors contributed to it. Perhaps the most important was fiscal: The cocoa industry was making significant strides, so that the colony's annual revenue rose from 300,000 pounds in 1900 to over a million pounds in 1910 and to nearly 3 million pounds in 1920: More money was becoming available, a key requisite in sanitary activity.[26] Further support for sanitary reforms was provided in 1908 by the committee, charged with the task of making recommendations for the reorganisation of the West African Medical Services; the committee recommended that `..."It is a part of the duty of a medical officer to increase the progress of sanitation amongst natives dwelling in his district"...'.[27] It can be said also that the establishment of WAMS in 1902, played an important premonitory role in the instituting of sanitary reforms in the country; though not one of its intended purposes. For, it was the establishment of WAMS which saw the increasing attraction of competent medical men into the medical services of the colony. Such medical officers had to be men of many parts, able to perform medical, sanitary and political duties.[28]

The earliest greatest sanitation activity of the colony can be put between 1910 and 1920, mostly during the governorship of Sir Hugh

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26.Metcalfe, Great Britain and Ghana, Appendix D, p. 751. The role of finance in sanitation cannot be overstated. Chamberlain's policy of gradualism was based on this fact.

27.Patterson, Health in Colonial Ghana, pp. 12-13.

28.Since J F Easmon was appointed the first Medical Officer of Health for Accra in 1884, the occasional MOH for Sekondi, Cape Coast and Accra, was evident in the colony. One such example was Dr (Mrs) Deacon who was MOH for Accra around 1900, and Dr Hayford for Cape Coast.

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Clifford. The energetic Dr T.P. Rice became the first head of the Sanitary Branch; the branch department commenced business in 1910.[29] Its establishment was crucial in the history of sanitation of the colony.It was this body which laid the basis of sanitation in Ghana.

The Secretary of State issued a memorandum in 1910 setting out the organisational structure, powers and duties of the new Sanitary Branch.[30] What was the administrative structure of the sanitary organisation ?

The Sanitary Branch was headed by a senior sanitary officer (SSO), his immediate superior the PMO, and his deputy, the junior sanitary officer (JSO). Below them were several medical officers of health (MOH) and European sanitary inspectors. Apart from being directly in charge of the JSO and the MOH and all other officers, the SSO had under his orders indirectly, on tours of inspection, the district MOs of outstations in matters relating to public health and prevention of disease.[31] From 1921 the SSO became known as the Deputy Director of Sanitary Services and the JSO, senior sanitary officer. From this time also the Sanitary Branch was sometines referred to as the Health Branch.[32] The most senior African staff

29.GCGRMSD, (1910), p. 5. Dr Rice was a house surgeon in 1897 at Lagos, SMO in Southern Nigeria in 1903 and in Ghana in 1906, SSO (the first such appointment in Ghana) in Ghana in 1910, PMO, Sierra Leone in 1913, returned to Ghana in 1916 as PMO (after retirement and death of PMO Dr Hopkins).He became PMO, Barbados, in 1929, finally retiring in 1930. He died in 1941: NAG, EP 387.
30.This memorandum was published in full in despatch by Clifford in 1914: Clifford to Harcourt, NAG ADM 1/2/94, Desp. No. 780 of 19.10.1914.
31.Clifford to Harcourt, NAG ADM 1/2/94, Desp. No. 780 of 19.10.1914. See Appendix II for details on the administrative structure.
32.GCGRMSD, (1921), p. 5.

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was the sanitary superintendent under whom were several categories of sanitary inspectors. Subordinate to these were several dozen village overseers.Mosquito headment at first had the sole duty of supervising mosquito brigades; by the 1950s they were performing general sanitary duties as well. Village overseers' duties in the earlier years lay in the supervision of the planning of villages to simple lay-out and building of houses; by the 1950s they had the additional duty of supervising elementary sanitary services in villages. A proportion of these auxiliary staff were employed by the municipal councils.[33] It was not till 1946 that the adminstrative machinery of sanitation underwent a major reorganisation; when Housing and Town Planning, Labour, and Water Supplies became independent departments, no longer handled by the Medical Department.[34] It was, largely, this overhauled organisation which the first African government inherited in the 1950s.

In all towns which were headquarters of districts, there were Sanitary Committees consisting of local officials including the district commissioner, and others, who provided monthly reports of their proceedings to the SSO. The senior sanitary officer then advised the government through the Principal Medical Officer as to the utility of the recommendations made and the expediency of giving effect to them. The sanitation of the three largest towns in the colony at this time (Accra, Cape Coast and Sekondi) was controlled by municipal bodies called Town Councils constituted of

33.Maude Commission, p. 39.
34.GCGRMSD, (1946), p. 10.

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government officials including a medical officer of health, an engineer appointed by the governor,and elected non-officials. The bodies levied taxes and collected revenue, but they dealt chiefly with conservancy.Sanitary improvement works of any magnitude were designed by the Director of Public Works in collaboration with the senior sanitary officer and carried out by the engineers of the Public Works Department.[35] The enactment of the Towns and Public Health Ordinance in 1912 provided for the establishment of a Central Health Board, based at Accra. This Board was presided over by the Principal Medical Officer. The Board had the important power and function to make, alter or revoke, rules, subject to the governor's approval, in connexion with sanitation.[36] The functions of the Sanitary Branch were many. There were the ordinary duties of general nature, and a wide range of extraordinary duties.In the event of an outbreak of any serious epidemic disease, the procedures to be followed were clear.[37] In a nutshell, the functions of the branch department included general sanitation; refuse disposal; the construction and proper maintenance of drains, lagoon reclamation works and mosquito control; water supply;

35.Clifford to Harcourt, NAG ADM 1/2/94, Desp. No.780, of 19.10.1914.
36.Other members of the board were the Director of Public Works, Secretary for Native Affairs, the Senior Sanitary Officer (who was the head of the Sanitary Branch) and one other member appointed by the governor: Bryan to Harcourt, NAG ADM 1/2/83, Desp. No. 269, of 11.2.1913, encl in: The Towns and Public Health Ordinance, 1912.
Major H Bryan acted as governor for short periods in 1904, 1906, 1907, 1908, 1909, 1911 and 1912, when various governors were on leave: Metcalfe, Britain and Ghana, Appendix B, p. 744.
37.Clifford to Harcourt, NAG, ADM 1/2/94, Desp. No. 780 of 19.10.1914. See Appendix II for details of the duties.

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sewage and sewage disposal; markets and slaughterhouses; the handling of epidemics; health education; overseeing town and village planning along sanitary lines. From the mid-1920s, the Branch took on two additional responsibilities: that of sanitation in the mining health area, and for the maternal and child welfare centres; the women medical officers who ran them became part of the Sanitary Branch.

We shall now narrate the main areas of sanitary reforms, first, from 1910 to 1950 under the strictly colonial administration, then from 1951 to 1960 under the first African government. The narrative shall first deal with general sanitary organisational arrangements, then general sanitation, malaria control, sewage and sewage disposal, water supplies and finally health education.

When sanitary reform started in 1910 during the Roger administration, it was pursued with exceptional vigour. By the mid-1920s, the Sanitary Branch was employing eight Sanitary Legislative Ordinances in the prosecution of its functions. These ordinances, with little modification, remained in place till the colony attained political independence in 1957.[38]

Prior to the establishment of the Sanitary Branch in 1910, sanitation was only part of the duty of many medical officers in outstations. Only the most energetic medical officers in good

38.The Ordinances were:1.The Town Councils Ordinance.2.The Towns and Public Health Ordinance.3.The Crminal Code Ordinance.4.The Destruction of Mosquitoes Ordinance.5.The Vaccination Ordinance. 6.The Infectious Disease ordinance.7.The Quarantine Ordinance. 8.The Mining Health Areas Regulation Ordinance.

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physical condition could cope.[39] From 1910 however, these officers were no longer alone in the prosecution of their onerous sanitation tasks. They now operated through, and obtained valuable assistance from, the Town Councils and Sanitary Committees.[40] From now on they also had the assistance of the European staff sanitary officers employed to secure regular supervision, at first in the major coastal towns, and by 1920, throughout the provinces. Where there was no MOH, European sanitary officers were distributed. Their task was not only the supervision of sanitary work, but also the training of Africans for such work.[41]

By the end of 1910, over 20 towns were receiving close sanitary attention. These towns were: Axim, Tarkwa, Dixcove, Dunkwa,Adjuah, Nsawam, Sekondi, Elmina, Cape Coast, Saltpond, Winneba, Mangoase, Koforidua, Adawso, Dodowa, Somanya, Akuse, Ada, Keta, Kumasi and Accra. Sanitation activity in these towns included: provision of government wells and water tanks, incinerators, public latrines, construction of drains and the draining of swamps, slaughter houses, and improvement of markets.[42]

Increasing attention began to be quickly extended to the towns of the interior. For example,in 1913, the headquarters staff of the Sanitary Branch, now headed by Dr David Alexander, toured over 41

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39.GCGRMSD, (1907), p. 9. See also Chapter 5 for the many duties of the early medical officers.
40.GCGRMSD, (1912), p. 184.
41.European Sanitary Officers continued to supervise and train Africans right into the 1940s. Senior African Sanitary Officers began to enter the scene from the mid-1930s on.
42.GCGRMSD, (1910), p. 57.

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towns of the colony, from then on a regular task of the branch department, inclusive of towns in the south, Ashanti and the Northern Territories;[43] by 1920, the wide range and variety of sanitary activity had spread deep into Ashanti and even to the Northern Territories.

That sanitary activity largely favoured the coastal towns is demonstrated by an examination of the apportionment of the sanitary vote of 1907, a bias which carried into later decades. That year, out of a vote of 4,239 pounds controlled by the Principal Medical Officer, 3,637 pounds was spent on the Colony, 340 pounds on Ashanti and 262 pounds on the Northern Territories.[44] Further evidence of southern bias is provided by the fact that in 1910, of the 18 towns in which sanitary work was done, 10 were towns in the Colony, four in Ashanti and four in the Northern Teritories.[45] But what were the responses of Africans to sanitary reforms ?

Perhaps the most difficult task faced by the Sanitary Branch in these early years of sanitary reform was how to root out, what, in Europeans opinion, was the culture of filth of the African population. Except the Ashantis, the Africans, (in particular the coastal Africans) it would seem to Europeans, had not the vaguest notion of sanitation and, what was also even more extraordinary to Europeans, they were generally most resistant to efforts to change their ingrained `insanitary habits'. A 1904 report had stated: `the

43.ibid., (1913), p. 18.
44.ibid., (1907), p. 10.
45.ibid., (1910), p. 63.

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native is satisfied with the conditions in which he has lived for centuries, and does not wish for anything better'.[46] Observations and comments of this nature run through practically the entire Medical and Sanitary Reports between, say 1900 and 1920.[47] And it is said, seldom, if ever, were Africans able or willing to institute, unassisted, for themselves, even the most elementary sanitary measures.

In the rural communities, progress in sanitation was, at best, dead slow. Even though Ashanti entered the sanitation scene later than the colony, the response of Ashanti communities to sanitary reforms was far more positive than anywhere else. The indolence and apathy of coastal Africans, a legendary feature of coastal attitude, in this and other health matters, contrasted sharply with the enthusiasm and cooperative attitude in Ashanti. Did general sanitation achieve any gains between the inception of reforms in 1910 and the twenties ?

By the late 1920s a good deal of progress had been made in village sanitation especially in the Eastern Province of the Colony and in Ashanti. Medical officers working in conjunction with the political officers had villages laid out, new streets built and building lines cut. The Chiefs and Headmen generally showed keen interest and often, drains, slaughter-slabs, pit latrines etc were constructed by inhabitants themselves with communal labour. To

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**46.ibid., (1904), p. 7.**

**47.As late as the 1930s, village sanitation in many rural areas, again with the exception of Ashanti, remained in appalling state and a Senior Health Officer described the situation as one `...to be seen to be believed'.**

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assist chiefs and headmen in enforcing on their people compliance with sanitary principles, bye-laws were passed under the Native Jurisdiction Ordinance laying down penalties for breaches. These bye-laws were adopted by many of the Paramount Chiefs and in many cases were regularly enforced especially by the more enlightened chiefs.[48] And by the mid-1920s, Ghana was clearly no longer a dangerous place for Europeans. European mortality had fallen to a level no higher than in England.In the 1930s, it was being admitted that Ghana was deemed peculiarly free from many of the discomforts associated with tropical countries; hot nights and intense heat by day were recognised as the exception than the rule while insects were seen mostly as comparatively unobstrusive. Similarly in the urban centres, sanitation had made great strides. By 1930, most of the larger towns were now comparatively clean with good layouts and planning, and with conservancy, rubbish disposal and bush-clearing services. This must be contrasted with the absence of sanitation of any sort in the entire colony at the turn of the century. What was even more important, by the 1930s and on,there was growing demand for general environmental sanitation. The past efforts of health and political officers and the effort to promote the knowledge of hygiene and sanitation had definitely borne fruit.In 1932,the medical and sanitary authorities were stating `The response of the people as a whole has been good and their willingness in many cases to shoulder the burden of the necessary work (on sanitary matters)

48.Organisation and Activities of the Public Health Services of the Gold Coast, (Accra,1926), p. 10.

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themselves is indeed gratifying'.[49] Again this contrasts with the earlier days of sanitary reform when Africans on the whole adopted overt hostility to sanitary officials and exhibited a general reluctance to attempts to change their insanitary habits.

Further progress could have been made but for the financial stringency of the depression of the 1930s and the second world war. Nevertheless these gains were not too severely eroded for the Maude Commission found a widely accepted opinion in 1952 that very marked improvements had been achieved in recent years and that the standards of sanitation in towns and many villages had risen. House to house inspection for preventing fly and mosquito breeding and accummulation of filth continued unabated in the towns, an activity encouraged by the Commission.[50]

When the first African government took over the administration of the country in 1951, its sanitation policy was that `... sanitation is a proper responsibility of local authorities in municipalities and elsewhere and that the Central Government should be relieved as soon as possible of such commitments. The Central Government would provide advice and guidance to local authorities and would,through various media of health education, promote... a new outlook on the necessity for improved standard of sanitation'.[51] Till approximately 1960, general sanitation activities were more or less along the lines which the African government had inherited,along with their

49.Colonial Annual Report, Gold Coast Colony, (1932-33).
50.ibid., p. 40.
51.Government Statement on Report of Maude Commission Coast, p. 2.

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myriad problems, from the colonial government in 1951.

One of the major problems inherited was that in spite of the gains of the twenties, thirties and forties, all was not well with the increasingly complex administrative machinery which organised and supervised sanitation. From the 1940s, serious overlap of responsibilities was occurring between government and municipal councils in the major towns: Sekondi-Takoradi, Cape Coast, Accra and Kumasi. Difficulties resulted from this overlap of function and the dearth of medical officers of health. A classic case in point was Accra. Here, as at the other three municipalities, the town councils had rather wide powers and responsibilities in sanitary matters with which they found themselves unable to cope. Moreover the overlap of function between government and the councils ensured the existence of many important areas of responsibilty which each felt quick to disclaim. Land dispute was a major drawback in sanitary reforms in the larger towns. It was worst at Accra. Land disputes were responsible for the holding up of the construction of badly-needed market and latrine facilities in the centre of the town.[52] In the 1950s, Kumasi, with an estimated population of 80,000, was in some respects more fortunate than Accra, chiefly because when the town was rapidly expanding, the original site and some of its land belonged to government. When in 1943, the Crown

52. In Accra in 1951, the sanitary officer stated in his report that there was a lack of public latrines and dustbins in the town. When however money was voted to improve conditions in Nima, work was effectively held up on account of the inefficient administrative machinery set-up of the Council and land disputes: Maude Commission, p. 8.

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lands were vested in the Golden Stool, Kumasi remained sufficiently under public control to make town planning a relatively simple matter.[53] Largely as a consequence of this, the new town was well laid out and contained few congested areas so evident at Accra. If the African government formulated and implemented a clear new policy on sanitation organisation and administration, unhappily, examination of the flimsy extant records between 1955 and 1960 leaves one almost completely in the dark.

Since mosquito control dealt at once with malaria and yellow fever, mosquito control was one of the main thrusts of envirommental health embarked upon by the new Sanitary Branch in 1910 and in all following decades. Among the major steps taken by the Sanitary Branch,in 1910, was the formation of mosquito brigades,whose tasks were to eventually become a key exercise in the prevention of malaria and yellow fever. The early initial attempts to promote the voluntary participation of Europeans and Africans in the brigade activity failed. Of the Europeans, one or two outbursts of zeal in this direction were witnessed but these died a speedy natural death. And of the Africans, the interest displayed by them could be written down to nil.[54] But by 1920, and right into the 1950s, however, professional mosquito brigades, recruited from the African population,and led by sanitary inspectors and mosquito headmen, had become a well-established arm of the Sanitary Branch Department.[55]

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53.ibid., p. 9.
54.GCGRMSD, (1910), p. 56.

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Their function was to seek, identify and obliterate all breeding places for mosquitoes in townships and their immediate vicinity; mosquito brigade activity was supported by the Mosquito Ordinance of 1911.[56] Among its provisions, private domestic dwellings in certain designated towns must submit to authorised entry and larval and general sanitary inspection by sanitary inspectors and their crew between 6am and 6pm any day. Prosecution followed a larval offence, a fine of up to five pounds inflicted.[57] The growing vigorous application and effectiveness of the Mosquito Ordinance is evident from the statistics of house inspection between 1910 and 1920.[58] But Africans did not accept the Mosquito Ordinance and its application with equanimity. In 1912 numerous women demonstrated at Government House when the district commissioner of Accra tried inflicting a fine of one pound, the women maintaining `...there was no water that did not contain mosquito larvae, and that they were being punished for what was virtually an act of God..'.[59] The ire of the African population was, in part, based on the knowledge that the larval campaign, the important product of the Mosquito Ordinance, was directed principally against yellow fever, to which at that time, Africans,

55.Reporting on the work of mosquito brigades was an unfailing exercise in practically all Annual Sanitary Reports from 1910 on.
56.Clifford to Harcourt on Medical Department of the Gold Coast, NAG ADM 1/2/95, Desp. No.780 of 19.10.1914.
57.GCGRMSD, (1912), p. 96.
58.See Appendix for statistics on the success of the application of the Mosquito Ordinance between 1910 and 1920.
59.op. cit.

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on the whole were partially immune.[60] Europeans on the other hand were non-immune and in them, yellow fever nearly always ended fatally.

The application of the mosquito ordinance went hand in hand with attempts at mosquito control by drain construction and drainage and reclamation of swamps.

An important immediate task taken on by the new Sanitary Branch was consequently the drainage of swamps in and around the large towns. This was a necessary but hideously expensive undertaking and beyond the colony to tackle at once. A beginning was made in 1910 and money was voted annually for this important exercise.[61] The next four years, `money was being spent generously' for this and other sanitation exercise.[62]

An important part of the exercise was the construction and cleaning of drains in the towns, also an expensive undertaking. In 1910, of the 18 towns in which sanitary work was done and reported on, only nine had concrete drains. In 1910, extensive drainage schemes were planned for Accra and Sekondi. The World War slowed down progress on account of its adverse effect on revenue, construction material

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60.Sir Rupert Boyce, an expert on yellow fever, during the 1910s, took the position that yellow fever was endemic in the African. It was popularly held that Africans were immune, a slight truth only. The notion Africans were immune was exploded in the 1920s when yellow fever broke out at Asamankese, a purely African community, with many African deaths. See Chapter 8 under Yellow Fever for details.

61.This is certainly not to say there was no drainage construction undertaking in earlier years. Reports up to 1910 state such activity though not on the comparatively grand scale after the establishment of the Sanitary Branch. We are dealing here with the sanitary reforms which commenced in 1910.

62.Colonial Annual Report, Gold Coast Colony, (1912).

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and European personnel.[63] Drain construction accelerated again in the 1920s.[64] During succeeding years, drainage construction was again slowed down by the depression of the 1930s and then by the second world war.[65] Thence a great deal of earth-drainage was taken in hand by the medical officers of health and medical officers of many stations.[66] In most of the 1930s and 1940s, in most centres, funds were chiefly used in the maintenance and repair of existing concrete drainage systems which were tending to fall into disrepair as a result of the depression and the war, but in almost every one of them, the maintenance and upkeep of the existing system taxed to the utmost the available labour force.[67]

The problems of the handling of lagoons was an expensive and vexed one. Most of the larger coastal towns of the colony are of considerable antiquity. These towns occupy classical West African sites

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63.ibid., (1914), p. 44. In 1910, there were some 13,000 yards of concrete drains at Accra, in 1919, only 35,000 yards. The corresponding figures for Sekondi were 4500 and 22,000 yards respectively. Concrete drain construction was even slower in all other towns, the majority of which had to be content with earth drains mostly.

64.These data were obtained from the Sanitation Sections of the GCGRMSD between 1910 and 1928. By 1928, there were nearly 100,000 linear yards of concrete drains at Accra, over 36,000 at Sekondi and over 23,000 at Kumasi.

65.This is evident from a study of the GCGRMSD of those years. Because of its expensive nature and more complex engineering, permanent concrete drains were, by and large, constructed by the Public Works Department. Such work progressed quite satisfactorily in the main towns of Sekondi-Takoradi, Cape Coast, Accra and Kumasi during most of the 1920s until financial stringency arrested progress in the 1930s and 1940s.

66.In 1930 alone the following yardages of earth-drainage were dug, graded and cleaned: GCGRMSD, (1930), Sanitation Section: Accra 411,700; Kumasi 475,398; Sekondi 898,149; Tamale 58,235.

67.Of the important centres, Accra was incomparably the worst drained. The town and its Christiansborg suburb were rapidly extending to the north into low-lying areas where the only drainage available was by means of primitive earth cuts which were often completely lost over extensive lengths after every heavy downfall of rain.GCGRMSD,(1932), p. 28; ibid, (1933), p. 31; ibid, (1936), p. 27.

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very much complicated by lagoons, or sites consisting of alternating well-drained and low-lying areas. The low-lying areas usually accommodated sluggish streams, swamps and pools whose drainage often presented considerable difficulties. Despatches of governors to Secretaries of State from the 1880s on, constantly focussed attention on the problems of the lagoons and ways and means being used to tackle them.The Korle Lagoon reclamation work was begun in 1929 by Army Engineers.[68] Work slowed down on account of financial stringency. It however continued to make very slow progress through 1938. At the outbreak of war in 1939, the work ceased. By 1950 it had silted up and converted into additional man-made mosquito-breeding ground.[69] In the 1950s drain construction and lagoon reclamation works continued but only perfunctorily, clearly on account of scarcity of funds; and by 1960 house to house inspection and prosecution for mosquito larval offence had more or less fallen into desuetude. Though these were amongst the worst public health failures of the first African government, the long history of the struggle to provide potable water was a much happier one.

One of the most important crying needs of the colony, from the earliest years, was improved water supply, a problem which continues to plague some sections of the country even today. At the

68. GCGRMSD, (1928-29), p. 20.

69. Maude Commission, p. 8. Various other lagoon-related works were undertaken such as the permanent concrete outlet to the sea of the Butuah Lagoon at Takoradi which was completed in 1938: GCGRMSD, (1938), p. 31; and extensive work at Kumasi and on the Ejisu road swamp. ibid., (1929-30), p. 23.

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turn of the century, no town in the colony possessed pipe-borne water. In the towns, drinking water was, for the most part, stored rain water or water from shallow wells and pits. In the African villages, ponds, nearby streams and swamps, the surrounding banks of which often served for latrines, provided water for all purposes. In some towns and villages, man and beast shared the same source of water. It can be said with finality that practically all sources of domestic water, whether in villages or in towns, were polluted or disease-borne. Moreover, prior to 1910, Ghana was a colony where no sewage system existed nor its properly-organised disposal. The colony was consequently permeated with dysentery and parasitic diseases such as hookworm and round worms. Guinea worm was rife. Stored rain water, popular in the towns, bred its own problems: the domestic breeding of mosquito, and consequently malaria and yellow fever; thus started the house to house inspection of domestic premises for mosquito larvae and the institutionalising of prosecution of those in whose houses larvae were found (vide supra). The European community depended on rain water stored in metal tanks. Such water storage tanks became an integral part of all segregated accommodation provided government officials; and also favoured by non-official Europeans. In the 1880s and 1890s, condensed water was regularly used in hospitals by European patients and the hospital staff; but this never became popular, as it did, in Northern Nigeria.

There were four aspects to the problem of water supply: The most dominant was clearly fiscal: How do you embark on expensive modern

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and comprehensive water works in a colony where there is a crying need for its general development, and where there are so many basic needs to be met from a meagre exchequer ? The data on revenue provide incontrovertible evidence that the colony, at the turn of the century, was in no position to undertake major modern water works. The next important question was the securing of dependable regular supply. This was a technical matter to which various governors applied themselves as will be evident below. Thirdly the minimising or eliminating pollution, and therefore, various water-borne diseases, necessarily had to be an integral part of any water scheme, especially in an environment such as that of Ghana where water-borne tropical diseases abound. The irony was that the authorities well knew that good water supply would largely eliminate such diseases and yet were hamstrung in their plans by fiscal constraints. The fourth and most vexing and intractable problem was the mass illiteracy of the African. The African had first to appreciate the sanitation aspect of water supply. He had to understand, for instance, that guinea worm could be eliminated if he drank wholesome disease-free water. And he had to understand the need to keep his source of water pollution-free. Yet the people lacked an education culture, a new experience slow to take root.The lack of a sanitation, hygiene and education culture constituted one of the greatest bugbears of the colony. It hindered and continues to hinder progress in water development and water use. For the people had (and have) to be taught the necessary hygienic habits that must go with any water scheme, for any hope of success.

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In the early 1910s, water supply in the larger towns began to be tackled with greater energy. It was handled in a variety of ways. The cheapest and hence the most widely-used means in the supply of water was public wells. These had to be properly constructed, and secured against contamination from surface pollution and mosquito breeding.[70]

The insistence on these necessary features of water wells was for ever to tax the Sanitary Branch and the Public Works Department in unremitting labour, vigilance and constructional innovation.[71] Water wells were all at first bucket-and-hand operated, some, later, provided with hand pumps, which were for ever breaking down. Water tanks were more expensive, but began to gain popularity from 1925. The cheapest means of water storage in the African population in the towns was in the use of water barrels.[72] What it gained in popularity was largely nullified by the problems it created in domestic mosquito breeding. Special regulations were made on the securing of water barrels against domestic mosquito breeding. These regulations began to be applied rigorously from about 1911. Their application through the instruments of the Mosquito Ordinance,[73]

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70. GCGRMSD, (1910), p. 54; (1913), p. 28; (1914), p. 43.

71. Year after year, the Sanitary Branch touches on these matters, right into the 1950s.

72. By 1910, there were 58 public wells in the country and 1224 private ones: GCGRMSD, (1910), p. 66-123. In 1920 there were over 80 public wells: ibid., (1920), p. 30. In 1910, there were 130 public tanks, 854 private ones: ibid., (1910), p. 66-123.
Water tanks gained in popularity and, by 1925, there were over 500 public ones in the country: ibid., (1925-26), p. 32.
In 1910, there were over 3000 water barrels in use in African private dwellings: ibid., (1910), p. 66-123.

73. This Ordinance was enacted in 1911.

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resulted in many, and often zealous, prosecutions. And rigorous domestic inspection and unrelenting prosecution became a regular feature of life in the colony.

By means of wells, village water supply was generally improved in the 1920s, 1930s and subsequent years. Again, Ashanti in particular, as in general sanitation, was foremost in embracing self-help in village water supply, where the chiefs and the people showed ready willingness to help and, most important, were appreciative of its benefits.[74] Whereas in Ashanti the village communities embraced such projects with unabashed enthusiasm, those in the colony proper were generally laggard and apathetic.[75] Villages in the south, it was held, cared little about the quality of their drinking water, those in Ashanti most keen on improvement and quality of their supplies, often seeking technical aid and willing to bear most of the cost themselves.[76] The total absence of a maintenance culture however played havoc with the village well installations: Wells damaged by falling trees or through sheer neglect of maintenance were often allowed to deteriorate until they were beyond repair.[77] It was the hope, all along, that pipe-borne water supply would eventually supplant well-water supply, particularly in the urban areas.

In the late 1880s a former army medical officer stationed at Cape

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74. GCGRMSD, (1929-30), p. 40.
75. op. cit.
76. op. cit.
77. The problem of maintenance drew regular comments in reports year by year. The problem of maintenance continues to dog the country's progress today.

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Coast started the idea of bringing water by pipe into Cape Coast from the Kakum River. His successors pressed the idea on governor Griffith in 1891. In a despatch to Lord Knutsford that year, Griffith stated that he hoped `...that in a few years, if the revenue of the Colony is maintained as at present, the work may be taken in hand and executed promptly'.[78] And the governor had good reason for taking a wait and see attitude because between 1885 and 1889, the revenue had been falling.[79]

Griffith did take, in the early 1890s, the first active steps to ascertain whether water supply could be obtained for Accra. Deep borings and other prospecting works were undertaken under his orders. But the results proved unsatisfactory.[80] The scheme was to be a very modest one because the revenue of the colony was incapable of supporting the type of elaborate scheme which eventually began to supply Accra in 1914, and Sekondi in 1916. For over twenty years, various proposals and suggestions were put forward for the supply of pipe borne water to Accra. And in 1908, governor Roger was plainly losing patience with the constant postponement of such schemes.[81] It was during his administration in

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78.Griffith to Knutsford on Water Supply for Cape Coast: NAG, ADM 1/2/47, Desp. No. 187, of 5.6.1891.
The question of pipe borne water supply for Cape Coast was not taken up again till 1914: GCGRMSD, (1914), p. 26.

79.As stated elsewhere, the decline in revenue had made necessary a reduction in the salary of medical officers and that of other government officials in 1885 and the following years.

80.Gold Coast Departmental Annual Report of 1895, PRO, CO 98/9. See also GCGRMSD, (1912), p. 100. Governor Roger in 1909, then governor Clifford in 1914, cited this early attempt to provide piped water in the Colony, an attempt rendered nugatory, in the main, by scarcity of funds.

81.Roger to Elgin, NAG, ADM 1/2/212, Desp. No. 543/09 of 6.5.1908.

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1910 that, at last, the works on the first pipe borne water schemes were launched for Accra and Sekondi.[82] Sir John Roger joined the Service of the Malay States in 1882, at age 31. He was at Eton, Christ's Church at Oxford, read for the Bar and became governor of Ghana in 1903. In a memorial to him at the opening of the Accra water works in 1914, governor Clifford said of him: `One of the highest services he performed was his great example of self-sacrificing devotion to duty and courage which enabled him in spite of feeble health to give all that was best in him to the service of the Gold Coast Colony which he so dearly loved'.[83] During the period of his last leave in 1910, and he was soon to succumb to his last illness in England, he spent part of it visiting the Panama Canal Zone, with view to ascertaining what was being done there for the prevention of malaria and yellow fever so he could apply their methods in Ghana. Before he left the colony on this leave, to which he was not to return, he had seen to the commencement of the Accra and Sekondi water works.

The fact that Accra and Sekondi were the towns of primary importance in the early part of the century gained for them the first pipe-borne water scheme in the colony. And the yellow fever outbreak of 1910 at Sekondi, with nearly 100% fatality in Europeans, provided a powerful impetus to the scheme.[84] In January

82.The mining boom of the 1910s had gained for Obuasi the privilege of the first town to benefit from piped water. It was provided by the mining companies in 1910. Other mining concerns were later to follow the Obuasi example. GCGRMSD, (1910), p. 54.
83.Government Gazette Extraordinary, No.7 of 1.7.1914.
84.GCGRMSD, (1910), p. 49.

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1914, `the supply of water was turned on in Accra...water was laid into various bungalows and additional distribution mains was laid into various districts of Accra'.[85] The consistent supply of fresh water was an inestimable boon for Africans and Europeans alike. The Sekondi water works, delayed by the war, was not completed till 1916.

In 1914, governor Clifford obtained the sanction of the Secretary of State to the appointment of a special engineer who would visit Cape Coast and other principal towns for the purpose of reporting on the feasibility of pipe-borne water supplies for these other towns; for in 1913 he had made it his declared policy to secure pipe-borne water supply to all major centres of population.[86] But nothing came of them.One major explanation was the outbreak of war. But for the war, such towns as Kumasi, Tamale, Koforidua, Winneba and so on, would have been provided similar water facility in the 1910s.[87] With the war ended, the appointment of Guggisberg as governor, the colony's possession of accummulated reserves (thanks to careful administration and husbanding of resources by Clifford)[88] and the upsurge in economic activity, the 1920s were marked by the provision of pipe-borne water supply to several towns. To Guggisberg's government, pipe-borne filtered water and concrete drains constituted the most effective and efficient method

85.ibid., (1914), p. 43.
86.The Accra Water Works, in: Government Gazette Extraordinary No.7 of 1.7.1914.
87.By 1914 for instance, preliminary investigation and identification of suitable source of water had been done for Kumasi. But its implementation had to wait till the the early 1930s: GCGRMSD, (1914), p. 43.
88.Wraith, Guggisberg, p. 74.

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of sanitation, and were therefore pushed in his 10-year development programme. The cost being enormous, the government adopted the principle of first tackling the towns with the largest populations and dealt with the smaller places by effecting practical improvements by the cooperation between local political officers, the public works department and the chiefs.[89] By 1925 Cape Coast, Takoradi and Winneba had joined Sekondi and Accra in being provided with pipe-borne water.[90] The most vigorous activity in the provision of pipe-borne water to urban centres occurred in the mid-1930s, under the administration of governor Hodson. In 1936, the Sanitary Branch declared that year as marking an epoch in the provision of pipe-borne water supplies.[91] Never, so far, in the colony's history, had so many water schemes been taken up at once: The extensions of Cape Coast water supply to Elmina and Saltpond were commenced and so had the new scheme for Koforidua. A comprehensive survey of the possibilities for water supply for the important towns of the Northern Territories had also been completed and a proposal for a Water Board for the Northern Territories was put forward. These activities were in keeping with the crying need for potable water in this part of the country.[92] But the optimism of further progress which greeted the gains in the development of water resources in the 1920s and 1930s was soon extinguished by the outbreak of the second world war. The ensuing

89.Governor's Annual Address to Legislative Council, 1922-26, PRO, CO 98/45.
90.GCGRMSD, (1927-28), p. 28.
91.ibid., (1936), p. 27.
92.See Appendix II on pipe-borne water supply in 1920s and 1930s.

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financial stringency and shortage of skilled personnel and construction material saw to that. Throughout the war and the immediate post-war years, little could be done except the repair and maintenance of existing water supplies. And even these were achieved only with difficulty. The schemes for the Northern Territories stayed on the drawing board.

In 1944 a Temporary Water Supply Department was formed. This Department took charge of rural water supply schemes, until then, handled by the Health Branch and the Public Works Department. That same year saw the formation of the Department of Rural Water Development. Its responsibility lay solely in water supply in rural areas.[93]

That the provision of adequate supplies of wholesome water for human consumption was the most urgent public health need throughout Ghana, and the most urgent, was not a debatable point. All who spoke with the Maude Commission in 1952 appreciated this need and the Commission itself emphasised it again and again.[94] The new African government itself underlined its appreciation of this need by stating in its 1951 Development Plan that '...the improvement of water supplies throughout the country is of fundamental importance for development. Without the provision of clean water in the towns and villages a basic standard of health cannot be attained'.[95] In the 1951 Development Plan, provision was made for capital

93. GCGRMSD, (1944), p. 6.
94. Maude Commission, p. 42.
95. op. cit.

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expenditure on water supplies of 3.5 million pounds of which 1.5 million was allocated to urban and 2 million pounds to rural water development.[96] In 1952, the Minister of Communications and Works, became responsible for both rural and urban water supplies, an important administrative arrangement enabling proper focusing on the water problem.[97]

The main weakness of the water supply system was attributable to the shortage of skilled staff. And one of the most important of the defects could be laid at the feet, in general terms, of the absence of a maintenance culture; specifically, enough attention was never given to seeing that wells, dams, ponds etc were consistently in satisfactory operation condition.The facilities, once constructed and completed, seemed the end of the labours. The Maude Commission witnessed that a village was riddled with guinea worm where the wells had been dry for many months and no steps whatsoever taken to remedy the situation, with the result that one of the very important reasons for constructing the well, that is, the preventive eradication of guinea worm, was nullified. Clearly the villagers had resorted to their old ways, in water supply, with the certain assurance that guinea worm infestation would once more return to their community, as it in fact did.

The shortage of skilled staff also made it impossible for providing adequate expert advice to local authorities and village communities seeking to provide their own water supplies; it has been

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96.op. cit.
97.See Appendix II on water supply in the late 1940s and 1950s.

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stated above that in the 1930s, it was this sort of advice which spurred the people of Ashanti to so creditably provide their own village water supplies. Finally, there was very poor liaison between those responsible for water supply and the Medical Department. This was a serious weakness in the system. For there are many considerations, from preventive medicine point of view, which would determine the suitability of a particular kind of rural water facility in a particular community.[98]

Sewage disposal constituted one of the most difficult problems of sanitation in the country. Apart from the various forms of latrines, the bush that grew around a village or town was the common latrine. Promiscuous fouling of the perimeter of villages was the normal state of affairs.In coastal towns, beaches were popular for the purpose.[99] Public pan latrines began to be constructed and come into use at the turn of the century. By 1910, over twenty towns in the colony had this facility. And by 1925,

98.Thus for instance open reservoirs, tanks and ponds must be secured against pollution, particularly against schistosomiasis; and the Medical Authorities were and are the ones to determine whether schistosomiasis prevailed in a certain community or not. And such supplies would be considered by the Medical Department unsuitable and unsafe and should only be installed where other methods of water supply were found impossible to provide. In certain communities where guinea worm is rife, the depth of a well and its appropriate security against pollution would determine whether guinea worm infestation would be avoided or not. Furthermore because of the wide prevalence of dracontiasis and the existence of several pockets of schistosomiasis in the country, provision of safe water to some communities should be more urgent than to others. And again only the Medical Department was in a position to offer the best solutions to such problems.(See Appendix for the administration of water supplies in the 1950s).

99.The records are replete with references to the pervasive utilisation of open spaces and bushes for a privy. And this state of affairs, sadly, can still be witnessed in the heart of Accra.

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there were 104 at Accra, 50 at Sekondi and 74 at Kumasi.[100] Sewage disposal was a problem more of the towns than of the villages. Sea latrine was a favoured and popular means of sewerage disposal and several were built at Accra and other coastal towns but by the 1930s, were being phased out.[101]

Pan latrines were the rule in towns where the Sanitary Branch had sufficient staff to carry out conservancy. A most vexing problem was that Africans along the coast made no attempt to meet the government half way by looking after the latrines which the government had built for them.[102] In the towns, because pan latrines were the most practicable, conveyance became an important task of the Sanitary Branch, a task both expensive and difficult. Latrine men had to be employed and this task the Ghanaian Africans, particularly the coastal Africans, were unwilling to perform. Prisoners performed them but the importation of Kroo labour, for this and other scavenging purposes into the colony, became necessary.[103] The utilisation of motor transport for conveyance first came into use in 1920 at Accra and by 1931, it was in more general use in the larger towns.[104] Because motor transport was genarally too expensive for most towns the task rested with the latrine carriers.

In the absence of water carriage type of sewerage, the problem of

100.GCGRMSD, (1925-26), p.31.
101.GCGRMSD, (1930-31), p. 35.
102.ibid., (1914), p. 41.
103.ibid., (1920), p. 21. The use of Kroo labour for this purpose persisted into the 1950s.
104.op. cit.; GCGRMSD, (1930-31), p. 35.

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latrines and excreta disposal was to sorely tax, unremittingly, the ingenuity of the Sanitary Branch.

Whatever the method of disposal, a perennial problem was the prevention of flies breeding and nuisance from excreta. In 1925, Major A L Otway, medical officer of health Sekondi devised a successful method of disposal that solved this problem.[105] Experiments were also conducted successfully at Accra and Kumasi with a view to the elaboration of a simple cheap septic latrine. First erected for public use at Labadi and Teshie, and modified for use at Mfantsipim School in 1931, this type of latrine was expected to supplant all non-water carriage types in future.[106] And by 1940 a considerable number of them had been installed in various towns.

In the early 1910s, a scheme for water carriage sewerage for Accra was considered, worked out and approved.[107] This was to be coordinated with the pipe-borne water system whose construction had begun in 1910. The scheme for Accra was to have commenced in 1914. Governor Clifford announced its approval by the Secretary of State during the opening ceremony of Accra water works on 10 January 1914.[108] Its postponement, because of the first world war, was a most serious setback.[109] The Sanitary Branch, again and again, recommended the need for water carriage sewerage system for Accra,

105.ibid., (1924-25), p. 75.
106.ibid., (1930-31), p. 35.
107.ibid., (1913), p. 28.
108.Government Gazette Extraordinary, No. 7 of 1.7.1914.
109.GCGRMSD, (1914), p. 42..

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Kumasi and Sekondi.[110] On the indefinite postponement of the water-borne sewerage system for Accra in 1914, a certain number of latrines were constructed there in such a way as to allow their being connected up later with a water-borne sewerage system should it materialise.[111] But by the late 1930s its consideration was vitiated, first by insufficiency of pipe-borne water supply, then indefinitely postponed by the second world war.[112]

The first water carriage sewerage system in Ghana was that constructed as part of the new Korle Bu Hospital which was opened in 1923.[113] The second was that of Achimota School which came into use in 1927[114] and the third constructed for the European Hospital at Takoradi and was in use by 1931.[115] Encouraged by the Sanitary Branch, water-carriage and septic tank disposal system, introduced in the early 1930s, gained increasing popularity in private residences particularly in the better class residences at Accra and other larger towns.[116] In the 1950s, the provision of a system of water-borne sewage for Accra as a whole was once more planned. It was going to be a most costly operation and an annual expenditure of about 30,000 pounds representing the cost of conservancy service at

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110. The augmentation of water supply for Accra in the 1920s, late 1930s and early 1950s was partly for the purpose of instituting a central water carriage sewage system for the town.
111. op. cit.
112. In the early 1930s, the problem of insufficiency of pipe-borne water for water-carriage sewerage was practically solved by doubling the daily supply from 1 million to two million gallons through additional installations of the water works. But this came too late because of the outbreak of war in 1939.
113. GCGRMSD, (1923-24), p. 15.
114. ibid., (1928-29), p. 29.
115. ibid., (1930-31), p. 34.
116. This continues to be a popular method even today.

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the time was set off against the capital charge.The project did not materialise. Meanwhile Tema Harbour and the Volta River Hydroelectric works became built and both Tema and Akosombo acquired central water-carriage sewerage sytems. In the early 1970, the Israeli government undertook to construct Accra central sewerage system to offset the loss of a Ghana Airways aircraft destroyed in an Israeli attack on Beirut Airport by Israeli warplanes. The project commenced. Pipes were laid. The project was again abandoned for the reason that Ghana had sided politically with the Arabs in their disputes with the Israelis.

In general, the first African government carried out its policy on water and sewage disposal stated above. The construction of dams, water wells, provision of pipe borne water to new communities and the upgrading of existing ones received considerable attention.

In sewage disposal, as in general sanitation, by 1960, definite progress had been made also.The progress was however a mixed one: On the one hand a good fraction of the African population had embraced hygiene and modern sanitary methods for good. On the other hand another good fraction of the population had retained, unchanged, the sordid primitive habits and conditions of the 1800s. Between these stood the remaining Africans who had a vague notion of sanitation but quite ready to slip back into the primitive ways of 19th Century Ghana, of promiscuous defecation.

Such success as sanitary reforms achieved owed much to health education. Much of the failure was also due to difficulties in health education.

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In the 1900s, the government faced three key obstacles in the pursuit of its policy on health education.The first obstacle, it was held, was in the nature of the culture of filth and disorder which characterised African habits and dwellings which is still very much in evidence today. The second obstacle was the mass illiteracy of the population, a population quite impossible to reach, in the 1910s and most of the 1920s, by means of propaganda through the written word. Thirdly, in the 1910s and most of the 1920s sanitary inspectors, one of the surest means of propagating hygiene and sanitation among the Africans, were woefully small in number.

The measures taken by the colonial covernment to propagate the knowledge of sanitation and hygiene were a most important undertaking.

The first stage of the major effort to spread the knowledge of hygiene and sanitation in schools occurred between roughly 1910 and 1920. But as early as 1905, that is, prior to the establishment of the Sanitary Branch, a scheme was inaugurated for the teaching of elementary hygiene and sanitation in government and government-assisted schools, mission schools and the teacher training colleges.The Medical Department's aims and expectations were that:`In addition to instructing the young...it is hoped that a knowledge of the conditions which govern health and well-being, will be widely disseminated, generally.'[117] But in a careful and

117.GCGRMSD, (1907), p. 10.

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detailed appreciation, in 1911, the Medical Department concluded pessimistically that there was little expectation of any change in the attitude of the people to sanitation in the generation of Africans of those days. It was their considered opinion that hope lay only in future generations.[118] From its early beginnings, the teaching was compulsory from Standard IV upwards. But such instructions were given also in those smaller schools, in which Standard III was the highest class.[119] First, the teachers, who were practically all Africans, had to acquire the knowledge prior to passing it on to their pupils. Accordingly, the subject was made a compulsory one also at the Teachers' Examinations.[120] By 1907, the Medical and Education Departments had reached the conclusion that the teachers' knowledge of the subject, was not extensive enough to

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118.ibid., (1911), p. 64. The Medical Department in 1909 gave expression to this pessimism, Acting Governor Bryan commenting: `I fear that at present, there are good grounds for the somewhat pessimistic views held by the Ag PMO with regard to the lack of interest taken by natives, even of the better class, in elementary sanitary principles. But it must be remembered that the subject hygiene has only been made obligatory in Government and Government-Assisted Schools since the year 1908, and having regard to the conservative nature of the character of the West African races generally, it is too much to expect that radical changes in habits can be effected at a rate which would be satisfactory to the Medical Authorities'. Bryan to Harcourt, NAG ADM 1/2/79, Desp. No. 201 of 28.3.1912:.

119.It might seem a curiousity that nowhere in the Medical and Sanitary Reports, until the mid-1920s, is any indication of the teaching of hygiene in secondary schools. The answer is clear: Secondary schools were practically non-existent; or very few. The Colonial Annual Report of 1903 states `There are no secondary schools under the Board of Education, and apart from the two seminaries of the Basel Mission, there are only four schools in the Colony which claim to give an education other than elementary'. And the Report of 1907 states `There are only four schools in the Colony which profess to give a higher education than that obtainable at the Primary schools'. Of the four, the Accra Grammar School was the only one which had received any Government aid. Clearly then the teaching of hygiene was, perforce, confined to the primary schools, of which there were many. On this see Colonial Annual Report, Gold Coast Colony, (1903 and 1907).

120.Bryan to Harcourt, NAG ADM 1/2/79, Desp. No.201 of 28.3.1912.

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permit them, with any reasonable hope of success, transmit it to their pupils.[121] In consultation with the Department of Education, the Medical Department decided to attempt a better-organised and a more systematic course of training. This was the beginning of the very close working relationship between the Education Department and the Medical Department for promoting the knowlege of hygiene and sanitation among school children. This spirit of cooperation was admirably exploited to the full in the next four decades.

An important aspect of the cooperation consisted of the giving of regular course of lectures by medical officers in towns where there were enough teachers to attend them. A standard text book on the subject was adopted, for the first time, from which medical officers would lecture, and which would be accessible to the teachers.[122] A Board of Medical Officers was constituted at Accra, responsible for examinations. Failure by a teacher to achieve the desired proficiency disqualified him for the rest of his Teachers' Examinations, thus endagering his chosen profession. Voluntary attendance of the lectures by non-teachers was encouraged and certificates of proficiency awarded them.[123] The teaching of hygiene in schools was improved by the adoption of practical methods agreed between the Education and Medical Departments.[124] The key matter in

121.GCGRMSD, (1907), p. 10.

122.Obviuosly a fledgling system of instruction in hygiene and sanitation was in apparent existence by 1900. Dr (Mrs) Deacon was Medical Officer of Health of Accra the period around 1900.

123.The Director of Education was in a position to guarantee lecture attendance, in the years around 1908, by a total of 188 teachers in the Colony and Ashanti: GCGRMSD, (1907), p. 10.

124.ibid., (1911), p. 65. In 1911, the Medical Department provided a list of

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sanitation at this time was the prevention of malaria and yellow fever, two diseases whose control depended on the control of mosquito-breeding. The understanding of the life-cycle of the mosquito became a key knowledge which every teacher and pupil had to have. One of the ways this was achieved was the practical demonstration, live, in the classroom, of the various stages of the mosquito's development.[125] Supplementing this, there were exhibited on classroom walls, large pictures of the mosquito in its various stages of development, from egg to imago; pictures of typical anopheles pools and of insanitary compounds; and a plan for making a water barrel water-proof. When text-books were difficult to obtain, particularly during the 1914-1918 War, teachers improvised. For example, the idea of pure water was driven home to pupils, not from text books, which were scarce anyway, but by the simple expedient of teaching that the straining of water through a cloth, at least, removed impurities in suspension; and that boiling would reduce the chances of contracting guinea worm.[126] Every attempt, by advice and the awarding of prizes, was made by the Education Department to encourage teachers to make their teaching practical and to illustrate their lessons by experiment. As a report of the

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practical suggestions to the Education Department for adoption in order to improve the teaching of hygiene and sanitation. These suggestions were all adopted by the mid-1910s.

125.ibid., (1913), p. 83. This approach to teaching the subject was based largely on the proposals of the Medical Department in 1911.

126.If this practice of boiling water prior to drinking had taken root in our rural communities, guinea worm, which continues to plague many rural communities today would not be in the news of this country today. As it is the lessons of the 1910s seemed not to have been passed on.

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Education Department of 1920 noted: `...This has been done with notable success in the Government Senior Schools where the teachers have formed good collections to illustrate their lessons by a series of experiments designed by various headmasters to illustrate the principles...'.[127]

In 1911, and from time to time in succeeding years, a special committee reviewed and revised the teaching materials and introduced new features in instructions for enhancing the teaching and learning of the subject.[128] As result by 1914, schools were being offered prizes for the clean and hygienic upkeep of school premises and compounds, and to teachers, for their houses. This ploy in encouragement was so effective that prize awarding became difficult because of the plethora of recommendations made by school inspectors.[129] Prize awarding was endorsed by Bryan, Acting Governor.[130] This fostered a growing pride in pupils, teachers and school masters, in their school premises and houses. Outdoor games were fostered and a system of physical exercise was introduced with

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127.GCGRMSD, (1920), p. 23.

128.In 1914 for instance the schedule of instruction in hygiene was revised as a result of consultation between the Education Department and the Sanitary Branch: ibid., (1914), p. 49; (1911), p. 64.

129.ibid., (1914), p. 101.

130.Such awards actually began in 1912. Major Bryan had been singularly impressed by the progress in the teaching of hygiene in schools. He visited schools to see for himself. He dwelt on this in a lengthy despatch on the subject in 1912. He stated: `I am in a position to endorse the opinion of the Director of Education that great interest is taken in these subjects by the students...and I am struck with the intelligence displayed by a class I personally questioned on the life history of the mosquito, the measure necessary to deal with an outbreak of plague etc etc...the character of the questions frequently asked by the students shows clearly that the importance of the subject is fully realised by them'. This visit was to the Training Institutions: Bryan to Harcourt, NAG, ADM 1/2/79, Desp. No.201 of 28.3.1912.

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the help of the Medical Department.

It can be said that by 1920, a firm foundation had been laid in the teaching of hygiene and sanitation in the schools of the colony. As stated above, as early as 1912, deputy governor Bryan was so impressed by the knowledge on sanitation and hygiene demonstrated by school children that it featured prominently in one of his official despatches to Secretary of State Harcourt.[131]

Upon this foundation, greater strides were made in the 1920s and subsequent years.Effort and achievement were facilitated by the publication in 1922 of handbooks in the form of pamphlets on sanitation for the use of teachers. These were written in simple language by various members of the Sanitary Branch, with the assistance of the Director of Education. The subject matter dealt with a wide range of topics such as personal and domestic hygiene, food and diet, enemies of man such as the rat and mosquito, small pox and vaccination, clothing and elementary anatomy and physiology.[132]

As part of its eight-point public health policy, important steps were taken by Guggisberg's government to facilitate and improve the teaching of hygiene and sanitation in the country. First, in 1925, an ordinance was introduced which required all school teachers to be registered and to possess a certain standard of educational attainment and insisting upon the compliance with the minimum of sanitary principles; this began to improve the general standard of

131.Bryan to Harcourt, NAG ADM 1/2/79, Desp. No. 201 of 28.3.1912.
132.GCGRMSD, (1922-23), p. 48.

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hygiene in the schools.[133] Second, a Teachers' Journal, launched by the Education Department in the late 1920s, which was an instant success; it became a ready and excellent means for furthering knowledge of hygiene and sanitation among teachers. Thanks to the close cooperation between the Education and Medical Departments, this journal, which became exceedingly popular, regularly carried articles written by members of the Sanitary Branch on health topics.[134]

Although hygiene, by the early 1920s, was already part of the curriculum of all schools in the country, both Medical and Education Departments had to worry about ways and means of translating the academic acquisitions of the knowledge of hygiene and sanitation into the practical; the next important step taken by the Guggisberg administration to facilitate health education was therefore the introduction of Health Weeks and Health Days from about 1925. This presented opportunities for rendering knowledge in health education practical. These special occasions, introduced as method of spreading the knowledge of hygiene, sought to bring the importance of hygiene to the notice of the general public.[135] The outbreaks of epidemics were often used as additional opportunities for launching Health Days and Health Weeks. Practical implications of sanitation and hygiene and the preventive aspects of disease were effectively demonstrated.Primary and secondary school children

133.ibid., (1926-27), p. 29.
134.ibid., (1935-36), p. 29.
135.ibid., (1925-26), p. 17.

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participated actively in these exercises. The junior arm of the Red Cross Society, known as the the Junior Red Cross Links, first formed at Achimota School in 1932, constituted a most valuable medium for the propagation of health knowledge and full advantage was taken of it. By 1937, there were over 46 Junior Links of the Society scattered across the country. These Links provided means of instilling keenness and giving an outlet for the practical adaptation of what students had learned theoretically, and propagating health knowledge among the young. The 1940s and 1950s saw major extensions and institutionalising of the propagation of health knowledge among the young in all schools, primary and secondary.

As teachers taught hygiene and environmental health to school children in the classroom, in parallel, sanitary inspectors engaged in the most important task of bringing this knowledge to adult Africans in their homes. At its very inception in 1910, the Sanitary Branch, and the sanitary reforms it set out to organise and carry through, required sanitary inspectors in its organisational structure. They constituted a most vital link in this structure and had two basic functions: They were enforcers of sanitation regulations. It was upon them also fell the bulk of the task of educating the largely illiterate population in sanitation and hygiene matters. As such, under the various ordinances, they were given very considerable powers that enabled them to perform

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these vital functions.[136] Because they conducted house to house inspection, sanitary inspectors were in the best position of exercising an educational influence on those with whom their work brought them into contact.[137] In the training of these officials, they were instructed constantly to teach those amongst whom they worked, the elementary principles of hygiene and sanitation, and never to serve a summons without carefully explaining the true nature of the offence. The deterrent expedient of prosecution, fines and imprisonment were to be utilised only judiciously.[138] In keeping with Guggisberg's public health policy, the first properly equipped training centre for sanitary inspectors was opened at Accra in 1922, under a very capable West Indian Sanitary Inspector employed for the purpose.[139] Retrenchment of the early 1930s, gravely, but happily only briefly, slowed down, but did not completely halt, the training of sanitary inspectors at this training centre. The seriousness of unemployment in the country, during the early 1930s in particular, is well-known. The expansion of educational facilities in the 1920s and subsequent years produced school-leavers, who, because of the depression, were

136.ibid., (1911), p. 64.
137.Speaking generally, it could be said that the majority of European officials in the Colony also acted as `missionaries' in the propagation of the knowledge and benefits of hygiene and sanitation among this largely illiterate population, both by precept and example. On this see also ibid., (1914), p. 48.
138.ibid., (1911), p. 64.
139.ibid., (1922-23), p. 48. Prior to that, probationary sanitary inspectors were usually trained at Accra by Medical Officers of Health, for whom the teaching of probationary inspectors was not a primary function. Medical Officers of Health, stationed in other larger towns such as Sekondi, Cape Coast and Kumasi also provided training and the keeping up to date of the knowledge of their sanitary staff.

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unable to find work. Young men who could not find work were willing to work as apprentice sanitary inspectors without pay, in the hope that they would be eligible for salaried appointments when vacancies occurred for sanitary inspectors. This state of affairs allowed the health authorities to raise the entry requirements for apprentice sanitary inspectors.

Therefore emerged the training of inspectors of two distinct types. The older inspector with the standard seven educational certificate and the inspector of a higher educational standard who possessed the second class teacher's certificate after four years teacher training.[140] Throughout the previous two decades, the Sanitary Branch was most anxious to raise the quality and status of sanitary inspectors in the country. One way it could do this was to properly professionalise the training by making it possible for trainees to obtain the diploma of the Royal Sanitary Institute, when the training entry requirements for candidates were raised in 1935. This had the added advantage of raising the prospect for senior appointments for successful candidates.[141] The response was so good that by 1937, sanitary inspectors in training were mostly of a higher standard of education.

The first full time African Training Officer for the Accra Sanitary School was appointed in 1938. Assisted by a European Sanitary Superintendent, he trained and entered the first twelve candidates for the examination that year, eight of whom passed. The holding of

140.ibid., (1934), p. 25.
141.ibid., (1935), p. 28.

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the examination in Accra marked the beginning of a new era in the training of sanitary inspectors.[142] The reorganised Accra Sanitary School continued its work till it was again interrupted in 1941, through staff shortage and the Second World War.[143] It was however reopened in 1944. The interruption allowed the Health Authorities the opportunity of elaborating a modern comprehensive curriculum for post-war training. Advantage also was taken of the interruption to design a new building for the school. The new school, in its new premises, and known as the School of Hygiene, was opened in 1948.[144] By 1953, schools of hygiene were opened at Kintampo for Ashanti, and at Tamale for the Northern Territories.[145]

It was inevitable that, at the very onset of sanitary reforms around 1910, the Africans responded to domestic sanitary inspection with hostility. Such hostility persisted, though progressively attenuated, till the country achieved political independence in 1957. The cause of this was clear: sanitary inspectors represented the law, they had powers to prosecute and they did prosecute, often with zeal, when sanitation laws were broken. Perhaps worse, the sanitation laws provided sanitary inspectors legal backing for entry into homes. Such intrusion, a new experience for the people, was met with resentment. The sanitation laws also provided legal backing for demolition of African houses under certain circumstances, such as during outbreaks of those types of epidemics

142.ibid., (1938), p. 38.
143.ibid., (1941), p. 8.
144.ibid., (1948), p. 18.
145.ibid., (1951), p. 18.

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traceable to,and associated with, African habitation; such activity invariably met the frank hostility of the Africans. Because of their prosecution powers against sanitation offences, the African quickly began to regard the sanitary inspector as a malignant type of police officer. This image was to dog the sanitary inspector throughout the period. The Medical Department did its best to mitigate, what in the eyes of the public, was an evil reputation of sanitary inspectors. However the important duty of the sanitary inspectors to educate the people on sanitation and hygiene in the course of their work contributed to the gradual abatement of hostility.

From the mid-1900s into the late 1930s, medical officers of health and medical officers and all ranks of the medical profession were duty-bound to carry across to all sections of the community, the message of sanitation and hygiene. They gave lectures on hygiene and sanitation to auxiliary medical staff whenever and wherever opportunities presented. These activities presaged the introduction of radio,cinema and other means of mass propaganda in the 1930s.[146] In 1934, a start was made in health propaganda using the medium of radio and cinema.[147] Since health propaganda and education require wide extension on a general scale, the Medical Department began, in

146.Important in the 1900s and early 1910s, when MO and DC were the most senior officials in any district. Preventive health formed part of their tasks. GCGRMSD, (1913), p. 30.

147.ibid., (1937), p. 34. The Broadcasting Service, of the 1930s, proved a valuable means of getting into touch with the general public during outbreaks of transmissible diseases. During the greatest outbreak of yellow fever in the Gold Coast in 1937 in the Shai and adjoining area, the Director of Medical Services, Dr David Duff, took to the air, to good effect.

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1938, to consider wider use of the cinema for it. A committee composed of representatives of interested departments was formed to advise government on the possibilities of using the cinema to further propaganda and education in subjects essential to the welfare of the public.[148] The outbreak of war in 1939 caused the project to be shelved temporarily. It was not till the late 1940s that the cinema came into increasing use in health propaganda. The increased means of disseminating information during the post-war years provided the Nkrumah government opportunities for further progress in health education between 1951 and 1960. The spread of literacy (including adult education which was seriously embraced by Nkrumah's government), greater numbers of mobile and static cinemas and the development of broadcasting made it easier to reach greater number of people. Advantage of these developments was taken by The Public Relations Department to stimulate interest in health matters by means of films, talks by the `Radio Doctor', and articles in the press. The Mass Education teams of the 1950s (again a feature of the African administration) included in their activity, instructions in village hygiene, infant care and improved nutrition. All these measures were considered supplementary to the more important and effective means of reaching the people through midwives, health visitors and the establishment of village health centres and in towns with maternity and child welfare centres.[149] Fortunately, between 1951 and 1960, the development of such health structures

148.ibid., (1938), p. 39.
149.Maude Commission, p. 28.

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and personnel was given vigorous attention by the African government in its effort to promote rural health; this resulted in gains in rural health education.

A variety of other means were used to propagate educational prophylaxis. In 1934, the government lent the premises formerly occupied by the District Administration of the Health Branch at Accra, for the pupose of developing a health museum. This museum of hygiene and sanitation grew steadily. The museum, soon taken over by the Red Cross, was maintained and steadily extended by this body.[150] This was to be only one of the myriad important functions the Red Cross, which though inaugurated only in 1932, was to play in health matters in the colony.The museum continued to serve an important educational role well into the 1950s.

Maternity and Child Welfare Centres and the Ladies of the Gold Coast League of Maternal and Child Welfare exercised extraordinary influence on the acquisition of elementary notions of sanitation and hygiene in the largely illiterate African homes in the 1920s and 1930s in particular.[151]

In the 1910s, the Ghanaian African's attitude to educational prophylaxis was one of disbelief.[152] But by the mid-1910s, educated Africans, in particular, were clearly showing practical interest in domestic hygiene and town planning.[153] On educational prophylaxis, the Medical Department was saying triumphantly, as early as 1918,

150.GCGMSR, (1936), p. 34.
151.ibid., (1924-25), p. 23. See Chapter 6 for details.
152.ibid., (1916), p. 14.
153.ibid., (1915), p. 21.

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'The seed that to all appearances was being sown on stony ground is now beginning to show fruit'.[154]

It must be stated however that the most important problem which the health authorities recognised was that, without major improvement in the standard of living (a matter not in the hands of the Medical Department), there was little hope of permanence to the sanitary reforms being painfully carried out. For in spite of all the labours of the Medical Department right into the 1950s, most Africans, the huge majority of who[m] lived in the rural areas, remained totally ignorant of the linkage between the endemic diseases from which they suffered on the one hand, and the insanitary conditions under which they lived and the polluted water they walked in and drank, on the other. Accordingly, until the late 1940s when the Medical Field Units were formed and commenced their tasks, the huge burden and problem of endemic diseases remained untouched. It was this organisation which, for the first time, began to hunt down, treat and compile statistical information on, endemic diseases in rural Ghana.

### The Medical Field Units

The Medical Field Units were a hybrid created by the amalgamation of the Yaws Mass Treatment Campaign and the Trypanosomiasis Survey. As is evident in Chapter 8, the tsetse and trypanosomiasis work in the Northern Territories was brought to a halt, as part of the retrenchment exercise, in 1931.[155] Trypanosomiasis work however

154.ibid., (1918), p. 29.
155.GCGRMSD, (1931-32), p. 44. See also Chapters 8 for further details.

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did not stop completely;it continued, but at low key. The unobstrusive identification and treatment of the disease continued; and so the collection of statistics on it.[156] By the mid-1930s, the Medical Department and government were clearly worried about the upward trend of the number of cases being uncovered.[157]

In 1935, the government set up a committee to look into the trypanosomiasis problem.[158] Meeting at Kumasi in July 1935, the committee recommended a general survey to locate infected areas and to determine its incidence and undertake vigorous preventive and curative measures in areas known to be foci of infection.[159] Work was to begin immediately.[160] But owing largely to the difficulty of obtaining an entomologist, work could not begin till the latter half of 1937. With the appointments of Dr Morris, entomologist, and Dr Waddy, Special Medical Oficer, the trypanosomiasis survey work commenced in earnest in 1937, in the Northern Territories,

156.This is is evident from the GCGRMSD of 1931-1935.
157.Evident from the Report of the Committee on Human Trypanosomiasis, of 1935, in: GCGRMSD, (1935), p. 78.
158.op. cit. The Committee consisted of The Chief Commissioners of Ashanti who was also chairman of the committee, and the Northern Territories; The Director of Medical Services; Secretary of Native Affairs; Acting Principal Veterinary Officer;and the Senior Pathologist. The problem of human trypanosomiasis was mostly in Ashanti and the NTs. This explains the presence of the Chief Commissioners of these Provinces on the committee.
159.op. cit. Quite properly, the Committee met at Kumasi for measures, necessarily focussed on Ashanti and NTs, to be taken.
160.Retrenchment resulted in the closure of the Yeji laboratory in 1931. Laboratory Technician Leeson and entomologist Morris fell victim to retrenchment.In 1937, Mr Leeson was recalled, Dr KRS Morris reappointed Entomologist, and Dr B B Waddy Special Medical Officer for the project. Dr Morris, had seen service in the colony between 1929 and 1932. He had entered the service of the MRI in 1929 with a BSc degree, participating in tsetse work. When reappointed in 1937, he had obtained a DSc from the work of his earlier years in Ghana.

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under the leadership of Dr G Saunders.[161] The intractable nature of the yaws problem impelled government to launch a mass treatment campaign in 1944, in the Northern Territories.[162] Thus in the mid-1940s, the trypanosomiasis and yaws campaigns were operating in parallel, independently of each other.[163]

Dr Saunders had gathered together and trained a few Northern Territories assistants in 1937 at Gambaga in response to the growing incidence of trypanosomiasis in the North of the country[164].

With the arrival of Dr Waddy and Dr Morris, this small team was expanded and organised for the trypanosomiasis survey work recommended by the 1935 committee. For the next decade, this organisation remained small and was concerned solely with the control of this single disease. In 1947 the staff of an abandoned yaws project in Eastern Dagomba was absorbed into Dr Saunders' unit which then turned its attention to yaws as well as trypanosomiasis.[165]

The metamorphosis of the yaws and trypanosomiasis units into, what became the Medical Field Units, was complete when in 1951, the government accepted their conversion into a general epidemic-endemic diseases unit. By 1951, the Medical Field Units had become responsible for a field of survey and treatment which included

161.GCGRMSD, (1936), p. 7.
162.ibid., (1944), p. 2.
163.ibid., (1945), p. 4.
164.Information provided by Dr Scott, in his review of the activities of the MFU in: Ministry of Health Report, (1955), p. 28.
165.loc. cit.

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trypanosomiasis, yaws, smallpox, schistosomiasis, leprosy, onchocerciasis and malaria.[166]

In 1951, Dr Waddy took over the leadership of the Medical Field Units from Dr Saunders who had retired that year.[167] The success of this multi-disease organisation was due to these two men's intimate knowledge of the field, organisational ability and dedication. In 1955 Dr Waddy retired as specialist in charge to take up appointment in the Ross Institute of the London School of Hygiene and Tropical Medicine and Dr David Scott assumed charge of the Units.[168]

By 1960, the MFU was in the process of regionalisation. The 10-year 1961-1970 health programme ordered by the government encouraged such regionalisation. It was recognised and argued that the units needed not retain their independent parallel services once the broader health services envisaged for all the regions were emplaced. The 10-year programme recommended, as a first step, integration of the units into a broader all-embracing health plan for the country; and their regionalisation and the transfer of their headquarters from Kintampo to Accra. The function of the headquarters at Accra was `to coordinate the services as far as possible...with the teaching and research activities of the National Institute of Health and Medical Research and the future Medical School. The epidemiological side and staff of the Medical

166.loc. cit.
167.loc. cit.
168.loc. cit.

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Field Units could form the nucleus of the newly-proposed department of epidemiology and statistics in the Ministry'.[169] Nearly all these recommended changes were accomplished before the fall of Nkrumah's government.

When the yaws and trypanosomiasis campaign units were amalgamated in 1947, its headquarters was at Kintampo. It had two campaign companies, one based at Kumasi and the other at Gambaga.[170] With the emergence of the Medical Field Units, four campaign companies were formed for field work, whose base of operations were: Kintampo for Ashanti, Ho in the Trans-Volta Togoland, Gambaga in the North-East and Lawra in the North-West of the Northern Territories.[171] The staff at the Kintampo headquarters was administrative. As such it was not concerned with laboratory or other similar training. It consisted mostly of administrative and clerical personnel which dealt with reports, records, finance and correspondence.[172] The headquarters had another most important function: It maintained a very large store of supplies for field work and a workshop for the Medical Field Units vehicles.[173]

The Medical Field Units had two major functions: That which engaged the most attention was the identification, diagnosis, treatment and limited prophylaxis, where applicable, of certain endemic or epidemic diseases. This aspect of the Units' function was

169.Health Services in Ghana, p. 34.
170.MHR, (1955), p. 28.
171.loc. cit.
172.loc. cit.
173.loc. cit.

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performed by trained, supervised staff. It did not require the continuous attention of doctors who, anyway, were in short supply. Superintendents, supervisors and field assistants checked and controlled this basic work. It was always the organisation's plan to provide formal systematic training at the Kintampo headquarters for new recruits and established staff. Yet this objective could never be carried out owing to shortage of doctors who would provide the training. Practically all training was given in the mobile teams themselves in simple microscopy and basic field techniques. In good time, trainees became competent in a variety of work: The ability to identify trypanosomes, malaria parasites and microfilariae in blood films; the making and staining of films; clinical recognition of leprosy, guinea worm and yaws; vaccination. All these were embodied in the early field training. It must be said that this aspect of the function of the Medical Field Units was, a great success.Routine field work served a dual purpose:It allowed a systematic mapping of endemic diseases, treating those conditions which could be dealt with in the field. It also served the purpose of the search for trypanosomiasis, for which repeat surveys were always necessary. Such resurveys had the added value of mopping up yaws, revaccination, and sometimes a specific campaign against such a disease as onchocerciasis.[174]

The second function of the Units was the research into the many different medical problems in the rural communities. Though most

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174.loc. cit.

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important, the Units' achievement in this area was less than desired owing principally to the persistent shortage of medical manpower.

Important success was however achieved in the accurate plotting during field surveys of certain endemic diseases.[175] The technique used was basically that developed in the 1930s during the trypanosomiasis survey.The expanded activities of the MFU produced necessary modifications and introduced complexities to the original basic technique.[176]

The immense role played by the MFU in rural health in Ghana cannot be overstated.In a most apt tribute to the Units' achievements, the document on the 10-year programme for Health Services in Ghana stated:`The Medical Field Units have become one of the most efficient instruments of the medical services in combating some of the endemic diseases in Ghana.The eradication of yaws, the control of trypanosomiasis, their participation in smallpox vaccination, in leprosy case-finding and medication and early case-finding and treatment of cerebrospinal meningitis, and the last but not the least their epidemiological surveys of several other endemic diseases, eg bilharzia, onchocerciasis and guinea worm are invaluable'.[177]

What follows is a brief summary of the major activities of the Units up to 1955.

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175.loc. cit.
176.This technique is detailed in Appendix.
177.Health Services in Ghana, p. 34.

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The general survey of endemic diseases in Ghana by the Medical Field Units was begun in 1951-1952. Its importance was recognised by the Maude Commission which strongly recommended the expansion of the Units and a widening of its scope. The south of the country was to be included in the Units' area of work, and the medical auxiliary and technical manpower strengthened.[178] By 1954 the activities of the MFU had covered over half of the Northern Territories, three-quarters of Ashanti and one-third of Southern Togoland.[179] Further succeses were chalked in succeeding years. The survey was extended to other areas in the Northern Territories and Ashanti. The MFUs brought help to many rural areas which, hitherto, had had little medical attention and requests were often made by the people for their return. The addition of penicillin to the therapeutic armamentarium added to the Units' popularity. Fixed centres were selectively established to deal with special problems such the treatment of trypanosomiasis, onchocerciasis and leprosy.[180] By 1955, the general incidence of sleeping sickness found on MFUs' surveys had become vanishingly low in the Northern Territories and the Volta Region. It was only in Ashanti, where the disease continued to be associated with the main roads, was there persistence of infection rate approaching any significance.[181]

178. Maude Commission, p. 17.
179. MHR, (1955), p. 29.
180. In 1955 alone, 245,862 people were examined by the survey teams, some 28% of whom were onchocerca cases and 9% bilharzia cases. 17,693 cases of yaws were treated and 62,910 given prophylactic penicillin. 968 cases of trypanosomiasis and 1707 of guinea worm were treated. Of the 8013 cases of leprosy seen, 1917 were treated. Primary and revaccinations were done on 145,333 people: loc. cit.
181. loc. cit.

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An important achievement of the MFUs was the working out of the pattern of the prevalence of overt yaws.They found the prevalence relatively low in the drier Northern Territories, often less than 1% of the population. Southwards, in the forests of Ashanti, the prevalence was higher, at about 4%, with pockets of heavier infection, which often reached 15% of the population. In the Volta Region, the incidence was particularly high, especially between Kete-Krachi and Yendi. At about the end of 1952, Penicillin Aluminum Monostearate (PAM) was subtituted for acetylarsan and bismuth preparations in its treatment.

The MFUs handled leprosy in three ways: It plotted the distribution of the disease by diagnosis during routine field surveys. It also conducted clinics for treatment at its fixed centres. All leprosy treatment centres were run by Field Assistants under the direction of the medical officer.In some areas such as Northern Ashanti, the MFU, the medical officer and the local leprosy service set up between them clinics covering the whole area and cooperatively. The prevalence of leprosy continued to be carefully mapped. In Ashanti for example, an important fact obtained was that the incidence increased northwards and this was linked with differences in the standard of living in the area.[182]

The microfilariae of Onchocerca volvulus were first seen in 1875, from the skin of a Ghanaian African.[183] When the Colonial Civil

182.In 1953, the Medical Field Units diagnosed a total of 2,859 cases of leprosy in the the NTs and Ashanti; in 1954, 3,582 (including the Volta Region) and in 1955, 538 cases.The incidences were respectively 1.23, 1.53 and 0.84%. loc. cit.
183.MHR, (1954), p. 54.

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Administration was set up in 1906 in the Northern Territories, the District Commissioners soon noticed and reported the rifeness of blindness in the Tumu area in particular and in other areas.[184] The existence of Onchocercal blindness in the western Northern Territories was noted by Dr G F T Saunders in 1932.[185] Dr Saunders and others were preoccupied with the trypanosomiasis epidemic which was at its height at this time. Onchocerciasis was therefore forgotten again till its virtual rediscovery in the early 1940s by Dr A Ridley, an army eye surgeon, who noted the association between deficient vision and onchocerciasis in soldiers from the Northern Territories.[186] He was put in touch with Dr Saunders who provided him information permitting him to investigate the disease at Funsi in the Wa district. These results were published in 1945.[187] Ridley's work could not be followed up, mostly because of the the war-time shortage of medical manpower extending into the immediate post-war years. The 1948 census revealed an abnormally high incidence of blindness in the Northern Territories. That year the specialist epidemiologist, Dr David Scott, who was the then medical officer of health, investigated the distribution of onchocerciasis; and in 1949, was permitted to do a full investigation for six weeks. The upshot was the attraction of the attention of the British Empire Society for the Blind, culminating in the sending of a working mission to Ghana in

184.loc. cit.
185.loc. cit.
186.loc. cit.
187.loc. cit.

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1952.[188] The Society's investigators included an ophthalmologist and Dr Crisp, an entomologist.Dr Crisp succeeded in the important but difficult task of working out the life cycle of Simulium damnosum, which appeared to be the chief or the only vector in the transmission of onchocerca volvolus in Ghana.[189] Dr Crisp's work revealed and raised the possibility of planning a campaign for the elimination of the fly in Ghana, and in neighbouring French territories. By 1953 then full information was now available to tackle this disease in West Africa. Prior to the arrival of the British Empire Society for the Blind mission in Ghana, the government ophthalmologist was experimenting with the drugs antrypol and banocide in the treatment of onchcerciasis. As a result of this work, he recommended the use of antrypol to the Medical Field Units.[190] The MFUs had gained experience in the use of antrypol in field treatment of trypanosomiasis. Consequently they were able to begin its use.[191] In 1952, the Medical Field Units began experiments with mass treatment with antrypol in the Tumu district of the Northern Territories. Up till this time, nobody had expected any form of treatment to help the individual case of onchcerciasis blindness. By the end of 1954, Dr Waddy had evidence that patients with onchocerciasis with reduced visual acuity had,

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188.loc. cit.
189.In 1954, the blindness rate of 10% in Ghanaian villages was even surpassed by some French ones: loc. cit.
190.loc. cit.
191.loc. cit.

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to some degree, recovered vision with antrypol treatment.[192] Though the treatment became extremely popular in the Tumu area, there was no doctor to follow up cases and assess results.By 1954, there were an estimated over 10,000 cases of total blindness due to onchcerciasis in the North.[193] By 1955, onchocerciasis seemed to have declined in the country as a whole.[194]

Guinea worm was recognised early as an important endemic disease with very significant morbidity and important economic consequences. The report of the Medical Field Units for 1954 considered it `...possibly the most crippling of all endemic diseases of the Gold Coast. Full recovery from the effects of a single guinea-worm near the ankle may take four years, and the eruption of multiple guinea-worm causes 100% disability for months. It can be

192.MHR, (1955), p. 33. As a routine, samples of persons seen by the survey team were examined for onchocerca by skin snip; in the the Tumu district, where the incidence of onchocerca blindness was notoriously high, since 1942, the survey team examined all persons, except the very young, for onchocerca in addition to other examinations.
In 1953, 24,319 persons were examined for onchocerca in the Northern Territories and 6,562 in Ashanti. Forty one per cent were infected in the North and 11% in Ashanti. About 500 people were treated with antrypol in 1953: ibid., p. 32.
A man who came to Kintampo stone blind rapidly recovered vision after a course of antrypol; the chief of Tumu summoned the Specialist Epidemiologist to show him a man, who had been blind two years earlier, but who, after treatment was back at his old hunting profession.Such cases were common in that district: ibid., (1954), p. 55.
At the WHO conference in 1954, nodulectomy was advocated, as a prophylactic and a therapeutic measure: loc. cit.
193.loc. cit. The MFUs decided in 1955 to institute a mass campaign of nodulectomy in the worst affected areas,and the extension of mass treatment in the North.But the transfer of the medical officer who was to perform the nodulectomies rendered the programme nugatory. Mass treatment with antrypol however was carried out, and by the end of 1955, 4773 cases were treated: MHR, (1955), p. 33.
194.loc. cit.

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estimated that in the Northern Territories alone some 10,000 adults are completely disabled throughout each farmimg season and some 90,000 partially disabled. The disease is not confined to the North; it is equally common in other parts of the country, wherever pond water supply is relied on.The total loss to the Gold Coast labour effort is enormous'.[195] The disease is found in the rural areas and its elimination or control rested largely on the provision of healthy potable water and health education. The construction of dams and water holes in the rural areas in the development effort of the early 1950s unwittingly compounded the problem. Pipe-borne water supply could eliminate it but could not be provided. In 1952, the Medical Field Units experimented with the adding of wettable DDT to pond water in areas where guinea worm was extremely rife. The results indicated this simple method might eliminate the disease altogether from Ghana within 2-3 years if sufficient staff could be devoted to the task. The toxicity of DDT however eliminated this method of control.[196]

The distribution of bilharzia in Ghana was only roughly known from hospital attendance by 1954.[197] But nothing had been published about it. Commencing in 1953, the Medical Field Units (as well as the Medical Biologist) began survey work on the disease. It was however impossible for the survey team to examine everybody seen

195.ibid., (1954), p. 55.
196.See Chapter 8 for further information on guinea worm. See also MHR, (1954), p. 55.In 1953, the Medical Field Unit examined 232,379 cases, in 1954, 234,202 and in 1955, 209,371 cases for guinea worm. The corrsponding numbers treated were 1,594, 2,221 and 1,707 cases each of those years: See MHR, (1953-55).
197.ibid., (1954), p. 55.

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during survey for schistosomiasis; though in some areas, this was possible and was done.The Units resorted to the collection of specimens for examination for S.haematobium from selected populations, largely in the North and in Ashanti. In 1953, in the North, an ad hoc survey team was set up which concerned itself with the examination of school children for bilharzia.This allowed the collection of some preliminary statistics on the disease.[198] The MFUs however were never in a position to estimate the disablement from the disease, if any.[199]

It was the policy of the Units to accept the responsibility to drop whatever they were doing and take on the control of any major epidemics, such as smallpox, in their area of operations. Though the disease had been several times introduced into the Northern Territories from 1948 (after the establishment of the Medical Field Units) it was always mild in character.[200] Most of the credit for this can be claimed by the Medical Field Units. The Units added routine vaccination to their functions from 1951 on. Every section of the Units, except those engaged in anti-yaws

198.In the North, in 1953, 3,122 cases were examined, of whom some 34% harboured the parasite. In 1954, 2,866 school children were examined 26% of whom harboured either S. haematobium or S. mansoni. In Ashanti where similar work was done by the ordinary survey teams, 1,209 persons were examined in 1953; 11% of them had the parasite. In 1954, field survey teams in the North, Ashanti and Volta Region examined 8564 persons for bilharzia, with 33% positive.In 1955, the corresponding figures were 11,190 and 10% positive: MHR, (1953-55). Anxiety began to be shown by the Medical Department about possible effect of the Volta River Project on the incidence of the disease in the early 1950s but it was considered that the possibility of increasing the disease need be no bar to proceeding with the project.

199.ibid., (1954), p. 55.

200.ibid., p. 56.

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campaign, participated in the exercise and their specific mass vaccination campaign ended at the end of 1954.

That the Medical Field Units were a great success cannot be gainsaid. Their success was due, in part, to the great laboratory diagnostic and research support provided by the Medical Research Institute and Laboratory Service. And it is to this Branch of the Medical Department that we must now turn.

## Medical Research and Laboratory Services

Apart from earlier unofficial work by Dr Africanus Horton and Dr J F Easmon, systematic, official medical research in Ghana can be said to date from the work of Dr Albert Chalmers, MD, FRCS, at the close of the 19th Century.In September 1899, Dr Chalmers reported on experiments he had carried out on frafra poison used by the Frafra people to tip their arrows; and on experiments to determine the percentage of alcohol in palm wine. Some of the experiments were conducted at Gambaga and the rest at the Colonial Hospital, Accra.[201] Dr Chalmers spent part of that year also, collecting, classifying and examining mosquitoes at Accra; he provided a preliminary report on the culicidae of Ghana in November 1899. That same year, 1899, he reported on his studies on the jiggers of Ghana; this parasite had been imported into the country by returnees from Sao Thome.[202] Dr Chalmers was certainly a most busy researcher. His broad research interest lay in the cause of the fevers which attacked people in West Africa.

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201.GCGRMSD, (1900), pp. 274-90.
202.ibid., (1899), p. 291.

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A Dr Leiper came to the colony in 1905 and proceeded to study the transmission of guinea worm.[203] His research confirmed that infection takes place through the alimentary canal as a result of the ingestion of cyclops-infected water. This work was published in 1906.[204] At this time Dr W M Graham was also researching the aetiology of guinea worm and collecting useful information on the cyclops and other fresh-water fauna as well as on biting fleas.[205] In 1907, Dr Graham was detailed to investigate the biting flies and ticks in Ashanti. He was to make as complete collection as possible of the Ashanti diptera, ticks, fleas, mosquitoes, and agricultural pests which damaged agricultural crops and fruits including cocoa.His investigations led to the identification of Glossina palpalis at Kumasi, the principal vector of the African trypanosomiasis, and the Ashanti belt of the tsetse fly.[206] His work contributed to the earliest reporting of trypanosomiasis in Ashanti.

Dr Graham provided an important report on the rifeness of guinea worm in the African communities and its associated grave economic implications. He read a paper on this and other work he had done at the General Meeting of the British Medical Association, Tropical Section in 1907.[207]

When in 1905, the Secretary of State requested the collection of

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203 Probably came out from the London or Liverpool School of Tropical Medicine.
204.ibid., (1906), p. 12.
205.loc. cit.
206.GCGRMSD, (1907), p. 10.
207.loc. cit.

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blood-sucking flies for the British Museum, only Dr Graham, out of 41 medical officers, possessed any special knowledge on the subject of entomological research and was the only one who took up the task.He did so after a short course of special study. Dr Buee and Dr Chaplin, officers of the Medical Department, who had also gone through a course of veterinary pathology and bacteriology in England, died within a few months after their return to Ghana.[208] By 1908 then, Dr Graham was the only medical officer devoting himself to full time research.

In 1907, Dr A E Horn investigated cerebrospinal meningitis in the Northern Territories. Working under the most difficult conditions, he showed,using microscopic evidence and culture, that the epidemic of meningitis in these parts of Ghana was of the same nature as that which had recently occurred in Europe and America.[209] In 1908, Dr Swan was investigating an outbreak of pneumonia at Boso and of sleeping sickness at Krepi in the Volta District; while Dr Carter and Dr Connal were studying malaria in children at Accra.[210]

The work of Dr Graham in the delimitation of the tsetse belt in Ashanti was brought to an abrupt halt in 1908 by the outbreak of plague at Accra. He was brought down to Accra to take charge of the laboratory which was started in connection with the outbreak.[211]

When the plague broke out in Ghana in early 1908, Professor William Simpson was sent out to the colony by the Colonial Office to

208.Roger to Elgin, NAG ADM 1/2/66, Desp. No. 591 of 30.12.1906.
209.GCGRMSD, (1907), p. 11.
210.ibid., p. 13.
211.GCGRMSD, (1908), p. 13.

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investigate it, stamp it out and prevent its spread. He arrived in the country 2nd February 1908.Professor Simpson brought with him equipment and materials for this assignment.[212] Thus started the Accra Laboratory. Or so Tettey says.[213] But the Accra Laboratory had actually been started earlier than Tettey has stated:There is evidence that a pathological laboratory was doing work about 1900 at Accra. And Dr Chalmers was investigating the frafra arrow poison in a laboratory at Accra between 1898 and 1899.In a despatch in 1900, governor Hodgson was saying `I hope to carry on further investigation with regard to the tsetse fly as soon as the Government Laboratory at Accra is in working order'.[214] That year, 1899, most of the pathological work was being carried out in a small room in the Accra Hospital (located where the Supreme Court now stands). At the end of that year the Hausa Hospital was left vacant when it was moved to the Cantonments;[215] governor Hodgson had their older premises converted to a central pathological laboratory.[216] This laboratory was intended to be used for original research into the causes and nature of the fevers and diseases found in the country. A laboratory was certainly therefore in existence before 1900; the dating of the first

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212.loc. cit.
213.C Tettey, `A Brief History of the Medical Research Institute and Laboratory Service of the Gold Coast 1908-1957', West African Medical Journal, (ns) (1960), pp. 73-83.
214.Hodgson to Chamberlain, NAG ADM 1/2/53, Desp. No. 99, of 7.3.1900.
215 Special hospitals began to be provided the Hausa Constabulary from the late 1880s; the first two were at Accra and Kumasi, and another later at Tamale.Right from the inception of the medical department the medical service catered for these special African officials.
216.GCGRMSD, (1899), p. 264.

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laboratory at 1908 by Tettey is evidently in error.

Dr Chalmers' interest in fevers has been noted. The laboratory's purpose became two-fold: Research and clinical investigation. Dr Graham ran the plague laboratory and was appointed the first pathologist and research officer in charge of the laboratory.[217] On 15th February 1908, assisted by Dr A Connal and Dr A Pickels he began the examination of rats for plague and the manufacture of the plague bacillus for anti-plague work.[218] Their work went beyond the plague problem.They identified other blood sucking parasites of the rat.

The laboratory proved essential and invaluable during the plague. It was equally useful after its suppression:large numbers of examinations were made which ensured against the possibility of further cases of plague escaping detection.The manufacture of P.pestis was continued, attempts were made to exalt it, and cultures of the bacillus were sent to out-stations for inoculation. In addition to such work,the laboratory carried out analyses of samples of water from different sources and also postmortem examinations. It also made smears and histological examination of various diseases and examined specimens from slaughter houses.[219] After the suppression of the plague, the laboratory was relocated in the Contagious Disease Hospital at Accra (Labadi). The Accra Laboratory remained in these premises till 1924 when it was

217.ibid., (1908), p. 13.
218.Tettey, `Medical Research Institute', p. 73.
219.GCGRMSD, (1908), pp. 13-15.

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transferred to its new location.

Staff shortage hampered research and laboratory work in these early years of the Accra Laboratory, even though the laboratory was well-equipped. Leadership was in short supply. For the next few years, the Laboratory lacked a permanent substantive head, for Dr Graham was transferred to Nigeria on promotion as Director of the Medical Research Institute at Yaba (started in 1907) in late 1908.[220] Moreover the doctors who ran the laboratory had compelling clinical duties as well. In the latter part of 1908, the deputy Principal Medical Officer had to take charge of it, first after Dr Graham's departure, then after Dr Connal's;[221] and in 1909 Dr G E H Le Fanu took charge, followed by Dr Connal in 1912;[222] and in 1913 Dr Condy took charge. During this period, no medical officer could be spared for exclusively laboratory duties. It was impossible to carry out any significant original research work.[223]

In 1909, led by Dr G E H Le Fanu, the laboratory carried out a successful experiment to manufacture active vaccine lymph, locally, for smallpox vaccination.[224] After further experiments by Dr J M O'Brien, vaccine lymph began to be manufactured successfully on a

220.ibid., p. 1.
221.ibid., p. 14
222.Dr Graham was transferred to Lagos as Director of the Medical Research Institute at Yaba in 1908. The same year Dr Connal is stated to have been transferred, where to, we are not told. But in 1912, Dr Connal was applying for the position of Director, a post he got: Bryan to Harcourt, NAG ADM 1/2/80, Desp. No. 694 of 24.9.1912. This followed the retirement of Dr Graham that year: Roger to Elgin, NAG ADM 1/2/68, Desp. No. 392 of 16.9.1907.
The Lagos Medical Research Institute was started in 1907 and all British West African colonies made financial contributions to it: loc. cit.
223.GCGRMSD, (1908), p. 14.
224.Bryan to Elgin, NAG ADM 1/2/72, Desp. No. 390, of 19.8.1909.

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large scale in the laboratory in 1910.[225] Besides this important activity, the laboratory became increasingly busy in routine work such as mosquito, slaughter house, medicolegal, malaria, trypanosomiasis work; examination of faeces, urine, sputum and blood as well as postmortem work.

Pathological specimens reached the laboratory from as far north as Salaga and from as far west as Sekondi. But the bulk of the work consisted of clinical materials from Accra and its environs.The number of routine examinations done by the Accra Laboratory between 1914 and 1920 ranged between 1817 and 2569. As the Figure in Appendix VII shows, the number of routine examinations done annually were quite small.They remained static during the entire period.

There are several explanations for this.Medical science was in its infancy and definitive diagnosis of disease by microscopy, bacteriological, chemical and histological techniques were a novelty of fairly recent origin and only recently available in Ghana. The employment of these techniques had only begun to take root among medical officers of the colony; MOs had to be weaned away from their total dependence and reliance on clinical diagnostic methods.As such even medical officers at Accra and Accra District did not make full use of the facilities provided by the Laboratory. The obtaining of specimens from out-stations was hampered by bad communication in the country;and

225.GCRMSD, (1910), p. 13.

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as early as 1914, the Accra Laboratory was expressing the hope of the establishment of similar laboratory in other parts of the country.[226] The chronic shortage of medical officers made it difficult to spare those with laboratory interest for permanent laboratory duties.[227]

The assumption of duty of Dr J W Scott MacFie, MB,DSc,MA,DTM, on August 13th 1914, as full time pathologist of the laboratory marked a new departure for the laboratory. Previously, as indicated above, it was in the charge of a medical officer who had other duties to perform. Dr MacFie thus became the first full time pathologist and medical research scientist in the country.

Dr MacFie had been a research assistant at the Medical Research Institute at Yaba, Nigeria. He was closely associated with yellow fever and other investigations and had done some work on sleeping sickness, a disease receiving considerable interest and attention in the 1910s.

With the arrival of Dr MacFie, busy research activity began. For the first time the laboratory had not only a proper leader, but also an able one. Opportunities for research were enhanced with the appointment of Dr A Ingram,who had important entomological work to his credit,in 1916.[228]

In spite of staff shortage considerable amount of research work was done by the Accra Laboratory.[229]

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226.This is a distil of information in GCGRMSD between 1910 and 1920.
227.This is clear from information in GCGRMSD between 1908 and 1914.
228.ARLS, (1916), p. 5.
229. See Appendix VII.

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The research covered a wide area in tropical medicine: Malaria, mosquitoes, trypanosome and other parasites, amoebiasis, spirochaetal infection, yellow fever and various bacteriological work.

Research was severely hampered by the outbreak of World War I. It was the practice that medical officers stationed at Accra who had laboratory interest spent part of their time working in the Accra Laboratory. This source of staff was largely extinguished through the assignment of medical officers for war-time duties.[230] Between 1917 and mid-1919, Dr Macfie himself was seconded for special work at Liverpool in connection with the Malaria Commission of the War Office.[231] An outbreak of plague at Accra in 1917 focused attention away from research. And a succession of medical officers with laboratory interest, in revolving door fashion, entered and left the Laboratory.The sole Laboratory Assistant, Mr S Smith died in 1916, with no local African trained in laboratory work to succeed him.[232]

The achievements of the laboratory during the war years were understandably very modest: In 1915, Dr Hopkins, the Principal Medical Officer, authorised the inclusion of records of scientific work done by other medical officers not attached to the Laboratory,in the Accra Laboratory's annual report.[233] The objective of this important decision was to permit a wide dissemination of

230.ibid., (1915), p. 5.
231.ibid., (1917), p. 17.
232.ibid., (1916), p. 5.
233.ibid., (1915), p. 5.

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scientific information, and to encourage research initiative in keen medical officers as a whole. Several such contributions were published in the Laboratory's Annual Report of 1915. But the practice was sadly discontinued the following year, most probably because of exigencies of the war.[234] The Accra Laboratory started a pathological museum and a library which became an increasingly important reference library for medical officers all over the country.[235] In October 1920, the Secretary of State for the Colonies approved the creation of the Medical Research Institute in Ghana.[236] The staff was to consist ultimately of a director and six pathologists.[237] These positions were not easy to fill but by 1921, the staff situation had improved considerably: Dr MacFie became the Institute's first director and Dr Ingram and Dr Corson, pathologists. There was a laboratory superintendent, Mr Leeson and a laboratory assistant, Mr Abbott. The first African subordinate staff were Mr P C Paitoo a laboratory attendant, and Mr E E Bannerman, a clerk. Until 1924, the Institute continued to be housed in its old unsuitable premises of the old Accra Contagious Disease Hospital.

The Gold Coast Hospital (Korle Bu Hospital) was opened in 1923, and along with it, the new premises of the Medical Research Institute. The structural and equipment facilities of the

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234.ibid., (1916), p. 5.
235.These actually date from 1908 when the plague laboratory was established.
236.ibid., (1920), p. 43. From now on the Accra Laboratory became the Medical Research Institute.
237.loc. cit.

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Institute matched and complemented those of the new hospital (See Appendix VII for details). These no doubt encouraged governor Guggisberg's determination to establish a medical college at Accra.

The work of the Institute commenced in its new premises in May 1924. In that year, an important, and cordial, working relation began between the new Gold Coast Hospital and the Laboratory, thanks largely to Dr A J R O'Brien, surgical specialist and Resident medical officer of the Hospital. Facilities were allowed the Laboratory staff in the new Hospital for joint clinical and laboratory investigation of obscure cases.[238] It was this sort of collaboration which led to the first discovery and description of Relapsing Fever in British West Africa. The first case was reported by Dr G E H Le Fanu, a clinician, while Dr Ingram of the Institute, was the first to show that it was the louse-borne form and not the the East African tick-borne form.[239] As early as 1914, with the arrival of Dr MacFie, and the successes being achieved by the Accra Laboratory, optimism was rife about the possibility of

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238.Dr O'Brien put 12 beds at the disposal of the Laboratory. Any unusual case which was not surgical, but medical, and requiring special investigation from a tropical medicine point of view was handed to the Laboratory for investigation and study, a physician carrying out any treatment suggested by the laboratory men or from investigative results: GCGRMSD, (1924-25), p. 42.
A clinical laboratory formed part of Korle Bu Hospital and operated by the Medical Department. With the death in 1928 of Dr Young, the Director of the Institute, and the appointment of a replacement Director, Dr Butler, a major reorganisation was under-taken. As part of this reorganisation, the Clinical Laboratory of Korle Bu Hospital was taken over by the Medical Research Institute. This was to be a short-lived exercise. As part of the retrenchment exercise, this Laboratory was first closed down in 1931, then relinquished back to the Medical Department: ibid., (1931-32), p. 44.
239.Tettey, ` Medical Research Institute', p. 74.

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establishing a similar laboratory at Sekondi and Kumasi.[240] This was in keeping with the new general policy of governor Clifford to extend the benefits of scientific medicine to Africans as a whole.[241] For it was soon recognised that the usefulness of a pathological laboratory to clinicians was an inverse function of the distance the laboratory service was away from them.[242] The Laboratory at Accra also planned and hoped to bring its resources closer to the medical officers in important outstations by means of a travelling mobile laboratory. The carrying out of these plans depended on an increase of staff and liberal provision for travelling. But,first, the exigencies of the Great War caused their postponement, then the drastic reduction in the Institute's estimates for 1921, their temporary abandonment.[243]

No other laboratory could be established outside Accra till 1922. That year the Sekondi Laboratory was opened by Dr J F Corson with the assistance of Mr F W Abbott, laboratory assistant.[244] It was however closed within six months because of staff shortage.[245] Nevertheless a fact was established: the viability and usefulness of a branch laboratory was demonstrated. When Professor William Simpson was back in the colony to investigate the health of mine labourers in 1924, he strongly recommended the reopening of the

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240.GCGRMSD, (1914), p. 52.
241.See Chapter 2 on Clifford's policy of African inclusion in the health services in the early 1910s.
242.ARLS ,(1921), p. 42.
243.ARLS, (1921), p. 42.
244.ibid., (1922-23), p. 66.
245.loc. cit.

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Sekondi Laboratory.[246]

Fortunately, the staff position had sufficently improved to permit this. In February 1926, Major C M Ingoldby reopened the Sekondi Laboratory. Major Ingoldby had been seconded as pathologist from the Royal Army Medical Corps in October 1925; he had then participated in tsetse investigations in Bole, Ho and Oda districts and other parts of the Northern Territories. He had worked as plague pathologist in the Sanitary Branch before joining the Medical Research Institute. With the assistance of Dr Robinson, assistant pathologist, Mr Woodward, laboratory assistant, and Mr Paitoo, laboratory attendant,he operated it with great success till[247] his untimely death in June 1927.[248] Scarcity of funds held a Kumasi Laboratory in abeyance and it was not till May 1930 that it was opened in temporary quarters by Dr Reid.[249]

By 1923, two motor cars designed and outfitted for mobile laboratory work [250] were engaged in work outside the immediate vicinity of Accra, surveying the area for tsetse fly and collecting snails in order to determine the intermediate hosts of S.haematobium in Ghana.[251] The travelling laboratory saw important service in 1926-1928 in the hands of the Rockefeller Yellow Fever Commission at Asamankese and Suhum [252] during the outbreak of yellow fever in

246.ARLS, (1924-25), p. 42.
247.ibid., (1925-26), p. 38.
248.ibid., (1927-28), p. 54.
249.ibid., (1930-31), p. 1.
250.ARLS, (1921), p. 41.
251.ibid., (1922-23), p. 66.
252.ibid., (1926-27), p 48.

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1926 and trypanosomiasis field investigation at Yeji between 1928 and 1932.[253]

In 1923, there were three full-time pathologists:Dr MacFie, Dr Ingram and Dr Corson. The quantity and pattern of research in the Institute are evident when the publications from the Institute are studied.[254] The years 1920 to 1924 had a distinctive feature: No other period saw so much research done and so much published by so few. The area covered by their research was wide-ranging. There were numerous publications on mosquitoes, midges, bilharzia, malaria and its treatment,various parasites (human and horse), monilial infection, onchocerca, relapsing fever, tsetse, trypanosomiasis and filaria.

Unfortunately in 1923 both Dr MacFie and Dr Corson suddenly resigned and left the colony.[255] This was followed by Dr Ingram's retirement in 1924. Dr Young was then transferred from Nigeria as the new Director of the Medical Research Institute.[256] The transfer of Dr Young from his tsetse work in Nigeria to the Institute in 1924 and the appointment of Dr Burgess as pathologist partially rectified the staff problem caused by the departure of Dr MacFie, Dr Corson and Dr Ingram. And 1925 saw further improvement in the

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253.ibid., (1927-28), p. 47.
The Motor Laboratory was condemned by the Board of Survey as obsolete vehicles and consequently retired from service in 1932: ibid., (1931-32), p. 44.
254.See Appendix for publications between 1914 and 1957.
255.ARLS, (1923-24), p. 19.
256.Dr Ingram retired in September 1924: ibid., (1924-25), p. 42. In May 1924 the Institute commenced work in its new premises: loc. cit. Note that the new Gold Coast Hospital was opened in 1923. Mutual proximity and facilities obviously began to complement the work of both Hospital and Laboratory.

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staff situation with the appointment of three additional pathologists.[257]

A unique opportunity for studying yellow fever occurred in 1926. In May that year, an epidemic of yellow fever, confined to Africans, began at Asamankese and in January 1927 at Suhum. There were sporadic cases at Saltpond, Nsawam, Accra and Akuse. These outbreaks coincided with the arrival at Accra of the Rockefeller Foundation Yellow Fever Commission team.[258] The Commission had its headquarters at Lagos. Dr Hideyo Noguchi, working under the auspices of the Rockefeller Yellow Fever Commision in Brazil,had claimed Leptospira icteroides as the causative organism of South American Yellow Fever.In dispute was whether this same organism was responsible for African Yellow Fever;hence the presence of the Commission in West Africa at this time, which, in the event, proved crucial. Fortuitously, Dr Muller of the Commission, and newly-arrived, confirmed the post-mortem diagnosis of Dr Byrne the medical officer in charge of the Asamankese and Suhum area.[259] From then on the Rockefeller team and the staff of the Medical Research Institute commenced their investigations.[260]

Dr Young, the Director of the Medical Research Institute, worked closely with the Rockefeller Commission.[261] In the course of their work both Dr Noguchi and Dr Young died from laboratory yellow

257.ibid., (1926-27), p. 47.
258.ibid., p. 48.
259.ibid., p. 51.
260.The movements and activities of the Rockefeller Yellow Fever Commission are narrated in Chapter 8 under yellow fever.
261.ARLS, (1926-27), pp. 48-9.

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fever.[262]

Outstanding results emerged from the yellow fever research at Accra and Lagos. It was proved that the African yellow fever was caused not by the leptospira but by a virus. At Accra, the researchers succeeded in producing yellow fever infection in the macaque monkey.This crucial experiment led Dr Mahaffy to isolate the now famous Asibi strain (named after Ghanaian yellow fever patient from whom it was isolated) of this virus. From this original strain followed the preparation of the yellow fever vaccine which is now in world-wide use.

The sudden death of Dr Young in May 1928 from laboratory yellow fever severely disorganised the work of the Institute.The new Director, Dr G G Butler, sent from Nigeria, assumed duty in August that year.[263] His main achievement during his very short directorship was the restructuring of the Institute: His reorganisation resulted in the Institute concentrating on research while other laboratories in the country concentrated on routine work, the Institute acting as a reference laboratory.[264] During his brief tenure as director, Dr Butler did interesting work on malaria

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262.See Chapter 9 under yellow fever for details.

263.GCGRMSD, (1928-29), p. 54.

264.Dr Butler's recommendations were as follows: `The Pathologists should be stationed at Sekondi, Kumasi and Accra native hospitals to undertake routine clinical examinations and that the Medical Research Institute should endeavour to carry out lines of research and undertake only such routine duties that the Pathologists at the out-stations were unable to deal with.These Pathologists would remain members of and be required to report to the Medical Research Institute in order that the presence of unusual findings may be noted, guidance given into channels that would appear to be profitable and uniformity maintained in technical methods and yet be in the position of a liaison officer between the physician or surgeon and the Research Institute'.ibid., p. 56.

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and analysis of statistics relating to yaws and syphilis. Dr A S Burgess had had a long interest in and researched plague. His work culminated in 1927 in the award of the Langley Memorial Prize for his work on: `The selection of a strain of B. pestis for the preparation of a vaccine, with special reference to the effect of animal passage on virulence'.[265] He continued his work on plague till 1930/1931 when the plague project was discontinued.[266] 1932 saw important publications on tsetse and trypansomiasis, relapsing fever and an interesting one on sickle cell disease, presaging the epic work on this disease by Dr Edington and Dr Konotey-Ahulu in the 1950s, sixties and seventies. Onchocerciasis also received attention, a dissertation on which earned Dr M H Hughes the MD from the University of Oxford.[267]

In consonance with the reorganisation carried out by Dr Butler, from the later twenties to the early 1930s, the Medical Research Institute provided pathologists for the various laboratories and units under its jurisdiction. These by 1930, apart from its own headquaters laboratory, were the Korle Bu Hospital Clinical Laboratory, the Kumasi and Sekondi Clinical Laboratories, the Field Laboratory for Trypanosomiasis investigations at Yeji and the Mobile Laboratory and the Entomological Unit. There was a parallel increase in the staff and by 1930 there were about 8 pathologists, two medical entomologists and several laboratory staff. Before and

265.ibid., (1927-28), p. 46.
266.ARLS, (1930-31), p. 1.
267.GCGRMSD, (1932-33), p. 43.

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after 1930 the staff position of the Institute was, and would, never be better.

Between 1931 till the end of the second world war, research remained in abeyance. The reasons are not far to seek: Staff shortage had been an episodic problem from the inception of the Accra Laboratory in 1908; from 1931 it became a perennial one, caused first by the economic slump which led to retrenchment, then by the second world war. The retrenchment exercise of 1931 caused severe reduction of the staff. The position of director was abolished and replaced by a Deputy Director of Laboratory Services. All but three pathologists as well as the entomologists lost their jobs. Retrenchment reorganisation also saw the closure of the Korle Bu Hospital Clinical Laboratory in 1931, the Sekondi and Kumasi Laboratories taken over by the Medical Department, the closing down of the Yeji Laboratory in May 1931, and the retirement of the Mobile Laboratory in 1932. The Entomological Unit ceased to exist. Work in the Institute again reverted to routine work mainly. As pathologists were not available, laboratory attendants were detailed to run the Sekondi and Kumasi Laboratories, doing simple examinations under the direction of the senior medical officer of the station.[268] The exigencies of the second world war and the immediate post-war period, retirements and resignations, caused further depletion of staff.[269]

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268. Importantly, in 1929, permission was granted for the local training of Laboratory Attendants at the Institute . The local organised training of laboratory technicians appears to date from then: GCGRMSD, (1928-29), p. 55.
269. ibid., (1949), p. 15.

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By 1944, laboratories had been established at Cape Coast and Tamale as well, which, with those at Sekondi and Kumasi, and run by African laboratory attendants, carried out large numbers of miscellaneous examinations in connection with the busy hospitals at these centres.[270] And by 1949, all hospitals except those at Keta, Wa, Akuse and Yendi were supplied with microscopists.

The usefulness of Junior Laboratory Technicians was proved by their work in the out-stations. As pathologists were in short supply and health services in the colony were undergoing expansion after the war, the training of laboratory technicians and microscopists became a major need. This was started in the Institute in 1946, ex-servicemen laboratory technicians forming the bulk of the trainees. The training was elementary and of a year's duration.[271] The training programme was soon extended to three years and Veterinary Assistants also began to be trained in the Institute.In 1952,a laboratory assistant was sent to Yaba, Nigeria, for training in histopathological techniques and by 1955, four laboratory assistants had received advanced training in the United Kingdom.[272]

The 1952 recommendations of the Maude Commission of Enquiry into the Health Needs of Ghana provided important stimulus to the development of laboratory facilities in the country as did the post-war economic boom. New laboratories were built at Korle Bu

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270.ibid., (1944), p. 8.
271.ibid., (1945), p. 5.
272.MHR, (1955), p. 35.

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Hospital Accra, Sekondi, Kumasi, Tamale and other stations, and by 1957, there were 26 laboratories attached to government hospitals, but none of which had a pathologist.[273] Twenty-two hospital laboratories were equipped for simple laboratory examinations and by 1955, all out-station hospitals, except Nsawam, had a trained laboratory technician.

A complete expansion and reorganisation of the Institute commenced in 1952. With the increase in staff, separate departments were created in the Institute, with consequent increase in efficiency and facilities offered clinicians.The departments created were: Bacteriology, Biochemistry, Histopathology and Haematology.[274] In 1955 the control of all laboratory services of the country was vested in the Senior Officer at the Medical Research Institute. Dr G M Edington became the first specialist in charge of the Medical Research Institute and the Laboratory Services.The early 1950s witnessed partial resurgence of research activity. The sickle cell problem began to receive increasing attention, under the leadership of Dr G M Edington.His work on this disease earned him the MD from the University of Glasgow in 1951. Edington became Professor of Pathology, Faculty of Medicine of University College Ibadan in 1957 and Dean in 1959. With Dr H Lehmann, he discovered the first cases of sickle cell haemoglobin C disease and a new haemoglobin,haemoglobin G, in West Africa in 1954. Other haemoglobinopathies such as thalassaemia were studied during this

273.ARLS, (1957), p. 1.
274.MHR, (1953), p. 38.

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period.

In 1952, the Ghana government accepted the recommendation of the Maude Commission that it should give its full support to the proposed West African Council for Medical Research, a body for coordinating medical research in West Africa. The government also agreed to give every encouragement to research by individual researchers and that the Research Institute should resume its original research function which had yielded so much in the 1920s.[275] But The West African Council for Medical Research was broken up in 1961, a breakup initiated by the Nkrumah government. Ghana decided to go it alone in medical research, setting up its own National Institute of Health in its place, with Professor Joseph Gilman, a South African physiologist, as its head. In this the Ghana government sought and obtained the assistance of the American National Institute of Health. The Institute achieved a brief success with good collaboration between the Americans led by Dr Edgcombe on the one hand, and the Ghanaian counterparts led by Professor Gilman, on the other. Valuable work was done particularly in regard to hepatitis.[276] When the Nkrumah regime fell in 1966, Gilman left the country and Dr Saakwa-Mante became head of the

275. Government Statement on Maude Commission Report, p. 3.

276. Interview with Professor Sai, Accra, in January 1995. Professor Sai chaired the meeting at which Ghana decided to leave the West African Medical Research Council in 1961. At this meeting was Professor Maegraith, the noted researcher and author on Tropical diseases, representing the British government. Gilman became a confidant of Nkrumah. He came to Ghana with the claim he was anti-apartheid and had run afoul of the authorities in South Africa. Sai says Gilman persuaded Nkrumah for Ghana to leave the West African Medical Research Council and was also highly instrumental in Nkrumah's decision to abrogate the Ghana-American agreement for the Americans to build the country's first medical school.

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Institute.

The achievements of the Accra Laboratory, then of the Medical Research Institute were protean: Much new information on tropical diseases originated from them. They made crucial contribution to the development of the yellow fever vaccine, by the use of which yellow fever no longer exists in the world. They produced vaccines against smallpox and plague, played crucial role in the work which eventually eliminated sleeping sickness in the country, spearheaded the identification of several haemoglobinopathies. Most important, through its work, the laboratory diagnosis of disease became an established feature of medical practice in the country.

In the late 19th Century, Ghana was an obscure British colony. By the 1920s, it was no longer so: It was from now on a colony ranked with a first class governorship.[277] From the 1920s on it had lost its sinister reputation of a public health hazard where only the intrepid European reputedly dared. Though far from perfect, by 1960, sanitation had become a reasonably well-organised and permanent feature of public health life in the country: The basic complex and expensive structures and the necessary culture which must go with mosquito and malaria control were in the course of establishment; the average indigene could no longer be said to be totally ignorant of, and, apathetic towards, general sanitation, sewage and its disposal, the use of wholesome water, and the orderly lay-out of towns and villages; health education was no

277. Governor of Gold Coast: Appointment of Sir R A Slater, PRO CO 323/981/8.

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longer something strange, new and disbelived; the regular visitations of epidemics had been considerably curbed, thanks largely to the work of Dr G F T Saunders, his successors and the Africans who ran the Medical Field Units. To all these successes were due the crucially-important inter-service cooperation between the Sanitary Branch, The Medical Field Units and the Medical Research Institute. So that when the first African government took power in the 1950s, it inherited the foundations of public health, which prior to 1910 could be said not to have existed, upon which to build.

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# Chapter 5

## THE MEDICAL STAFF

Between 1880 (when the British West African Army Medical Service metamorphosed into a civil Colonial Medical Department) and 1900, the number of medical officers of the fledgling Medical Department was very small indeed. Table 13 below attests to this fact.

Table 13

Medical Officers in the Early Medical Department

1880-1895

| Year | Number | Reference |
|---|---|---|
| 1880 | ? | |
| 1881 | ? | |
| 1882 | ? | |
| 1883 | ? | |
| 1884 | 9 | Blue Book, PRO CO 100/34 |
| 1885 | 12 | ibid., 100/35 |
| 1886 | 11 | ibid., 100/36 |
| 1887 | 13 | ibid., 100/37 |
| 1888 | 14 | ibid., 100/38 |
| 1889 | 13 | ibid,. 100/39 |
| 1890 | 15 | ibid., 100/40 |
| 1891 | 16 | ibid., 100/41 |
| 1892 | 20 | ibid., 100/42 |
| 1893 | 23 | ibid., 100/43 |
| 1894 | 22 | ibid., 100/44 |
| 1895 | 29 | ibid., 100/45 |

Thus in 1884, there were a total of nine medical officers and up to 1890, no more than an average of 15.[1] The Table also shows that the growth in numbers was equally slow; between 1885 and 1891 new appointments varied, mostly, between nil and one.

The principal reason which explains the small number of medical officers in these early years was that only a small number of

1.Griffith to Ripon, NAG, ADM 1/2/49, Desp. No. 124 of 1.4.1895.

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doctors were required to provide a service for a tiny number of colonial officials, mostly Europeans. Furthermore, the area covered by the services before the early 1900s, was restricted largely to the Crown Colony proper; and even there, the government's gaze rested almost entirely on the coastal towns.[2] Recruitment difficulty was a second and important cause of the small number of medical officers and the few regular appointments made to the department because West Africa was one of the least sought-after places by British medical men due to its notoriety as one of the unhealthiest places on earth.[3] Compounding this was the fact that in the 1880s and 1890s, in particular, the colony's revenue was small and salaries poor. Chief Medical Officers McCarthy, Easmon (1892) and Henderson (1896) constantly made it clear that recruitment would be impossible if the conditions of service (particularly in the matter of salaries) of medical officers were not improved.[4] Salary reduction, consequent upon a serious drop in revenue in the 1880s created further difficulties in recruiting British medical officers.[5]

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2.See Chapter 3 for details.

3.GCGRMSD, (1900), p. 19. See Chapter 1 for details on the bad press on West Africa and Europeans' conception of and attitude to the West African environment.

4.On the subject of poor salaries, in 1893, Dr J F Easmon wrote to governor Griffith: `... To obtain good men we must have to pay for their services and make it worth their while to devote and concentrate their best energies on their official duties...'. Griffith to Ripon, NAG ADM 1/2/46, Desp. No. 81 of 18.3.1893. When Dr Easmon became CMO in 1892, he had only about 15 medical officers on his staff. And Dr Henderson wrote in his 1900 report, `...In such a notoriously unhealthy place as the Gold Coast... adequate remuneration must be given...'GCGRMSD, (1900), p. 19.

5.In 1885, the colony's revenue was 193,875 pounds; it had been rising slowly but steadily since 1880. From 1886, revenue began to fall and by 1887, it had fallen below 100,000 pounds. The further fall in revenue in 1888 led to a `...reduction

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The poor conditions of service were thus superadded to the well-publicised celebrated infamy of the West African climate. The shortage of medical staff was aggravated by the practice that out of a tour of service of 17 months, the officer spent five of it on leave in England. This left, for instance in 1893, 9 medical men in the colony at post.[6] Sickness, absence on leave and emergencies which were constantly occurring during this period made the life and work of the medical officer excruciatingly unpalatable.[7] Worse for them, the responsibility of medical officers extended over very wide territory. And they were constantly shifted from station to station.

To cover their large areas of professional responsibility, this small number of medical officers were constantly on the move travelling by the then trading paths or routes. Along the coast, such shuttling was conveniently accomplished by steamer but in the interior, this was arduously accomplished by use of carrier-and-hammock and a good deal of walking.[8]

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in the salaries of officers joining the service then and subsequently...': From 1888, the commencing salary of Assitant Colonial Surgeons was reduced from 400 to 350 pounds. Griffith to Ripon, NAG ADM 1/2/46, Desp. No. 81 of 18.3.1893.

6.Griffith to Ripon, NAG ADM 1/2/46, Desp. No. 380 of 23.12.1891.
And in 1907, of 63 medical officers in the employment of the Department, 38 were at post and 25 on leave; forty percent of the medical staff were unavailable at any one time because of leave: GCGRMSD, (1907), p. 5.
The medical staff position was further aggravated by the Ashanti disturbances of 1900 because medical cover became necessary for Ashanti owing to the demands of the military. Low to Chamberlain, NAG ADM 1/2/54, Desp. No.452 of 7.11.1900.

7.Griffith to Knutsford, NAG ADM 1/2/43, Desp. No. 125 of 11.5.1889.

8.Horses were often used in the North and the coastal plains, for which their users were paid allowances. But their users were constantly on the alert for sleeping sickness to which horses were prone. Animal haulage was consequently not so successful, though tried. Griffith to Granville, NAG ADM 1/2/39, Desp. No. 157 of 8.5.1886. See also Chapter 3 for further details.

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The number of medical officers was determined largely, during this time, by the number of districts which had district commissioners. The reason the two moved together in all administrative districts was two-fold: It was a matter of policy that the medical officer had to be on hand to attend the district commissioner and his European and African subordinates. Secondly, the district commissioner and the medical officer were the two most senior, educated and responsible members of the administration in any district. And very often, for reasons of economy, the medical officer performed the duties of the district commissioner, when the latter was on leave, invalided or the position of district commissioner was unfilled for any reason.[9] Colonial regulations and the terms of their appointment also required that medical officers could be called upon to discharge any duties the governor might call on them to do.[10] Duties in gaols and the lunatic asylum were unpopular, but they were professionally legitimate while the others were not. These non-professional duties included customs and preventive work, supervision of government stores, judiciary work, treasury work, collection of caravan taxes, overseeing accounts of post offices, surveying public works stores

9.The primacy of the district commissioner and his staff as the chief consumers of the doctor's services is illustrated by the fact that in 1886, Sekondi did not have a medical officer because the district commissioner that year was a Euro-African (rare in those days) who was disinclined to be treated by a white medical man. Because he did not want one, the town did not have a medical officer to which it was entitled and provision had been made for. Griffith to Granville, NAG ADM 1/2/39, Desp. No.157 of 8.5.1886.
On this see also Roger to Elgin, NAG ADM 1/2/70, Desp. No. 552:565/08 Case 86/08 of 19.10.1908.
10.Hodgson to Chamberlain, NAG ADM 1/2/53, Desp. No. 23 of 13.1.1900.

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and political duties of a district commissioner.The medical officer was also the meteorologist; he oversaw the daily recording of relevant meteorological data, their careful compilation and inclusion in annual reports. In some instances a medical officer devoted as much as five or six hours of his working day to such extra-professional duties. Accordingly legitimate professional duties often suffered, sanitary work in particular.[11]

The policy of engaging the services of medical officers in political duties, in particular, was due to the exigencies of the time. There was shortage of European staff in every department of government. This must be understood. European staff were expensive, particularly in West Africa, however subordinate their appointments in a colony. Perusal of despatches between gorvenors and the Secretaries of State gives clear indication of the great deal of trouble it took to employ a European officer with creditable qualities for administrative and other work. The reason of economy was therefore paramount. The government also considered that the system afforded valuable experience and training for medical officers, what for, we are not told, although it recognised the disadvantage of employing them as district commissioners.[12] As a

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11.Pricipal Medical Officer Dr Langley stated in 1907, `...only in the cases of specially energetic and zealous officers and those who keep exceptionally fit physically, that much sanitary work is done...'. GCGRMSD, (1907), p. 9.

12.As Roger pointed out in 1908,the cost of providing a third European Officer for every district was prohibitive. Roger to Elgin, NAG ADM 1/2/70, Desp. No.550 of 19.10.1908.Significant extraprofessional duties were performed by MOs well into the 1910s. In 1910 nineteen members of the medical staff performed political and judicial dities. Between them, they expended 1350 days on such duties that year. GCGRMSD, (1910), p. 6.

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critical medical officer, Dr Rome Hall, stated in 1901, `...a medical officer who has to do administrative work here is persistently overworked'.[13]

Medical officers often protested about their poor conditions of service and excessive work, even though they well knew that conditions of service outside West Africa were inferior to those operating in Ghana.[14] Most also complained about the extra-professional duties, (though a few enjoyed the political duties) considered them absurd, and ruinous for the proper exercise of their professional duties.[15] For, when required to act as commissioners, they lost income from private practice. This applied particularly to the more senior medical staff who often had quite large private medical practice not infrequently interrupted or compromised by long stints of duty as acting district commissioners.[16]

Despite their small numbers,the size of the medical staff (from the

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13.ibid., (1901), p. 24. The critical Dr Rome Hall did not endear himself to the CSO at Accra. He was referred to by governor Hodgson as `... a man who seems to avoid looking at most things from the ordinary standpoint'. Hodgson to Chamberlain, NAG ADM 1/2/51, Desp. No. 268 of 27.6.1898.

14.MOs, during these early decades often petitioned the Colonial Office for improvement in their service conditions. Hodgson to Knutsford, NAG ADM 1/2/43, Desp. No.221 of 22.7.1889. The truth was that those appointed to West Africa seemed to feel they had been sent out into the wilds. Their cry for improved conditions of service, truly legitimate, was helped along by a psychological factor: The state of mind that men coming out to West Africa were sacrificing their lives for the Empire, an attitude later governors tried to expugne. Clifford to Harcourt, NAG ADM 1/2/84, Desp. No. 233 of 14.4.1913.

15.GCGRMSD, (1901), p. 24.

16.Hodgson to Chamberlain, NAG ADM 1/2/53, Desp. No. 23 of 13.1.1900. Dr David Duff, in the 1910s, was medical officer, district commissioner and sheriff of Ada-Prampram. Till today a park there named after Dr Duff by the Africans continues to be known as Duff Park, although the inhabitants of the area today have no clue to the origin of the name.

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standpoint of patient care) cannot be said to have been grossly inadequate and doctors excessively overworked, compared with later years. This view is supported by the exaggeratedly and favourably high patient-doctor ratio of about 70/1 and African exclusion from the service.[17] The excessive work was more the result of the many additional extra-professional duties they were called upon (by regulation) to do (vide supra).

Prior to 1902 (when WAMS was inaugurated), the colony suffered not only from an insufficiency of medical officers. New recruits, particularly in the 1890s, were generally of poor professional quality and questionable non-professional reputation.[18] But a common problem faced by all new medical officers sent out to West Africa was their inexperience in tropical medicine. The new medical man in West Africa often knew much less about malaria than the `old coasters',and the remark was often made that patients were far better able to attend themselves when struck by tropical fevers than newly appointed medical officers who lacked experience in these areas of medicine.[19] Furthermore the scientific basis of tropical diseases was still in its infancy and the `old coaster' medical men depended overwhelmingly on their experience rather than

17.On the other hand, the population-doctor ratio for those years was exceedingly high, at over 45,000 persons per doctor. See Chapter 3 on the definition and use of patient/doctor and population/doctor ratios in assessing medical personnel adequacy.

18.And CMO Henderson was complaining in 1899 `...the majority of the Medical Officers sent out during the last 12 months were what I can only describe as the dregs of the profession...this is borne out by the fact that, for various discreditable causes, so many have had to be sent home after at most a few weeks in the Colony...': GCGRMSD, (1900), p. 19.

19.Colonial Annual Report, Gold Coast, (1898), NAG, ADM 5/1/7.

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on any superior knowledge of tropical diseases.

However, the negative features of professional quality began to change for the better and the chronic medical staff shortage began to improve after 1902, and by 1910, the number of officers was double that of 1900.[20]

The three major factors which explain the pattern of growth in the strength and quality of the medical staff between 1900 and 1920 were the establishment of schools of tropical medicine in Britain in 1898, the introduction of the West African Medical Service (WAMS) in 1902, and the improving fiscal situation of the colony.[21] These post-graduate schools provided career opportunities for British medical graduates and enlarged the pool of medical men from which doctors who sought to practice medicine in the tropics could be drawn, a step which assisted in the surge in the number of medical officers after 1900. Further impetus to recruitment was provided by the inauguration of the West African Medical Service in 1902, which amalgamated the medical services in the four British West African colonies and doctors employed under this new style receiving much more generous conditions of service: Salaries and pensions were improved and opportunities for promotion much

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20. In 1900 there were 31 doctors, in 1907, sixty-three. The number remained at about sixty till a slow decline set in from 1917, reaching a low of 49 in 1920.

21. See Chapters 2 and 4 for further details. The establishment of these post-graduate schools was enthusiastically received by the Ghanaian colonial government which considered it so important that its Legislative Council unanimously voted a sum to support it. Colonial Annual Report, (1898), NAG ADM 5/1/10. It soon became mandatory for all doctors seeking appointment in Ghana and other British West African Colonies to obtain a diploma in Tropical Medicine. This rule operated in the medical service in Ghana till the 1950s.

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enhanced. The new scheme provided a common salary structure and promotion system applicable to all four colonies. From now on, openings for promotion in any of the four colonies became available to any medical officer in any of the other.[22] Accommodation for a WAMS officer was free. Generous leave passages were maintained and appointees to WAMS could study and obtain their diplomas in Tropical Medicine at colonial government expense (vide infra). These features of WAMS, helped by the growing revenue of the country, speedily enhanced the recruitment of British medical officers into the Medical Department.[23] Assistance to recruitment was provided by the generous official policy on private medical practice which allowed medical officers additional sources of income.[24] An ancillary factor, by no means unimportant, was the improving European mortality on the West African coast during this period, for, by 1910, because Europeans' fear of the climate was already evaporating,(thanks to energetic preventive measures) medical men were now not unwilling to serve in Ghana.[25] And even though duty in Ghana meant banishment from

22.So from 1902, medical men flitted from one colony to another on promotion.
23.GCGRMSD, (1902), p. 19. In 1900 revenue was 585,583 pounds, in 1910 over one million pounds. Metcalfe, Great Britain and Ghana, p. 751. In 1900 there were 31 government doctors in the colony, in 1907, sixty-three. GCGRMSD, (1900 and 1907).
24.Clifford to Harcourt, NAG ADM 1/2/90, Desp. No. 35 of 15.1.1914.
25.The infamous environment contributed to the generous salaries began to be offered under WAMS. It certainly helped in extracting favourable conditions of service not seen in any other British Colony outside Africa.For instance, in other colonies, not situated in Africa, no passages were ever paid by government and few officers were able to take leave out of the colony more frequently than once in every three or four years, in contrast to an annual leave of 5 months in Ghana: Clifford to all Departmntal Heads, NAG ADM 1/2/88, Desp. No.685, 6.9.1913.

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civilisation, as it was generally believed, there were those medical officers who became well-attuned to the local conditions.[26] Because of the above factors, 1900s saw an even more favourable decline in the already low patient-doctor ratio. From 1910 further improvement in the staff strength was caused by the establishment of the Sanitary Branch and the Pathological Laboratory Services.[27] But a gradual decline set in from 1915, caused essentially by the First World War. From 1914, medical officers began to be assigned duties in connexion with the war effort. They were regularly assigned duties with the Togoland Field Force (Hostilities in German Togoland were brief and over before the end of 1914), later with the Cameroon and East African Expeditionary Forces (where hostilities continued till the armistice in 1918), in rotation. Others were seconded for service under the War Office and the Admiralty. Between 1914 and 1918 then,the strength of the medical staff was more theoretical than factual; some 40% of the staff were, at any one time, out of the country on war duties and only some 60% of them actually remained on duty in the colony at any time. As they retained their appointments in WAMS, the number of doctors on the staff list remained steady and those who remained on duty within the country naturally did a lot more work.[28]

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26.An example of such an officer was Dr E H Tweedy, described by governor Roger as a `good hinterland medical officer' and `well-suited to the NTs'. An Irishman (and a good proportion of medical officers of WAMS were Irish and Scottish), he was appointed medical officer to Ghana in 1897 and served mostly in the NTs. He was promoted Senior Medical Officer in 1904 and provincial Medical Officer for the Northern Territories in 1910. PRO, CO 554/4, p. 83.

27.See Chapter 4 for details.

28.GCGRMSD, (1916), p. 6. The disposition of medical staff in connexion with the

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The increased work load during the Great War was aggravated by the important policy of Clifford of African inclusion in the health services.[29] As a consequence of the policy, by 1920, the case-load for the medical officer had increased about ten times what it was prior to 1910.[30] In most of the 1910s therefore, the medical staff worked much harder because of staff depletion in the Great War, increased patient numbers resulting from the Clifford policy of African inclusion, and their continued employment in extra-professional duties.[31]

When Guggisberg took office in 1919, the proportion of the African population which utilised medical services was only about 2.5%, the patient/doctor ratio 700/1 and the population/doctor ratio over 40,000/1.[32]

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war is stated in the GCGRMSD between 1914 and 1918. In 1916, 10 medical officers served with the Cameroons Expeditionary Force, five in East Africa, four were stationed in Togoland (the Germans had evacuated Togoland at the end of 1914) and nine were seconded to the Royal Army Medical Corps. One sad casualty of these military duties was Dr F G Hopkins, Principal Medical Officer since 1911 (He had served in Southern Nigeria for over ten years before taking up appointment as Principal Medical Officer in Ghana). He retired in 1916 but succumbed within a month to the pneumonia he contracted while serving with the Royal Army Medical Corps: ibid., p. 6.

29.See Chapter 2 for details.

30.This is evident from the annual case load published in GCGRMSD of 1900-1920; and from the fact that, prior to 1910, the patient/doctor ratio was about 70:1; by 1920, the ratio was over 700:1.

31.Clifford to Harcourt, NAG ADM 1/2/84, Desp. No. 233 of 14.4.1913. PMO Dr Hopkins complained bitterly about the continued employment of MOs as district commissioners. Another important result of the policy of African inclusion was the commencement of the examination, by the Clifford administration, of the possibility of training African doctors locally, since it was clear there would never be enough British doctors to handle a medical service open to all Africans. On this see Chapter 9 for details.

32.These figures were calculated from GCGRMSD, (1919-1922). Corresponding figures at the commencement of the Clifford administration in 1912 were: < 0.1%, 70/1, and 45,000/1.

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Superimposed on these sobering figures was the great demand for medical officers arising in the 1920s. For,the 1920s saw further increasing pressure on the health services: Guggisberg's public health programme called for, and resulted in, the vigorous construction of hospitals and dispensaries in many parts of the country which previously lacked them and medical services began reaching many parts of the country. New services such as maternal, child and school health services were introduced.Rapid demographic changes and increasing urbanisation were occurring, the ordinary Africans were now embracing modern medicine with increasing willingness with its attendant explosive increase in the number of Africans seeking treatment at clinics, hospitals and dispensaries.[33] These features of the 1920s created increased demand for more medical officers. In 1919 there were 52 MOs (including 5 whose duties were solely administrative).[34] The establishment for the medical staff was increased but by 1922, thirty five of the new positions remained unfilled.[35] The medical staff was doing double work, many medical stations were without doctors, African members of the Legislative Council were asking questions about the medical staff shortage at every opportunity and the chiefs and people were constantly petitioning for medical officers.[36]

The difficulties accounting for the shortage of the 1920s were twofold: Recruitment difficulties in Britain as result of post-war

33.See Chapter 2 and Chapter 3 for details.
34.GCGRMSD, (1919), p. 5.
35.ibid., Report for the Quarter 1 January to 31 March 1922. p. 5.
36.Guggisberg to Milner PRO, CO 554/46, Desp. No. 998 of 19.10.1920.

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reconstruction and inadequate advertising by the Colonial Office, about which Guggisberg complained.[37]

By 1924, a good proportion of vacancies had been filled and the number of medical officers began to exceed 70 for the first time in 1926 and by 1930 there were 104, including eleven women and nine Africans.[38] But because of the fast diminishing Africans' suspicion of modern medicine and the basic policy of the Guggisberg administration to provide medical services to as many people as possible[39] further pressure was exerted on the services; this is indicated by the fact that by 1930 the patient/doctor ratio had grown, from 700/1 in the late 1910s, to nearly 3000/1. Although by 1930, about 10% of the population had access to medical facilities, (compared with 2.5% at the close of the Clifford administration) the population/doctor ratio remained woefully high at some 40-45,000/1, as in the previous decade.[40]

It was because of the perception of the colonial government and the Medical Department that adequate numbers of doctors for the country could never be met from supply of doctors from Britain that vigorous attempts were made in the 1920s to commence a medical college at Accra for training African doctors locally.[41]

37. WAMS were insufficiently advertised in the United Kingdom, unlike the vigorous advertising campaigns for the Indian service for example. And it was sufficiently serious for Governor Guggisberg to point this out: Guggisberg to Milner, PRO CO 554/46, Desp.No.998 of 19.10.1920. The large number of vacancies between 1920 and 1925 is an indication of post-war expansion of medical services in the colony.
38. GCGRMSD, (1926-27), p. 93 and (1930-31), p. 126.
39. See The Gold Coast, A Review of Events of 1920-1926 and Prospects of 1927-1928 by H E Brigadier-General Sir Frederick Gordon Guggisberg, Accra, 3 March 1927.
40. See Appendix for detailed figures.
41. See Chapter 9 for details.

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We have seen that by 1930, the number of government medical officers in the colony was well over 100. By 1932, the figure had declined swiftly to about 70. Between 1937 and 1939 a slight improvement occurred but the number fell again to a new low of 50 in 1940. The number was maintained at this level throughout the Second World War and by 1945 the patient/doctor ratio had risen to the astronomical figure of 10,000/1.[42] The principal causes of these adverse figures were the economic slump of the 1930s, the replacement of WAMS by the Unified Colonial Medical Service in 1934, the Second World War and the relentless increase in patient numbers.

When Guggisberg left Ghana in 1927, the revenue of the colony was a healthy one and had shown little sign of decline. It fell moderately between 1929 and 1930, but from 1931, seriously.[43] As result of declining revenue, in 1931, the Slater government commenced a comprehensive retrenchment exercise: In 1930, there were some 66 clinical officers; by 1934, the number had dwindled to 49. In 1930 there were eleven lady medical officers, in 1932 there were four, and in 1934 only one remained. The number of

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42. In 1921, 1930 and 1938, the population-doctor ratios were respectively 44,162, 41,499 and 44,089. The population-doctor ratio remained high, virtually unchanged at about 42,000, for 25 years, in spite of a great deal of effort by government.
43. Revenue in 1927 was over five million pounds. In 1930 it was about half what it was in 1927, about 2.3 million pounds. The fall continued till 1934 when a slight recovery began. This recovery was arrested by the Second World War. It was not until 1946, when the war was over, that revenue approximating that of 1927 was once more achieved. Most of the 1920s, only some 4-5% of annual revenue constituted recurrent medical expenditure. But by 1930 some 10-13% of revenue was needed to maintain a medical staff of inferior strength.

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specialists was reduced from four to two, the positions of leprosy and temporary medical officers were abolished. The number of African medical officers also fell from ten in 1929 to four in 1934. Cuts in the staff of the Sanitary Branch were no less brutal: In 1930, there were 17 officers; this was reduced to 12 by 1934 and remained at that level throughout the period. But for the fear of losing forty years' painful and arduous work to improve sanitation in the colony, the staff cut would have been more drastic. Another branch of the Medical Department hard-hit by the retrenchment exercise was the Medical Research Institute.[44]

The reduction in the strength of the medical staff was contributed to by resignations and early retirements. Replacements through recruitment also became difficult.

The recruitment difficulties began in 1934 when the Colonial Office unified the medical services of all colonies under a new title Colonial Medical Service. This replaced the 32-year old West African Medical Service. In general, the new conditions of service were similar to what they were under WAMS, but somewhat inferior. The features which were of principal concern to the Medical Department were the new salary scales, the cessation of special initial rates of pay for medical officers of health and pathologists and the new pension conditions. The Medical Department feared the new terms would not attract men, particularly into the

44.Data obtained from GCGRMSD of 1931-1946. See Chapter 4 for details.

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Sanitary and Laboratory Branches.[45]

This proved the case although the Colonial Office improved the conditions somewhat.

As early as 1934 then, the service began to lose its attractiveness. By 1938, with prospects of war in the air, more attractive jobs were becoming available to young medical men in Britain, and recruitment became even more difficult.[46] The war shunted away about 25% of the medical staff to war-time duties. A constant feature of war-time was the great shortage of doctors; those who did not go to war overworked to keep an expanded medical service running. A steady supply of African medical officers was however anticipated, and assured, by the government's medical scholarship scheme. In view of these facts and the rapid increase in the amount and the responsibility of the work of the Department, a quota for African medical officers was seriously considered. This policy was to

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45. See Minute of Director of Medical Services, Dr David Duff, of 15.11.1935, NAG CSO 11/1/339 encl. Colonial Medical Service, 702/33.
Under WAMS, in order to attract medical men for sanitation work, officers were allowed, in addition to the salary of an ordinary clinical medical officer, what was called a duty pay and a staff pay. Additionally, under WAMS, a special initial rate of pay started off the MOH at a distinct advantage over his clinical counterpart. (Clinicians however could make up for this through private practice) This made it not unattractive for medical officers in the Clinical Branch to transfer to the Sanitary Branch; this was encouraged. This inducement was effective in improving the staff strength of the Sanitary Branch. The new rules of the Service abolished this special dispensation. It was by similar arrangement that the Laboratory Services Branch was able, under WAMS, to attract pathologists.

46. In 1938, Dr Duff, the DMS obtained direct information at interview, of a newly-recruited MO, Dr Minette. This stressed the fact that inducement by the armed services in Britain in the late 1930s were far superior to those offered in the Colonial Medical Service. NAG, CSO 11/1/339. Minute of Dr Duff, DMS, of Nov. 1935, on Shortage of Medical Officers in the Gold Coast attributed to Unattractive Conditions of Service. This comment dated 7 November 1938.

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replace Europeans, as far as possible, by Africans. The Secretary of State envisaged a minimum number below which the European staff of medical officers might not go, but this policy soon proved unworkable and the quota system was abandoned.[47]

Shortage of medical manpower was a problem common to all British colonies after the Second World War, a problem which the Colonial Office tried to solve by various means. The major causes of this were the cessation of recruitment during the war, the post-war spate of retirements and the sanctioning of new medical establishments under various development plans in Britain and the colonies. Another major cause of the difficulty was that the new Labour Government-inspired National Health Service offered a career to doctors carrying a pension on retirement; consequently, a pensionable career in the Colonial Medical Service was not so tempting as it was formerly.[48]

In Ghana, after the Second World War, several major changes assisted in enhancing the strength of the medical staff, the most important being the replacement of the colonial by an African government and the steep rise in national revenue. These allowed an Africanisation policy and a major reorganisation of the medical services. Furthermore the government's medical scholarship scheme

47.See Appendix for further information on quota system in Ghana, Nigeria and Sierra Leone.

48.Thus in 1948, the Colonial Office recruited 157 doctors with 159 still outstanding. The Royal Army Medical Corps and the Medical Branch of the RAF were absorbing all medical graduates, and even these were understrength: State of Recruitment to the Colonial Medical Service and of Dental Service, PRO, CO 850/233/8 and S/S Creech Jones' Circular Despatch 27215/206/49 in CO 850/233/8.

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gathered pace in the early 1950s. This, together with the Cocoa Marketing Board medical training scheme, and the new government's Africanisation policy made it possible for increasing number of African doctors to join the medical service. The Unified Colonial Medical Service, commenced in 1934, was at an end.[49]

But in 1951-52, there were still only 97 medical officers and in 1952, one hundred and three, the patient-doctor ratio remained well over 10,000 and the population-doctor ratio over 45,000. The distribution of medical practitioners over the whole country was very uneven. In the Northern Territories, there was one medical officer to 120,000 of the population; in Togoland, the proportion was one to 96,000; in Ashanti one to 27,000 and in the Colony one to 24,000. As a first step, the indigenous government decided to have about 150 medical officers in the service by 1957.[50]

To achieve this, extensive recruitment of non-Africans became necessary since the return of African students qualified in the United Kingdom would do little than replace the normal loss due to retirements.[51] The government consequently began recruiting non-British and non-African medical officers in 1951 after amendment of the Medical Practitioners and Dentists Registration Ordinance. This

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49. See Chapter 9 for details. In 1952, the African Government, based on the Report of the Select Committee on the Lidbury Report, established a Ghana Civil Service replacing the Colonial Civil Service, of which a Ghana Medical Service formed a part. The effect of this policy, when carried out, was that African doctors began to be appointed to a Ghana Medical Service: See Report of the Select Committee on the Lidbury Report, Sessional Paper No.III of 1952, (Accra, 1952)

50. Maude Commission, p. 31.

51. This was pointed out by the Maude Commission, and which, no doubt, created a deep impression on the African government.

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step immediately began to improve the medical staff situation.[52] Clearly the matter of importance was what steps should be taken to secure the necessary number of African recruits to the profession as a long term policy. Serious consideration was therefore given to the commencement of a medical school.[53]

But as result of the government's recruitment and service policies, by 1960 the population-doctor ratio had fallen impressively to 18,000/1 for the country as a whole, and the achievable target for 1970 was estimated at 7000/1.[54] Moreover, when the medical school was started, it was reckoned that if 50 students were trained locally and 50 abroad, then the country might be able to replace a considerable number of its expatriate doctors by 1975.[55] In any case, by 1960 Ghanaian African MOs had gained ascendance in numbers.

It can be said however that it was not till the early 1950s that African medical officers began to gain unquestioned acceptance into the Medical Department without prejudice. The period 1890 to 1950 were long years of racial prejudice in the profession, many and long fights against a professional system hostile to African professionals, frustration for African doctors, few opportunities

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52.This allowed the registration of doctors irrespective of whether they possessed qualifications registrable in Great Britain. GCGRMSD, (1951), p. 1.
53.The first medical school was established in 1961. See Chapter 8 for details.
54.Maude Commission, p. 30 and Health Services in Ghana, p. 37.
55.Health Services in Ghana, p. 38.
The figures exclude Senior Medical Officers, Specialists, the professional administrative staff, medical officers of health, pathologists, women medical officers. There were no African specialists in the service till 1951 when Eustace Akwei and C O Easmon (Grandson of J F Easmon) became the first African Public Health Officer and Surgical Specialist respectively. There are no exant records after 1939.

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for African aspirants for the profession. It is a main objective of the narrative which follows to trace the excruciatingly slow growth in African medical officers' numbers, the factors that caused this, the manner in which Africans fought racism in the profession and how it was overcome. Table 14 demonstrates this slow growth of African doctors in the public health service and also compares the number of African (they were all clinical officers) with European clinical medical officers.

Table 14

African Medical Officers* 1880-1939

| Year | Number | % Total | Reference |
|---|---|---|---|
| 1880-1900 | 3-6 | 25-30 | PRO CO 100/30-52 |
| 1901-1902 | 2 | ? | NAG GCGRMSD 1901-1905 |
| 1903-1919 | 0 | 0 | NAG ibid. 1903-1919 |
| 1920 | 1 | 2 | NAG ibid. 1920 |
| 1925 | 8 | 15 | NAG ibid. 1925 |
| 1930 | 7 | 12.5 | NAG ibid. 1930 |
| 1935 | 7 | 15 | NAG ibid. 1935 |
| 1939 | 12 | 31 | NAG CSO 11/1/339 encl.DMS to CS of 14.11.1938 |

In mid-nineteenth century West Africa, developments in colonial infrastructure created a demand for African personnel. Sierra Leone supplied British needs from Freetown.In 1880, the third Sierra Leonean doctor, Dr J F Easmon entered the medical service in Ghana.[56] In 1893 he became Chief Medical Officer. He was dismissed from office in 1897 after a long and protracted dispute between him

56.Patton, `Dr John Farrell Easmon', pp. 601-5. Qualifying in 1879, after a distinguished student career, he had received his training at University College London, The Royal College of Surgeons, in Ireland and in Brussels.The others were Dr James Horton and Dr Broughton Davis.

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and governor Maxwell.[57]

When Easmon became Chief Medical Officer, there were three other African officers and a West Indian in the Medical Department: Dr Spilbury Smith and Dr J O Coker, both Sierra Leoneans; Dr B W Quartey-Papafio, the first Ghanaian African medical practitioner; and Dr Derwent H R Waldron, a West Indian.[58] In the mid-1890s therefore, about 30% of the medical officers in the Medical Department were coloureds. Between 1902 (when Dr Quartey-Papafio retired from the Medical Department) and 1920 (when Dr C E Reindorf was eventually employed as temporary medical officer), there was no African doctor in the Medical Department.

Up to 1915, only four Ghanaian Africans had qualified as medical practitioners, compared with 17 Nigerians and many Sierra Leoneans.[59] The main explanation for the slow growth in Ghanaian African doctor numbers was that Ghana lacked, at this time, secondary schools. The establishment of Church Mission Society Grammar

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57. ibid. Dismissed on the charges that he had engaged in private practice from which he, as Chief Medical Officer, was barred by regulation; and that he, as a government official, was too closely-connected with his family commercial venture of the Gold Coast Publishing Company and the newspaper The Independent. Following dismissal, and with the most willing assistance of the local business community, Easmon took up a successful private practice at Cape Coast. He died prematurely at the age of 40 in 1900. Governor Maxwell himself died and was buried at sea off Cape Coast in 1898 while travelling to England on leave.

58. Hodgson to Chamberlain, NAG ADM 1/2/51 Desp. No. 297 of 9.7.1898. Hodgson was at the time Colonial Secretary. He was to become governor in December 1898, succeeding Maxwell.

59. These were: Dr B W Quartey-Papafio, qualified in 1886; Dr E J Hayford, qualified in 1898; Dr F V Nanka-Bruce, qualified in 1907; and Dr C E Reindorf, qualified in 1910. C Tettey, 'Medical Practitioners of African Descent in Colonial Ghana', Int. J. Afr. His. Studies, xviii (1985), pp. 139-44. See also: Schram, Nigerian Medical Service, p. 433.

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Schools in Sierra Leone and Nigeria in the 1840s had opened opportunities for young Africans, for the higher education necessary for later professional university training, including medical.[60] The establishment of secondary schools in Ghana, on the other hand was much slower, and took a long and tortuous path. Wraith has stated: `In the matter of higher education for Africans, Clifford's predecessors cannot be said to have distinguished themselves'.[61] The Europeans believed that secondary education was inappropriate and premature for Africans and of no use to the country till Guggisberg `tore these ideas to shreds'.[62] In the event, up to 1931, when the first government scholarship was awarded, all Ghanaian students who studied medicine did so privately. These were very few; only a few African families had the means to afford the years of great expense that a medical training involved.[63] An important truth was also the fact that the reduced mortality of Europeans facilitated the greater willingness of European medical men to take up appointment in the colony and reduced reliance on African doctors.[64]

The second, perhaps more important, explanation for the dearth of Ghanaian doctors lies in the long history of racial prejudice in

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60.It was to the CMS Grammar schools at Lagos and Freetown that Quartey-Papafio went in 1876-1878, and Fourah Bay College in 1880-1882. Patton, `Dr John Farrell Easmon', p. 615.
See also Wraith, Guggisberg, p. 84.
62.loc. cit. The initiative in secondary education came wholly from Missions.
63.Circumstances required that prospective medical students had first to obtain appropriate secondary education in Sierra Leone or Lagos or in the United Kingdom, all very expensive preliminary undertakings.
64.Kimble, Political History, p. 100.

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the profession between the late Nineteenth Century and the end of the Second World War. This frustrated Africans who entered or might wish to enter the profession.

As we noted, African doctors were members of the Army and Civil Medical Staff between 1859 and the early 1900s, some achieving the top positions. But in the colonial service`... rigid color bar gained momentum in the 1890s and... European personnel began to monopolise top posts. Africans in all branches of the colonial service, many of whom had been educated in the same schools and with their European counterparts, now found their careers blocked by rising racism'.[65] The second passing over of Quartey-Papafio[66] and the resulting new rule on African medical officers were the early signs of the institutionalisation of inferior positions for medical officers of African descent: African medical officers were now officially designated `Native Medical Officers', later `African Medical Officers', to distinguish them from the apparently superior European medical officers.[67] They had lower rates of pay and their promotion ended at the level of Senior Assistant Colonial Surgeon.[68]

65.Patton, `Dr John Farrell Easmon', p. 601.

66.Dr Quartey-Papafio was passed over, first in 1894 for promotion in preference of Dr W A Murray (a British); then in 1897 in preference of Dr W R Henderson (by governor Maxwell) for the position of CMO made vacant by Easmon's dismissal. On this, see: Patton, `Dr John Farrell Easmon', p. 615; and Kimble, Political History, p. 97.

67.It was not till 1934, that, following protests from African MOs against this nomenclature, the Colonial Office abolished it. Cunliffe-Lister to Gov. Sierra Leone, No. 531, 8.12.1934. The nomenclature `African Medical Officer' was no longer in use in Nigeria at this time. Cunliffe-Lister used the Nigerian precedent to abolish the term.

68.Patton, `John Farrel Easmon', p. 635. In 1905, after over 15 years' service, Dr Quartey-Papafio who remained a Senior Assistant Colonial Surgeon, retired into private practice and politics. Kimble, Political History, p. 98.

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By the century's end, racism was on the rise and the establishment of WAMS in 1902 sealed the issue and racial discrimination came into the open. And all reasons were used to justify it. The regulations drawn up for the WAMS stated that applicants must be of European parentage and an unpublished note made it clear that this was designed to exclude Africans and Asians, as well as `foreigners' from Europe.[69] It was difficult for everybody to find and understand the fundamental reasons which caused a change of that earlier policy in which the then Secretary of State, the Marquis of Ripon, in 1893, directed that the medical staff of the colony should consist of two-thirds Europeans and one-third Africans.[70] In the face of the lack of concrete information on the reasons for the new policy of African exclusion, several alleged explanations gained currency: European officials and their wives were held as having no confidence in black doctors and their work; they objected to being handled by black doctors. It was also alleged that the records of past coloured medical officers were not good and thus gave no encouragement to the government for their further employment; that African doctors, anyway, objected to being shifted from their homes to outstations on account of their family ties. It was also alleged that Europeans at outstations objected to African medical men holding administrative positions in the absence of district commissioners. It was being said further that Africans

69.ibid., p. 98.
70.Petition of the Gold Coast Auxiliary of the Anti-Slavery and Aborigines Rights Protection Society, 23.1.1913, Bryan to Harcourt, Conf. case 159/11. Encl. in Desp. No.89 of 11.2.1913.

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should not be placed on the same roster with Europeans, to avoid confusion that might arise in matters of promotion; European officers were said to object to having African officers as their superiors. Lastly it was held that the ordinary African preferred being treated by European doctors.[71] An examination of the real facts make it clear that there was bound to be some measure of truth in each of these allegations. On the other hand, the performance of African doctors of the 1860-1902 period was clearly, at the least, comparable to those of European doctors, often better.[72] As for the confusion in promotion that might arise if African and European doctors were placed on the same roster, it is plain that human greed and selfishness were at work.

The Aborigenes Rights Protection Society, of which Dr Quartey-Papafio was a member, petitioned the Secretary of State in February 1913 on the question of non-employment of medical men of African descent. The Society concluded their petition by asking that `the regulations guiding the appointment to the West African Medical Staff may be so altered that Medical men of African descent may have the privilege of being appointed to the Medical Service of this Colony, or, if the status quo ante could not be altogether resuscitated some arrangement might be made whereby medical men of

71.loc. cit.

72.The discreditable performance of several European doctors around 1900 had compelled the then Principal Medical Officer Dr Henderson to terminate their appointments. GCGRMSD, (1900), p. 19. The records are replete in instances which testify to the most creditable professional and administrative performances of Horton, Davis, Easmon, Quartey-Papafio and others. Furthermore, it was the rule than the exception that Africans in the Medical Department and such Departments as the Treasury, Customs etc did their share of movement from station to station.

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African descent may find it worth their while to offer their services'.[73]

Various governors, up to Clifford, admitted the injustices of the system which kept African doctors out of WAMS. The moment Clifford took up office his attention began to rivet on the matter of the employment of Africans in the Medical Department. He favoured their employment. In a despatch in 1913, he openly and courageously challenged the principle of African exclusion and argued out how the African colonies would benefit from the more advanced ideas already accepted and practised in India, Ceylon and Malaya.[74] He followed up his position and argument in London when he went there on leave in 1914. There, he met the whole Advisory Committee and put across his case. When he returned to Ghana, he was able to report to the Legislative Council that `although I have failed to obtain a whole loaf, I have secured a small piece of bread...The Secretary of State has agreed to the creation of six posts in the Gold Coast Medical Service which shall be open to natives of West Africa possessing qualifications current in England'.[75] But this dispensation was largely academic because, at this time, there were

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73.Bryan to Harcourt, NAG, ADM 1/2/79 . Conf. Case 159/11, Desp. No.89 of 11.2.1913 encl. Petition of the Gold Coast Auxiliary of the Anti-Slavery and Aborigines Protection Society. Governor Clifford himself challenged the 1911 ruling of the Colonial Medical Advisory Board in a despatch of March 1913. PRO, CO 96/528, G.C ii of 3.3.1913, No. 133.

74.Wraith, Guggisberg, p. 89. The numerous and, often lengthy, despatches of Clifford to the Colonial Office attest to Clifford's antipathy to the exclusion of Africans from the administration of the country. He constantly contrasted the Gold Coast situation with his experience in Trinidad, Ceylon and The Malay Strait Settlements.

75.Leg Co Debates, (1.2.1914), p. 73.

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few from Ghana pursuing medical studies. Consequently the alloted six positions could never be filled and ~~was~~ were never filled till well into the 1920s. In spite of the Secretary of State's agreeing that African doctors could have six positions in the Medical Department, resistance to African entry continued. Reindorf, the fourth Ghanaian medical practitioner, graduated in 1910. He could not enter the medical service till 1919, when he was grudgingly eventually appointed as Temporary Medical Officer in charge of the Venereal Disease Clinic at Korle Bu, a temporary appointment he held till 1931 when he fell victim to retrenchment.[76]

In keeping with the Secretary of State's concession and Guggisberg's policy of encouraging Africans into the profession, the Gold Coast Gazette of July 1921 began to invite African applicants to the six African posts in the Ghana Medical Service.[77] But apart from the fact that there were few qualified African medical men to take up such positions, those available preferred the much more lucrative private practice of which governor Guggisberg felt compelled to speak when he appealed to young Africans to `put their country before their pockets in the early years of their service, deferring the hopes of private practice in addition to government service until they were well-established...'.[78] African doctors' reluctance to take appointment

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76. Two other Africans received appointment in 1921, Dr A F Renner-Dove and Dr G J D Hammond, both Nigerians, the very early days of Guggisberg.
77. Government Gazette, 23.7.1921. M.P. No.12, 695/1921. See Appendix for details.
78. Leg Co Debates, (1920-21), p. 20. Perhaps the attitude of young African medical men was not entirely inexcusable: All had received their training in England, many the preliminary secondary school education as well; the training

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in the Medical Department of the 1920s was encouraged by another frustrating condition: The frustration that African doctors graduating in England were sent away to gain their clinical experience, even as housemen, anywhere they chose except Britain; accordingly, they arrived back in Ghana with no clinical experience, and Guggisberg's government correctly stipulating that they could not be employed on the same footing as their European counterparts until they had gained the requisite clinical experience at Korle Bu Hospital.[79] During the Korle Bu period, his official designation was Junior African Medical Officer. He became African Medical Officer after satisfying the Director of Medical Services of his proficiency, the first three years of which were probationary.[80] As Wraith states: `At once the storm clouds of suspicion gathered and the air was charged with the reek of racial discrimination'.[81] In response, the African medical practitioners, supported by the `opposition' in the Legislative Council criticised and petitioned against it. African outrage however soon waned when the political complexion of the scheme faded and was replaced by an appreciation of its practical value.[82] It was thus in the 1920s that

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was long and expensive and paid for entirely from the private means of their families; their exclusion from the WAMS was a grudge they could scarcely live down.

79.See appendix for details.

80.The scheme was gazetted in 1924. The Gold Coast Gazette, (2.8.1924). M.P. No. 11420/1924.

81.Wraith, Guggisberg, p. 238.

82.This scheme was however operated well into the late 1940s. The title `African Medical Officer' was not used in Nigeria but it was in the other three colonies. The word `African' was dropped from Medical Notices of the Government Gazette from April 1939.

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African doctors again began to re-enter the public health service. During the period 1931-1940, apart from 1932-1934, the number prescribed by the Secretary of State was exceeded and by 1939, it had crept up to twelve, Africans constituting about 30% of the clinical medical staff.[83]

Up to 1941, all African medical officers in the public service had received their training by private means, and it was from this cadre of men that the government drew their African medical officers. For the first two medical officers trained under the sponsorship of government entered the Medical Department only in 1941.[84] The numbers of such African medical officers increased slowly but steadily from 1941, while those of privately-trained men declined. But the proportion of Africans scarcely rose in the 1940s in spite of the medical scholarship scheme because the numbers sent out for training were too small and the training scheme had started too late to effect any substantial influence on the staff strength. By the end of the 1940s, it was clear that it was only by a major change in policy that an increase in the strength of the medical staff in general, and of the African component, in particular, could be achieved.

In keeping with the Maude Commission's recommendation that more medical scholarships should be awarded, the annual awards were substantially increased. This important step set the stage for

83. The small but perceptible increase in African numbers in the mid-to-late 1930s was, as explained above, due principally to the replacement of WAMS in 1934 by the new Unified Colonial Medical Service.
84. These were Dr C O Easmon and Dr Eustace Akwei. See Chapter 9 for details.

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major increase in the number of African doctors from the late 1950s on. In 1955, the effects of the constitutional changes on the health services began to be felt. The Chief Medical Officer, his Deputy, all Principal and Senior Medical Officers and others of overseas origin proceeded on leave prior to retirement. For the first time medical practitioners of Ghanaian birth were appointed to the substantive positions of Chief Medical Officer and Deputy Medical Officer.[85] All three Principal Medical Officers became African that year. In spite of these major changes, no serious disruptions in the health services occurred.[86] Figure 4 summarises the slow change in the number of medical officers between 1900 and 1960.

85. Dr Eustace Akwei became the first Chief Medical Officer and Dr R H O Bannerman Deputy.
86. MHR, (1955), p. 7.

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# Chapter 6

## MATERNAL AND CHILD WELFARE AND WOMEN MEDICAL OFFICERS

Because of African exclusion from the medical services, the problems of maternal and child health in Africans were ignored by the Medical Department; until 1915 when Dr F V Nanka Bruce, a private medical practitioner and member of the Legislative Council, drew the attention of the Council to the serious loss of life among mothers and babies in Ghana; infant mortality at Accra that year was 360 per thousand live babies. Dr Nanka-Bruce gave prominence to the need for the proper training of African midwives and the construction of a properly-equipped maternity hospital to reduce these high losses of life. Governor Clifford accepted these proposals, and in 1917, appointed a committee to enquire into the causes of maternal and infant mortality in the country. The committee came to the conclusion that the high death rate of infants was principally due to the ignorance of midwives and parents and to the faulty treatment of the mothers themselves. As a means to counter these, the committee advocated the provision of a maternity hospital and the training of midwives.[1] But little or nothing could be done about the committee's recommendations until the Great War was over and governor Guggisberg took up the question by appointing another committee in 1920 to consider the possiblity of the construction of a maternity hospital and training centre for

1.NAG Acc No. 1763/58, BP 249, `Report on the Committee on Infant Mortality in Accra', 31.8.1917.

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midwives from funds raised by public subscription.[2] Apart from various recommendations, the committee took the decisive position that the government should take financial responsibility for such work. Guggisberg accepted the proposal, and the establishment of Centres for Infant and Maternal Welfare became the most important of his 8-point public health policy.

But infant welfare work had been started prior to the government's involvement: In 1921, organised infant welfare work was started by Dr Jessie Beveridge of the Scottish Mission (that year infant mortality was 247) who opened a clinic and dispensary for the treatment of minor ailments of school children and infants, in a mud hut behind the Scottish Mission School at Christiansborg. In spite of the unprententious and limited accommodation, the centre was an instant success. In appreciation of the success, the government assisted Dr Beveridge by supplying drugs and paying the salary of an interpreter, and later, by the giving of a small grant-in-aid. Similar service had also been meanwhile started at Aburi by the Scottish Mission, under the charge of Dr Marian Reid and government continued to provide financial support for both the work in British Mandated Togoland and at Aburi.[3] The government soon stepped in, with consequent phenomenal growth and development in infant and maternal care. To this was due the keen interest, initiative and organising ability of Dr Pirie. Under his guidance, the government took over the Christiansborg centre in 1923-1924

2. Patterson, Health in Colonial Ghana, p. 23.
3. Governor's Address, (1920-27), p. 189 PRO, CO 98/52, p. 189.

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while Dr Beveridge continued her work at Amedzofe in the Mandated Togoland.[4] In 1924, Guggisberg approved a plan proposed by Dr G J Pirie (DDSS in succession to Dr Dalziel who retired in 1922) for maternal and child health and the training of the necessary auxiliary staff. The basis of Dr Pirie's plan was the formation of a few large Infant Welfare Centres in conveniently situated places throughout the country. Each centre would consist of an infant welfare clinic and hospital and would be the headquarters of an Infant Welfare Association of the surrounding district.The Centres would provide periodic examination and treatment of school children and general advice to mothers and treatment of their children by Women Medical Officers (WMO). The centres would also engage in the training of African health visitors.[5]

Part of the centrepiece of Guggisberg's plans was the engagement of experienced women medical officers: The organisation and operation of Maternal and Child Welfare Centres as well as School Medical Service became the principal duties of Women Medical Officers in Ghana. Because these duties involved, in the main, preventive work, they became, officially, part of the Sanitary or Health Branch of the Medical Department. Although Dr Jessie Beveridge of the Scottish Mission (vide supra) pioneered infant welfare (and it was not uncommon for women to bring their babies to her from as far distant as the Northern Territories), the first government woman medical officer was Dr Mary Magill, who, starting in 1921 `...did

4.loc. cit.
5.ibid., (1922-26), p. 144, PRO CO 98/45.

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much valuable work in laying the foundation...' of the welfare system.[6] She was followed from 1925 by WMOs Dr Nora Robinson, Dr Cathleen O'Halloran and Dr MC Chappel who were stationed at various times at Accra, Kumasi and Sekondi.[7] The ranks of women medical officers grew and by 1930, there were eleven in the service.

In 1924, a government centre was opened at Sekondi with a sub-centre at Shama.In 1927, 1928 and 1929 centres were opened at Kumasi, Cape Coast, Koforidua and Ho, respectively and between 1928 and 1930, all four had been provided permanent premises. In the North, a weighing and welfare centre was in operation by 1932. Cadbury, the chocolate firm, contributed money for infant welfare work at Kumasi and parts of the Colony.[8] The government also continued to make grants-in-aid to the welfare centres run by the Scottish Mission and also one in the Kpandu area where the Roman Catholic Sisters were running a very popular infant clinic, treating nearly 3000 cases that year[9]

In keeping with the 1920 committee's recommendations and the scheme provided by Dr Pirie, the construction of a maternity block at Korle Bu was commenced in 1924, the foundation stone of a

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6.In 1920 the government appointed Dr Mary Magill, a special School Medical Oficer whose principal duty lay in handling school children. By 1921 there had arisen the need for Lady Medical Officers for the specific duties of working maternal and child welfare and school medical services. And it ws Dr G J Pirie, Deputy Director of Sanitary Services, who, with support of Guggisberg, laid the plans in 1921 and organised their operation. loc. cit.

7.loc. cit.

8.Data obtained from GCGRMSD, (1926-30 and 1932-33).

9.GCGRMSD, (1928-29), p. 39.

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Children's hospital and clinic laid by Princess Marie Louise in June 1925;[10] the Children's hospital, named after her, opened in April 1926. Dr Mary Magill took charge of the hospital on its completion, assisted by two nurse-midwives, one a Sierra Leonean, and the other, a West Indian.[11] The opening of the Princess Marie Louise Hospital was a landmark in the history of Maternal and Child Welfare work. Provision was made for about 16 beds and cots at this Hospital in order that the Lady Medical Officer in charge might have an opportunity of investigating the nature of the diseases from which the children brought there were suffering if they were to be treated on scientific lines. It also allowed the investigation of dietetic matters, the checking up by means of controls, and constant supervision of advice given on infant feeding. Furthermore the hospitalisation of infants together with their mothers served as a valuable means of educating mothers in the many aspects of mothercraft.

That the popularity of the welfare movement was immediate was without doubt. In its early year 1925, over 20,000 children were seen at infant welfare centres, in 1930 over 130,000, over a six-fold increase. The numbers of women and children attending the welfare clinics especially at Accra, Kumasi and Koforidua were so great that it was very difficult for the single lady medical officers in charge to cope with them.[12] Another dimension to

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10. Governor's Address, (1922-26), p. 145, PRO CO 98/45.
11. ibid., (1927-1929), p. 189, PRO CO 98/52.
12. This kind of observation was regularly made in AMSRs of 1926-1932 and even during the years of financial stringency of the 1930s and 1940s. Such and similar

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maternal well-being was achieved when the maternity hospital, with midwifery training, was opened in May 1928, under the care of Lady Medical Officer, Dr Summerhayes.[13] It was at first feared that African prejudice against institutional treatment at childbirth would make the hospital a failure. But the contrary happened as by the end of 1928, the hospital appeared already too small because of the instant popularity it gained, thanks to Dr Summerhayes' professional ability and her peculiar gift of winning the confidence of African women.[14] In 1931, work at the maternity hospital was taken over by Dr Lawlor, another Lady Medical Officer. By 1932 when the Maternal and Child Welfare centres faced mass closure as part of the retrenchment exercise, the infant mortality had fallen from the figure of 368 in 1916 to 95 at Accra and thousands of school children had benefited from the existence of the centres. The new maternity hospital at Accra quickly began to prove its value: In 1929, maternal mortality at Accra was about 10%, in 1930 it had fallen to under 3%. Moreover by 1930, there were already six midwives in training.[15] As will be evident below, several explanations account for the rapid success of the welfare movement.

The popularity and success of the welfare movement owed a lot to

centres are still very popular today.

13. Dr Summerhayes, born 4 November 1894, was appointed Lady Medical Officer 21 March 1928, resigned 15 June 1931, marrying Dr McRae, a Medical Specialist. She received unadorned commendation for her work from the Colonial Advisory Medical Committee.

14. GCGRMSD, (1927-28), p. 41 and (1928-29), p. 38.

15. ibid., (1930-31), p. 41.

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the curative service intergrated into it. It was realised by the Health Authorities that the only way to secure the understanding and appreciation of the objects of preventive work, particularly among a population such as that of Ghana, which was mostly illiterate, was to show or give something tangible: A village that had been well laid out and furnished with sanitary structures etc served as something tangible and as an object lesson to the inhabitants of neighbouring villages. And so it was with welfare work. For mothers responded to advice regarding their infants with greater enthusiasm and acted on such advice because they saw their own or the neighbour's child cured of high fever, enteritis etc; [16] Accordingly, the welfare centres played important part in the treatment and prevention of endemic diseases such as malaria, helminthiasis and yaws; by 1928 yaws constituted nearly 30% of cases treated at Welfare Centres but as a result of the movement's activity, the figure had fallen to less than 10% by 1932.[17] To ensure the success of the maternal and infant welfare movement, all efforts were made to secure the cooperation of African citizens of the intelligentia class but initially these attempts failed `lamentably and conspicuously'.[18] In Guggisberg's view, this was not surprising for the reason that he thought what the Africans needed was a lead, which at the time, was lacking. The result of failure

16. Views set out by Dr Selwyn-Clarke in his defence of Maternity and Child Welfare Movement against mass closure.
17. GCGRMSD, (1933-34), p. 25. The dramatic history of yaws eradication is told in Chapter 8.
18. Guggisberg to Thomas, Desp. No. 876 of 7.11.1924 encl. In Report of Committee to formulate a scheme for the training of Medical Practitioners, (1928), p. 50.

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of African leadership in the movement was the formation of the Gold Coast League for Maternal and Child Welfare.[19] Ladies of the league, African and European, extended the influence and teachings of the welfare clinics through domiciliary visits. They met once a month and were addressed by medical officers and health officers on subjects of their activities. These ladies, by their house to house visits, got into close touch with mothers in their own homes and discussed with them problems in house cleanliness and the rearing of babies and children. In the Accra area, the staff and students of Achimota School contributed their share by welfare visiting in surrounding villages.[20]

The welfare movement received its first setback in 1931 when on account of economy the staff at the centre at Christiansborg could no longer be maintained. And for a while the Lady Medical Officer continued to run the centre voluntarily without government pay.[21] During the early months of 1932, the movement received yet another blow in the reduction in the number of appointments of Lady Medical Officers from eight to four. That year also, the Christiansborg welfare centre was closed down owing to retrenchment of staff and its buildings lent to a private medical practitioner.[22] Other setbacks supervened: In 1927 governor Guggisberg had ordered free medical attention to children attending welfare centres. By 1930

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19.See Chapter 4 for further details.
20.GCGRMSD, (1926-30).
21.This information is contained in Dr Selwyn-Clarke's memorandum of 1932, cited in this chapter.
22.GCGRMSD, (1933-34), p. 8. See also Chapter 5 on the effect of retrenchment on the medical staff.

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however nominal fees began to be charged once more. But owing to the financial stress which had set in, the late 1920s, it became impossible to continue with the supply of free drugs and dressings at the various welfare clinics. Fees were increased, free lists were compiled and even these were subsequently substantially curtailed. Furthermore, the Medical Department began to press the case that curative services at these centres should be abolished because hospitals in the towns were already providing such services; that stopping such duplication of service would reduce costs. Some went as far as to say that the welfare centres were a `well-intentioned mistake'.[23]

The Health Branch, under whose aegis the welfare centres were run, countered with arguments in a series of letters and memoranda which provided ample justification for the need to maintain the welfare centres, including the continued provision of curative services. But overwhelming demand for treatment and the long journeys patients made for the purpose made inevitable the continued offer of curative service at the welfare centres in addition to their primary preventive and educational work.[24] At Cape Coast citizens petitioned that their Woman Medical Officer should not be taken

23.See Dr Selwyn-Clarke's memorandum of 1932, cited above.

24.Several memoranda passed between the Medical Branch, (which was pressing for closure, or at least severe truncation, of welfare centres and their activities) and the Health Branch (of which Welfare Centres formed a part and which had worked so hard to make a success of it) as well as letters from Women Medical Officers (who ran the centres with such marked success) and petitions from African women, notably at Sekondi, Cape Coast and Koforidua.
There were memos from Dr Selwyn-Clarke (No. 926/82/1926; No. 6302-6/82/1926 of 29.11.1930; No.39/82/1926; No.1488/63/1930 which occupied 18 pages (Dr Selwyn-Clarke was well-known for his thoroughness).

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away, pointing out that infant mortality in the town had fallen 50% due to the work of the welfare centre and that the people, once skeptics were now enthusiasts of the welfare system. Women, literate and illiterate, at Sekondi, protested against the retrenchment of their nurse-midwife.[25] Strong support against closure was provided by others such Dr Jessie Beveridge, respected pioneer of the welfare movement, now back in England who wrote: `While recognising the urgent need for severe economics, I feel sure it would be a serious step backwards to close the welfare centres in the big towns...I should think that all who know the earnest and strenuous work put in by the Government Medical Women in this colony will agree that to close down the Welfare Centres would be a tremendous loss and injury to the country'.[26]

The singular role Dr Selwyn-Clarke played in saving the Maternal and Child Welfare system from the demise threatened by retrenchment must be told. It can be said that the collapse of the welfare system was averted principally by his dedication to the cause of the movement and the energy with which he pursued his ideas on it. In his famous memorandum of 1932, he proposed to widen the scope of the work done by the already-existing and very active Gold Coast League for Maternal and Child Welfare to whose membership Lady Slater, the governor's wife, belonged. In order to draw in leading

25.NAG CSO 11/6, 149/32, `Petition of the Unofficial Members of the Town Council of Cape Coast and Other Inhabitants'. 10.2.1932; NAG CSO 11/6, 1028/31, SF 1. `Petition of the Women-Folk of Sekondi' encl. In: African Member of the Sekondi Maternity and Child Welfare League to Lady Slater, 13.2.1932.
26.This is quoted in memorandum No. 1488/63/1920 of Dr Selwyn-Clarke.

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Europeans and Africans, he proposed that the league apply to the Red Cross Society for affiliation. When he was on leave that year in England, with the help of Dr A J R O'Brien, formerly Resident Medical Officer of the Gold Coast Hospital now on the Medical Advisory Board of the Colonial Office, Dr Selwyn-Clarke held discussions with the Secretary General of the British Red Cross Society. Meanwhile in Ghana, he had begun the formation of strong local committees consisting chiefly of leading Africans but with a sprinkling of European members to assist from their knowledge of similar associations elsewhere. He sought and obtained the support of Paramount Chiefs of the colony for a scheme for the Welfare Centres at Koforidua, Cape Coast and Sekondi to be maintained by local subscription. In all these activities, he received ample and enthusiastic support from Dr J M McKay, Head of the Health Branch, Dr M C Chappel and Dr C D Williams, Lady Medical Officers in charge of the Kumasi Clinic and Princess Marie Loiuse Hospital; as well as those of others such as WMOs Dr F A Adam and Dr D E Stewart. The upshot of these efforts was the transformation of the Gold Coast League for Maternal and Child Welfare into the Gold Coast Branch of the British Red Cross Society, governor Slater becoming its first Patron, the Colonial Secretary its President, and the Director of Medical and Sanitary Services, Dr David Duff, its first Chairman. Distinguished Africans became majority members. The Gold Coast Branch of the Red Cross Society raised sufficient funds from private donations to undertake the management of the Infant Welfare Centres at Cape Coast and Koforidua, and later Sekondi, including

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the hiring of European nurses to run them. The Society also contributed funds for new buildings at the Maternity Hospital, which had already so soon proved too small.[27] The Table in Appendix IX shows that, apart from 1932 and 1933 when infant attendance dropped, the number of children attending welfare clinics increased progressively during and after the Second World War. As the table indicates, welfare clinics remained popular throughout and after the war, though it continued to be plagued by a lack of numbers of trained Health Visitors.

The Maude Commission of Enquiry into the Health needs of the Gold Coast endorsed and encouraged the continued work of the Maternal and Child Welfare Centres.[28] The Commission, in its report, recommended progressive participation of Local Authorities in the operation of the centres, and their progressive control at the local level. The Sekondi, Cape Coast and Koforidua Clinics continued to be maintained by the Red Cross and a new clinic was built by the Society at Accra in 1952.

By 1955 the Maternal and Child Welfare Service had assumed great complexity. Specialised maternity services were provided at two main centres in the country: At the maternity hospital at Accra and at the maternity unit of the Kumasi Central Hospital. Additionally such services were provided by all maternity units attached to all

27. Selwyn-Clarke, `The British Red Cross Society on the Gold Coast', W. Afr. Med. J., vii (1934), pp. 117-9; See also Memo No. 1488/63/1930 of 21.3.1932. The Red Cross soon did other things: It donated an X-Ray machine to Kumasi, supplies for leper colonies, especially that at Ho, an asylum for derelicts at Tamale and a car for midwives and Health Visitors at the Pricess Marie Loiuse Hospital.
28. Maude Commission, pp. 15 and 37.

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government and government-sponsored Mission Hospitals throughout the country. Also maternity clinics, established either by local authority or private midwives, became progressively available in various towns throughout the country. Where such clinics did not exist,dressing stations were used for the purpose.[29] Women attended these for medical aid in respect to pregnancy, childbirth and puerperium. These dressing stations were mostly local authority sponsored, run by dressers with no specific training in handling conditions arising out of the pregnant state. But this deficiency was partly mitigated through periodic clinics at the dressing stations by doctors and trained midwives.

Private midwives in the rural areas cooperated in the running of welfare clinics under the guidance of the Superitendents of Health Visitors. These activities were subjected to regular routine inspection. Health Vistors took on increasing burden in the routine running of maternal and child welfare centres. By the early 1950s, Health Visitor training had become well-established.

By 1955, there were 14 Child Welfare Centres in the Eastern Region, 33 in Ashanti, several at the Accra area and a few in the Western, Volta Region and the Northern Territories.[30]

Women Medical Officers did not belong to the West African Medical Service. Their exclusion was most probably a historical accident. For, until 1920, and apart from Dr Deacon of the 1900s, only European medical men took up appointments in Ghana. When in the

29.MHR, (1955), p. 7.
30.loc. cit.

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early 1920s Women Medical Officers began to be sought by Guggisberg to run his new welfare centres, lady medical officers were, de facto, already excluded from the West African Medical Service. Whereas medical men were given the privilege of private practice, Women Medical Officers were denied it. As has been stated above, all Women Medical Officers belonged to the Health Branch of the Medical Department since the welfare services, being initially largely preventive, were part of the Health Branch. While Medical Officers of Health, who were all males, received a special duty allowance in lieu of private practice, Women Medical Officers were denied it. In 1930 the Lady Medical Officers signed and presented a petition protesting the inequity. The initial response of the Director of Medical Services to the protest was that it was ill-considered and premature. Fortunately various governors and Secretaries of State had been debating over some years whether to pay women the stipend in lieu of private practice or allow them private practice. The Lady Medical Officers won their case and payment of stipend in lieu of private practice was approved. But money could not be found for it during the depression of the early 1930s. In 1932, Dr Cicely Williams submitted a petition protesting the continuing injustice saying: `...medical training for a woman costs as much as for a man...'. The right to private practice was granted, to be supplanted by the 150 pounds stipend in 1935.[31] Dr

31. Patterson, Health in Colonial Ghana, p. 15. See also, NAG CSO 11/1, 1292/30, DMSS to CS, 2.8.1930, `Terms of Appointment of Medical Women in the Gold Coast', petition of June 1930.

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Cicely Williams, became probably the most prominent of the Lady Medical Officers. Born in Jamaica in 1893, she was one of the first female medical students to be admitted to Oxford. After qualifying, she joined the Colonial Medical Service in 1928 and was engaged principally in Maternal and Child Welfare Clinics which were apt to provide preventive care only. `Cicely saw the nonsense of this separation and started to provide both preventive and curative care'. Though the teaching was that the care of small children should be left to doctors and nurses, she began to break the rule. She accepted African mothers' insistence on staying with their sick children, saying a `cuddle is worth a lot of medicine'. Within three weeks, her services had become so popular that police had to be called in to control the crowds. She stated `When you have just treated a child for pneumonia and saved its life, the mother is more likely to listen and respond to ideas on better nutrition'. Dr Williams received her post-graduate MD from Oxford, work which included the first description of protein-calorie malnutrition. It was she who first used the word `kwashiokor' to describe it. Kwashiokor was a Ga word meaning `the deprived one'. When Dr Williams asked for permission to take the MRCP examination, she had difficulties with the medical authorities. There were those who said that she was so good at her professional work that the acquisition of the MRCP was a personal ambition she wanted to satisfy, which was unlikely to further increase her professional competence in the service of the colony. In 1935 she sought and got transfer to Singapore.[32] She later became a senior lecturer in the

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Department of Human Nutrition in the London School of Tropical Hygiene and Medicine. She paid another visit to her `old hunting ground', Ghana, in 1953. She died in 1992 at the age of 98.[33]

Another female medical officer who achieved considerable prominence from her work, was Dr Helen Hendrie. Dr Hendrie's principal work was done in 1921-1925 while stationed in the Yendi area in the Northern Territories as the medical officer. During this time leprosy and yaws were beginning to receive, for the first time, considerable attention from the Medical Department. Dr Hendrie was probably the first medical officer to tackle, in a systematic way, the problem of leprosy in the Northern Territories. It was probably her leprosy work there which began to reveal the magnitude of the leprosy problem in the North; her work certainly, at the least, contributed immensely to the Medical Department's appreciation of the extent of the problem. She conducted clinical trials on the relative efficacy of Moogrol and Chaumoogra oil in the treatment of the disease, an investigation which showed the superiority of the

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32.There she campaigned against the International Milk Companies who, seeking by every means, to expand their global market for their products, were engaged in persuading mothers to give up breast-feeding. She was, probably as a result of her stand, transferred to Malaya, where she set up a string of clinics with local nurses; these clinics became the forerunners of Primary Health Care Centres. When the Japanese took Malaya in 1943, she became a prisoner of war. She played no small role in the survival of her fellow prisoners; it was she who encouraged and supervised the cultivation of vegetables, to whose consumption the prisoners' survival was largely due. When the war was over she became adviser to WHO, and was based first at Geneva, then at New Delhi.

33.David Morley, Obituary of Cicely Williams, `Mothers and Children First', in Guardian Weekly, 2 August 1992.

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former over the latter anti-leprosy drug.[34] She was also active in the early mass treatment of yaws, a disease which permeated the rural community throughout the colony, especially the Northern Territories. She also carried out important clinical trials on the relative effectiveness of arsenical (N A B) and and bismuth (Bismuth Sodium Tartrate) preparations in the treatment of yaws.[35] Dr Hendrie also engaged in Maternal and Child Welfare activity at Tamale. Her work, Guggisberg said, `has entirely dispelled the notion held in some quarters that Women Medical Officers cannot deal with, or inspire confidence in, the African races'.[36] Dr Helen Russel, the first woman pathologist in the colony, and there has been none since her, was appointed to the Medical Research Institute in 1928. In May 1928 Dr W A Young, the Director of the Institute died, soon after the death of Dr Noguchi, from Laboratory yellow fever. As result of this the Institute's activities were severely disorganised. It was during this precise time that Dr Russel took up her duties at the Institute. She had the misfortune of having much responsibilty thrown on her shoulders so soon after arriving in the colony. For three months following Dr Young's death, she had to take sole charge of the work in the Medical Research Institute single-handed.

It was not until Dr G G Butler, the new Director, arrived,

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34.The extraordinary trail-blazing work of Dr Jessie Beveridge, Dr Mary Magill and Dr Summerhayes, in maternal and infant welfare (later, Mrs McCrae) have already been noted above. GCGRMSD, (1923-24), p. 37.
35.ibid., (1925-26) p. 59.
36.Governor's Address, (1922-1926), p. 89, PRO CO 98/45. Dr Hendrie, `...in one of the wildest parts of our country...has dealt with an increasing number of general patients, successfully carried out the treatment of yaws and inoculation... besides her work with regard to leprosy'.

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transferred from Nigeria in late 1928, that normal activity began to resume.[37]

Although women medical officers' historic contribution to the establishment of modern medical services in the country was only over a relatively brief period, the results of their work have stood the test of time. Their presence in the country was a demonstration to the local Africans that women could be doctors also and that women doctors could do what male doctors did. It is not surprising that by the early 1940s female African government medical scholars began to enter the ranks of their male counterparts.[38]

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37. GCGRMSD, (1928-29), p. 54. Also NAG 563/31/SF 34. Memo. of Dr Selwyn-Clarke, No. 1488/63/1930. The records suggest that the first Lady Medical Officer in Ghana was Dr M A Stewart Deacon, MB ChB. Dr (Mrs) Deacon was the MOH of Accra Town Council during the years around 1900; the sanitary reports of 1900-1902 on Accra were written by her. She also wrote a book `Lectures on Hygiene' which, for many years, was the standard text book in the teaching of hygiene and sanitation in the schools of the colony. Ibid, (1913), p. 83.

38. See Chapter 9 on the first female government medical scholar, Matilda Clerk.

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# Chapter 7

## THE SUPPORTING MEDICAL STAFF, THEIR TRAINING AND WORK

### Dispensers, Dressers and Dispenser-Nurses

Right from the inception of a medical department in the country three types of auxiliary staff, which formed an indispensable part of the medical services organisation, were also started. They were the Dispensers, Dressers and Nurses. In the very early years the indispensable role of dressers and dispensers, in particular, arose from the fact that they were the essential staff who manned dispensaries and small hospitals where resident medical officers could not be stationed. They were also indispensable to resident medical officers.

What were the functions of dressers and dispensers during these early years? In Ghana, as in any other tropical country, tropical ulcer was rife. Its common occurrence determined the early introduction of dressers whose sole duty was to dress ulcers.[1] Dispensers on the other hand engaged in more sophisticated work. They handled specific and common complaints. These included malaria, diarrhoeas, yaws, upper respiratory problems and so on. They also did the valuable task of dispensing medicines. They were in fact the right-hand assistants of medical officers. They often were responsible for the compilation of annual medical reports, a

1. The condition is seen most frequently in low-lying, hot, humid regions, common particularly in open air workers whose work is sweaty, and who are exposed to local injury, especially about the legs. The aetiological factors in its appearance have been summarised in the phrase: ` filth, food, friction and fuso-spirillosis'. A R D Adams and B G Maegraith, Clinical Tropical Diseases, (Oxford,1960), p. 381.

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most important responsibility, of their stations.[2] Dispensers also performed the important function of sanitary inspection in the 1890s and 1900s at Sekondi, Cape Coast and Accra and were paid monthly allowances for their overtime work.[3] And it was not till the early 1910s, when the Sanitary Branch of the Medical Department had been formed, that they were no longer required for such duties. Dispensers quickly acquired good reputation, their good work often acknowleged in official reports. For instance, in 1901, the Acting Principal Medical Officer, Dr Garland, was saying: ` I am pleased to record my high estimate of the capacity of the dispensers in this Colony. I consider them highly trained and capable officials'.[4] Such estimation of dispensers' abilities was the rule rather than the exception.[5]

The earliest dispensers were Africans who bore European names.These men came principally from Cape Coast and Accra.[6] This is not

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2.The reports of 1900 and 1901 on the Tarkwa dispensary were written by Dispensers Sutton and Hagan,on Winneba in 1905 and 1906 by Dispensers Smith and Lamptey. GCGRMSD, (1901), p. 27.

3.Roger to Elgin, NAG ADM 1/2/70, Desp. No.550 of 19.10.1908.

4.GCGRMSD, (1901), p. 13.

5.Governor Guggisberg paid high tribute to Dispenser John Cato and his service in the Legislative Council in 1922: Governor's Address, (1922-26), p. 88, PRO CO 98/45. Mr Cato entered the Medical Department in 1887, became Chief Dispenser in the late 1900s and died in 1922. Reports on him usually merely referred to his usual efficiency, and therefore needing no further comment.

6.So that between 1880 and 1910, there were dispensers Sutton, Hagan, Smith, Fynn, Plange, Cato, Bartels, Thompson, Wellington and so on. It was this group of people with Anglo-Saxon and other European names who, by their close and long contact with Europeans, had acquired a measure of education culture and who took advantage of the scanty educational facilities then available.Dr Nanka-Bruce and Dr C E Reindorf, the third and fourth Ghanaian-born medical doctors who graduated in 1907 and 1910 respectively, entered into the study of medicine after several years' stint as dispensers and also as vaccinators.

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surprising because the existing schools were located principally at these two towns as were most Europeans and principal European businesses.

Right from the start of the establishment of the Medical Department, dispensers received their training at the Accra Hospital. The training of greater numbers under improved conditions began to occur in 1895 when extensions were made to the Accra Hospital.[7] Candidates for the training had to have a background of reasonable education, though we do not know to what level. It seems certain however that the required minimum educational background was the standard seven school certificate. They could only practise their profession after obtaining three years' training at the Accra Hospital and after obtaining a practising licence, in accordance with Ordinance No.14 of 1892.[8] To obtain the licence to practice dispensing, a qualifying examination had to be passed which many would-be practitioners of the profession usually had great difficulty with, a difficulty due to the low educational background of the candidates.[9]

Recruitment of dispenser pupils for training was difficult because of the generally poor educational standards and the very small

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European names are still common among coastal Ghanaians. The names were either adopted as result of some form of association of certain coastal Africans with Europeans living in their community or as result of black-white intermarriage or bastard children between local black girls and Europeans.

7.Plans for improving training facilities and augmenting the dispensing staff were provided by CMO Dr J F Easmon. Griffith to Ripon, NAG ADM 1/2/47, Desp. No.341 of 23.11.1894.

8.GCGRMSD, (1912), p. 6.

9.ibid., (1913), p. 6.

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number of Africans who went to school. This situation was worsened by the fact that, in spite of their importance as part of the medical team, their salaries were miniscule: In 1900, a new medical officer was paid about 400 pounds a year and European nurses, something like 200 pounds a year.[10] But very senior dispensers, whose work was officially acknowleded excellent, might be paid something like 50 pounds, dressers 36 pounds and nurses 24 pounds a year.[11] The very small salaries of dispensers, dressers and nurses inhibited the willingness of Africans to come forward for training.[12] When the cocoa industry began to make rapid progress in the 1900s and 1910s, African youth who might have taken up dispenser and dresser professions understandably chose the more remunerative work as clerks for commercial firms. Accordingly, between 1880 and approximately 1920, resignations were frequent and the Medical Department unfailingly reported, every year, the shortage of dispensing staff.[13]

By the early 1910s they had begun to leave the service in even greater numbers. Many left the service to open their own drug stores and the Medical Department began to press the government to improve the conditions of service of the subordinate staff.[14] For

10.Clifford to Harcourt, NAG ADM 1/2/94, Desp. No. 780 of 19.10.1914.
11.Blue Book, (1882), PRO CO 100/32.
12.GCGRMSD, (1902), p. 19.
13.Of the two professions, dispenser and dresser, the former was more popular and better remunerated in government service. Moreover, a licensed dispenser could open and operate his own drug store.As dispensers were trained at government expense, and resignations frequent, the Medical Department proposed their being bonded, after qualifying, to serve government a certain number of years: ibid., (1903), p. 20; (1912), p. 6; (1913), p. 6.
14.Resignations had started even earlier, for year in year out in the mid-1900s,

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the Medical Department very well knew, and made it clear again and again, that the only way of attracting candidates to come forward for training and inducing them to stay on the job, was an improvement in their conditions of service. In 1912, a new improved scheme of conditions of service was approved for the African subordinate staff.[15]

A modest increase in the number of dispensers occurred in the latter half of the 1910s but this was not entirely due to subordinate staff's improved salaries. It was partly due to the new policy of governor Clifford: After his Ceylon experience, and with the support of Dr Rice the Principal Medical Officer, Clifford commenced a programme for extending medical service to Africans through a dispensary system. This required dispensaries and dispensers in large numbers with a sprinkling of medical officers who would serve a supervisory role, a scheme also not unlike that in French West Africa. The training was conducted principally at the Accra Hospital but other major hospitals were also used in the training. When Clifford left office in 1919, there were 23 dispensers in training. Guggisberg terminated the scheme because he considered it below standard.[16] In the early 1920s however, Clifford's policy of basing the widening medical service on the training of a large number of dispensers was largely upheld and

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reports state that the pay of African Subordinate staff was poor, a main reason for the shortage of this cadre of hospital staff. Ibid, (1905), p. 9.

15.ibid., (1912), p. 6. The effectiveness of this is evident from the table in Appendix IX. The number of dispensers had dropped to 11 in 1910 rose to 25 by 1913 and by 1920, over thirty.

16.Leg Co Debates, (1925), p. 241, NAG ADM 14/2/11.

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reiterated by various weighty authorities.[17] The difference now was that ideas now focused not only on dispensers but also on the training of medical assistants. Accordingly, the training of dispensers and medical assistants in large numbers was an important agendum of the Committee appointed by the Secretary of State in 1927 to formulate a scheme for medical training in Ghana.

At the collapse of the plan for a medical college, the Secretary of State instructed colonies to proceed to devise plans for turning out medical assistants (and parenthetically, dispensers) as it had become clear that there was no hope of augmenting the medical staff either through local training of medical men or overseas recruitment. Dr Inness, the Director of Medical Services, following closely the recommendations of the 1927 Committee, drew up a scheme which would provide Ghana with a staff of 250 medical assistants, or about one for every 12,000 of the population. Thirty students were to be admitted annually till 90 were being trained at one time. The full course of the training was to be four years.[18] The important feature of the scheme was that the medical assistants to be produced stood, in hierachy, between medical oficers on one hand and nurses and dispensers on the other. The wisdom in creating this cadre of health personnel was disputed. There were those who, like Dr A J R O'Brien, thought it wiser to wait till it was possible to

17. Lord Lugard stressed its urgency in a speech at a meeting of the Imperial Social Hygiene Congress. So did W G A Ormsby-Gore in his report on his visit to West Africa in 1924, as did the third conference of senior members of WAMS at Accra in 1925: Gold Coast Committee for the Establishment in British West Africa of Medical Practitioners' and Assistants' College, pp. 33 and 57.

18. GCGRMSD, (1932-33), p. 94.

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train fully qualified doctors locally. There were others who thought that the need for medical assistants was so urgent that the advantages of creating them outweighed the disadvatages. The cost of the scheme was however considered too high.It was then scaled down and simplified.Even this modified scheme was found too expensive in the context of the depression period.[19]

There were important questions to be answered: What exactly were to be the functions, duties and responsibilities of the new grade of officers ? What training was therefore to be given to them ? What exactly was to be their status, and their relation to other parts of the medical organisation and how was it to be regulated ? Eventually it was decided that it was not necessary at that time to proceed to the creation and training of a new grade of medical personnel: It would be sufficient to amplify the training already being given to dispensers so as to qualify them not only for their

19.Opposition to scheme: Dr A J R O'Brien, surgical specialist and Resident MO of the Gold Coast Hospital for many years and a very highly respected senior member of the Medical Department, warned in a memorandum in 1927, against the training of Medical Assistants: He stated `Unless a medical man knows his work he is a danger to the public. Half-trained medical assistants are in my opinion useless. I feel very keenly on this subject, and am convinced that it were better to leave matters alone than create a Subordinate Service'. He ended his memorandum with: `Aim at the highest we can. If the highest is too costly wait until West Africa can afford it': Letter from Dr A J R O'Brien, Surgical Specialist, to the Director of Medical Service. Dated 12.9.1927, encl. in Report of Committee to Formulate Scheme for the Establishment in British West Africa of a Medical College, (1928), pp. 69-70.Cost of first scheme: The capital expenditure on school buildings spread over three years was estimated at 73,000 pounds. Recurrent cost for 90 students at 6000 pounds per annum and for 250 fully trained Medical Assiatants estimated at 95,000 pounds per annum. These excluded the cost of drugs and dressings for dispensaries: GCGRMSD, (1932-33), pp. 94-7. Cost of modified scheme: Capital expenditure was about 64,000 pounds, recurrent cost from some 2000 pounds the first year to about 30,000 pounds in the twelfth and following years. loc. cit.

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ordinary and usual duties, but also permit them take charge of outlying rural dispensaries, under the regular supervision and guidance of visiting medical officers. We note that dispensers were handling this sort of responsibility, as we have seen above, at the turn of the century, and even earlier. In this connexion then, though they probably did not know it, the Medical Department in 1930 was proposing nothing new. Thus came into being the training of nurse-dispensers or `superdispensers'.

The dispenser-nurses were to be trained to bandage and dress, to nurse, to deal with wounds, ulcers and sores of various kinds, to treat straightforward cases of malaria and so on; to give first aid, douches and injections and to dispense well-known stocks of drugs for prevalent and easily-recognised illnesses.[20] This third scheme was approved by the Secretary of State in 1930 and the training of dispenser-nurses came into force in 1931.[21]

It admitted males only, for reasons which are not clear. In essence it combined the training of a nurse with that of a dispenser. Superimposed on this were some highly selected fundamentals of medicine and surgery. All teaching was given, as far as possible in a practical manner, on the wards, out-patient clinics and dispensing department of Korle Bu Hospital at Accra. Under the vigorous administration of Dr A J R O'Brien surgeon and the

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20. Paper by Dr David Duff, DMS, on position on the Gold Coast of the problem of training African Medical Assistants for work in the rural disoensaries. Presented at the Legue of Nations Health Conference in Cape Town in November 1932. GCGRMSD, (1932-33), pp. 94-7.

21. loc. cit. See also Colonial Annual Report, Gold Coast, (1930-310), pp. 6-15, NAG, ADM 5/1/39.

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Resident Medical Officer, it had since its opening in 1923, been turning out trained dispensers and nurses for the rest of the country. By rearranging syllabuses and time-tables and enlarging lecture rooms, it became possible to give the extra instructions in the new scheme. It was a four-year course, the first two devoted to nursing and the last two to dispensing, elementary medicine and surgery.[22]

By 1932, there was a staff of some 50 nurse-dispensers serving in various parts of the country. The scheme was decidedly cheaper, though it did not by any means escape completely the vicissitudes of financial stringency of the time, facing the possibility of closure or extreme abbreviation in 1935. But this was fortunately averted and the scheme was continued into the 1950s.[23] Clinical Superintendents replaced nurse-dispensers in the 1950s, ran Health Centres under the general supervision of district medical officers. Male nurses or dispenser-nurses were given a year's instructions to prepare them for this office and a training school was set up for them in the early 1950s. In 1960, Health Superintendents replaced Clinical Superintendents.[24]

In 1952, the question of medical assistants resurfaced. The new

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22. GCGRMSD, (1932-33), p. 96.

23. The dispensing school was offering a three-year course to about 30 students a year. By re-arranging things, it was expected that the full extra staff of 80 Dispenser-Nurses would be added to the medical service. Part or most of the cost was borne by the chiefs and people themselves in the various areas which benefited. loc. cit.

24. Clinical Superintendents had duties limited largely to curative work. The duties of Health Superitendents was more wide-ranging: Apart from clinical work, they were responsible for health education as well as dealing with sanitary matters.

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African government approved the creation of this grade of medical personnel as advocated by the Maude Commission of 1952.[25] The Commission had every opportunity, and also the mandate, to recommend the training of medical assistants. But it avoided the term `Medical Assistants' altogether. The terminology Clinical Superintendent would appear to have eventually prevailed. The Brachott proposals of 1960 steered clear of medical assistants or clinical superintendents altogether, replacing these with Health Superintendents.[26] The facts indicate that, first financial stringencies (1930s), then psychological and political barriers, effectively blocked the introduction of medical assistants into the country: Guggisberg had stood firm against any attempt to substitute the training of medical assistants for fully qualified medical officers.[27] He was not against the introduction of medical assistants as such; his opposition was in the substitution of one for the other. The attempt to introduce medical assistants into the service in the late 1920s failed for financial reasons. When the scheme was once more revived in the 1950s, financial considerations could no longer stand in its way, rather most likely, psychological barriers.

We see therefore that over the years the `dispenser' position underwent several moultings: Between 1880 and 1930, dispenser;

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25.See Chapter 3 for details. See also: Maude Commission, p. 22; and Government Statement Maude Commission Report, p. 5.
26.Health Services in Ghana, p. 21. In the establishment of Health Centres, the chief officer was a medical officer, the next in line a health superintendent.
27.See Chapter 8 for Guggisberg's position on this.

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1930-1950, Dispenser-Nurse; 1950-1960, Clinical Superintendent; 1960, Health Superintendent.

We also note that the concept and functions of a dispensary had undergone changes in complexity: By 1950, there were 22 government dispensaries mostly run by dispenser-nurses. But then another 100 or so `dispensaries' had sprung up. These were set up by Native Authorities and run by dispenser-nurses or male nurses or attendants. By 1960 when the next 10-year health development plan was being prepared, dispensaries in their earlier concept, function, organisation and nomenclature had disappeared. These health institutions were now known as Health Centres.

**Nurses**

The first two European nursing sisters were appointed in 1878 to look after the health needs of European government officials when the first primitive hut-hospital was opened in James Town at Accra.[28] The records are however not clear on how long these two nursing sisters worked in the colony. But it would seem that until 1897, the presence of European nursing sisters in the Medical Department was not a regular feature, if at all, of health arrangements in the colony. In 1897 three European nursing sisters came out to the colony on an experimental trial for the purpose of ascertaining their suitability for work in the prevailing conditions in the colony.The trial lasted for three years and was successful.[29] This successful trial heralded the introduction of

28. Maude Commission, p. 33.
29. GCGRMSD, (1899), p. 254.

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professional nurses into the colony. And from 1899, European nurses began to take up appointments regularly and the basis for professional nursing began to be laid; organised nursing work began.

In these early years, such doctors as were available in the colony, Missionary and Governmental, got by in assistance, from male orderlies who did the most elementary nursing such as the washing and feeding of patients.[30] And one of the important early tasks of the European nursing sisters was to train African nurses.

The African nurses trained during this period were almost exclusively males.[31] Four principal reasons explain this: First, perhaps the most important,the young people with any education were principally males and it was from amongst them that pupil nurses could be drawn. Second, until girls' schools began to be established, parents went shy of sending their daughters to schools largely dominated by boys. The third reason which explains the male dominance of the period was the attitude that nursing was menial work which involved the close and physical contact with, and handling of, sick people in hospital where most of the hospitalised sick were males.[32] A fourth important reason was the fact that this 'difficult and menial labour' was rewarded with vanishingly low salaries.[33]

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30. Fact Sheet on Ghana, Ghana Information Services, (Accra, Jan 1965).
31. Practically all named nurses in the GCGRMSD up to the late 1910s were males. This male preponderance in the nursing service continued into the 1950s.
32. Records in GCGRMSD between 1900 and 1920 for instance show that, some 80% admissions were male. In this connexion, midwifery was preferred by parents and their daughters.
33. GCGRMSD, (1913), p. 7. But then this applied equally to male nurses.

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The system of training was that of apprenticeship for a period of three years. Training was given in the centres where European nursing sisters were based. These centres were initially Accra, Cape Coast, Sekondi and later Kumasi and much later Koforidua, the towns with the largest hospitals and by 1920 had also acquired European hospitals. As medical facilities were extended to various parts of the colony, more candidates were recruited and trained in improvised facilities. The teaching was based on curricula which took into consideration the universally-low educational standards of the time. The training in these government nursing institutions included the teaching of very elementary anatomy and physiology, medical and surgical nursing, hygiene and first aid. A local diploma was awarded at the end of three years to successful candidates.This was the `Director of Medical Service Cerftificate'.[34]

Between 1880 and the early 1920s, the Medical Department had great difficulty finding candidates to train. That the main problem attending the recruitment of suitable candidates for training was the gross inadequacy of the educational background of prospective trainees was clear to all. And PMO Dr W R Henderson vented the Department's frustration at this state of affairs in 1901 when he stated: `...I would strongly recommend that some steps be taken to encourage a better class of men (note there were no women African nurses one could speak of in the 1900s) join the nursing service,

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34. Fact Sheet on Ghana.

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for really the type of boys we have had applying recently is too bad for anything. They are all "bush boys" who have little education, so called, in the way of book work, otherwise they are absolute savages and quite unteachable'.[35]

Having recruited these `savages and unteachables', great difficulty was experienced in training them. The African trainees found it difficult to understand the responsibilities which went with nursing duties. For instance it was common of African nurses that they lacked an appreciation of the need to keep awake at night when attending a serious case. The frustration was such that the medical officer in charge of the Accra Hospital in 1901 stated`...I personally would prefer to work shorthanded than have a lot of useless boys about the place...'.[36]

Having trained the nurses, the Department had great difficulty retaining their services. The Department was consequently perpertually short of nurses. Year by year the medical authorities bemoaned this problem and announced their frustrations in a variety of ways.[37]

For whereas dispensing was quite popular, nursing was considered menial work by the educated African youth. The hours of work,(night work was abhorent to them) the discipline the work involved and the

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35.GCGRMSD, (1901),
p. 19. Report of Dr Alick Knight on the Accra Hospital. It is of interest that in the GCGRMSD of the same year, Acting PMO Dr Garland was praising dispensers, referring to them as being highly trained and capable officials. It is interesting also that in the 1930s, by contrast, the Medical Department was averring happily the `teacheability of the African' in the matter of nursing.
36.GCGRMSD, (1901), p. 20.
37.Evident from reading of GCGRMSD, particularly between 1900 and 1920.

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poor pay, all conspired to render the nursing profession distinctly unpopular. They did not care for an employment which required so much effort, attention and care, and which was rewarded, after all the trouble, with a most ridiculous salary. Accordingly, the trained or trainee nurse was only too anxious and keen to resign his position or abandon his training at the least pretext.[38] As with dispensers, in the 1910s, it was much more worth the while of the African youth with some education, an education albeit poor, to take up the more pleasant and remunerative work of a cocoa buyer's clerk.[39] To counter this, the Medical Department made regular representation to the government on the matter of better salaries for the subordinate medical staff, which included nurses, till 1912 when a new scheme of working conditions was accepted by government. The scheme also sought to, by improving the employment conditions, increase the strength of the nursing staff.[40] In spite of the new deal for the subordinate staff, recruitment of trainees and retention of the trained continued to be a problem which plagued the Medical Department.[41] The number of trained nurses,up to 1920, remained small and static.[42] In 1921, there were only 64

38.GCGRMSD, (1912), p. 6; (1913), p. 6; (1914), p. 7. The medical records of the 1910s,1920s and 1930s are replete with resignations and terminations of appointment of nurses.
39.ibid., (1913), p. 6.
40.ibid., (1912), p. 6.
41.In the 1920s and subsequent years, the locally-trained nurses, owing to the limitations of their training, were only qualified to enter into the Junior Civil Service. All Senior Civil Service posts were held by European Nursing Sisters, and very occasionally by local girls who had studied the profession privately in Britain: Fact Sheet on Ghana, p. 1.
42.See Table in Appendix VIII.

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nurses and nurses-in-training. The first major advance in nursing and their training commenced when the Gold Coast Hospital was opened in 1923. And the expansion and extension of hospital facilities during the 1920s accelerated the training and country-wide deployment of nurses and by 1930, the number had exceeded 200. Because nursing had become a critical factor in the modernising of public health facilities in the 1920s, the advanced training for nurses and midwives formed part of the agendum of the Third Conference of the Senior Members of the West African Medical Staff held in Accra in 1925 and of the 1927 Committee appointed by the Secretary of State to work out a plan for the establishment of a West African Medical College.[43] In 1928, a scheme for increasing the number of nurses-in-training at Korle Bu Hospital, Kumasi and Sekondi was worked out and soon in operation. The objective of this exercise was to `...keep constantly in training a supernumerary reserve at the larger centres; so that when calls for staff came from out-stations it would be possible to furnish at once properly trained personnel and avoid the dislocation of work and impairment of efficiency at the larger centres..'.[44] This increased the strength of the nursing staff somewhat in the 1930s and 1940s, but not by very much for significant proportions of trained nurses resigned their positions, largely on account of poor salaries, as it had been in the earlier decades. But as we have seen above

43. Proc. 3rd Conf. of Senior Members of WAMS, Dec. 1925 encl. In: Report of Committee to formulate a scheme for a West African Medical College, (1927), p. 56.
44. GCGRMSD, (1928-29), p. 41.

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nurse-dispensers had begun to be trained from 1931. This partially made up for the dearth of nurses. But the shortage of the 1940s was however so serious that Dr Balfour Kirk, DMS 1941-1943, advocated a hold on expansion of hospital facilities to allow the training of nurses and other supporting medical staff.[45]

Recognising that the system of apprenticeship could not produce nurses of the calibre required to fill the highest positions in the service, Dr Kirk drew up plans for a School of Nursing with a defined syllabus for training.[46] It was this plan which led to the starting of the first State Registered Nursing Training College in 1945 at Kumasi with 17 students in rented premises where Equip now stands in the city. The Kumasi General Hospital was used for the practical aspects of the training.[47] The school was soon a distinct success. In December that year, a competitive examination was held for the selection of post-primary pupils for the commencement of a one year pre-nursing course at Achimota School. On completion of this course they began to pass into the Nursing Training School. Meanwhile contruction of the Training School had commenced at Korle Bu.[48] Shortage of building materials, occasioned by the just-ended world war, hampered work. When eventually completed, it was a very impressive block of buildings. The college was modern in design and

45.This was the main basis of the dispute between Dr Kirk and governor Burns (who would not delay his hospital expansion programme) and Dr Kirk's forced retirement. See Chapter 3 for details.
46.GCGRMSD, (1943), p. 8.
47.ibid., (1945), p. 5.
48.loc. cit. The pre-nursing course at Achimota ceased in 1948, as planned, when increasing numbers of candidates with secondary school education began to become available.

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stood in extensive grounds. It was completed in 1948.[49] Until 1948 the training progressed at Kumasi, then was transferred to Accra. Plans were already drawn for a similar Nursing Training College as a permanent feature of the new Kumasi Hospital which was already then under construction.[50] Entrance to the Nurses Training College was restricted to females only. And during training all students lived in the College Hostel. The College's capacity was 150-180. And in 1949, 1950 and 1951, the entry to the preliminary nursing course was 33, 43 and 50 respectively.

Wastage was worst during the pre-nursing phase, in the initial years, amounting to some 30%. Thereafter, there was less of it, though the percentage was still substantial. The level of wastage fell with the years.[51] One of the permanent problems which bedevilled the nursing service as a whole was the fact that attrition was maintained by nurses marrying, getting pregnant and going on long maternity leave. In the 1950s for instance in some hospitals,well over 50% of the nursing strength might be away on maternity leave at any one time. Nevertheless male nurses were not necessarily preferred to females by doctors and hospital authorities.[52]

The first three Sister Tutors of the Nursing Training College were Miss Isobel Hutton, Miss Kay Storrier and Miss Gladys Burton.[53] They

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49.GCGRMSD, (1948), p. 5.
50.ibid., (1949), p. 4.
51.See Appendix for details.
52.Maude Commission, p. 33.
53.Miss Hutton was appointed senior tutor, A G Hyslop science mistress and W E Roberts and P R Pooley, English mistresses. GCGRMSD, (1945), p. 3.

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were appointed in 1944. Miss Hutton became Senior Tutor in 1952 and in 1956 Principal Nursing Tutor and consequently the first Principal of the Nursing Training College. It was while in London in 1947 that she achieved the critical success of obtaining, in principle, reciprocity for State Registered Nurses trained in Ghana.[54] In June 1950 the training at the Nurses Training College in Accra and the examination of the Nurses Board of Ghana were recognised as satisfying the requirements of the General Nursing Council of England and Wales for full reciprocity.[55] The government set up a Nurses Board, of which the Director of Medical Services was chairman, a Nurses Register and a Registrar of Nurses.[56] The effect of the regulations was to create two main classes of nurses: The Qualified Registered Nurse (QRN, vide infra) and the State Registered Nurse (SRN). For both types of nurse, the register contained a number of supplementary parts for male nurses, mental nurses, sick children's nurses and so forth.[57]

In the early 1950s, it was clear to the authorities that the rate of output of nurses from the Nursing Training Schools would never be enough for the rapidly-growing health service. Consequently the apprenticeship system of training for the Qualified Registered

54.Miss Hutton was born in 1904, obtained a BA at London University, qualified in Nursing and Midwifery in London and obtained the Diploma in Nursing Education also at the University of London. Her first teaching appointment, in 1941, was at the Charing Cross Hospital. She retired in March 1958. She visited the country again in 1976 and died in 1993 at the age of 89. She was honoured with an MBE for her excellent work in Nursing Education in Ghana. Biography of Isobel M Hutton. In Memorial Service for her 25.7.1993 (Eddy Williams Ltd, Accra, 1993)
55.GCGRMSD, (1950), p. 4. See also Fact Sheet on Ghana, p. 1.
56.GCGRMSD, (1951), p. 19.
57.Maude Commission, p. 34.

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Nurses (QRN) was retained.

The Qualified Registered Nurse training was a three year course at an approved training school. Five hospitals were approved for the training. These were: Korle Bu Hospital, Kumasi General Hospital, Tamale General Hospital, Sekondi Hospital and Cape Coast Hospital. In addition, candidates could be allowed to take the examinations, who had served some apprenticeship in Mining, Mission or Private Hospitals. The syllabus for this course was laid down in the regulations and basic educational background was the Middle School Leaving Certificate.[58] From 1952 the QRN constituted over 80% of the nursing strength. Fortunately, the QRNs were judged doing excellent work in spite of their disability, from lack of opportunity, in having little general education.[59]

**Midwives**

It is a well-known truism that maternal and infant mortality, prior to,and during, the first decades of Ghana as a Colony, were exceedingly high. The first extant reference to the seriously high maternal and infant mortality appears to be in 1915.[60] Yet until 1928 there was total silence on midwives in the Colonial Medical Reports.

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58.ibid., p. 34. In an attempt to boost the nursing auxiliary personnel, by 1965, a Nursing Assistant training programme had been established and four schools in operation. These were at the government hospitals at Ho and Koforidua; and at St Patrick's Hospital at Maase, Offinso, Ashanti, and run by Catholic Sisters; and at the Tetteh Quarshie Memorial Hospital, Mampong-Akwapim, under a Board of Management. Fact Sheet on Ghana, p. 2.

59.Male nurses with the QRN, who sought to qualify for the SRN by taking the concentrated 18-month course, often withdrew because of their inability to cope with the course. Maude Commission, p. 33.

60.See Chapter 6.

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The first Maternity Hospital, built by Guggisberg at Accra, hard by the Gold Coast Hospital, was officially opened in May 1928 under the energetic leadership of Lady Medical Officer Dr Summerhayes. When the Accra Maternity Hospital was opened in 1928, it had a total of 15 beds, out-patient and consulting rooms, an isolation block, a lecture room, and a theatre. The principal duties of the staff were out-patient and in-patient work as well as the training of nurse-midwives. The Lady Medical Officer also held ante-natal clinics at Christiansborg and at the Princess Marie Loiuse Hospital Welfare Clinic. This activity was designed to link maternity work of the town with the Maternity Hospital and in order to popularise the midwifery service. In its first 10 months, the hospital had seen 3599 cases.

The training of midwives commenced as soon as the hospital opened for business. The first two government nurse-midwives were appointed in 1928, and were stationed at Christiansborg and Accra, the initial objective to introduce improved midwife practice into African homes. Cautious optimism was provided by these two midwives each delivering about two babies a month that year.[61] For what had principally hampered any earlier attempt to introduce midwifery into the colony was local prejudice against baby delivery in the then `alien' institutions such as hospitals and when Dr Summerhayes began her epic work, the Medical Department, as whole, was skeptical of its success because of the depth of this

61. GCGRMSD, (1927-28), p. 34.

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traditional prejudice.[62]

Meanwhile, as will be recalled from Chapter 6, Maternal and Child Welfare Clinics had commenced, and had begun to gain instant success. Ante-natal clinics were begun at this time at various centres. Untrained midwives were encouraged to bring to the clinics the expectant mothers who had retained their services so that the latter could be examined to ensure that conditions for unaided birth were satisfactory and that no disorders of pregnancy were present.And practical demonstrations were given to the untrained midwives whenever possible. The fact that in its first eight months, the Maternity Hospital had seen nearly 2000 expectant mothers, indicates that prejudice against such services was not as deep-rooted as thought. The provision of the facility, and the encouragement to use it, quickly popularised the maternity hospital at Accra, for between 1929 and 1930, maternal mortality at Accra fell from 9.9 to 2.9 per thousand.[63] One major step in the local training of midwives was the sending out of those who qualified to other parts of the country to open up the service in outlying stations. And a major result of this extension was the alteration in the type of admissions which began to be made at the Maternity Hospital at Accra: Antenatal clinics became the chief source of increasing number of normal cases. They also soon began to provide

62.ibid., (1928-29), p. 41.
63.ibid., (1930-31), p. 44; (1927-28), p. 34.The invaluable role played by the Gold Coast League for Maternity and Child Welfare in promoting health in pregnancy and encouraging African women to use maternity facilities has been narrated in Chapter 6.

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evidence of the high frequency of the high stillbirths,miscarriages and infant mortality in the country. The increasing ante-natal work all over the country began to flood the Maternity Hospital at Accra with complicated cases. Maternal deaths at the hosptal remained high for most fatalities were due to outside cases being brought in late after the untrained midwife had done her worst to deliver the woman. Many died within 24 hours of reaching the hospital and were in extremis on admission.[64]

The quick acceptance of the services of trained midwives by Africans caused the early need to augment the annual intake of midwifery pupils from its initial six. By about 1931,there were 12 midwives who began to be attached to various welfare centres. Antenatal work flourished and difficulties began to be experienced in coping with the numbers of women attending the clinics at Accra, Kumasi, Cape Coast and Koforidua. And various towns and villages all over the country began to make requests for midwives, requests which could not be met.[65] The second most important development in midwifery training was the opening of a residential hostel for midwives at Korle Bu in 1936.[66] This important step by government opened up opportunities for prospective midwifery pupils all over

64.Happily, whereas initially admissions were mostly abnormal cases, the increasing appreciation of the service soon began to see the admission of increasing numbers of normal cases. By 1935, women had begun to take increasing advantage of post-natal clinics, not necessarily because they were ill. Ibid, (1928-29), p. 138.

65.That year it had become quite necessary to increase the intake of pupil midwives. Ibid, (1930-31), p. 45. The Table in the Appendix shows the fairly rapid growth of the training programme.

66.ibid., (1936), pp. 4 and 89.

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the country to gain admission to the school, housed and guided under congenial supervision without anxiety of parents far away from Accra. It promoted the spread of the midwifery service to other parts of the country. That year Dr Agnes Savage, an African medical officer, became the first warden of the midwives' hostel, an important step. At the hostel, she encouraged hobbies such as gardening, production of home-grown vegetables and other similar activity. Above all her influence contributed in no small measure to the beginning of an esprit de corps, an interest in their future careers and the betterment of their people.[67]

It was on account of the extreme shortage of midwives, nurses and dispensers that DMS Dr Balfour Kirk, in the early 1940s, would rather have an accelerated training of these supporting staff and a moratorium on hospital building.

By 1952, the number of registered midwives was 362. The majority trained both as nurses and midwives and many continued to serve in this dual capacity. The government employed 176 and 93 of the remaining 186 were in practice either privately or in a few cases in the employment of native authorities. In the latter cases the midwife frequently set up a labour ward and a small number of beds in her own home or in a house provided by the native authority with provision for ante- and post-natal care. In order to encourage midwives to take up private practice in the villages the government paid a subsidy of five pounds a month together with a bonus of 10%

67.ibid., (1937), p. 92.

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a case up to a maximum of 30 cases a month. This financial inducement did not apply to midwives at Accra and other large towns. The Red Cross Society established maternity clinics in a few areas; they employed midwives with the assistance of government. The Medical Department put the maternal mortality at 18.3 in 1949. The cause of this very high mortality was clear: As the specialist in charge of the Maternity Hospital stated at the 23rd Annual Conference of the Hospital: `It is a matter of gravest concern that most-if not all- of the deaths...which represent 74% of the total could have been prevented by adequate prenatal care and skilled attention at birth. All of these cases arrived at the hospital after a trial of various native treatments or following the mal-attention of untrained midwives'.[68] This state of affairs was evident, as we have seen, even earlier, in the 1930s. The Maude Commission, in their thorough analysis, proposed an annual output of a minimum of 90 midwives; the output in the early 1950s was about 47. But as they stated, `Even if the higher rate of output could be attained...it would still mean that during the course of the next 15 years more than half a million women in childbirth would be without skilled assistance'.[69] Another grave major problem was the reluctance of midwives in the south and Ashanti to take up work in the Northern Territories, because of their having to deal with unknown languages, strange people, disagreeable food, expenses of journeys home and so on. This of course went beyond the realm of

68. Maude Commission, p. 38.
69. loc. cit.

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midwifery. The only remedy was to induce young people in the North to undergo training and qualify themselves to staff their own services; but then there was the problem of the lack of schools and the obtaining of the supply of willing girls to undertake such training. As solution the Maude Commission suggested the training of village midwives whose training would last not less than one year.[70] But the records are not clear whether or not this proposal, though accepted by government, was ever implemented.

By 1952 the training of midwives had commenced at Kumasi also, taking in some 40 pupils, and by 1960 there were additional schools at Jirapa, Mampong-Ashanti, Mpraeso and Hohoe. Jirapa and Mampong were mission-sponsored. The course lasted 2.5 years and it admitted candidates without any basic training in nursing. Significantly, the Jirapa school, stationed in the North, began to provide midwifery training for girls from the Northern part of the country. Before the establishment of the SRN nursing training college in 1945, girls with a higher educational background were encouraged to train as midwives. Consequently some of the senior nurse administrators in the 1950s and 1960s came from the ranks of those who had been midwives for considerable periods prior to taking their basic nursing training.[71] But by 1960, the situation had changed: from now on, the better educated girls first qualified as SRN, then specialised in midwifery.[72]

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70. loc. cit.
71. Fact Sheet on Ghana, p. 4.
72. loc. cit.

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In view of the crucial role of nurses (and midwives) in health services and the prolonged shortage of this category of health personnel throughout the entire history of modern medicine of this country, the reader might want to know the direction in which professional nursing has developed; and whether any degree of success was ever achieved in the strength of the nursing staff. The inauguration of the Ghana Registered Nurses Association in 1960 attests to the firm establishment of the nursing profession in the country. It became the negotiating authority for all nurses in the country. The State Registered Nurses Association and the Society of Registered Nurses Association were formed in the early 1950s; these were an inevitable consequence of the progressive development of the nursing profession, particularly after the second world war. The Ghana Registered Nurses Association was the amalgamation of the two former Associations.[73] In 1961, the Association was admitted to full membership of the International Council of Nurses.[74] In 1952, the Maude Commission considered that whether the government's plans for the development and improvement of health services stood or fell depended largely on the adequacy of the supply of nurses and other medical auxiliaries, a view reiterated again in 1960 by Dr Brachott in his report on the ten-year 1961-1970 health services programme commissioned by the government.[75] Accordingly the government embraced, practically in its entirety, the policy for

73. loc. cit.
74. loc. cit.
75. Maude Commission, p. 33.

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training and recruiting of nurses recommended by the Maude Commission.[76] The importance of the adequacy of the number of nurses in every aspect of health service arrangements was recognised by all. The considerable wastage ensured that by 1952, in spite of all the effort, it was never possible to attain the full establishment of nurses with the minimum standards of qualification.[77] That the number of SRNs qualifying from the colleges at Accra and Kumasi was insufficient to meet all requirements, was plain for all to see. Taking into consideration the total strength of nurses in government service (See the Table in Appendix) and the potential of all the government nurses, training schools and hostels for nurses, midwives, community health nurses, mental nurses and so on, Dr Brachott stated `It is obvious that with this training potential, there is no possibility of providing the basic need for nurses for the planned (1961-1970) health programme'.[78] He advocated a considerable expansion of the training facilities and a fundamental change in the professional training programme.[79]

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76. Government Statement on the Maude Commission Report., p. 4.
77. Maude Commission, p. 33.
78. Health Services in Ghana, p. 41.
79 By 1990, two main categories of nurses had emerged: The professional nurse with the SRN and the Auxiliary Nurse or second level nurse (Enrolled or Community nurse) and other nurses with university degrees. The enrolled nurse receives a two-year training. Mission medical institutions alone employ 8,126 nurses of all categories, 555 of whom are SRNs. Government alone has in its employ some 11,003 nurses of all categories of whom 3,524 are staff nurses and midwives. Between the 1950s and 1990s the population of the country rose from about 5 million to about 14 million, about 2.8 times; while the number of nurses in government employment rose from about 1300 to about 11,000, about nine times, during the same period. Without any further qualification, and there are many, the growth of the nursing personnel and profession can be said to be phenomenal. And this in the face of a very fragile economy with the propensity of plunging into frequent phases of deterioration.
80. J Samarasinghe, Remuneration of Nursing Personnel in Ghana, July 1991, p. 24.

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# Chapter 8

## COMMON EPIDEMIC AND NON-EPIDEMIC DISEASES

Having narrated the policy on public health, the development of modern medical facilities and the growth in the staff who ran the services, this chapter deals with the major diseases seen and dealt with in the country. Malaria, the most important disease in the country, is caused by sporozoa of the genus Plasmodium and characterised by fever, varying degrees of anaemia, splenic enlargement and various syndromes resulting from the pathophysiological involvement of certain organs including the brain, liver and the kidneys. Falciparum malaria is found commonly in warm moist climates; this includes most of tropical Africa, and of course Ghana. It attacks man of all ages. No race is immune but repeated infection may result in the development of some immunity, usually partial. In its transmission, the female of certain species of anopheles mosquito is the definitive host, man the intermediate host. Infection is normally transmitted to man by the bite of an infected mosquito.

Malaria exists where there are certain conditions of transmission: Presence of suitable anopheles mosquito; a resevoir of malaria infection; suitable non-immune or partly immune hosts; and an environmental temperature of between $65^0$F and $85^0$F with suitable humidity. These conditions are amply met in Ghana and the rest of West Africa. In the nosological returns of the earlier years, malaria fever in Ghana was variously reported as quotidian, tertian, quartan and irregular (also known as intermittent);

remittent; and pernicious; haemoglobinuric fever; aestivo-autumnal; blackwater.

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In the 1920s and 1930s, when medical reports were at their most comprehensive, malaria accounted for 18% and 27% respectively of infective diseases (mostly between 20% and 23%); and between 3% and 8% (mostly between 6% and 9%) of total deaths. What is clear from the figures is that in spite of all the anti-malaria measures, and these measures were at their most stringent and comprehensive in the twenties and the thirties, the incidence of the disease changed very little, if at all, from the thirties on; in the twenties, thirties and forties, malaria accounted for some 7-9% of all hospital cases; in the 1950s, the figure rose to some 15%. The overwhelming sanitation measures were directed towards the prevention of malaria (and yellow fever):These were drain construction and cleaning; organised bush clearing and obliteration of stagnant water around human habitation; lagoon drainage and reclamation works; house to house inspection for mosquito larvae; flyscreenning of water barrels and houses; anti-mosquito spraying; a most important preventive measure for Europeans, was residential and hospital segregation (dealt with in detail in Chapters 2 and 4). There shall therefore be no additional, separate narrative on malaria in this chapter. It is enough to say that malaria was always the most important cause of morbidity, intercurrent and concurrent infection of malaria nearly always a factor in all ill people. What is also clear is that lagoon reclamation and drain construction, cleaning and patency, were never adequate in

# Malaria in Ghana: 1898-1955

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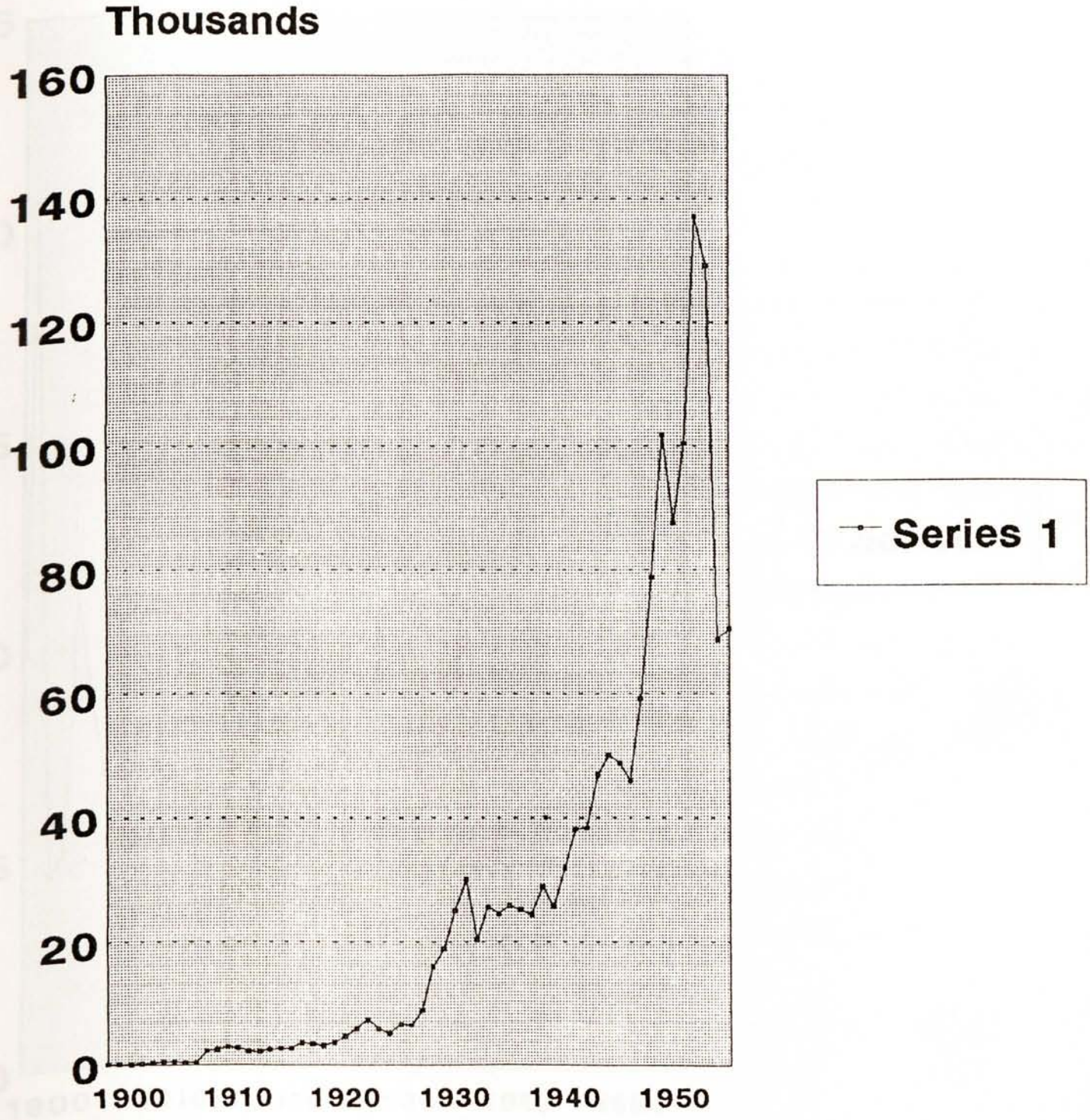
nnual Number of Cases Recorded by Government Hospitals and Clinics




igure 5

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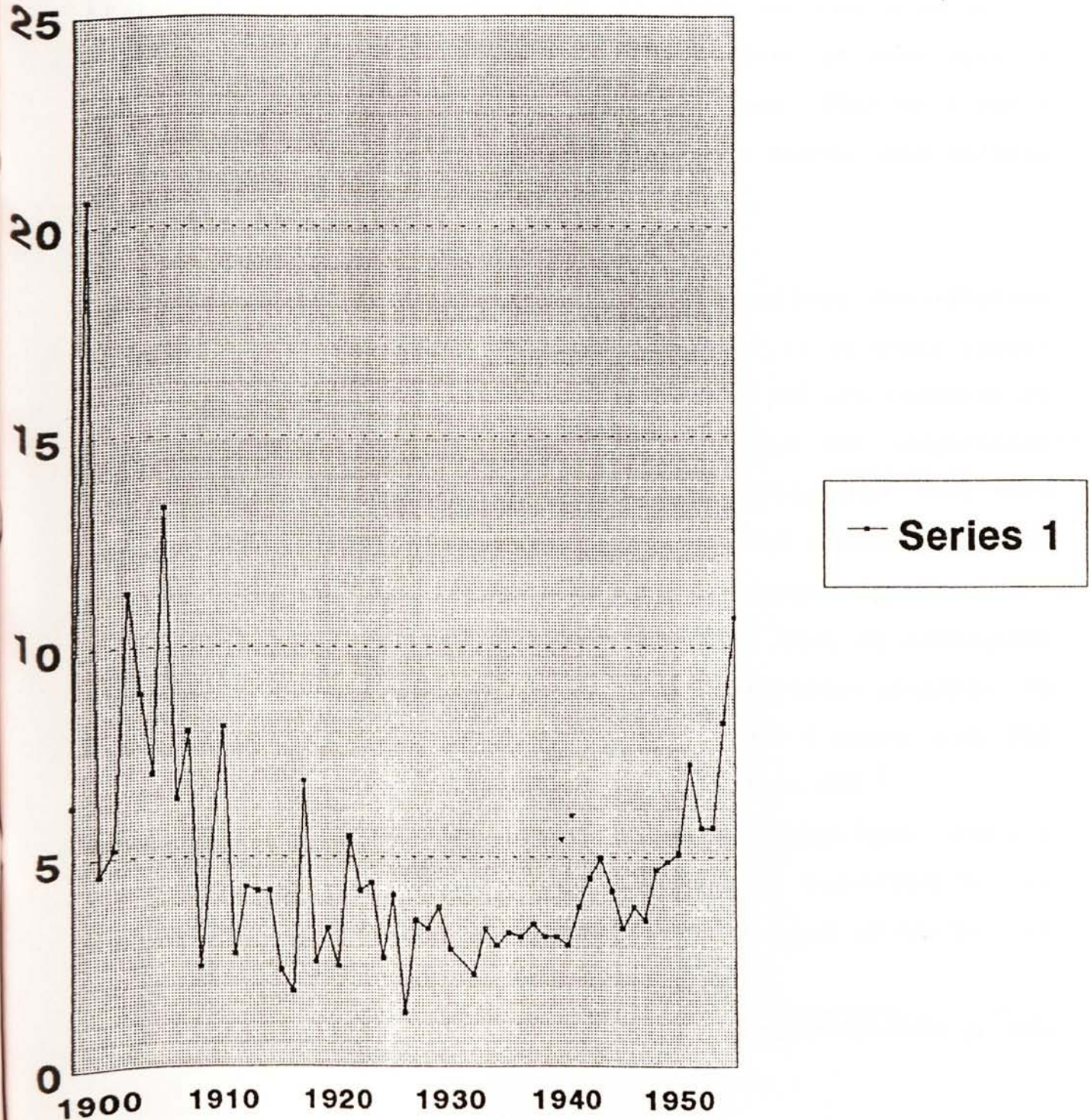
# eaths from Malaria in Ghana: 1898-1955

## Deaths as percentage of reported hospital deaths




ure 6

preventing mosquito breeding, and hence malaria infection; the principal cause was their expensive nature such as the country was never able to afford; an ancillary reason, but important, was the Africans' notorious apathy when it came to the keeping of constructed drains in working order; a bugbear of West African countries resulting from poverty and ignorance. Figures 5 and 6 show the annual number of hospital cases and deaths from malaria reported by government hospitals and clinics.

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**Smallpox**

Smallpox is a virus infection of cosmopolitan distribution commonly met in the tropics and subtropics.It is of great importance in the health of the community because of its tendency to epidemic spread. The infection occurs through the respiratory tract and it is spread by secretions and discharge from skin lesions. It is transmitted freely by infected clothing, paper, dust etc. The outcome and length of illness depends largely on the intensity of the initial virus toxicity and that of subsequent secondary infection usually caused by staphyloccocus pyogenes. In unprotected subjects, especially children under 5 years old, the prognosis is bad and mortality may be as high as 50%.[1]

Smallpox was a problem disease in Ghana and other West African territories in the 19th Century. Brackenbury referrred to its endemicity in the African population in his account of the British Military Expedition of 1874, the Ashanti War.[2]

1.A R D Adams & B G Maegraith, Clinical Tropical Diseases,(Oxford,1960), p. 338.
2.Brackenbury, The Ashanti War, pp. 308-76.

# Small Pox in Ghana: 1898-1955

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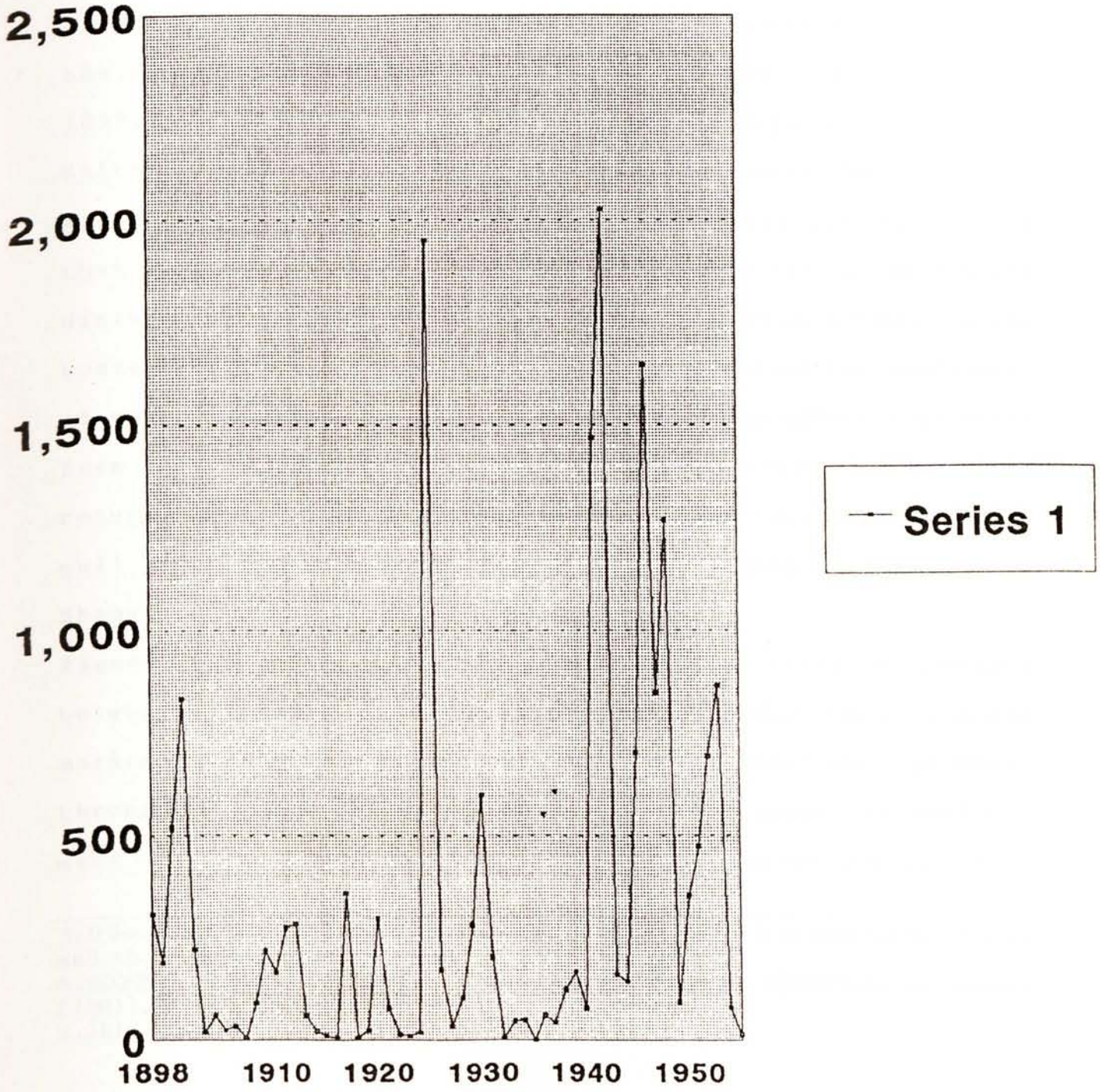
## Figure 7




Number of Annual Reported Cases

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Its endemicity in Ghana until recently is well-established fact, and in the entire West African region, and well-known to the Medical Department. But up to 1920 or so, the identified cases were localised mostly, but not exclusively, in the coastal belt.[3] This asymmetry in the recorded distribution can clearly be ascribed to the paucity of medical facilities in the interior. Thus up to 1899, cases were reported from Axim, Cape Coast,Anomabu, Saltpond,Accra and Keta, and none from the interior. That smallpox was however prevalent in the interior was demonstrated by the fact that carriers returning to Cape Coast in 1900 during the Ashanti disturbances of 1899-1900, imported smallpox from Ashanti to the coast that year.[4] The military expedition involved the employment of numerous carriers at Cape Coast for hauling military material from the coast. Many contracted smallpox in Ashanti and on their return, spread the infection along the Kumasi-Cape Coast route as well as at Cape Coast and its environs, reaching as far west as Shama.[5]

Figure 7 shows the number of annual reported cases of smallpox between 1898 and 1955. The graph demonstrates that the period was marked by a mix of frequent small outbreaks and epidemics throughout. There was not a single year that cases of smallpox were unrecorded. Between 1898 and 1920, when medical services had

3.D Scott, Epidemic Diseases in Ghana, p. 65. See Chapter 3 on medical facilities and their distribution.
4.GCGRMSD, (1900), p. 13. See also Report on Military Operations in Ashanti (1901), PRO CO 96/386.
5.ibid., p. 18.

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scarcely penetrated into the interior, the majority of cases went unreported. But as modern medical facilities spread in the colony from the mid-1910s, cases began to be reported in increasing numbers. The largest outbreaks, in which the reported cases exceeded 500 a year, occurred in 1901, 1925, 1930, 1941, 1942, 1945-1948, 1952 and 1953. In five of these years, the reported cases exceeded 1000. The first greatest outbreak occurred in 1925 when 1,948 cases were recorded.[6] But the greatest outbreak of the entire period occurred in 1942, with over two thousand cases.[7] On the basis of recorded cases, the worst decade for smallpox was 1940-1950 followed by the 1920-1930 period. The apparently best periods of relative freedom from the disease were between 1898 and 1920 (excepting the epidemics of 1900 and 1901) and between 1930 and 1940. From 1908, major outbreaks occurred in Ashanti and the Northern Territories, and thereafter, cases began to receive consistent and regular reporting from these two regions. A widespread outbreak occurred in 1910, with cases recorded in practically all provinces of the colony;the outbreak in Ashanti was particularly violent and widespread, prompting the stationing of the first Public Vaccinator of the colony in Ashanti in 1911.[8] There was relative dormancy of the disease between 1901 and 1924, but in 1924-26 a major outbreak occurred, mostly in the North and

6.ibid., (1925-26), p. 14. Between 1898 and 1920 the majority of cases in the `bush' went unreported simply because the means of identifying and reporting it did not exist.
7.ibid., (1942), p. 1.
8.ibid., (1911), p. 93.

Ashanti with 1948 reported cases.[9] Scattered over a wide area of the colony, the 1928-30 outbreak was so severe there was popular demand for vaccination.[10] The outbreak in the North was introduced from neighbouring French Territory, alerting the Medical Department to the need to coordinate their attack on the disease with French neighbours.[11] Thanks to vigorous vaccination, no major outbreak occurred in the 1930s, in spite of its rifeness in neighbouring countries, till 1941.[12]

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The distribution of the disease began to change by the mid-1930s, for it began to be largely confined to the more backward rural areas, corresponding closely with the general sanitary standard of any particular place. Rarely was it, from now on, seen in the larger urban centres.

In spite of continuing vaccination, a major outbreak began in the rural areas in 1941.[13] This recrudescence continued into 1942, particularly in the North. It affected mostly those areas where vaccination rate was low. But before it died out, sporadic cases had appeared in parts of the south and Ashanti also.[14] No large epidemic occurred again till 1946, 1948 and 1953; the massive vaccination programme had ensured that the majority of the population, by the mid-1940s, were protected against smallpox. Nevertheless, a major outbreak again began in 1950 which lasted

9.ibid., (1924-26), p. 8.
10.ibid., (1929-30), p. 28.
11.ibid., (1930-31), p 26.
12.Scott, Epidemic Disease, p. 71.
13.GCGRMSD, (1941), p. 2.
14.ibid., (1942), p. 1.

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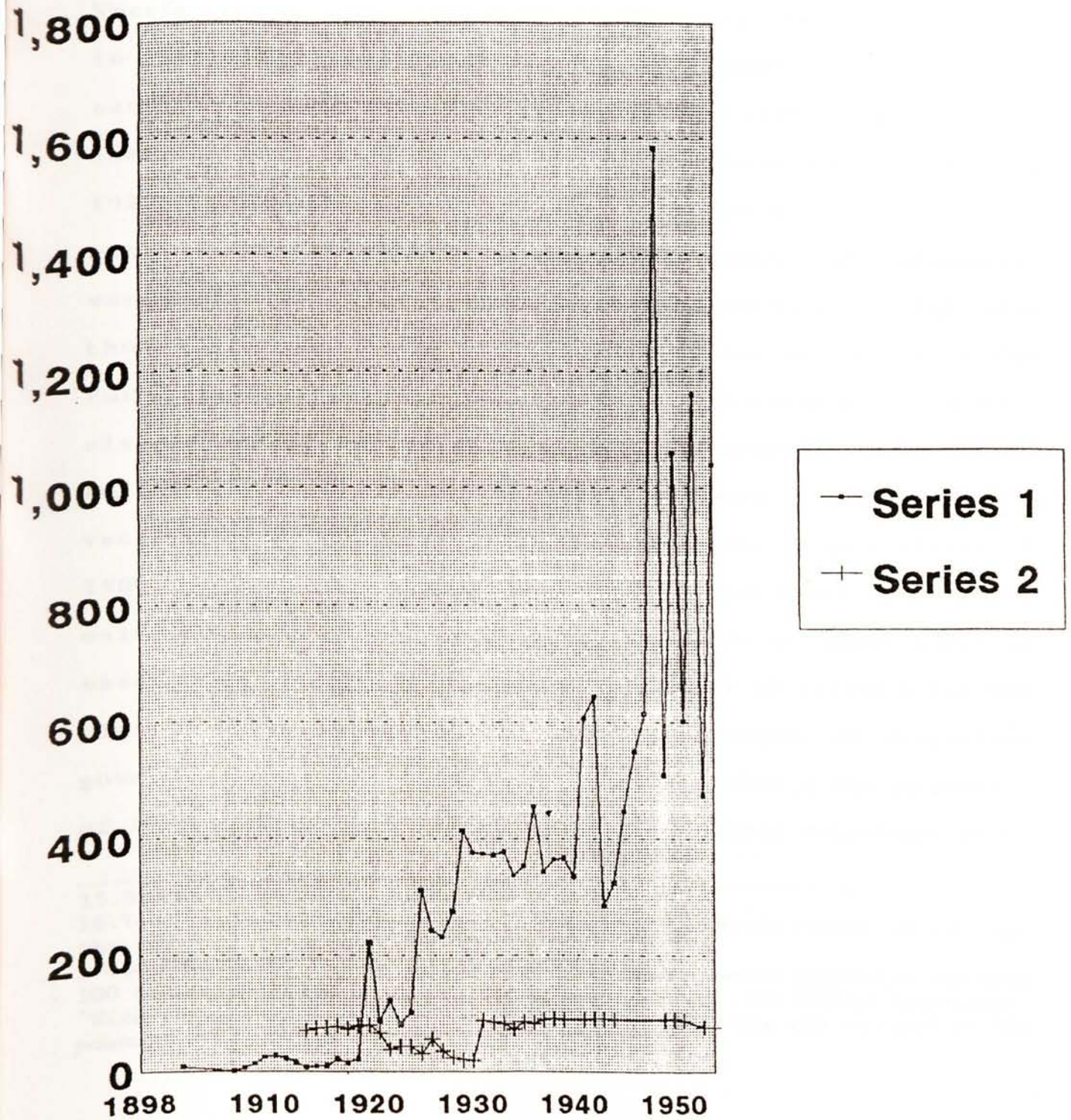
# lall Pox Vaccinations in Ghana: 1898-1955

Figure 8




es 1:Vaccination Figures in thousands Series 2:Success Rate %

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for four years. It was confined mostly to the south; the North was spared principally because of the continuous vaccination activities there of the Medical Field Units.[15]

Vaccination was the chief means of attacking smallpox. The graph in Figure 8 shows the time-course of the number of vaccinations carried out by the Medical Department between 1898 and 1955.Various comments in the reports of the Medical Department between 1910 and 1920 suggest vaccination of a limited number of people began as early as 1880. It is axiomatic that all Europeans were compulsorily vaccinated before travelling to West Africa and fair to assume that those early vaccinations in the colony were confined mainly to the European population since the records of the early years indicate clearly that seldom, if at all, did any European in the colony suffer from smallpox. As the graph in Figure 8 shows, serious vaccination only began in 1903, following the large outbreak of 1900.[16] Up to 1920, vaccinations were at a low level, because the colonial government showed great reluctance to spend money on vaccination in spite of the known endemicity of smallpox and the pleas of the Medical Department for the procurement of vaccine;the government pleaded the lack funds.[17] The smallness of the quantities of lymph imported from England forced the Medical Department into

15.Scott, Epidemic Disease, p. 73.
16.Vaccination of Africans commenced before 1900, but the records do not show the numbers vaccinated.
17.GCGRMSD, (1900), p. 18. Before 1900, the annual vote for vaccination was only 100 pounds, in spite of pleas, for an increase, by the Medical Department. 'Wiser counsel however prevailed' and in 1900, the vote was inceased to 500 pounds.

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the policy of vaccinating people only when outbreaks occurred. Moreover only the immediate contact of cases of smallpox were vaccinated.

Systematic vaccination in the colony, including house to house vaccination, commenced in Ashanti in 1911 with the appointment of the first Public Vaccinator.

Up to 1920, vaccination had been carried out by persuasion. But from 1920, it became, by law, compulsory and massive vaccination of the African population began.[18] From 1920, by means of special ordinances, it became an offence inviting prosecution, to knowingly conceal infected people; and the surveillance of and vaccinations at ports and rail terminals, often under police escort,were instituted.[19] From this date, much greater numbers began to be vaccinated.[20] By 1921, there were 13 Public Vaccinators, and vaccination campaigns widespread. Targeted in the campaign, initially, were military personnel and the police and their families, schools children and prisoners. Northern labourers, drafted for railway and mine work, were usually vaccinated at Kumasi, in their journey south.[21] The massiveness of the vaccination campaign, beginning in the early 1920s, is exemplified by the

18.ibid., (1920), p. 10. This Ordinance, enacted in 1919, came into force in 1920 when a serious outbreak occurred in Accra and its sourrounding districts. By 1948, over a million people were being vaccinated annually. ibid., (1948), p. 7. This year, a combined vaccination with French Authorities was undertaken. In 1952, the African government decided to vaccinate the entire population against small pox. See also ibid., (1952).
19.By 1920, there were still only four vaccinators in the colony and one only in Ashanti. ibid., p. 17.
20.ibid., (1920), p. 15.
21.ibid., (1921), p. 15.

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statement of the Medical Department in 1932-33 report that: `...during that year, almost everybody in the Eastern Province of the Colony was protected (by vaccination)'.[22] In 1935 alone some 10% of the people of Ghana were vaccinated. The usefulness and effectiveness of the vaccination campaign was proved: in the mid-1930s, there were very few outbreaks of smallpox in the country in spite of its rifeness in adjoining and neighbouring colonies.[23] Although by the mid-1940s, a large proportion of the people were vaccinated, the disease smouldered on, though considerably attenuated. In the late 1940s and the 1950s, the Medical Field Units played a most crucial role in the eradication of smallpox through massive vaccination.[24] But as we have seen, the critical factor in the fight against smallpox was the ready-availability of vaccine.

In the early years, apart from the financial encumbrance vaccine procurement entailed, there were other problems, mainly logistical and technical: A major one was the fact that vaccine or lymph had to be obtained from England, and transported all the way to Ghana, a journey which took several weeks. Apart from the expense, the additional delays caused by the poor communications in the country ensured rapid deterioration of the lymph in the tropical heat and low vaccination success rate.This state of affairs impelled the Medical Department to make an attempt at local manufacture of

22.ibid., (1932-33), p. 19.
23.ibid., (1935-36), p. 17.
24.See Chapter 4 for details.

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vaccine.

In 1909, Dr G E H Le Fanu (in charge of the Accra Laboratory) carried out successful experiments demonstrating that active lymph vaccine could be manufactured locally. Instruments were procured and a member of the medical staff, Dr J M O'Brien, took a special course in England to be able to undertake the work. On his return, he worked out the procedures for its manufacture on a large scale.[25] From 1911, steady and reliable supply of lymph was manufactured locally for despatch to wherever necessary at short notice.[26] This resulted in the important advantage that the short lag period between production and utilisation enhanced the effectiveness of vaccination.From 1920, and with improved communication, vaccine procurement from Britain recommenced with supplementation from French sources. But what was the attitude of Africans to smallpox and vaccination ?

Before 1900 and well into the 1920s and beyond, regular outbreaks of smallpox were a recurrent phenomenon. It was generally associated with magic and religion. Native doctors and jujumen were the repository of knowledge and providers of cure of it.[27] As usual, there was no scientific background that could have rendered effective their mode of attcking the disease. So that, more often than not, the measures they took were not only useless but often

25.GCGRMSD, (1910), p. 13.
26.ibid., (1911), p. 11. Attesting to this was the 70-80% vaccination success usually achieved. Local vaccine production was a fortunate undertaking at this time, interrupted supply by war-time conditions avoided: loc. cit.
27.GCRMSD, (1912), p. 94.

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exacerbated the problem as well as fleecing the unsuspecting sufferers of money. Furthermore Africans were extraordinarily casual about, indeed totally indifferent to, anti-contagion measures. This may be laid to a mix of ignorance and a fatalistic attitude to such a disease as smallpox.Generally speaking in the earlier years, the Africans' dislike of the idea of hospital ensured that they hid away instead of notifying their illness.[28] Additionally, and this applied particularly to the North, native doctors and Mallams attacked the problem of smallpox by applying generations-long methods: This notorious method consisted of the Mallam typically being called in in the event of an outbreak.He invited all people in the surrounding villages where the outbreak occurred and inoculated them on the wrist with pustule from a known sufferer of the disease. This achieved one thing:the disease was spread further. The Medical Department did all it could to discourage the practice but it continued well into the 1940s in the North.[29] In spite of the Vaccination Ordinance of 1920 which outlawed traditional inocultion, the Medical Department held it responsible for the continued endemicity of the disease in the North in the 1940s;[30] it was held largely responsible for the persistence of smallpox into the 1950s. However noxious the method of native inoculation though, it did prove that nothwithstanding

28.ibid., (1910), p. 51.
29.The nuisance value of native inoculators was a topic of regular comment in annual reports from the 1900s on. It was held responsible for 600 cases of smallpox with 44 deaths in the North in Yendi in 1930. Scott, Epidemic Disease, p. 84.
30.GCGRMSD, (1924-25), p. 8.

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the complete absence of the knowledge of its scientific basis, the African knew that smallpox, once it had attacked a person, and if not fatal, conferred immunity. Quite likely, some lucky ones escaped infection and acquired immunity from the African inoculators. Another feature of smallpox in the remoter villages of the country was the fact that when the disease struck, it was usually restricted to whichever community under attack. Because, such communities were isolated from the others, the local population got decimated and those who survived it acquired immunity. The next time it struck, those who had no immunity were struck down. Because of lack of communication, surrounding villages were usually spared. In the earlier years, Africans' response to vaccination was inscrutable: On occasion they flocked to be vaccinated; on other occasions, they evaded it, stampeding away, and nothing would persuade them to return.[31] Even so, by 1902, many people had recognised that vaccination was an effective answer to smallpox, and Chiefs, not infrequently, requested for public vaccinators for their villages. Even before the advent of Public Vaccinators, in the 1910s, Africans, particulary along the coast, were becoming grudgingly willing to submit to vaccination.

But by 1925, Africans, except in the North, were generally appeciative of the usefulness of vaccination and chiefs and people were in the habit of `crying out for vaccinators'. By the 1940s and 1950s, there was general African acceptance of vaccination, a

31.ibid., (1910), p. 51.

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changed attitude which enabled the Medical Field Units to virtually wipe out smallpox in the country.

## Plague

Plague is a disease of rats. Most human epidemics have originated from the epizootics of rats. It is caused by the bacillus Pasteurella pestis, identified in 1894 independently by Kitasato and Yersin. The disease occurs in two forms: As bubonic plague and primary pneumonic plague. Bubonic plague is the commoner form and not directly infective unless it develops into secondary pneumonia. Pneumonic plague on the other hand is exceedingly infective, giving rise to further pneumonic cases through inhalation of bacillus-laden droplet or the bacillus gaining entry to the lungs by other routes. Bubonic cases are always a potential source of pneumonic outbreak because some degree of secondary pneumonia occurs in bubonic plague; the sputum of such cases may contain the bacilli. The disease usually makes its first appearance as an epizootic in rats, the infection spread from animal to animal by the rat flea. As the rats die from the disease, the fleas find other hosts who may be man; where human dwellings are rat-infested there occurs opportunities for man to host the bacillus-carrying fleas. A person infected in this way develops the bubonic form of the plague. The line of transmission here is from the rat to man. The bacilli are carried along the lymphatics and infection introduced into the appropriate lymph nodes. The inguinal lymph nodes are the most frequently attacked. Fatality rate varies but death may be preceded by secondary pneumonic plague when the lungs of the person are

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invaded by bacilli. The disease may be transmitted to another person as primary pneumonic plague if that person inhales respiratory droplets containing the bacilli from another person with secondary pneumonic plague. Primary pneumonic plague is extremely dangerous because it has a high death rate, it is extremely infectious on account of the fact that the sputa of these cases are loaded with plague bacilli. Once primary plague pneumonia starts, it is spread from person to person as an airborne infection. No intermediate host is required for this. In some epidemics, bubonic plague may be supplanted by the more dramatic pneumonic, the transmission carried on from man to man without the intervention of the flea and the rat.[32]

It seems plague was introduced to West Africa for the first time during the pandemic commencing in the Far East in 1894; it began in Hong Kong that year. The earliest report of the epidemic in West Africa was at Grand Bassam in the Ivory Coast in 1899. Other areas of West Africa remained apparently free.[33] There were two epidemics of plague in Ghana; in 1908 and in 1924. In neither epidemic was the number of recorded cases high; the numbers ranged between 300 and 400 cases. But mortality rate was exceedingly high in those who caught it; it was 87% and 85% respectively in the 1908 and 1924 epidemics. Then there was a small outbreak from 1917 to 1919 which did not qualify as epidemics. Apart from these, Ghana has been free from the plague. Scott considers that the disease has not been able

32. Description based on that by H Smith in Handbook of Tropical Diseases, p. 59.
33. Scott, Epidemic Diseases, p. 2.

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to permanently establish itself in wild rodents in the country. He also considers that each outbreak was sharp, short and died out completely; that new outbreaks were fresh introductions from outside the country through the ports, not from lingering pockets of quiescence from previous outbreaks.[34]

In the 1908 epidemic, the disease made its first appearance at Accra. In early January 1908, there was rumour of a new disease in the town characterised by fever, buboes and a rapidly fatal course. The Principal Medical Officer, Dr Langley, with his two colleagues at Accra decided to take precautionary measures; in those days two medical officers were normally stationed at Accra responsible for the town and its surrounding districts. The three men decided to examine, from then on, all patients for the condition. They also asked the district commissioner to ensure that none who died in the town who might be a suspicious case was to be buried without a post mortem. The facility for post mortem work existed at only Accra at the time.[35]

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34.ibid., p. 3. In the 1908 epidemic, it was Professor Sir William Simpson who was sent out to Ghana to organise its stamping out: Ibid., (1908), p. 5. In the 1924 outbreak, Professor Simpson, again, happened to be in Ghana, but this time, he was in the country to investigate the causes of the high incidence and mortality of tuberculosis in mine workers. Another coincidence was as follows: It was while he was engaged with the 1908 outbreak that sanitary reforms for the country began to receive the serious consideration which resulted in the establishment of the Sanitary Branch of the Medical Department in 1908. Professor Simpson played a key role in this. Again it was as a result of his 1924 investigations of health in the mines of the country that led to the enactment of specific Sanitation Ordinances on mines. And in both outbreaks of plague he was on the spot to experience it and help in its eradication: Scott, Epidemic Diseases, p. 4.

35.The Accra Laboratory had been established about 1898, post mortem examinations, one of its duties. See Chapter 4 for details.

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When a case of acute pneumonia, ending fatally within two hours of admission, occurred on 5 January 1908, the two medical officers responsible for Accra together undertook an immediate post mortem examination. These two medical men had had no experience of plague. Nor had they any knowledge of plague having ever been previously reported in the colony or the rest of West Africa. They were then naturally cautious not to cause an alarm which might prove false and expensive. In their postmortem report, although keenly aware that the case might be plague, therefore, they couched their report on the organisms seen in a double negative. This was a very sensitive situation. The index of suspicion of plague remained high. The next couple of days, there were two deaths neither of which at postmortem furnished bubonic or pneumonic findings. On the 9th of January, there were two more deaths, which at postmortem demonstrated haemorrhagic inguinal adenitis and bipolar organisms. A diagnosis of plague was agreed upon and governor Roger informed. Further evidence of plague in a living case was obtained on the same day in a woman of 40 with an inguinal bubo, which when aspirated and smeared, demonstrated numerous bipolar coccobacilli. The woman died subsequently and plague was diagnosed in her at post mortem. Another source of evidence of plague was soon forthcoming: From the 5th of January, steps began to be taken to obtain dead rats in the town for examination. As it turned out, it was not until the 10th of January that the first was turned in. And that was from Government House. Smears of liver and spleen of this rat were teeming with plague bacilli. And a healthy guinea pig, fed

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with post mortem material on the 9th of January, died two days later; plague bacilli were found in its organs. Thus a confirmed outbreak of plague was made by two medical officers who had had no bacteriological training nor any previous experience of the disease. As Scott states: `How many practitioners would dare to make a diagnosis under similar circumstances today ?'.[36]

Now that word of plague was out, many cases began to be seen. By the end of the first week of April 1908, some 200 cases were identified at Accra and about half that number in the Central Province. There followed a period of quiescence and then in May-June and July ending, further but minor outbreaks occurred, with 35 and three cases respectively. The final single case was seen in mid-October 1908 at Accra.

The Medical Department began immediately to find out the origin of the epidemic. The enquiries pointed to some evidence that the disease was present some two months earlier, November 1907: That month there were six deaths in one family in James Town at Accra, all deaths in one family compound. Subsequent to this there were several similar deaths, in families, with fever and bubonic swellings the principal features of illness. The medical authorities, after the diagnosis of plague in January 1908, now recalled the fact that there had been several cases of groin adenitis, thought at the time as dracontiasis, some of which had died. It became clear that those cases of `guinea worm' might have

36.Scott, Epidemic Diseases, p. 6.

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been, not guinea worm after all, but plague. Furthermore the enquiries revealed the fact that in August-September 1907, abnormally large numbers of dead rats had been seen at Accra. Since the cases of plague being seen in January 1908 were all of the bubonic type, it was suggestive that rats with the epizootic had introduced the disease to the country through the port of Accra.[37] A study of the records shows a sustained stream of telegraphic communication on plague between the government at Accra and the Colonial Office, London. One of the first measures taken was the sending out to Ghana, of Professor William J Simpson (later to be knighted). When he arrived in the country 2 February 1908, his immediate action was to try to confine the disease to Accra and its immediate vicinity. He sought to prevent its spread by land and sea. To achieve these objectives, he threw a cordon sanitaire around Accra through which none could pass without a valid certificate of vaccination against plague. The value of inoculation with preparations of dead plague bacilli was proven and known. The cordon ran from Nungua to Nsawam and Teiman. Unfortunately, although the medical authorities were unaware of it, plague had already been transported westwards at the end of January before Professor Simpson's arrival. The cordon was tight and well-manned and nobody with the disease was known to have passed through it once it was established. Another important measure was the apprehending and hospitalisation of those ill with the disease and

37.loc. cit.

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the close surveillance of contacts. The most insanitary parts of the town were cleaned up; in particular over 200 families of the most infected parts of James Town were moved to west of the Korle Lagoon. And over 16,000 people within the town were inoculated with Haffkine's plague vaccine.[38]

Another most important step taken was the establishment of a plague laboratory in a room of the boys school in James Town, the heart of the outbreak.[39]

In this outbreak, there were 302 cases of which 258 died, giving a mortality of 85%. The disease was confined to two localities: Accra and its environs and the coastal strip between Accra and Cape Coast. There were 168 cases at Accra, most were bubonic and the mortality was 76%. There were 134 cases outside Accra with nearly 100% fatality. There were 25 cases in the villages in the Accra area and 106 in the Central Province. The cases outside Accra were mostly of the pneumonic type indicating the spread of the disease was effected by infected humans with secondary pneumonic plague. The very high mortality in the cases outside Accra provides the evidence that this was the case.

The spread of the disease from Accra westwards was effected by three men who set out at James Town at Accra intending to travel to their hometown Anomabu. They developed symptoms en route and died before reaching their destination. Some of those who attended their funerals soon developed symptoms and also died. The epidemic thus

38. loc. cit.
39. See Chapter 4 for details.

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spread westwards, some 60 people dying before news of it reached health authorities at Accra.The epidemic was arrested when a government medical team arrived, the people were moved from their homes, the village (Nyanyawu) burned and inoculation done.

The epidemic reached Anomabu in two ways: By canoe from Winneba, and by foot from Accra. At Anomabu 12 people died from it. It then spread to Biriwa, probably through funeral ceremonies, where there were 19 deaths, and so to Cape Coast. Cape Coast was the most westerly extension of the epidemic. Energetic measures could be taken here on account of the town being an adminsitrative centre and therefore possessed substantial medical facilities.

There followed a lull till the last week of May 1908 when 35 cases occurred at Accra once more. These cases spread the disease: First it was introduced from Accra to a neighbouring village; then from that village back to Accra where the disease took hold and led to the 35 new cases. All these cases were pneumonic plague with 100% mortality indicating it was spread by human and not by rats. The third outbreak of the epidemic occurred again at Accra in July involving pneumonic plague with 100% fatality; it occurred in six people of the same household. The final case occurred in October 1908.

An important pattern of the disease was that when the epidemic started in January, it was the bubonic form which prevailed. Primary pneumonic was rare. The pattern was reversed in the third to final outbreaks for all cases were primary pneumonic plague. This is explained by the fact that the first epidemic was an

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epizootic introduced by rats which resulted principally in bubonic plague. Subsequent spread of the epidemic was achieved through the respiratory mode, hence the preponderance of pneumonic plague in the latter stages of the epidemic. The maintenance of the epidemic beyond April was through human agency and activity. The vigorous anti-rat campaign at Accra ensured that the original epizootic was arrested and confined to that town and that practically all cases of bubonic plague were confined to Accra. The maintenance of the epidemic till October can be held to the conversion of the epidemic from bubonic to pneumonic. An interesting observation was the fact that in the later epidemics women victims preponderated. This was attributed to the practice that women handled the preparation of corpses for burial; in the course of their close contact with infected bodies and their inhalation of air-borne plague bacilli in the immediate environment of victims of the disease, they too caught the pneumonic form of the disease.[40]

The 1924 epidemic bore characteristics similar to that of 1908. It was introduced definitely through a port, and that port was Sekondi, the largest and busiest in the country. The epidemic began in its early stages with the bubonic form and the latter phase with the pulmonary form. Rats were definitely implicated. One difference was that the Sekondi-Kumasi railway played an important role in spreading the infection to Kumasi, where it took its toll principally among immigrants from Northern Ghana and Nigeria; these

40. Scott, Epidemic Diseases, p. 14.

# rypanosomiasis in Ghana: 1901-1960

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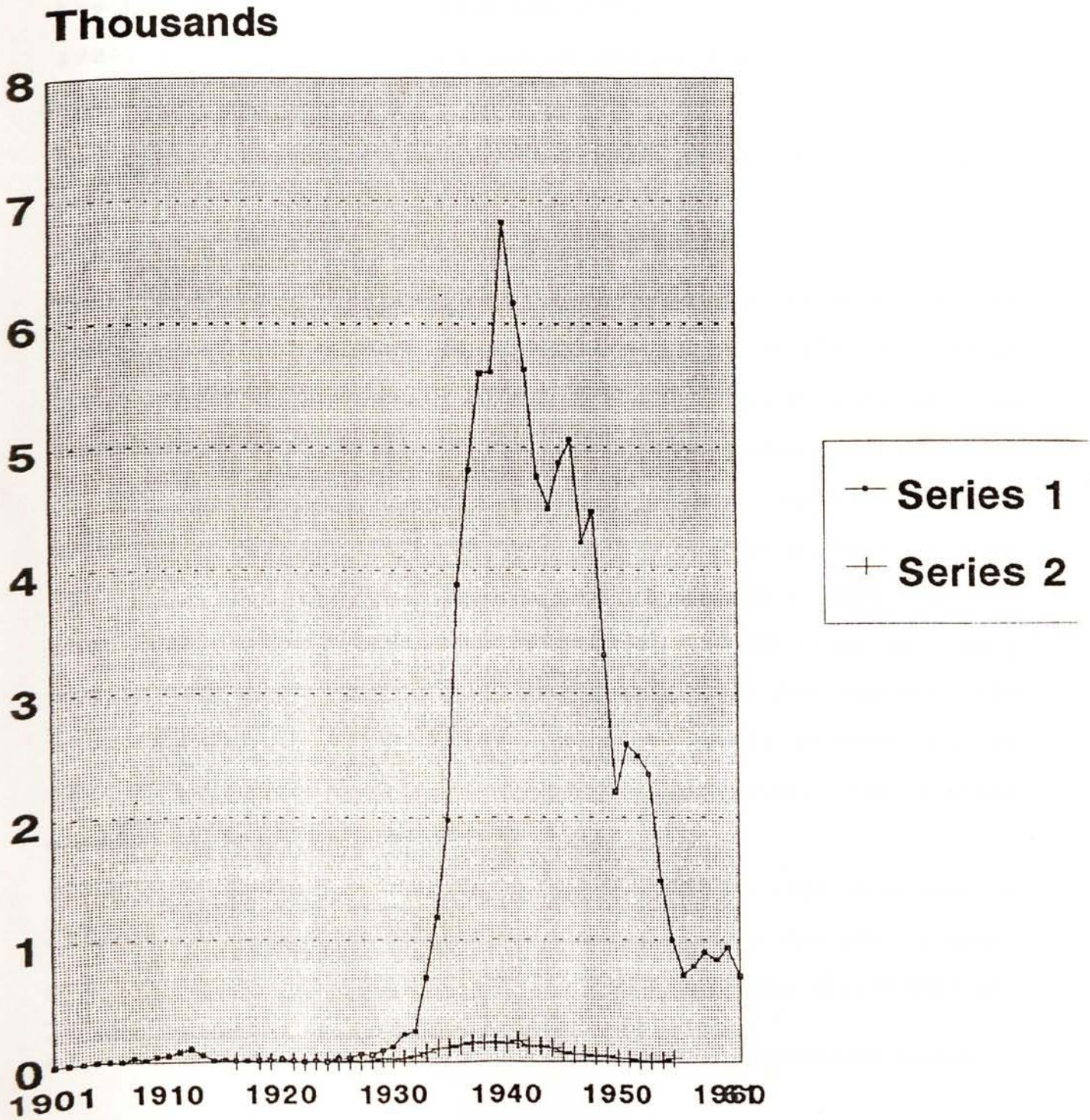
Figure 9




eries 1:Notification. Series 2:Hospital Deaths

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people lived in the most insanitary parts of the town. Rat eradication and control, easier in the 1908 outbreak because of its confinement to Accra, was much more difficult in 1924 on account of the long line of communication the authorities had to deal with in 1924. It was not until the end of the epidemic that the plague reached Accra. When the Sekondi epidemic ended in July, 122 cases had been identified with 92 deaths. There was no reported case of plague between 1924 and 1960.

**Trypanosomiasis**

This disease is also known as sleeping sickness. It describes the somnolence of a sufferer, (one of the key later manifestations) of the disease. The disease is caused by the parasite Trypanosome; in West Africa, by T.gambiense. The parasite is transmitted from man to man by the tsetse fly, the species most common in Ghana, Glossina palpalis.[41] Much has been written on the disease in Ghana and what follows is necessarily a very abridged account.Figure 9 shows that up until 1906, the number of reported cases was very small. But it was widely believed the disease was endemic, the numbers reported no indication of the true state of affairs. At this time there appeared no threat of an epidemic, the disease considered not a major health problem.[42] However,the great epidemic in Uganda caused, in 1907, a change in official opinion and attitude in Ghana. Searches for the disease and vector were started. As several cases had been discovered at

41.Adam & Maegraith, Tropical Diseases, p. 389.
42.Scott, Epidemic Disease, p. 139. See also appendix on historical review.

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Kumasi, these investigations commenced in Ashanti.[43] It was at Kumasi in 1907 that the important vector the tsetse G.palpalis was first found - and this was at the hospital compound and on the polo ground. During the course of a lecture to the African staff, Dr W M Graham, the medical officer and entomologist in charge of the search, had showed samples of tsetse and offered a reward to the first person to bring in a similar fly caught at Kumasi. Two weeks later two flies were brought in, which Dr Graham identified as G.palpalis and G.pallicera.[44] Subsequently several tsetse flies were caught on all the roads leading out of Kumasi and elsewhere, notably in the European Hospital and in the medical Officers'compound.[45] That year 34 cases of sleeping sickness were reported in the colony, practically all from Kumasi and a few from the Northern Territories.[46] The alarm which this created was focused on Ashanti and Brong-Ahafo, the towns Kumasi, Sunyani, Kintampo and Wenchi. The sharp rise in reported cases coupled with the beginnings of the uncovering of the wide distribution of the tsetse vector created rumour and fuelled apprehension. These stimulated investigation, the discovery of further cases, and false reports of epidemic outbreaks. The contraction of the disease by the medical officer at Sunyani assisted the state of alarm.[47]

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43.ibid., p. 139.
44.GCGRMSD, (1907), p. 17. That year the greatest number of cases were seen in Kumasi alone.
45.loc. cit.
46.ibid., p. 13.
47.Scott, Epidemic Diseases, p. 140.

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Figure 9 shows the dramatic increase in the number of reported cases from 1907. This is explained by the searches which began to be undertaken in 1907 and the enhanced index of suspicion for the disease this created. Although there were only 16 reported cases in 1908, further alarm was caused by the report of 60 in neighbouring German Togo.[48] The Ghana government responded to this by setting up two medical check points: at Anum and Krachi, frontier towns.[49] The objective of this step was to prevent or limit the spread of the disease to Ghana, the method used the examination of travellers and the exclusion of entry of those with the infection. On evidence from hospitals and various health outposts, the disease appeared rare in the south of the country. Its prevalence in the Northern Territories however could not be ascertained at this time because of the dearth there of health facilities and medical officers. In 1910, rumour of an outbreak in the Gonja district was investigated, the findings indicating a prevalence well below 1%. Scott stated: `Thus the true home of the disease appeared at that time to be restricted to central Ashanti and north Brong Ahafo'.[50] By 1908, the Medical Department was spending unduly large disproportion of its funds on the investigation of the disease, an investigation which at best was haphazard. Moreover it made the Department no wiser as to the behaviour trends of the disease.

48. It was said all those who contracted it in Togo died.
49. Scott, Epidemic Diseases, p. 140.
50. loc. cit. Cases were being reported from the Northern Territories as well.

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Accordingly Dr Alan Kinghorn was called in to investigate, review and report on it. Dr Kinghorn had had wide experience of the disease in East Africa, having showed, with Yorke, that G.morsitans was the transmitter of T.rhodesiense. Arriving in 1909, he spent a year in Ashanti and Brong-Ahafo on extensive survey of the infection.[51] Further extensive surveys were made in the same area and other parts of the colony by Dr Wade, Dr Beringer and others of the West African Medical Staff between 1910 and 1913.[52] These investigations and specific searches uncovered more cases of the infection.

But important too was the fact that Dr Kinghorn's finding of a low incidence of only 0.6% in 1909-1910 was confirmed by the subsequent 1910-1913 survey. These data reassurred the Medical Department an epidemic was not developing. In any case as far as the African was concerned, sleeping sickness evoked little fear. The Ashantis were saying it was a very old disease in their country and held it in no fear. Besides, they considered that the taking of blood smears, gland palpation and puncture brought much more dreaded ailments. They were superstitious about being examined.[53] It was also reassuring that the increased number of cases between 1907 and

51.Scott, ibid., p. 141. Dr Kinghorn was appointed Special Service Medical Officer for Sleeping Sickness investigation in 1909. GCGRMSD, (1910), p. 8.
52.ibid., p. 32, 38. In 1911 for instance much attention was focussed on the border town of Krachi where several MOs (Drs Keigwin, Slack and Dowdall) were on Special Sleeping Sickness Duty. ibid., (1911), p. 34. In 1910, 4000 pounds was voted for Sleeping Sickness Preventive Measures alone (a very large sum in those days). Sleeping Sickness Hospitals were opened at Anum and Kintampo. Attendance was generally poor, the `[Africans]...make light of the disease...and difficult to persuade...for treatment'. ibid., (1910), p. 47.
53.ibid., (1912), p. 8.

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1913 were the result of specific searches for the infection; and not a change in the behaviour of the disease. Field investigations were accordingly discontinued and the frontier medical check-points closed.

As a result of his investigation, Dr Wade drew attention to the fact that the disease followed trade routes and that the more remote the village from the main road, the freer from infection. This observation was important from preventive point of view. In 1911 an agreement on cooperation in sleeping sickness measures in German Togo and Ghana was reached between the British Government and the Imperial German Government.[54] On the outbreak of war in 1914, the agreement lapsed. The consequence of all these factors was the considerable decline in the number of reported cases between 1914 and 1924 as demonstrated by **Figure 9.** All reported cases continued to be practically from Ashanti and areas north of it. In spite of continued rumour of epidemic of the disease in the Gonja district of the North, no evidence of this was found.

Although suspicion of its widespread endemicity remained, interest in the disease waned until the arrival in 1924 of Dr Young, the new Director of the Medical Research Institute at Accra. Dr Young had worked at the Tsetse Research Station in Northern Nigeria and brought his interest in sleeping sickness with him.[55] The renewed interest in the disease was catalysed by the setting up of an examination post at Yeji for trypanosomal infection of cattle.

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54.ibid., (1933-34), Appendix ix, p. 100.
55.Scott, Epidemic Diseases, p. 144.

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This post, established in 1927, was operated cooperatively by the Medical Research Institute and the Veterinary Services. The Yeji post, manned by an entomologist and a pathologist, soon discovered human trypanosomiasis was also being transmitted on appreciable scale in the neighbourhood of the cattle examination post. The renewed interest in sleeping sickness fitted into the broad policy of the tackling of several other diseases at this time.

As result of the renewed interest in the disease and increased opportunities to diagnose and report it, the number of cases began to rise again from 1925 on. **Figure 9** demonstrates the new trend. As Dr Scott states: `...what had been encountered (in the North during the life of the cattle examination post) were the first signs of the great epidemic of the disease which was to involve much of the North of the country and continue for several years, but their significance was not appreciated at the time'.[56] The investigation was halted when the economic recession of the early 1930s caused the closure of the examination post at Yeji in 1931.[57] Writing in 1928, Dr Saunders and Mr Morris (later Dr Morris, entomologist) stated `We are not of the opinion that trypanosomiasis in the Gold Coast constitutes a serious or immediate danger to the stability or economic condition of the people'.[58] This view

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56. loc. cit.
57. See Chapter 4 for details.
58. GCGRMSD, (1933-34), p. 106. They said `Unlike in some sister colonies eg Nigeria, human sleeping sickness is not a problem of any magnitude in the Gold Coast': ibid., (1928-29), p. 22; and also that: `The disease on the Gold Coast is fortunately not the scourge it is in other parts of equatorial Africa and does not call for very special methods to deal with it': ibid., p. 11.

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continued to prevail in the Medical Department through 1934; though that year, for the first time the number of reported cases exceeded a thousand. By 1934 the Medical Department had some definite and important things to say about the disease: The Mamprusi district was a hyperendemic area, the Sunyani district and the centre of the forest belt of Ashanti harboured cases of the disease; cases in the south were few and considered imported from elsewhere; G.palpalis was the principal vector.[59]

Dr David Scott's study of the epidemic in Ghana indicates that it was part of a great epidemic which swept West Africa between 1912 and 1950. It was first discovered in the Congo in 1912. It progressed slowly in a general north-westerly direction, reaching Ghana in 1930, South Mamprusi the first district to be affected.[60]

The Medical Department only slowly appreciated the change in the behaviour of the disease; and that an epidemic was in the making. The tardiness in the appreciation of the epidemic and the instituting of the necessary measures of mass treatment and control are readily explained: The retrenchment of the 1930s following the economic depression with reduced medical staff had grave adverse effect on the handling of epidemics in general, of trypanosomiasis in particular. The gradual but marked rise in the number of cases diagnosed, which had begun about 1929, and had reached over 1000 cases in 1934, was attributed to the greater attention the disease was receiving and the improved standard of diagnosis and

59.ibid., (1933-34), p. 106.
60.Scott, Epidemic Diseases, p. 145.

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treatment. Moreover because the infection was mild and mortality low, the disease was not considered a menace to the country.[61] This official perception coupled with the financial difficulties of the early 1930s explain the reluctance and wariness of the Medical Department when it came to resource expenditure on trypanosomiasis.[62] Thus though trypanosomiasis was now certainly causing a great deal of anxiety, there was the fear of any significant diversion of activity to it that might cause the neglect of other important problems such as tuberculosis. After all, it was considered, trypanosomiasis was no new disease in the colony and anybody who looked for it would find it.[63]

In 1932, increased numbers of sleeping sickness cases were being reported from Bawku area. In 1933 a medical officer was sent to work in the epidemic area and a temporary field hospital was set up at Nakpaduri, where mass treatment commenced. In 1934 a second epidemic was found in the extreme North-West of the country and a treatment centre opened at Lawra. Meanwhile in Brong Ahafo and Ashanti the numbers of cases were also increasing; the disease was also gaining ground in the forest zone.[64]

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61.This important pronouncement was to be reversed the following year; the Trpanosomiasis Committee of 1935 attests to this reversal.

62.GCGRMSD, (1933-34), appendix ix, p. 107.The Medical Report of 1934 was stating: `Whilst the advisability of definite, planned anti-trypanosomiasis operations is undoubtedly a matter that allows of no argument, care must be exercised to ensure that large sums of money and numbers of personnel are not diverted from being used to deal with other vital medical and health problems of equal or much greater importance...'. Obviously Dr Selwyn-Clarke was one of those opposed to excessive attention to trypanosomiasis. The review on the subject, quoted here, was written by him.

63.ibid., (1935), p. 16.

64.ibid., (1934), p. 5.

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In 1935 the government set up a committee to discuss the apparent increase in the prevalence of trypanosomiasis. As a result of its recommendations, the Trypanosomiasis Campaign was established in January 1937.[65] The campaign continued in the 1940s and into the 1950s. During the first half of the 1950s, the prevalence of trypanosomiasis continued to decline, two small communities in Ashanti and Brong Ahafo being the only exception to the rule. But the rapid decline in the annual number of cases which was maintained for several years was abruptly halted in 1956 and replaced by a slight increase into 1957, and thereafter remained steady but small. The epidemic was halted, and trypanosomiasis virtually eliminated as a problem disease.[66]

## Influenza

Between 1880 and 1960, Ghana experienced its share of three pandemics of influenza. The first was the 1889-1892, the second the 1918, and the third the 1957 pandemic. Besides these the Medical Department reported two occasions when the number of influenza cases seen exceeded 1000: These were in the years 1935 and 1950 when 1333 and 1577 cases were recorded respectively.[67] But interestingly the Medical Department was silent on comment and the records show no deaths from influenza; total silence on influenza those two years probably reflect their mildness, as was the 1957

65.Report of the Committee on Human Trypanosomiasis, in GCGRMSD, (1935), p. 78. See Chapter 4 under M F U for details of the campaign in the 1940s and 1950s.
66.Scott, Epidemic Diseases, p. 164.
67.ibid., p. 187.

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outbreak.

In January 1892, the peak of the harmattan season, in a despatch to the Secretary of State Lord Knutsford, governor Griffith wrote:`The harmattan season has been unusually severe. There have been numerous deaths daily among the natives in different towns especially at Cape Coast and Accra who have been attacked by colds and symptoms of influenza which have proved fatal often owing to the mistaken method of treatment adopted through ignorance so much so indeed that I thought it my duty to convene and address a public meeting in the DC's Court at Accra...in company with the CMO (Dr McCarthy) and Dr Easmon warning the natives against the folly of their country treatment and resorting to the Government Medical Officers for advice, while Dr McCarthy and Dr Easmon indicated to them the necessity which existed for their abstention from the cold water bathing which was so deleterious to them and with regard to themselves, giving them general advice as to the course which they should pursue'.[68] Such was the brief reference made to Ghana's experience of the 1889 to 1892 pandemic.

This epidemic began typically towards the end of the year.Initially it was thought to be malaria. But as the epidemic developed and spread, it became clear that it was influenza. Observations on the disease were only possible along the coast. Consequently we have no idea its extent and severity in Ashanti or the Northern Territories. Nevertheless it was severe at least along the coast,

68.Griffith to Knutsford, NAG, ADM 1/2/47, Desp. No. 22 of 21.1.1892.

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especially at Cape Coast and Accra, the main centres with health facilities. The death rate was thought high on account of the Africans' mode of treatment. And govenor Griffiths appealed to the people at Accra to give way to European mode of treatment. At Accra it was observed that following one day of malaise, the African treated the fever, which usually appeared on the second day, with cold baths; on the third day he usually developed broncho-pneumonia which was again treated with cold baths. Death usually supervened the afternoon or evening of the fourth day.[69]

We can assume, on the evidence, that no part of the colony was spared, and some 4% of the population might have succumbed to it. It also can be assumed that the disease probably ran a course of about five weeks in any locality it hit, as it did in the 1918 pandemic. Its severity is undoubted. For death from it was sufficiently impressive and rapid for the Medical Department to postulate in 1912, that it might have been plague.[70]

Weather and communication are two potent means of transmission of influenza. The First World War ended in the late summer of 1918 when Germany asked for an armistice. Mass demobilisation of troops began that summer and it is thought that it was at this time that the great pandemic the world had ever seen began.[71] Soon, it is thought, the steamer began to spread the disease from Europe. Influenza struck Ghana, as it did other countries, with suddenness

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69. GCGRMSD, (1892), Quoted in GCGRMSD, (1918), p. 14.
70. ibid., (1912), p. 93.
71. A J P Taylor, The First World War, (London,1982), p. 229.

# Total Daily and Influenza Deaths in Accra 1918 Pandemic

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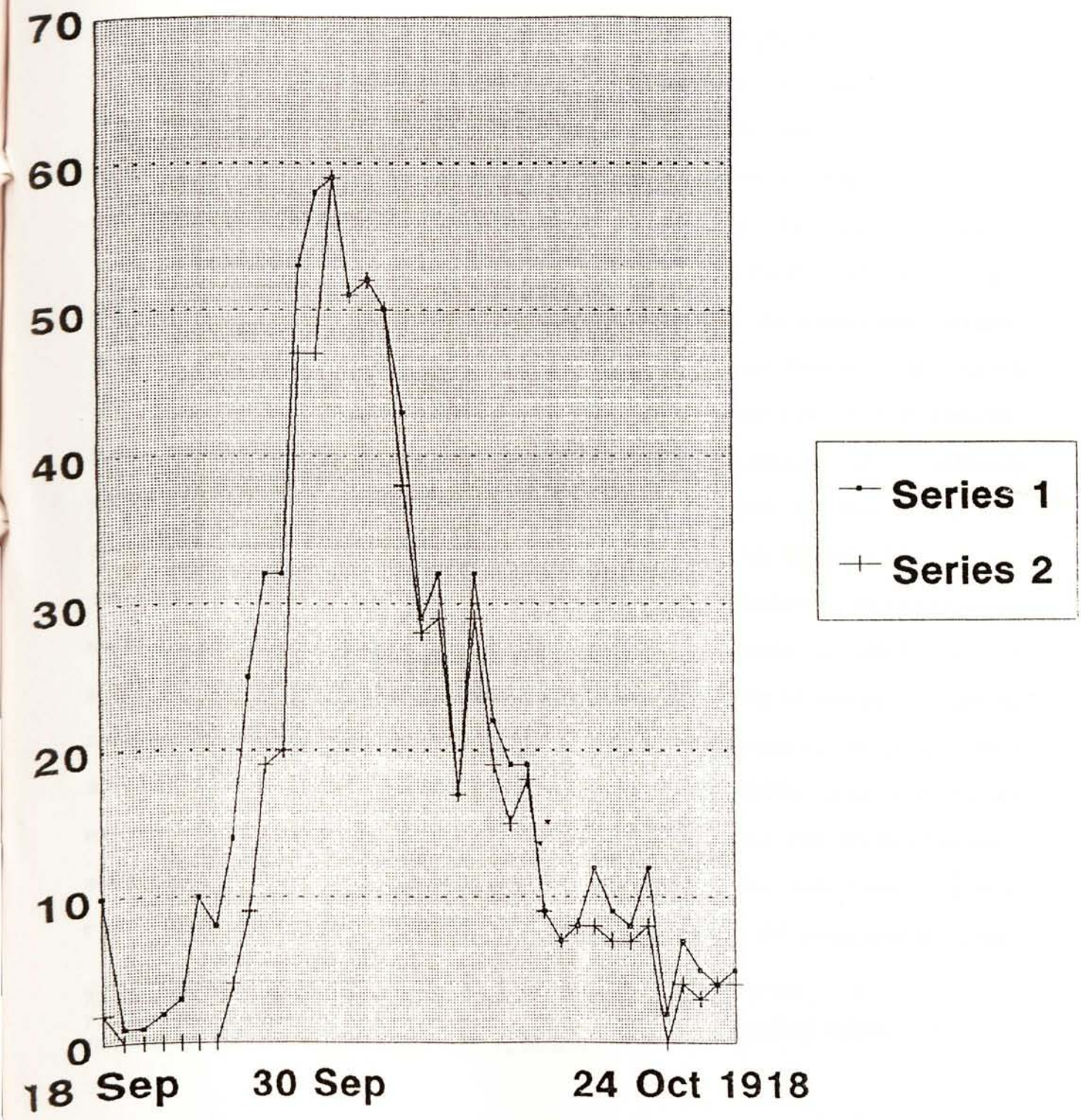
Figure 10 First death reported death in Accra 15 Sep




Series 1:Total deaths Series 2:Deaths due to Influenza

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and violence. The havoc it caused is assessable and admissible by several criteria: Over 50% of the people were infected; they suffered a debility greatly disproportionate to the length of the illness; about 4% of the population was estimated to have died within the very short period of some three to four months.[72]

The disease appeared to have been introduced into the Colony in September 1918. Within some four months it had invaded every part of the colony and subsided. In general, it ran its course in about four to five weeks in any community that it struck.[73] It is certain that the epidemic commmenced at Cape Coast and then marched inland. But it entered the country through the ports at Sekondi and Accra also. On entering the country by boat, human contact, air movement, human movement by walking or road and rail transport all combined to spread the disease.[74] Because data on cases at Accra are the most complete, these are presented in detail in Figure 10.

It was impossible to obtain figures on countrywide prevalence and mortality. However the disease in captive members of identifiable groups such as police, prisons, the military, civil service and so on, were monitored. The medical officer of health, Sekondi, for instance obtained information on government officials and firms where it achieved its maximum virulence about the end of September and slowly subsided in October and November. He reported a death rate of 4.55 percent among some 2600 employees of government and

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72. Scott, Epidemic Diseases, p. 188.
73. The Accra experience prototypifies the experience in other towns.
74. See appendix for spread of the epidemic.

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firms. Similar death rates were recorded at Kumasi, Accra, Saltpond, Tarkwa and Tamale.[75] Mortality rate was not completely uniform in the country. Whereas the estimated mortality rate for the coastal areas was bout 4%, it was estimated at 2% for Ashanti and 7% in the north-west. As explanation, these variations were conjecturally attributed to variations in weather conditions in different parts of the country.[76] If the general mortality rate was assumed at 4% and a population of 1.5 million was also assumed, then over 60,000 people died in the epidemic. In arriving at these figures, it ought to be recognised that the huge majority of people in the country lived in innumerable villages isolated from each other; such that an epidemic struck a village, decimated its population, and the next village no wiser to the disaster which had befallen its neighbour. But the universal prevalence of the disease provided the assurance that no village or town went untouched. Therefore the calculated country-wide death rate, though based as it was on the comparatively few centres for which records were established, is entirely credible.

Although a countrywide reportage was impossible at that time, the Report of the Registrar of Births and Deaths afforded useful clues on the overall death rate: The total number of deaths at all ages was 5083. This was an increase of some 1919 ( 62% ) over the same period of 1917. This information revealed that there was an

75.Scott, Epidemic Diseases, p. 189; See also GCGRMSD, (1918), p. 13. The attack rates among the closely-watched communities varied between 40 and 95%.
76.loc. cit.

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abnormal increase in the number of registered deaths during that period of 1918. The Registrar attributed the abnormality to influenza and considered that some 4% of the entire population had died from the epidemic during the months of September and October. The Registrar of Births and deaths made another interesting observation: He observed that the number of registered deaths in the immediate month of December was much less than the previous December. He explained this anomaly on the supposition that those who might have died in the normal course of things in December 1918, died earlier in September-October and that the population in December, anyway, was about 96% normal because of deaths from influenza.[77] Furthermore it was observed that many cases of pulmonary tuberculosis were eliminated: they succumbed when they were struck by the pulmonary form of influenza. The mortality case-rate was moderately higher in the European population than in the African. This was ascribed by some to the longer tour of service European officials rendered that year because of the war. This explanation was rejected when tour lengths of several Europeans were matched with European case-mortality and severity of attack.[78] What were the social and political fallouts of the epidemic ? Scott states: `The effect of the epidemic was dramatic'.[79] Within a week to ten days of the first case being reported, a town or village presented a changed appearance: Funeral processions were

77.loc. cit.
78.loc. cit.
79.Scott, Epidemic Diseases, p. 191.

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endless; hardly any household escaped bereavement. Shops were closed, markets normally the hub of African activity, emptied and remained empty till the epidemic was over. Streets were deserted and towns presented a ghost apearance. General depression characterised and replaced the normal African gregarious and noisy disposition.[80] The lay press attacked the government, blaming the Medical Department for unpreparedness and tardiness in its response to this medical disaster.[81] The government was accused of callousness and denounced for the shortage of doctors and its lack of interest in the African population. Governor Clifford and Principal Medical Officer Dr Rice had to defend the hard work the Medical Department was doing in the face of the small staff at the Department's disposal.[82]

Various measures were suggested and instituted to alleviate the problem. The government was at a loss as to what policy to adopt to control the epidemic; but so it was in the rest of the world. Quarantine was tried and, as expected, failed. There was little hope anyway that it would work. Although the smallness of the number of medical officers available was criticised by some, there was little they could have done: the much-vaunted modern medicine had little to offer. The cause was unknown, there was no known cure and it did not know how to stop the epidemic. An exhausted doctor

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80. GCGRMSD, (1918), p. 7 for Koforidua and p. 9 for Saltpond.
81. ibid., (1918), p. 15.
82. Casely-Hayford, in the Legislative Council, blamed the difficulty in handling the disaster on the government's reluctance to admit African Medical men into the government medical service and its failure to train African medical men.

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could only simply advise a desperate administrator to tell people to avoid influenza victims and stay out of their houses, sick people to stay inside their homes, kept quiet and warm and take cough medicines. The staff of the medical department was small in doctors, nurses,dispensers and other auxiliary staff. Most patients could perforce only get the most cursory medical attention, if they ever got near a hospital, which at that time were very few: One medical officer saw 130 patients in one morning. Another tried to cover three northern districts at once. African medical men in private practice, possibly in revenge for their exclusion from the Medical Department, demurred when asked to assist in handling the enormous numbers of patients: Some pleaded family commitments and others pressing business, some made it plain there was too much money to be made at this time where they practised (in the large centres as Accra).[83] African traditional healers and quacks had, what amounted to, a field day: They played on ignorance and fear of the people: a local entrepreneur invented and marketed a curative powder to be administered with liquor. Herb-pepper was used as remedy and a native castor oil and a pain killer made from root, camphor and schnapps made their rounds.[84]

It was clear to higher authorities that the epidemic could not be halted by human action and that it would have to run its natural course. And so it proved. For within 4-5 weeks of its appearance in

83.Patterson, `Influenza', Unpublished paper, 1993.
84.loc. cit.

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a community, influenza had subsided.[85] Perhaps the government should have done more to educate the public but the primitive nature of communication, the mass illiteracy and the smallness of the medical establishment would have, anyway, rendered such effort nugatory.[86] The epidemic caused untold personal suffering and disruption of all forms of activity. The measure of the disaster at the personal level is evident from a hymn composed and published by an African in which he portrayed man's helplessness: It was all an act of God and only He could stay the hand of death.[87] The 1957 epidemic was said to have begun in the East (Asia) and the disease became known as the Asian Influenza. It was a much less virulent form than previously recognised pandemics. In 1957 the epidemic swept across the world. There were thousands of cases in Ghana. Unfortunately there seems to be no extant record on it.[88] What is clear though was that it was relatively mild. The author of this thesis himself, a first year medical student in 1957, was struck in the month of August prior to his departure to his medical studies. He also was witness to the death of a middle-aged man who caught the disease at Sekondi. The author also can say that at Sekondi fatalities must have been rare as he was in a position to have heard or noticed it if many people had succumbed to it. A remarkable feature of it was

85.See Figure 10 on the appearance and disappearance of influenza at Accra, typical of this.
86.African embracement of modern medicine, though developing, had yet to take firm root.
87.GCGRMSD, (1918), p. 15.
88.Scott dealt with this disease in one paragraph in his book on Epidemic Diseases in Ghana p. 192.

# enereal Diseases in Ghana:1898-1955

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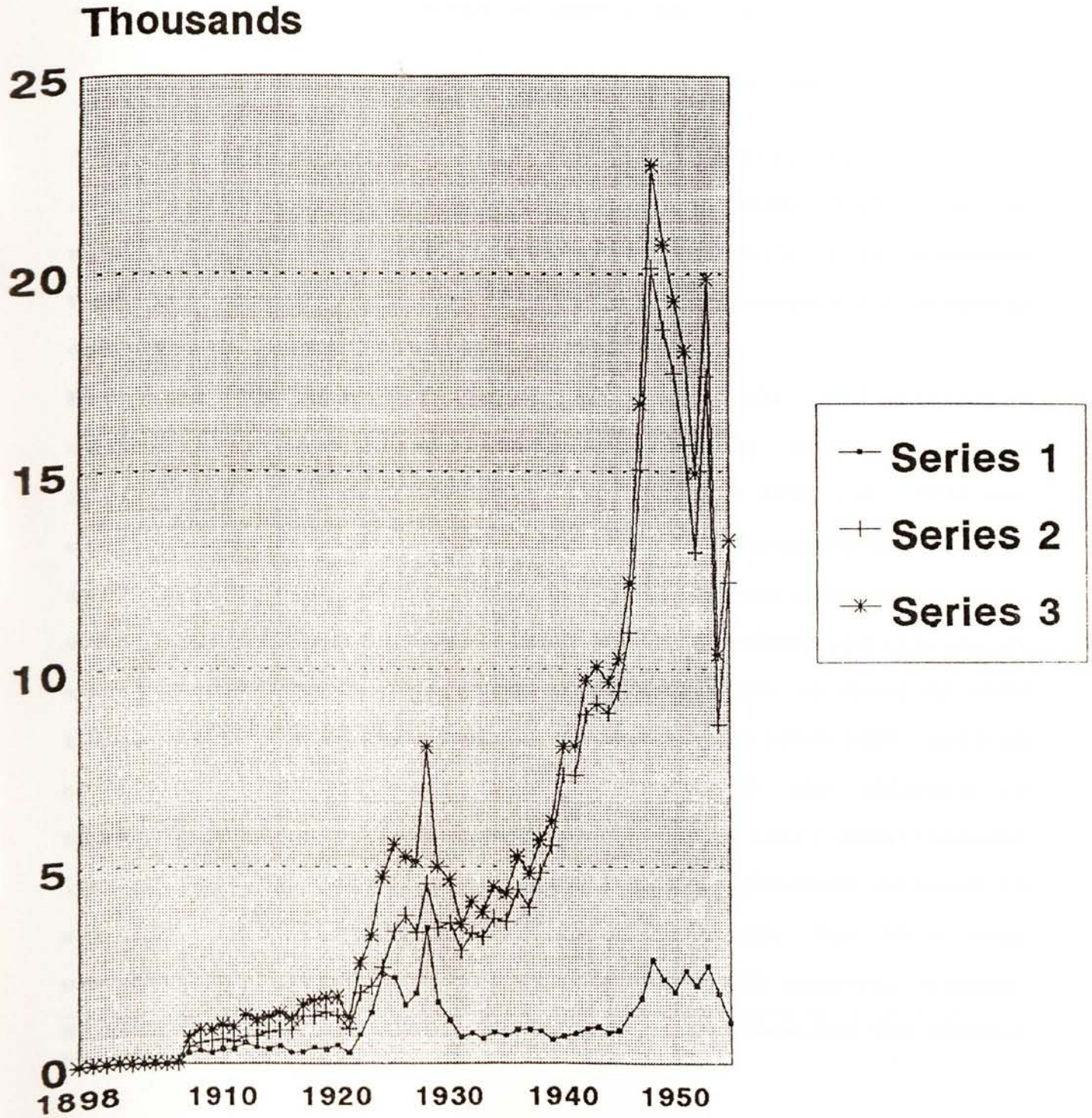
Figure 11




ries 1:Syphilis Series 2:Gonorrhoea Series 3:Total VD

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the flood of people who sought medical assistance at hospitals and clinics. But those new marvels of modern medicine,antibiotics,could do nothing to alter the course of the epidemic. The epidemic burned itself out within five weeks of appearing.

### Venereal Diseases: Syphilis and Gonorrhoea

Syphilis and gonorrhoea are venereal diseases. Syphilis is a specific disease acquired from inoculation through the skin, mucous membranes or the foetal placenta with the spirochaete Treponema Pallidum. Gonorrhoea, the most commonly encountered venereal disease, is caused by Neisseria gonorrhoeae.

Figure 11 shows that up to approximately 1906 the total number of cases of venereal diseases recorded annually did not exceed 100.The average annual recorded cases between 1898 and 1906 was only 33. And of this annual total, 21 were gonorrhoea and 12 syphilis. The case incidence was 1.4% and the case:population ratio vanishing low. These figures give the misleading impresssion of venereal diseases being practically non-existent in Ghana at this time. But this was far from the truth. Between 1880-1907, medical officers were anxiously reporting regularly the rifeness of syphilis and gonorrhoea and the devastation of their complications in the Keta district.[89] To be sure venereal diseases existed in similar prevalence elsewhere in the colony. But they went unreported for reasons evident in this work. That venereal disease

89.GCGRMSD, (1900), p. 14. The Medical Officer at Keta described that district as `saturated with syphilis'.

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was undoubtedly prevalent in the Colony and Ashanti, `to an extent inadequately represented by hospital statistics' was recognised early by the Medical Department.[90] By the early 1910s, its progressive dissemination was being assisted by the `...increasing facilities for travelling, and the cosmopolitan character of the large towns and industrial centres, Kumasi a representative of such a trend. Dr A J R O'Brien, Medical Officer of Health, Kumasi, stated in 1914 that the high and alarming prevalence of gonorrhoea in villages outside Kumasi induced a native chief to appeal for legislation as a means of dealing with its spread. In Kumasi itself, Dr O'Brien quoted Dr C V Le Fanu as writing "I am not overstating the facts when I say that almost every male adult over 20 suffers from gonorrhoea. I might say the same of female adults" ...'.[91] Part of the explanation for the high prevalence of venereal disease in Kumasi lay in the fact that it was a large garrison town and was being rapidly `civilised'.

The changed policy on reporting showed a significant increase in the number of cases seen annually after 1906 and in 1922 when a second surge in cases began to occur. Thus between 1906 and 1922, the total annual average was 1204 compared with 33 of the previous decade, an increase of over 3000 per cent. This increase was almost solely the result of more vigorous and faithful reporting and the increasing use of health facilities by Africans rather than to an increase in prevalence, though the latter certainly made its

90.ibid., (1914), p. 39.
91.loc. cit.

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important contribution. It advanced further in the 1920s. Movement of migrant labour no doubt assisted in its spread. In spite of the increase in the number of reported cases, the diseases were not a major health problem in the colony.[92]

But venereal diseases were sufficiently important in terms of their socio-economic implications and medical complications to stimulate special attention of the Medical Department which was showing increasing concern with its apparent increased prevalence and was hoping to investigate this problem. But the records do not say whether it was investigated any further. Dr C E Reindorf, after receiving specialised training in venereology in the UK at his own expense, joined the Medical Department as a Temporary Medical Officer in 1920.[93] In February 1921 he commenced a special venereal diseases clinic at the African hospital at Accra. The clinic also handled cases of yaws until 1928 when a separate yaws clinic was begun at the Korle Bu Hospital by Dr Albert Hawe.[94] The Medical Department launched a propaganda campaign on venereal diseases in 1922-23 under the direction of Dr Reindorf. Information on venereal diseases was presented to the public in the form of

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92.The case incidence between 1906 and 1922 was only some 2% and the cases:population ratio vanishingly low at less than 0.05%. In 1921 some 2.5% of the population was receiving medical attention for all diseases in Government hospitals and dispensaries: Only 0.05% were due to venereal diseases.

93.See Chapter 5.

94.Dr Reindorf stated in 1958 ` I took this decision (to include yaws among diseases to be treated at the Venereal Disease Clinic) in the teeth of the most vigorous opposition both within the service and outside it'. In the Ghanaian, No.1, July 1958, p. 40. See also GCGRMSD, (1928-29), p. 133. This clinic was entirely free. Dr Hawe investigated the relative effectiveness of arsenicals and bisthmus preparations at this clinic.

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venereal diseases as a whole since, the case incidence and the proportion of the population reported as suffering from venereal diseases, were so small.

A slight increase in syphilis cases occurred between 1944 and 1950 but began to decline again subsequently. But by then syphilis accounted for only some 10% of all cases of venereal diseases. The history of gonorrhoea showed a different turn. From 1922, apart from a short period of stabilisation between 1927 and 1931, the number of cases of this disease increased relentlessly up to 1946 when the number of reported cases began to decline. The increasing numbers was caused by the continued educational propaganda which stimulated the public awareness of it, coupled with the increased availability of facilities for its treatment, and confidence of the people in the drugs of treatment. Female patients, who ealier largely stayed away from the clinic for social reasons, began to use it increasingly.[97] Moreover opportunities for treatment were increasing as health services reached more people. Ports are major foci of venereal diseases and Takoradi was no exception. In the 1940s seamen with venereal diseases had access to treatment at Takoradi hospital and in 1949, their treatment was transferred to the Harbour Clinic.[98] The same year a Venereologist was appointed and stationed at Sekondi-Takoradi and a special Venereal Disease Clinic opened at Sekondi. The Venereologist introduced the

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97.loc. cit.
98.GCGRMSD, (1949), p. 8.
98.GCGRMSD, (1949), p. 8.

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treatment for yaws and schistosomiasis along with venereal diseases to popularise the clinic.[99]

By and large it can be said that the North was largely free from venereal diaseases, particularly syphilis, until the late 1920s when returning Northerners, who emigrating south in search of work, acquired the disease and spread it.[100]

In spite of these positive trends, a major clinical problem began to be seen with increasing frequency from about 1925 on:By and large the African usually reported for treatment when such complication of gonorrhoea as urethral stricture (in males), arthritis and various forms of morbidity (in females) had already established themselves. Late reporting accounted for this and remained a major problem, in spite of the educational propaganda.[101] An important change occurred in the proportionality between gonorrhoea and syphilis constituting venereal diaseases.In 1901, 1911, 1921, 1931, 1941, and 1951, syphilis accounted for 64, 40, 23, 19, 9.3, and 13 per cent respectively of all cases of venereal diseases recorded. The decrease in the proportions due to syphilis over the years (or the converse) is accounted for largely by two factors: Better and more accurate diagnostic facilities,

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99.loc. cit.

100.This statement is based on an examination of the records for the entire period and the observation of the singular pausity of cases reported from the North. See also GCGRMSD, (1938), p. 8.

101.Late reporting was a universal phenomenon amongst Africans in general and in this even venereal diseases were not exempted. Often the African would alternate native therapy with hospital treatment. Before long, complications supervened. This practice was sufficiently frequent and frustrating to the Medical Officer of Keta, in the early 1900s, to state it in his report.

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clinical and laboratory, and gonorrhoea and syphilis were being diagnosed with increasingly greater precision. The second factor was a real reduction in the number of cases of syphilis due to the venereal disease campaign, its vigorous treatment and a correspondingly real increase in the number of gonorrhoeal cases: sexual promiscuity engendered by a more fluid population, particularly in the growing urban areas enhanced the diffusion of these sexually-transmitted diseases, gonorrhoea in particular.

The increasing use of the sulphanilamide group of drugs from the late 1930s, and the increasing availability of penicillin from the late 1940s helped popularise treatment for gonorrhoea and syphilis throughout the country. But these new drugs introduced their own problems: In regard to gonorrhoea, strains of the gonoccocus resistant to sulphonamides and penicillin began to be seen as early as 1945.[102] More common in the large towns, it occurred mostly among the better class Africans who could afford private medical care.[103] The progressively easy availability of sulphonamides and penicillin popularised self-treatment, helped along by druggists. Indeed this may, at least in part, account for the decline in the number of hospital cases from 1949 on.

**Helminthic Infections**

We consider here the two major helminthic infections: Ankylostomiasis and Dracontiasis (guinea worm). Ghana, like all West African countries, possesses all the conditions which encourage

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102. GCGRMSD, (1945), p 8.
103. loc. cit.

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helminthic infections: Illiteracy and ignorance; poor sanitation and hygiene; poor drinking water; methods of agriculture which rendered farmers susceptible to infection. It is important to note also that during the early colonial years, little was said of helminthic diseases. The records show only few cases.[104]

**Ankylostomiasis**

This disease was first recorded in 1905.[105] The cases recorded between 1905 and 1955 are shown in Table 15 below:

Table 15

Reported cases of ankylostomiasis 1905-1955

| Year | Number of Cases | Reference |
|---|---|---|
| 1905 | 2 | GCGRMSD, 1905. |
| 1915 | 5 | ibid, 1915. |
| 1925 | 184 | ibid, 1925. |
| 1935 | 368 | ibid, 1935. |
| 1945 | 1983 | ibid, 1945. |
| 1955 | 4346 | ibid, 1955. |

Table 15 only demonstrates the general trend. They say nothing of the rifeness of the disease in the community, a known fact. They, very grossly, underestimate its prevalence. They show that as medical facilities became more widespread, so the number of cases increased in parallel with the general increase in the number of Africans treated by the Medical Department.

The importance of hook worm, among helminthial infections, lay in the experience that, it was one the greatest contributors to morbidity; this point was emphasised by Sir William Simpson who, in

104. See Chapter 2 on Colonial Medical Policy.
105. GCGRMSD, (1905), p. 21.

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1925, investigated the problem of tuberculosis among mine workers.[106] An examination of the records indicates also that practically all deaths from helminthiases were caused by hookworm infestation.[107]

Real interest in hookworm can be dated to the early 1910s. The 1909-1914 hookworm campaigns in the southern US helped stimulate interest in the disease in Ghana.[108] In 1908, a Basel Mission doctor noted it was common at Aburi.[109] The reporting on surveys of prisoners and hospital patients carried out between 1911 and 1913, showing prevalence between 4% and 13%, prompted the Colonial Office's demand for further information on it. Gold mine workers were those principally investigated. It was concluded hookworm was not a serious problem. In his investigation of the disease in Akwapim in 1914, Dr G H Le Fanu concluded that the only solution to it was improved sanitation. He emphasised that the African habit of promiscuous defoecation ensured the perpetuation of re-infection.[110]

Apart from Le Fanu's investigation, little was subsequently done to obtain accurate data on the disease, although a request was made by the Colonial Office for this about 1920.[111] When Sir William Simpson investigated the problem of tuberculosis among mine

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106.See under Tuberculosis below.
107.This is evident from a study of the nosological returns of the entire period 1898-1955.
108.Patterson, Health in Colonial Ghana, p. 58.
109.GCGRMSD, (1908).
110.ibid., (1913).
111.ibid., (1921), p. 17.

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workers in 1923, he pointed out the contribution of hookworm infestation to the general health of mine workers. His various recommendation contributed importantly to the reduction of the prevalence of hookworm among mine workers. Overall, therapeutic measures certainly have made no impact on the incidence of the disease. What has helped has been the increasing availablity of good water, improved sanitation and improved habits of hygiene and general living conditions.

**Dracontiasis**

Guinea worm has, for centuries, been a well-known helminthic infection in West Africa. It was one of the principal diseases noted during Bowdich's mission to Ashanti in 1817.[112] During the visit of the Anglo-French Boundary Commission to Ghana and the Ivory Coast, Dr J G Forbes the commission's medical officer, observed how common it was and how the African mode of treatment was no more inferior to that of European doctors.[113] It was one of the principal diseases dealt with at the colonial hospitals at Accra, Keta, Akuse in 1899.[114] In 1900, about 15% of all cases seen at Keta hospital were guinea worm.[115] Reporting on it in the Gold Coast Medical and Sanitary Report of 1907 (and at the general Meeting of the British Medical Association in the Tropical Section) Dr W M Graham considered the disease of great economic importance

112.Bowdich, Mission, pp. 370-80.
113.Forbes, `Native methods of treatment', pp. 361-97.
114.GCGRMSD, (1899), p. 259-60.
115.ibid., (1900), p. 14.

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in the the country because it was the greatest cause of annual admissions to the sick list in the various African services maintained by the colony.[116] It was widespread in the entire colony, conditions for infection being ideal. Between 1900 and 1910 reporting on guineaworm was sketchy but consistent; Axim, Tarkwa, Cape Coast, Accra, Akuse and Keta reported it regularly in the annual reports on hospitals in these towns. It can be said that between 1900 and 1910, guinea worm and other helminthic infections constituted a very significant fraction of cases seen in every hospital and dispensary and all the towns concerned had the common characteristic of poor sanitation and poor water supply. Consequently prior to 1914 when piped water was introduced at Accra, it was very common in this town. After 1914, the disease began to be eliminated in the town. It was almost universal in the North. In the larger towns, the construction of deep wells was encouraged, and efforts made to protect them from surface pollution. But attempts to eliminate cyclops with chlorinated lime and DDT failed.

Routine surveys of guinea worm were carried very occassionally. A 1955 survey showed that the overall incidence was not high but in certain parts of the country there were villages or groups of villages where infection varied from 10 to 20%.As late as 1955, it was estimated that in the Northern Territories, guineaworm completely disabled some 10,000 adults during the farming season

116.ibid., (1907), p. 25.

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every year; and another 90,000 partially out of a population of 800,000 people.[117] It was for long realised that cooperation between various departments together with health education could do much to eradicate it. Till 1960, guineaworm remained a major rural health problem because preventive measures were insufficiently vigorous, extensive and sustained.

### Yaws

Yaws (also known as Framboesia) is a disease caused by Treponema pertenue, a motile spirochaete.Yaws is usually classified as primary, secondary and tertiary.Goundou and gangosa are extreme forms of tertiary yaws. Once contracted, yaws offers at least partial immunity.[118]

The disease is unevenly distributed within the tropics. The organism is spread chiefly by direct contact with an infective human case. It is commoner in rural districts than in towns and cities. It is most common in sparsely clothed and insanitary agricultural communities, such conditions encouraging transmission by contact. These features suggest the disease has been rife in Ghana for centuries; the environment was very fertile for the establishment of yaws. In one of the earliest references to yaws in Ghana, the Bowdich Mission's Dr Tedlie listed it and its complications as one of the commonest diseases he came across there.[119]

To be sure, as early as 1900, yaws was recognised by the

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117.ibid., (1955), p. 22.
118.Adam and Maegraith, Tropical Diseases, p. 511.
119.See Chapter 1 for details.

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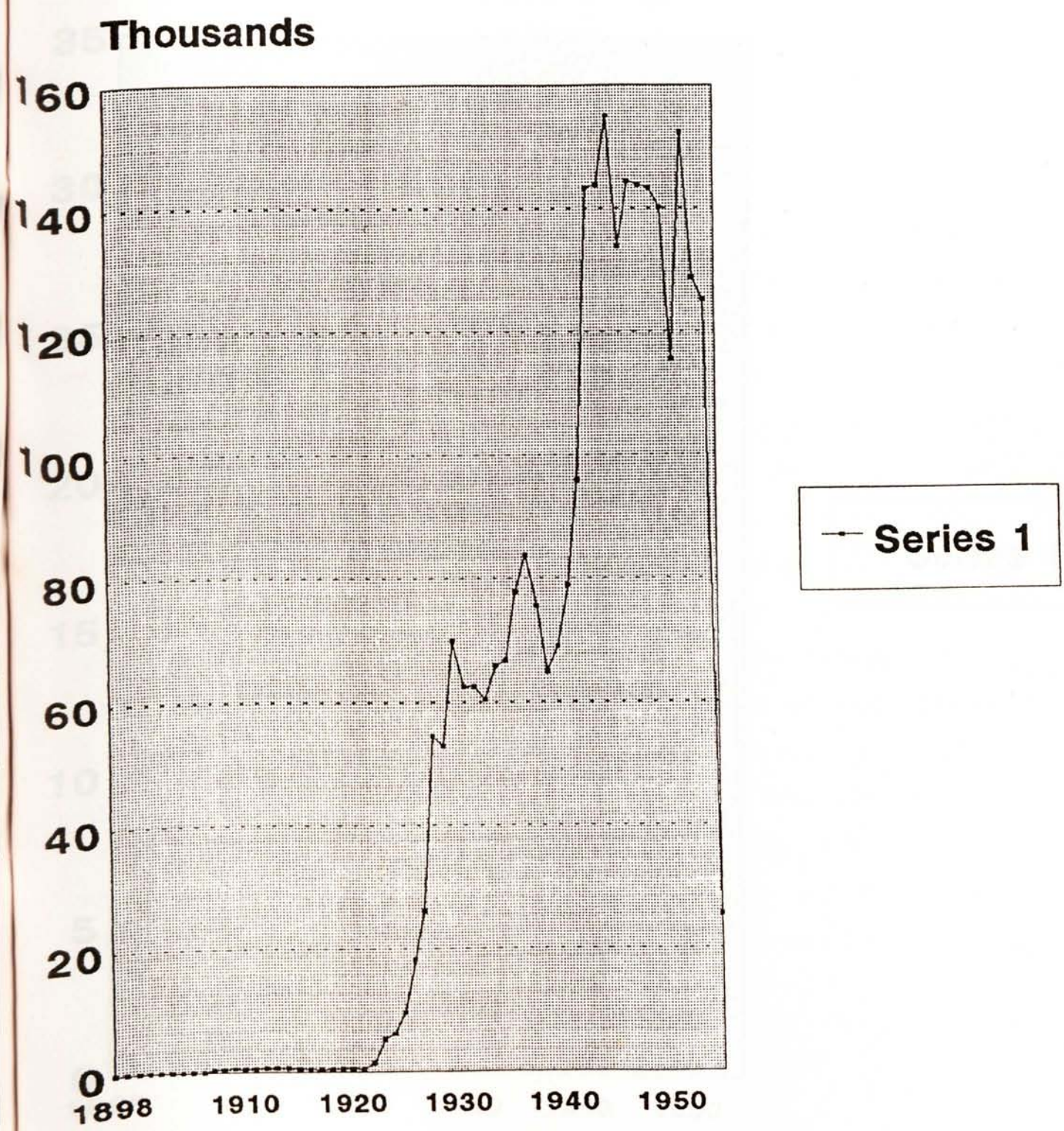
ws in Ghana 1898-1955: Number of Cases Seen Annually

Figure 12




tice vanishing small numbers prior to 1920

# ase Incidence of Yaws in Ghana 1898-1955

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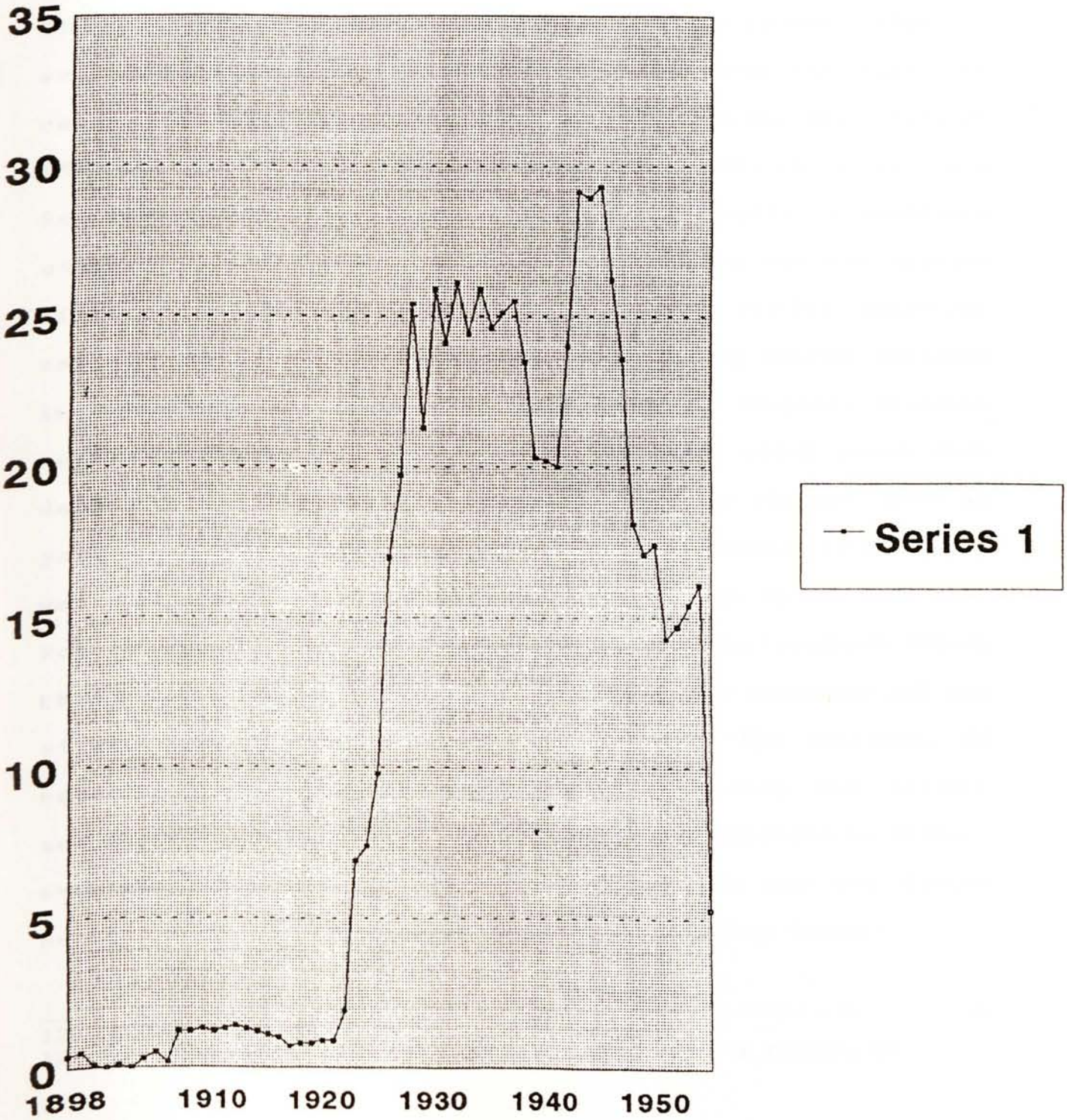
Figure 13




ures as percentages.Note dramatic rise in 1920s and fall in 1940s

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Medical Department as one of the most prevalent diseases in the colony,[120] but its handling by the Medical Department remained in abeyance and little was initially said about it.

Its late official appearance as a major disease in the colony is evident from Figure 12, which shows, in graphic form, the number of cases seen annually, and from Figure 13, the case incidence between 1898 and 1955.[121] The Figures show that until 1922, there were very few recorded cases although the disease was clearly in abundance everywhere. The obvious fundamental explanation was the initial African exclusion from the health services. Another important explanation lies in the Medical Department being totally absorbed in handling other, at the time, more important tropical diseases such as malaria, yellow fever, and dysentery which posed such danger to the very lives of Europeans. `Native disease' such as yaws which, on the whole, only caused an inconvenience to Africans, was neglected. Part of the explanation also lies in the fact that Potassium Iodide, which was the best drug for its treatment during this period, was not only ineffective, but also expensive and its efficacy could not have impressed Africans. The smallness of reported cases received some contribution from the African society's attitude to yaws: It was a diseases expected to afflict everybody some time in the community. And it was not feared because mortality from it was negligibly low.These factors

120.GCGRMSD, (1900-1903).
121.The corresponding Table for Figures are also shown, in Appendix XI.

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encouraged the reluctance of even those Africans, to whom some modicum of medical services were available, to seek modern treatment for it.

It was not till 1923 that yaws began to feature regularly in the annual medical reports. That year the report admitted that the large numbers seen were primarily due to the introduction of the new and more effective drugs Galyl and N.A.B.(neoarsenobisthmus,an arsenical preparation).[122] As we shall see, confidence-winning of a society largely suspicious of modern medicine required that treatment should be rapidly effective and cheap. Till the 1920s, none of these two conditions could be met in yaws.[123]

As is evident from **Figures 12 and 13**, from 1923 to about 1930, there was an explosive increase in the number of reported cases along with a parallel increase in its case incidence. So that, in contrast to the near-total silence on it over the previous 4 decades, the Medical Reports were saying in alarm in 1928 that yaws `... prevails everywhere,treatment takes such time'.[124] By 1930 yaws was considered one of the most formidable and widespread of all tropical diseases in the country. And in the 1920s and 1930s it was considered, next to malaria, the biggest factor in the health problems of the colony.On a national basis, the greatest bulk of cases of the disease was contributed by the North. By 1930, about one in four of all patient seen was a case of yaws and the

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122.GCGRMSD, (1923-24), p. 79.
123.Other explanations for this state of affairs are described below.
124.ibid., (1928-29), p. 14.

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percentage was to climb higher in succeeding years.Infant Welfare Centres, based principally at Accra, Cape Coast, Sekondi, Kumasi and Koforidua, were reporting case incidence of around 30% in children and it was clear that yaws was crushingly hyperendemic in every nook and cranny of the country.[125]

Several factors explain the phenomenal increase in the reported cases. The expansion of medical services under Guggisberg, the expansion of communications which increased the accessibility of health facilities to more people, the acceptance by the colonial government that the health and well-being of the African was their responsibilty, were the fundamental reasons explaining the huge number of cases being seen. It was also during this period that Africans demonstrated clearly their increasing embracement of modern medicine. The introduction of new and effective drugs for treatment (NAB and Salvarsan principally) greatly encouraged Africans to seek treatment.

There were other factors which helped things along importantly.The great dedication of the doctors is clearly evident from the reports. In this respect, Dr Helen Hendrie worked in far away Yendi in the early 1920s with exceptional zeal in the treatment of

125.ibid., (1929-30), p. vii. That year the medical officer of Tarkwa was reporting that 72% of all cases treated was yaws: ibid., (1929-30), p. 16. In 1929, the medical officer at Kintampo stated that the district was `permeated with yaws...I have never seen so great a mass infection in any other district'. And at Keta, the medical officer reported `the only general disease in the district is yaws...yaws is rife in the hinterland': ibid., p. 33. In 1929, it was being said that yaws was the chief disease in the North, constituting some 42% of all cases treated. It was here that the rural community was most dominant and sanitary conditions worst.It was rife particularly among the Kokombas: ibid., pp. 16 and 51.

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yaws and leprosy.[126] The Venereal Disease Clinic at Accra, dealing with both venereal diseases and yaws, and under the charge of Dr Reindorf, was reporting in 1923 `...a most extraordinary attendance by patients suffering from primary and tertiary famboesia'.[127] And Dr Albert Hawe commenced a special yaws clinic at the Korle Bu Hospital in 1928, and running it himself in addition to his regular duties.[128]

The increasing use of arsenicals, and later the even cheaper bismuth preparations revolutionalised treatment and the spectacular effect of modern therapy could not be denied even by the hardened out and out tradition-bound rustic. They flocked to the clinics, dispensaries, welfare centres and hospitals.Thus in 1929, yaws claimed 23% of all cases treated by the Medical Branch and by 1932, it was accounting for 27%. The increase was country-wide, nor was it associated with any major campaign; an anti-yaws awareness was gaining ground in the early 1930s. An important feature of this was the role played by Native Administration Dressers who treated sufferers in the villages. They were taught to diagnose yaws, provide treatment, and contribute to the compilation of records of yaws cases.[129]

The early half of the 1930s saw some stabilisation of the number

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126.ibid., (1923-24), pp. 7 & 37.
127.ibid., (1922-23), p. 80.
128.At this clinic, he investigated the relative effectiveness of bismuth preparations and arsenicals in the treatment of yaws; bisthmus was cheaper than arsenicals. ibid., (1928-29), p. 134.
129.The Annual Medical Reports of 1920-1930 reported on yaws than during any other period.

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of reported cases, as Figure 12 demonstrates, suggesting signs of decline. But the apparent decline, in the country-wide context, was an illusion. Such decline as occurred was confined to the larger towns in the Colony and Ashanti; the North remained saturated with it, in demonstration of the axiom that the more primitive and insanitary the conditions, the more happily yaws settles in.[130] For whereas in the 1910s and early 1920s, yaws was a common sight in the streets of Kumasi for instance, by the early 1930s, it was a rarity. This important change applied as well to other urban centres which were now in improved sanitary state (Accra, Cape Coast and Sekondi), for sanitary reforms favoured the larger centres.[131] It was becoming clear in the early 1930s that yaws was being progressively banished to the more backward and rural communities.[132]

The optimism engendered by the apparent decline was supported by the returns from the Infant Welfare Centres. These demonstrated that whereas in 1929, some 25% of all cases seen at these Centres were yaws cases, a steady decline in the percentage began to be observed from 1930 and by 1937, yaws only accounted for some 11% of all cases.[133] Assessing the statistics and other factors, the Medical Department stated with satisfaction in 1938 that yaws was definitely a declining disease, although it remained a serious

130. GCGRMSD, (1932-33), p. 21.
131. ibid., (1933-34), p. 25.
132. ibid., (1932-33), p. 21.
133. ibid., (1937), p. 20.

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problem.[134]

In spite of these hopeful signs of decline, in 1935 the Medical Department had been expressing some trepidation in connexion with its incidence due to the falling standards of rural sanitation, a situation being correctly blamed on the financial stringencies of the 1930s.[135] This trepidation was borne out by the increased incidence which occurred between 1936 and 1938, an increase assisted by the introduction of subcutaneous and intravenous medication in 1935 which received such popularity that it drew large numbers of cases.

The encouraging statistics and other favourable observations notwithstanding, the Medical Department was well aware that the bulk of cases were in the `bush'. It seemed yaws had `retreated' into the bush and in this the Northern Territories continued to live up to expectation. For the apparent decline and stabilisation in the number of reported cases in the 1930s was to explode into another massive uncovering of cases from about 1941.

Up to 1942, the treatment of yaws was not altogether free. Small nominal fees were charged but it has to be remembered that, to the crushingly impoverished huge majority of people, even such small fees were significant.[136] When therefore in 1942, Burn's government declared the treatment for yaws free, there commenced another

134.ibid., (1938), p. 7. Some of the credit for this goes to Native Administrative Dressers. Indeed, by 1937, hope was being expressed by the Department that yaws might be completely eradicated in the near future: ibid., (1937), p.6.
135.ibid., (1935), p. 18.
136.MOs were worrying in the early 1920s about the cost of organoarsenicals, an

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explosive increase in numbers, principally in the rural districts.[137]

It was quite clear that the disease had to be tackled on a grander scale. The government decided to mount an active anti-yaws campaign in the rural areas, beginning in the Northern Territories, a region which, previous experience showed, harboured the majority of cases. Preparations were made in 1943 and at the year's end the mass treatment campaign was launched in the Yendi area. This area was chosen on account of the extensive presence of yaws there.[138] The campaign focused on both the curative and preventive aspects of the disease. It was very well-received by the people and heavily patronised.The Yendi mass treatment campaign provided valuable information upon which such campaign in other area were based. The campaign was a success.[139] It was was extended to Northern Ashanti and the Volta Region, with Kintampo as the base of operations. The mass treatment campaign produced dramatic reduction in infection rate. Equally dramatic improvements in the labour situation was also noticed.[140] Perhaps more important, the people were now aware of a situation which had prevailed in their communities for generations. This enhanced their cooperation with the campaign teams.[141]

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injection of which cost one penny! One of the reasons yaws therapy shifted from arsenicals to bismuth preparations was the relative costliness of the former.

137.GCRMSD, (1942), p. 3.
138.ibid., (1943), p. 2.
139.By 1944, the following areas were covered: Wa, Lawra, Fian, Hian, Tumu, Bole. ibid., (1943), p. 2.
140.ibid., (1948), p. 7.
141.ibid., (1945), p. 8.

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The campaign owed its success largely to the interest and action of governor Burns: He secured a free grant of 8000 pounds for the campaign in the mid-1940s from the Colonial Development and Welfare Fund; and saw to the launching of a ten-year plan for the treatment of yaws, commencing in 1947-48.[142]

In 1944, the Medical Officer of Winneba treated `...an experimental series with penicillin...with great success'.[143] This experience, to be soon followed by increasing availability of this wonder drug, combined to enhance the success of the mass treatment campaign in the years that followed. Yet another development was soon to follow. In 1947 the yaws and trypanosomiasis campaigns were amalgamated and soon became the Medical Fields Units.[144] By 1954, the MFUs were treating yaws mostly with penicillin and hospitals, dispensaries, dressing stations and health centres were all providing similar treatment.[145] It can be said that it was the MFUs which finally wiped out yaws in the country in the 1950s and early 1960s.

Small pockets of yaws, though, continued to exist in the country.

### Yellow Fever

Yellow fever is an acute infectious disease caused by a filterable virus transmitted by certain genera of culicine mosquitoes. Severe cases exhibit fever, relatively slow pulse, early and progressive

142.The same Welfare Act provided some 158,000 pounds for the project which continued into the 1950s: Yaws Survey and Experimental Campaign, PRO CO 96/781/6.
143.GCGRMSD, (1944), p. 4.
144.ibid., (1947), p. 5. See the valuable work of the units in Chapter 4.
145.MHR, (1954), p. 46.

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albuminuria, vomiting, some jaundice, and varying degrees of liver, kidney or vascular failure. In severe cases, death occurs in five to eight days. Complete recovery may however occur in three to four days.Today, yellow fever vaccination is no longer required for international travel, indicating world-wide control or eradication is reliably complete.[146] It is important to recognise that several factors influenced the records on yellow fever:Roughly speaking, up to the early 1920s, its diagnosis was inaccurate.[147] Most diagnoses were based on clinical grounds which were often uncertain and it was not till the late 1920s that definitive and dependable diagnostic criteria and methods could be employed widely in the country. Case reporting prior to 1927 was consequently highly inaccurate and the likelihood of misdiagnosed,undiagnosed and unreported cases great.

Up to about 1910, there was considerable reluctance to diagnose yellow fever because of the consequence to trade for placing ports on quarantine.[148] It is certain that prior to the mid 1910s, yellow fever in Africans went largely unseen and undetected, particularly if such cases occurred in places where there were no medical services and European residents.

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146.See appendix for historical review.

147.Scott, Epidemic Diseases, p. 40.

148.GCGRMSD, (1935), p. 89. Patients with all the classical features of yellow fever were described as cases of `African fever, typho-malarial fever, remittent fever, bilious fever' etc. In the outbreak of the disease in 1910 at Sekondi, it was at first denied by local medical men and the press. Dr Rice drew attention, at this time, to the practice of medical officers recognising certain cases as yellow fever but denying them official recognition. ibid., (1935), p. 88.

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Selwyn-Clarke, writing in 1935, stated that in Ghana `...there are grounds for the belief that yellow fever was present from the beginning of the 19th Century and possibly for a considerable period before then...'.[149] Until the 1950s, it was a very much feared disease, particularly in the non-immune. In Ghana, until the 1920s, the non-immune were principally Europeans and they were at the greatest risk; they exhibited the full clinical features and faced the-often fatality; whenever yellow fever struck, it wreaked death on those Europeans who caught it and the literature is replete with innumerable accounts of death of whites from yellow fever on the West African coast. The African adult population, on the other hand, had acquired, till the mid-1920s, at least partial immunity as a result of subclinical infection year.[150] Apart from two cases, both ending fatally, in 1902, there was no reported case between 1898 and 1909. From 1910 we note that (excepting 1929, 1940, 1944, 1946-1948 and 1953) an outbreak occurred every year. The severity of an outbreak varied from year to year. The worst outbreaks of the century, in which there were twenty cases or more, occurred in 1913, 1922, 1926, 1927, 1931, 1937, 1949 and 1951. These could be considered epidemics. Of these, the worst on record were the 1926-27 and 1937 outbreaks. The first and most serious outbreak of the century occurred in 1910. This outbreak occurred in ten Europeans at Sekondi. Nine

149. loc. cit.
150. The crude death rate and the mortality rate between 1898 and 1955 are shown in Figures in appendix XI.

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died and there was some indication three Africans also died from it.[151] Sir Rupert Boyce, sent out to stamp out the outbreak, arrived at Sekondi accompanied by several young medical officers on their way on appointment. Dr Rice the head of the new Sanitary Branch had however stamped out the outbreak before their arrival.[152] The 1913 outbreak, unlike that of 1910, was widely scattered.Cases occurred, for the first time on record, in Ashanti and the Northern Territories.[153] The 1926-27 epidemic was important in several important respects: First, the disease affected Africans to a much greater degree than in previous years, suggesting Africans were converting from immune to non-immune status;the outbreak originated at Asamankese,a purely African township, and environs.[154] Second, it would seem that the improvement of communication, death registration and improved medical facilities, were having appropriate impact in the towns and villages beyond the coast. Thirdly, by coincidence, there was a team of experts of The Yellow Fever Commission of the Rockefeller Foundation in the country at this time; this provided the team, headquartered at Lagos, the

151.ibid.,(1910), p. 49.The first death occurred 12 April and the last 22 May 1910.
152.ibid., (1932), p. 88. This outbreak contributed to the strengthening of residential segregation. See Chapter 2 for details.
153.ibid., (1913), p. 9. Up till this time, reported cases were confined to the coastal towns, none from Ashanti or the NTs, the most likely explanation the poverty of medical facilities in these parts of the country during that period.
154.ibid., (1926-27), p. 20.

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opportunity of carrying out important research into yellow fever.[155] In 1928 there were only two but important cases; both ended fatally. They were laboratory infections, contracted by Dr Young and Dr Noguchi.Dr Noguchi was infected while carrying out research on the disease at Accra, Dr Young when performing a post mortem on his dead colleague Dr Noguchi.[156] The greatest outbreak of yellow fever in the country during the 1898-1955 period occurred in 1937. The principal area involved in this outbreak was north-east of Accra:The Shai, Krobo and Akwapim districts. This date coincided with the Coronation of George VI, an event provoking large movement of people in respect to its celebration.This event may have contributed to the spread of the disease from the rural origin of the outbreak to Accra and its environs.Important also was the fact that the overwhelming majority of the infected were Africans and not Europeans.[157] Again the evidence seems to suggest increasing numbers of non-immune Africans were replacing the immune. The 1937 outbreak was so serious the Director of Medical Services, Dr David Duff, took to the air. Broadcsating largely to the African community, he explained the importance of preventive measures,that such measures were in the hands of the people themselves.He summed up his broadcast :`No Stegomyia, No yellow fever'.[158] His message was translated into several local languages

155.loc. cit. See Chapters 2 and 4 for further details on the work of the Commission.
156.GCGRMSD, (1928-29), p. 66. See Chapter 4 for details.
157.ibid., (1937), p. 5.
158.loc. cit.

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and distributed widely.

An epidemiological feature of yellow fever, evident from a study of the records between 1900 and 1955, and pointed out by Scott,[159] was the ten-year periodicity of outbreaks. After the major outbreaks of 1937, an average of 2 cases were reported a year the next ten years, till 1949 when 22 cases were reported that year.[160] A new epidemic had begun. In 1950, there were 13 confirmed cases[161] and in 1951, 25 cases. The epidemic lasted, as usual, three years and by 1952, the number of cases was only 8, the total number of cases in this epidemic, sixty. The outbreak began in the Akwapim district, the towns affected Nsawam, Kibi, Mampong and Adeiso, the latter hardest-hit. Sporadic cases also occurred at Tarkwa, Nsaba, the Sekondi area, Winneba and Kpandu. At the height of the epidemic in 1951, the Viral Research Team of the Medical Research Institute at Yaba, Nigeria, was invited to Ghana to investigate the outbreak and report on the method of control with particular reference to the use of the neurotropic yellow fever vaccine of the Pasteur Institute of Dakar.[162] The team from Lagos was augmented by a Ghana Government entomologist. Commmencing a mass vaccination campaign at Nsawam in September 1952, over 300,000 people were vaccinated between Winneba and Akwapim. Taking advantage of the campaign, a combined preparation of dried smallpox and yellow fever vaccines was used to vaccinate against smallpox as well. The mass

159.Scott, Epidemic Diseases, p. 58.
160.ibid., p. 55; GCGRMSD, (1949), p. 5.
161.ibid., (1950), p. 3.
162.GCGRMSD, (1951), p. 6.

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vaccination went well till it was suddenly halted because the same yellow fever vaccine had caused encephalitis in Nigeria. That this vaccination campaign was effective, there was no doubt. For there was complete absence of yellow fever notification in the area covered by the vaccination campaign, between 1952 and 1959.[163] An outbreak was reported at Tema in 1959. Although the evidence for it was slight, it seemed mass vaccination had blunted the behaviour of the outbreak.[164] A few cases of yellow fever were confirmed at Kintampo in 1955, but information on it is scanty.

What were the patterns of racial incidence and mortality of yellow fever in all these years and how was the disease handled ?

Generally speaking, the death rate was 50% or more: In eleven of the outbreaks, mortality was 100% and in thirty three, over 50%. The greatest fatalities from yellow fever for the entire period were recorded in 1937.

The data indicate that yellow fever was worst for Europeans up to about 1920. Thereafter their case incidence declined progressively; whereas in the 1910s and early 1920s the majority of cases appeared in Europeans, from about 1925, the position began to alter.

163.Scott, Epidemic Diseases, p. 55.
164.loc. cit.

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Table 16 shows the time course of the declining contribution of Europeans to reported cases of yellow fever. Up to about 1920,

Table 16

Progressive European Falling incidence of Yellow Fever

| Year | % of cases European | Reference |
|---|---|---|
| 1910 | 100 | GCGRMSD, 1910. |
| 1913 | 55 | ibid, 1913. |
| 1922 | 44 | ibid, 1922. |
| 1926 | 12 | ibid, 1926. |
| 1927 | 16 | ibid, 1927. |
| 1937 | 2.5 | ibid, 1937. |

there were comparatively few Africans reported with the disease but from 1926 they began to form the majority. From the mid-1920s then, as the European population gained increasing security from yellow fever, Africans on the other hand, initially became more and more prone to it by reason of their changing immune status.[165] Furthermore medical services were reaching further into the interior, communication and yellow fever intelligence were improving, and identification and reporting of African cases getting better.From the late 1930s and into the 1940s and 1950s, practically all cases of yellow fever were Africans.But how did the Medical Department handle yellow fever ?

The discovery in 1900 that the mosquito Aedes Aegypti was the ordinary carrier of the virus led to the vigorous prosecution of preventive measures, through mosquito control. This contributed to the suppression and the reduction in frequency of outbreaks. In Ghana this can be said to have begun in 1910, following the

165.GCGRMSD, (1935), p. 87.

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Sekondi outbreak, under the leadership of Dr Rice the head of the Sanitary Branch. Till the 1950s, yellow fever outbreaks provoked the most energetic action from the Medical Department. Anti-larva campaigns were pursued with exceptional vigour. This included house to house search for larvae, prosecutions and heavy fines if larvae were found. These measures invited loud protests from Africans, including hostile newspaper comments. From the point of view of Africans, they the Africans were immune and they were being made to pay for the greater susceptibility of the European community.[166]

As result of the work of the Rockefeller Commission, by 1927 the Medical authorities in Ghana were expressing optimism for an early effective preventive vaccine against yellow fever.[167] By 1934, the Medical Advisers to the Colonial Office felt justified in strongly recommending vaccination against yellow fever in all whites proceeding to West Africa.[168] Accordingly there began the increasing use of Findlay's serum-vaccine by Europeans in the Colony. So rapid was progress in yellow fever research that by 1938, mass vaccination in West Africa was being contemplated.[169] And by 1940, attenuated virus vaccine was beginning to be made available for susceptible Africans and Europeans.[170]

Till today, there is no specific treatment for yellow fever. This is because, being viral, antibiotics are not effective. Nor does

166.This notion was no longer valid (from the 1920s) as evident from the Asamankese outbreak of 1926.
167.GCGRMSD, (1927-28), p. 16.
168.ibid., (1934), p. 15.
169.ibid., (1938) p. 6.
170.ibid., (1940), p. 3.

# Cerebrospinal Meningitis in Ghana: 1898-1955

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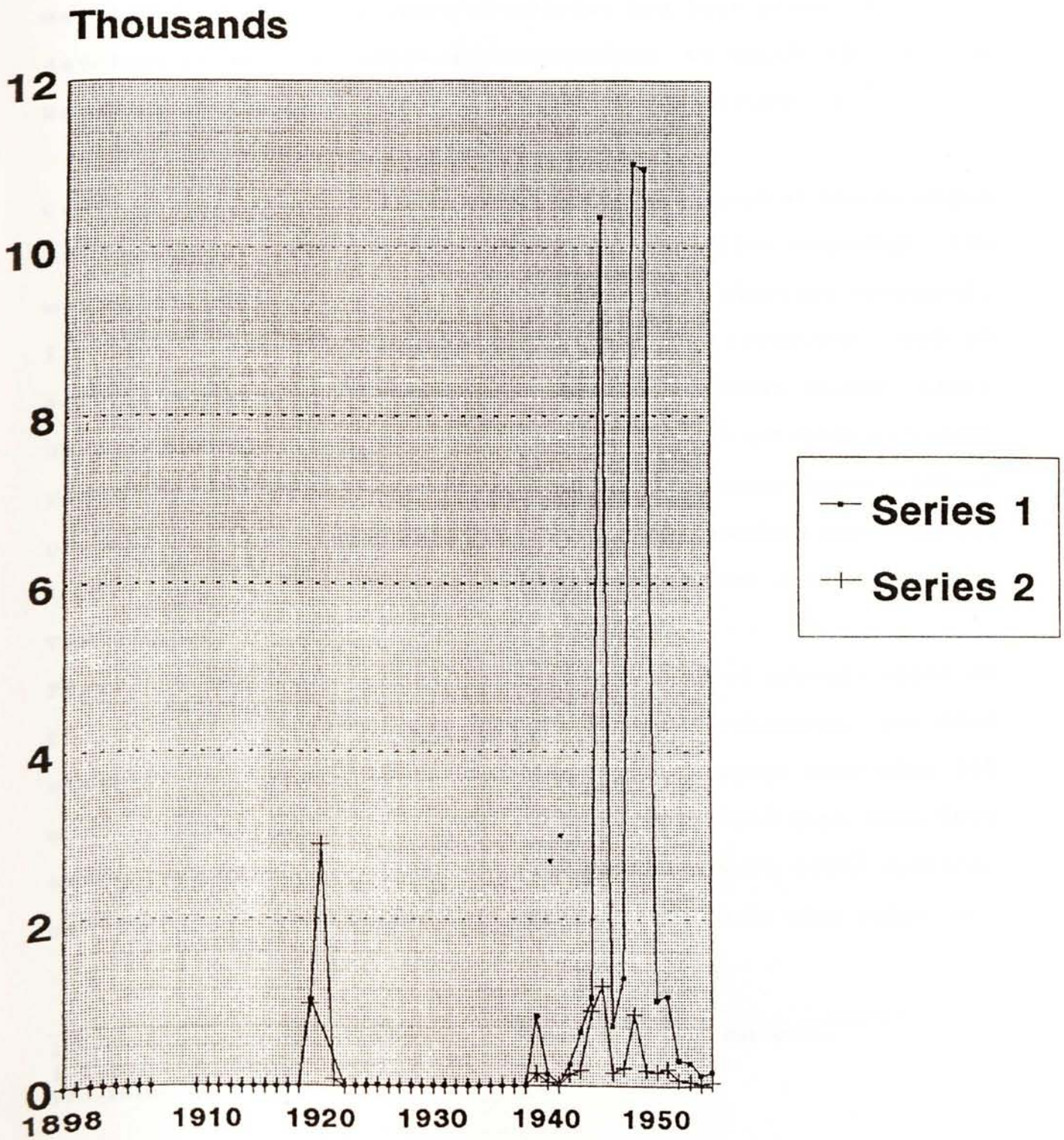
Figure 14




Notes 1:Annual case numbers.Series 2:Deaths.No figure of cases 1920-21

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there exist any reliable chemotherapeutic agent capable of specific attack on the virus. Yet, yellow fever has been eliminated world-wide today. This state of affairs has been produced by the development of the yellow fever vaccine, to which the Medical Research Institute at Accra made important contribution.[171]

### Cerebrospinal Meningitis

Cerebrospinal meningitis is caused by the infection of the meninges of the spinal cord and the brain, the causative organism the meningococcus; hence its name.In the absence of vigorous treatment, it takes a rapidly fatal course. Today the effective use of antibiotics renders the disease a lot less feared; though still dangerous, more than the pre-sulphonamide and antibiotics early years. The meningococcus often inhabits the nasopharynx without passing to the meninges. The carrier of the organism may transmit it to others in the droplets discharged from the nose and mouth. The disease may occur sporadically.[172]

**Figure 14** shows the time course of the number of annual cases of the disease over the period 1898-1960. The death rates are also shown in the Figure. Scott considered case numbers less than 500 minor epidemics, 500-5000 moderate epidemics and more than 5000 cases major epidemics.[173] In addition, there were often sporadic cases of considerably smaller numbers only and in some years, no

171.See Chapter 4 under Laboratory Services an Medical Research.
172.Scott, Epidemic Disease, p. 85.
173.ibid., p. 88.

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cases were reported. Scott's classification shall be used in this description.

The graph in Figure 11 shows that the major epidemics of cerebrospinal meningitis occurred in 1906-1908, 1919-1921 and 1944-1960.

The worst of these epidemics was that of 1906-1908. It was a disaster. It claimed over 30,000 lives. The epidemic occurred in the Northern Territories.[174] By February and March 1906, the epidemic had caused a large number of deaths. In 1906, whole villages were deserted as result of death from the epidemic.[175] In many areas the epidemic was virulent, several villages virtually decimated. Few parts of the North were spared; it reached as far south as Kintampo. Only two medical officers covered the entire northern half of the Northern Territories during this period.[176] And because health facilities were exceedingly primitive and frankly embryonic, reports on the epidemic were necessarily fragmentary. Diagnosis was based largely on clinical impressions, occasionally backed by post mortem examination, which was difficult to carry out.[177] Reports on the epidemic were largely in the form of general impressions. Dr C V Le Fanu, senior medical officer travelling in the North at this time, received reliable information the epidemic had taken hold, as well, in adjacent French Territories on the Niger. Journeying from Gambaga to Yeji, on foot, in February and

174. loc. cit.
175. GCGRMSD, (1906), p. 29.
176. loc. cit.
177. GCGRMSD, (1906), p. 8.

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March of 1906, he saw many cases himself.[178] The Chief Commissioner administering the entire North, reporting in a paper to the Royal Society of Tropical Medicine on the epidemic, estimated over 20,000 people had died in the epidemic;[179] That the epidemic was very large was further evidenced by reports of it further south in Brong Ahafo as well. The 1906 epidemic continued into 1907 and lingered on into 1908. When the epidemic did resurface in the harmattan months of 1908, Dr Horn, dispatched to the North for the purpose, was well-placed and able to follow its course in some detail. He estimated the fatality rate was in excess of 80% and over 6000 people were thought to have died in the 1908 epidemic.[180] In spite of the very limited facilities at his disposal, Dr Horn was able to do some lumbar punctures and successfully grow the meningococcus from the cerebrospinal fluid.[181] By 1909 the epidemic had burned itself out.

There was no further epidemic until 1919-1921, which Scott called the second cycle epidemic in Ghana. This commenced in February 1919. The fatality rate was high, in the neighbourhood of 95%; 1041 case were recorded, 986 deaths. The 1919 outbreak continued into the next harmattan season of 1920, the principal observer in this

178.ibid., p. 29. Dr Collier, medical officer at Wa,concluding the epidemic was cerebrospinal meningitis, reported on the virulence and the total decimation of some villages.
179.Scott, Epidemic Disease, p. 97. He based this on his personal visits round the territory. This figure, though not necessarily accurate because of the conditions of those days, at any rate, impressed the fact of the epidemic's size and virulence.
180.ibid., p. 98.
181.GCGRMSD, (1908), p. 11.

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outbreak, Dr Dalziel.[182] The principal feature of this outbreak was an increase in its range and the fear of its spread to Ashanti; it had, again, reached as far south as present day Brong Ahafo which experienced the disease in its first epidemic form.[183]

Based on Dr Dalziel's reports, the Medical Department accepted the endemicity of cerebrospinal meningitis in the North. He was strongly of the opinion the disease lurked un-noticed in endemic form in the Northern communities, epidemics resurrecting from the endemic foci, rather than from fresh importation.[184] By 1921 the epidemic had died out though there were restricted outbreaks of a few cases.[185]

In spite of the bitter experience of their recent 1919-1920 outbreak, the chiefs and people of the North continued to demonstrate total apathy towards the institution of the simplest measures which helped check the disease.[186] So in 1920, rules were formulated that would guide chiefs in the reporting of suspected cases of the disease.[187] Because medical officers and other health officials were so few in the North, these rules and guidelines were operated by the district administration officers, who through the chiefs, obtained information about outbreaks.[188] The district commisioner supervised the cordoning off of infected villages and

182.ibid., (1919), p. 15.
183.ibid., p. 15.
184.loc. cit.
185.GCGRMSD, (1921), p. 16.
186.loc. cit.
187.GCGRMSD, (1920), p. 18.
188.ibid, p. 18.

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provision of isolation huts which were destroyed after use. Since no specific treatment existed for meningitis at this time, these measures were most important. As a result, some chiefs acquired a very high index of suspicion for the disease and in 1921, there were many reports of cerebrospinal meningitis from some of them though most, when investigated, were found groundless.[189] Over the 23 years between 1921 and 1944, there was no great epidemic of cerebrospinal meningitis.[190] In 1938, much anxiety was caused by a serious outbreak in Northern Nigeria and adjacent French Territory. Precautionary measures were taken by declaring Bawku and Zuarungu, for short periods, areas infected. However there were only sporadic cases and there was no epidemic tendency.[191] The alarm of 1938 however seemed justified in 1939 when there was a minor epidemic of 481 cases between January and April, with 86 deaths.[192] Between 1939 and 1944, the North continued to experience only scattered outbreaks during the harmattan season. The outbreak of 1944 occurred soon after the rains in October: The Medical Authorities feared it was premonitory to an impending major outbreak.[193] And so it proved for it continued into 1945, rapidly assuming major epidemic proportions. There were over 10,000 cases, with only 1056 deaths however.The comparatively low mortality of 10% was ascribed to various factors: Sulphonamides had entered the

189.ibid., (1921), p. 16.
190.In 1924, there was a false alarm of of it at Goaso, Ashanti, which turned out to be influenza upon verification. ibid., (1924-25), p. 19.
191.ibid., (1938), p. 24.
192.ibid., (1939), p. 1.
193.loc. cit.

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scene and its therapeutic effectiveness did much to win the confidence and cooperation of the chiefs and people. But for it, this epidemic would have been a great disaster.[194] Chiefs and other responsible people were supplied with the drug in tablet form which they could administer to suspicious cases prior to the arrival of a medical officer; this was deemed a success, few misdiagnoses made, many lives deemed saved by the measure.[195] During the epidemic there was total cooperation of all Departments. Emergency camps were opened in the more heavily infected areas, manned by health and hospital auxiliaries.The military authorities gave assitance. This was all the more important because of the medical staff depletion occasioned by the World War.[196]

Efforts at health education were made. People were educated to avoid overcrowding and weekend visits, factors which encouraged its spread. Sleeping outside during the epidemic season was encouraged as it avoided overcrowding.[197] Such health education measures probably helped reduce the prevalence the next two years. But 1946 and 1947 were a mere interlude, a temporary respite, because both 1948 and 1949 saw major epidemics, with over 10,000 cases each year.[198]

The 1948 epidemic occurred with a simultaneous outbreak of

194.Scott, Epidemic Disease, p. 102.
195.Often, a case instead of dying in 2,4 or 6 hours survived up to 12 hours or more.In later years, as communication improved and with more doctors in the North, this practice was discontinued. At the time it was practised, its usefulness could not be doubted. loc. cit.
196.loc. cit.
197.Measures similar to those of the 1910s.
198.Scott, Epidemic Disease, p. 103.

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smallpox.[199] During the epidemic seasons, personnel of the Yaws and Trypanosomiasis Campaign (later to become the Medical Field Units) were placed under the orders of the MOH, Northern Territories, for epidemic duties.[200] Evidence of the public aliveness to the dangers of the disease was manifested by their early application for treatment, relatives often hurrying patients to the nearest health post. By 1950, the epidemic had burned itself out. From 1951, the annual epidemic in the North decreased year by year till 1955.Then commenced a gradual increase till 1960 when a large outbreak occurred.[201]

As can be seen from the above description, epidemics of cerebro-spinal meningitis have been localised almost exclusively in the Northern Territories. All outbreaks between 1906 and 1960 occurred in this part of the country. The most northern part of Ashanti, threatened in both the 1906-1908 and 1919-1920 epidemics, caused concern of a southerly spread and extraordinary measures were taken to prevent this. No epidemic occurred in any other part of the country, only isolated, sporadic cases outside the region during the entire 1898-1960 period.

Socio-environmental factors made the Northern Territories fertile

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199.GCGRMSD, (1948), p. 7.

200.Scott, Epidemic Disease, p. 103. The 1948 epidemic was important in another respect: vigorous measures began to be taken to enhance the ability of the Medical Department to deal with meningitis outbreaks. These included a systematic training of epidemic teams and teaching of Field Nursing. Educated men were recruited, trained towards the yaws and trypanosomiasis campaign and in epidemic duties. These were then available for the yaws and trypanosomiasis campaign during the epidemic off-season. See Medical Field Units in Chapter 4.

201.op. cit. p. 104.

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ground for cerebrospinal meningitis. An important epidemiological factor was the fact that the Northern Territories is the driest part of the country. During the harmattan season, temperatures and humidity are lowest; a climatic experience no other part of the country experiences.[202] It is also the poorest region. These well-known facts made immense contribution to the regular appearance and spread of the disease. The socio-economic peculiarities of the North and the seasonal harmattan are inter-related in the inception and spread of an epidemic. Scott's analysis indicates that the cold dry harmattan season might produce enough damage to the mucosa of the upper respiratory tract to render it more susceptible for the implantation and multiplication of the meningococcus.[203] Furthermore, during the harmattan season, which was also the driest in which no farming activity was possible, a social factor got introduced: People tended to move around a great deal. The enhanced intermingling of people encouraged the spread of the miningococcus. Furthermore, such movement of people led to increased overcrowding of sleeping accommodation, accommodation which was normally poorly-ventilated and grossly overcrowded. The passing around of the meningococcus was thus further assured. This was a fact of poverty for it was observed again and again, that in epidemics, the better off people

202.op. cit. p. 110.
203.loc. cit.

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living in superior accommodation with no overcrowding were almost always spared from attack.[204] It was the knowlege of this factor which led the Medical Department to embark on the health educational campaign from the 1920s (vide supra). Contributing to the epidemiological pattern were transport and communication, primitive and negligible features of Ghana at the turn of the century. It was unimaginably so in the North. In the early years, this was paradoxically an advantage in the transmission of cerebrospinal meningitis and other epidemic diseases for the disease was often confined to villages which got decimated with little spread to others, witness the 1906-1908 outbreak in which whole villages were wiped out.[205] The lack of communication probably assisted in limiting the disease to the northernmost parts of the region.[206] This important observation was utilised from about 1920 (vide supra). When outbreaks occurred isolation huts were built at strategic points along such routes where identified cases were hospitalised treated and careful watch kept at the borders adjoining French territories where there was much mixing of people.[207]

The mortality during pre-sulphonamide days was variously estimated at 50-95%. The introduction of sulphonamides in the late 1930s was followed by their wider use in the 1940s. Case mortality fell

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204. GCGRMSD, (1933-34), p. 24.
205. ibid., (1906), p. 8.
206. Dr Dalziel, in 1919, pointed out the role played by communication lines in the transmission of the disease. ibid., (1919), p. 15.
207. Scott, Epidemic Disease, p. 114.

# espiratory Diseases in Ghana 1898-1955

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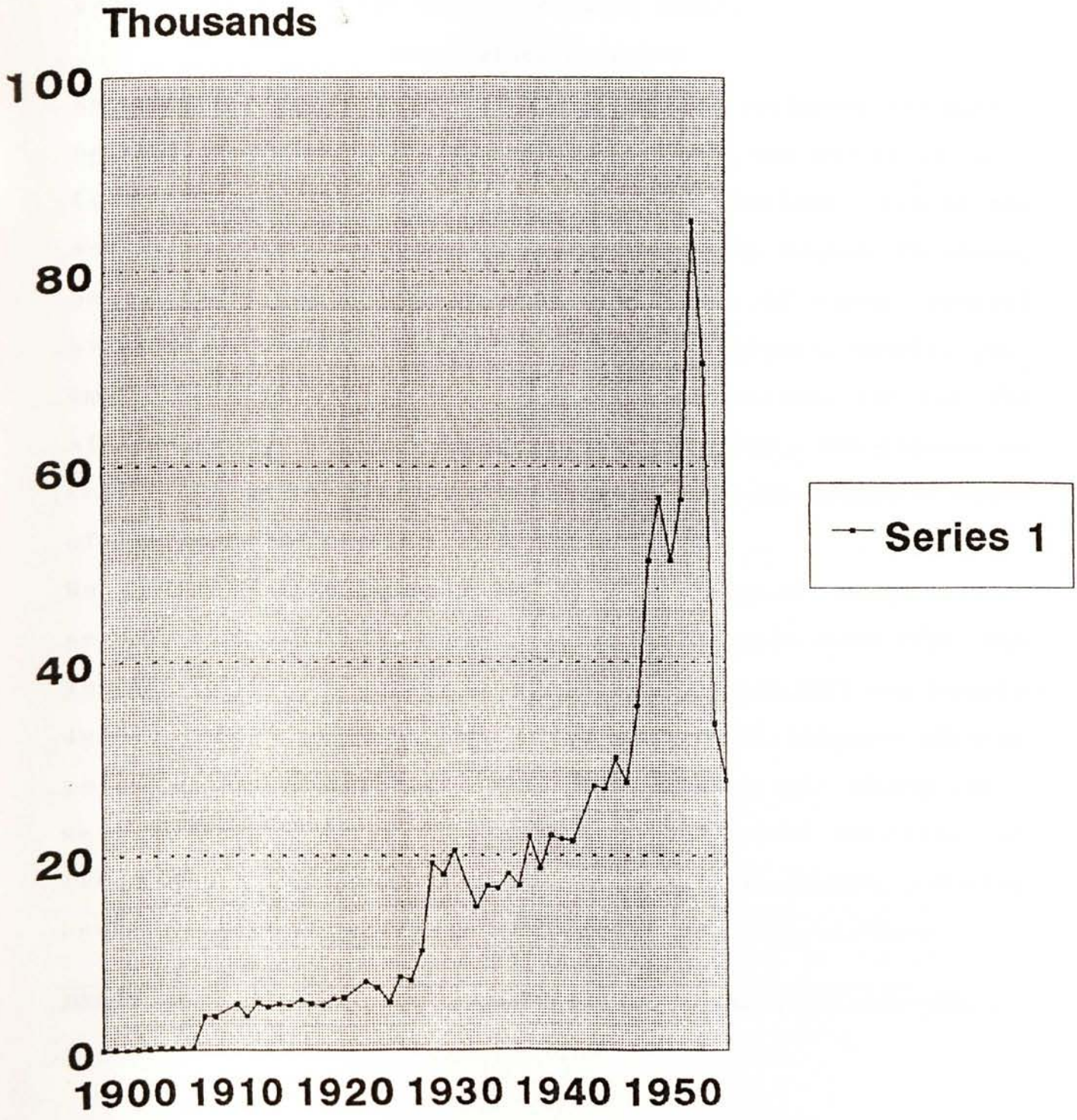
Figure 15




nual Number of Cases

precipitately.[208] Subsidiary camps were passed [boilerplate: University of Ghana http://ugspace.ug.edu.gh] the first time in Ghana in 1960 as specific prophylaxis. The objective of it was to protect communities from a threatened epidemic. Infections continued to occur, but cases were much fewer.

## Respiratory Diseases

An important factor to be borne in mind when analysing the data on respiratory diseases, as stated elsewhere, was the practice (till 1907) not to include all non-official African cases in the annual returns of the Medical Department. As Figure 15 shows, between 1898 and 1906, the annual number of cases reported averaged only 108. Clearly this figure represents, mostly, that small group of officials receiving notification, and not the African population as a whole.In this therefore, the figures as they stand, are misleading on the question of the number of cases of respiratory diseases.

We see from Figure 15 that from 1907,the number of cases rose to over 3000 annually till a second surge commenced in about 1925. The increase in the number of cases between 1907 and 1925 was largely due to the inclusion of the growing numbers of ordinary African patients in the annual reports. By 1927 well over 10,000 cases were being reported annually. The spreading modern facilities of the 1920s and growing African confidence in modern medicine certainly made important contribution to this surge in case

208.Epidemics post-dating 1940 generally had case mortality of about 10%.

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The period approximating 1932-1945 saw the stabilisation of the number of cases seen annually.This can be ascribed to the general retrenchment of the early 1930s and the shortage of health personnel during the Second World War.[210] The postwar (Second World War) period saw a massive increase in the number of cases, reaching a recorded peak of 85,000 in 1953. It is difficult to explain the subsequent decline in the number of cases post-dating 1953; save a possible ascription to a general improvement of living standards and housing, reduced overcrowding and a general improvement in the economic conditions of the country, all heralded by the appearance of an African government and the economic boom of the country.

Respiratory diseases constituted an important factor in the health of the Ghanaian African throughout the period under consideration, particularly up to the mid-1940s. The trio: bronchitis, broncho-pneumonia and lobar pneumonia accounted for over 90% of all respiratory diseases in Ghana. Moreover the trio often held the pride of place as the killer disease among Africans.[211] The trio competed and alternated with pulmonary tuberculosis as the foremost killer diseases between 1898 and 1955 and several factors explain

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209.This applies to all diseases and not to respiratory disease alone.
210.GCGRMSD, (1938), p. 67.This figure was maintained throughout the war.
211.This accords with similar observations made as long ago as 1898. ibid., (1898). And the Medical Report of 1928 states the `African is naturally very susceptible to it.' ibid., (1928-29), p. 12.
According to professor C O Easmon, in the 1940s and 1950s, a period in which he was actively engaged in medical practice, bronchitis was the most common disease, apart from malaria (Easmon interview, Accra, 1990).

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this pre-eminence of the trio:

As early as 1898, Dr Henderson, the Principal Medical Officer, was reporting that the African's propensity to suffer from respiratory disease was a consequence of his `weak lungs'; no explanation was given for this. The truth really was that the African, more often than not, harboured various other intercurrent infection such as ankylostomiasis and malaria, which along with indifferent nutrition and the often-present anaemia, lowered their resistance to bacterial infections such as respiratory infection. Another factor of importance was the insanitary conditions under which Africans lived. Housing was abhorrently poor and the typical types of African dwellings (which took little account of ventilation) encouraged droplet infection, respiratory in particular.[212] This problem was compounded by the cultural habit of overcrowding, a habit often the result of crushing poverty. Dr Selwyn-Clarke, working in the Sanitary Branch from 1919 to 1935, knew the country thoroughly.In several of his reports, he expressed dismay at the unhealthily large numbers of Africans packed in African accommodations, to which demographic factors made their contribution.[213] Demographic patterns began to exhibit real change particularly from the 1920s, when railway construction and mine labour caused

212.The description of typical African dwellings at Cape Coast, by Dr Beringer, offers a classic picture: GCGRMSD, (1912), p. 193. It was not till the 1930s that louvre windows began to achieve a measure of popularity. Poor ventilation of African dwellings received regular comment from the Medical Department throughout the period under study. But from the mid-1930s on, African dwelling patterns, on the whole, were changing to the more salubrious.
213.ibid., (1932), p. 22.

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movement of labour to the south and swelled the urban population. These encouraged the poor living conditions which in turn encouraged droplet infection. This was particularly true for mine labour. This group of susceptibles were the same as those for pulmonary tuberculosis. In the Tarkwa area, respiratory infection went hand in glove with pulmonary tuberculosis. Underground conditions provided fertile ground for the acquisition of respiratory infection.[214] Apart from mine labourers, boat boys who unloaded boats at the various sea ports were prime susceptibles to respiratory infection. Apart from the insanitary conditions in which they lived, their susceptibility was increased by heavy work under damp conditions. Respiratory infections were commonest in the poor. The majority of patients were typically males of the 25-45 age group.

Another important contributor to the pneumonias was the periodic outbreak of influenza, the most famous of which was the pandemic outbreak of 1918-1919. Influenza, more often than not, left a sequel of respiratory infection; or respiratory infection often complicated its progress. Moreover, until 1938, when the sulphanilamide drugs entered the scene in Ghana, treatment was of general nature and not specific.[215] The result was the high mortality pneumonia-bronchopneumonia became associated with. This was worsened by the fact that lobar pneumonia was often difficult

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214. The Mining Companies made efforts to address the problem and the larger companies, by 1930, were taking steps to improve underground ventilation, provide hot baths and locker rooms at the mine heads. See below.

215. GCGRMSD, (1920-1937).

# berculosis in Ghana Annual Number of Cases 1898-1955

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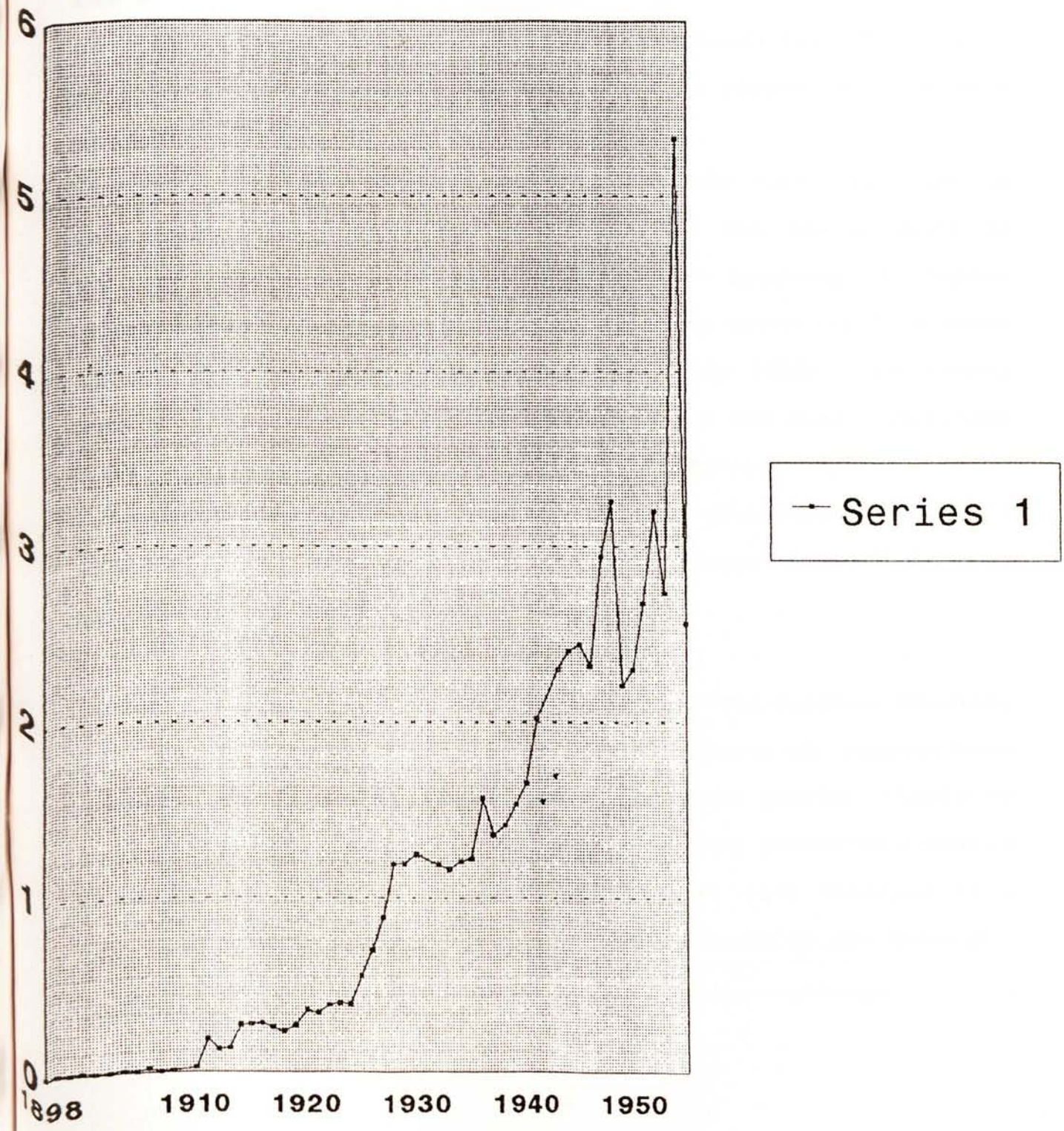
Figure 16



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to diagnose: The disease often made a sudden appearance and took a rapidly fatal course;patients were often dead, even while at work, before a definitive diagnosis could be made; particularly if the patient died during the septicaemic preconsolidation stage of the disease:in which case it was often difficult to differentiate it from malaria, yellow fever and pneumonic plague, all diseases then current.[216]

The advent of the sulphonamide drugs in the late 1930 made an important impact, many more lives saved. The improvements in housing conditions and sanitation and the teaching of hygiene began to make their contribution to improved mortality from about 1938. With the advent of penicillin in the 1940s, respiratory infection rapidly lost its premier place as the most important killing disease; to the extent the Annual Medical Reports of the late 1940s and the early 1950s merely referred to their statistics:In contrast to previous decades, comments were perfunctory or absent.

**Tuberculosis**

It was constantly pointed out in the Medical and Sanitary Reports, particularly of the 1900-1920 years, that figures on tuberculosis grossly underrepresented the actual number of people likely to have the disease in Ghana. **Figure 16** shows the number of reported cases.Between 1898 and 1910, reported cases only averaged 10 a year.These small numbers determined the attitude of the Medical

216.ibid., (1932-33), p. 23.

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Department at the time: It was not a disease of special interest.[217] Between 1911 and 1924, there was a slow but steady increase in the number of reported cases. Then a second dramatic increase in case numbers began from 1925, passing the thousand mark in 1928. Between 1928 and 1935, the number of reported cases stabilised. Then began another surge from 1935. In 1954, the figure reached 5000. The progressive march in prevalence of tuberculosis in the 1920s and 1930s was sufficiently serious for the Medical Department to consider the disease `the most direct threat to the future of the people of the Gold Coast.'[218] The relentless increase in the number of cases can be explained by the increasing availability of health services to Africans, their increasing willingness to use them, improved communication, a true increase in the spread of the disease, and a real concern of the Medical Department about tuberculosis. The insanitary habits of the people, very much assisted by their casual attitude to and plain ignorance of sanitation and hygiene, provided fertile ground for the spread of tuberculosis. These facts together with the low resistance of the population to tuberculous infection constituted powerful grounds for the pessimistic reports on tuberculosis coming from the Medical Department at this time. And typically, when clinicians begin to take an interest in a disease and look for cases, they invariably unearth more cases.

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217.Yet a little earlier,in 1908, the Medical Department was already showing anxiety about the disease. GCGRMSD, (1908), p. 11.
218.ibid., (1936), p. 24.

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The question arises as to how important tuberculosis was, relative to other diseases. This question can be answered by considering the case incidence.[219] Generally speaking, throughout the 1898-1955 period, tuberculosis formed only a small percentage of all cases seen at outpatient clinics and hospitals. Apart from 1901 and 1906, (when figures were much less accurate than in later reports), when it was greater than 0.8%, the case incidence remained less than 0.65% throughout. This means that, taken in the wider context of diseases in general, tuberculosis was never a very major disease in the country; yet it was important, as we shall see below.

In the 1920s, though as a disease entity, the numbers seen were not large enough to evoke alarm, suggestion of an upward trend was evident and beginning to cause concern. Moreover, till the early 1920s twenty or less people were reported dying from the disease annually, but from the early 1920s, the death rate rose relentlessly.[220] Yet when factored by the total number of cases of all diseases, tuberculosis was not showing an increased incidence; the spread which seemed to be occurring from the early 1920s seemed to have been arrested.

What caused the most concern to the Medical Department in the 1920s and 1930s was the fact that not only was the crude death

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219. The case incidence is the fraction (as percentage) of all cases of diseases seen, which is tuberculosis. Graphs and Tables on case incidence of tuberculosis are shown in the appendix.

220. The report of 1920 states that `the number of untreated cases is probably much in excess of the advanced ones which seek relief'. And so it soon proved. GCGRMSD, (1920), p. 19.

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rate rising year by year; but also that tuberculosis was increasingly becoming a major cause of death in the colony.[221] For whereas up to about 1920, it accounted for less than 6% of all registered deaths, it was accounting for about double this number in most of the 1920s and 1930s. The rise in the death rate in the 1920s and 1930s was caused by the increasing spread of the disease amongst a population that had little resistance to it: The 1920s and subsequent years saw a large increase in migrant labour, mostly from the Northern Territories, largely to the mining areas of the south. This migrant labour brought with it people who had no resistance whatsoever to tuberculosis. They were in poor state of health, had intercurrent diseases, weakened by travel over long distances under horrifying conditions, malnourished and undernourished, and finally worked underground and lived in hediously insanitary conditions where they worked.[222] Furthermore, the anxiety on tuberculosis in the 1920s focused some attention on the tuberculisation of the African. Tuberculisation of the African, predictably, started in the southern towns and then carried into the interior.[223] The development and growth of the mining industry brought tuberculosis in its wake. And it was becoming increasingly clear at this time that the incidence of tuberculosis was particularly high in mine labourers drawn from the Northern Territories.[224] In the 1920s, the disease was rapidly

221.(1925-26), p. 8.
222.ibid., (1926-27), p. 24.
223.ibid., (1923-24), p. 14.
224.As early as 1914, the Medical Department was showing awareness of the

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increasing in extent and virulence in the larger towns of the south, the cases almost all of the advanced pulmonary variety, and almost always rapidly fatal. Two important conclusions emerged from these facts: The tubercle bacillus was judged that of the human type and the disease, running an acute and subacute course, was afflicting a non-immune population.[225] By 1924, the Medical Department had recognised, this time without doubt, that the African had not been sufficiently long in contact with the disease to develop resistance to it. By 1925, the alert was on, that the Ghanaian African had little resistance to the disease.[226] And all the clinical features supported this judgment, a judgment confirmed in later years.[227] Confirmation emerged from the character of the spread of the disease and demographic considerations.

In this respect, it is significant that in the early 1920s, practically all reported deaths from tuberculosis came from towns of the coast, none from any interior medical facility, apart from Tarkwa, the `home of mining and tuberculosis'. It became increasingly clear that the Africans at the greatest risk were Northerners: Typically , they were males, aged 25-45 years, Northerners, and current or former mine labourers. They had little or no resistance to the tubercle bacillus and, in them, the

comparatively high prevalence of the disease in the mining districts of the south of the country.ibid., (1914), p. 38.

225.ibid., (1923-24), p. 14. In tuberculised communities, such as those of Europe, the disease ran a chronic course and often affected the bones and joints. In such communities, the pulmonary type ran a chronic course.

226.loc. cit.

227.ibid., (1937), p. 22.

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disease unfailingly ran the acute course typical of the non-immune. Their tuberculosis was also of the open variety in which the sputum of the sufferer was loaded with tubercle bacilli ready for dissemination; a process amply helped by their indiscrimate spitting.[228] By the 1930s, the medical authorities were judging the African population as definitely undergoing tuberculisation, but at `heavy cost'.[229]

How was tuberculosis spread from the south to the north, where it was previously rare ?

The Northerns, suffering from tuberculosis, often tried to reach their homes to die. In the process, they left a trail of tubercle bacilli all the way to the North, disseminating the disease en route.[230] The mine labourer, upon discovering he had tuberculosis, simply abandoned work or discharged himself from hospital where he knew not much could be done for him, lived for a while with people in neighbouring villages in equally bad sanitary conditions. Tubercle bacilli were disseminated. He then continued his journey North in company of other afflicted colleagues, often by walking. Many did not make it to their homes.

Those who did were soon to die: But they unwittingly accomplished

228. It was not until 1923-1924 that even Kumasi began to report cases of tuberculosis; though no doubt present all along, it was probably not sufficiently widespread to attract the attention of the medical authorities. By 1926-27, Kumasi too was reporting increasing incidence with nearly 100% mortality. This was seen with alarm and blamed on the lack of immunity and the low powers of resistance to infection by the tubercle bacillus. ibid., (1926-27), p. 24. Kumasi was a transit point where Northern returnees from the South carrying tuberculosis, paused and passed.

229. ibid., (1937), p. 22.

230. loc. cit.

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one important thing. They brought along with them tuberculosis which promptly afflicted their local people, people who had no resistance to the disease.[231] This explains the increasing prevalence of the disease in Ashanti, which was transit territory for these migrants. The records show increasing appearance of tuberculosis in the Northern Territories as well as Ashanti from about 1920 on.

Owing to the high mortality among mine employees, the Secretary of State for the Colonies appointed Sir William Simpson, who had also performed a similar mission during the 1908 plague outbreak, to visit Ghana and examine the conditions of the mines and mines villages. He arrived in July 1923 and found various causes for the high death rate among miners in the Tarkwa-Aboso area.[232] As to the mining areas, Professor Simpson's recommendations were adopted immediately. These included medical examination of Northern recruits prior to employment in the mines to eliminate, as far as possible, the unfit from underground employment. Housing and sanitary arrangements were also improved and better supervised, six-monthly inspection was carried out in the mines and mines villages and hospital accommodation improved. Though alleviating the situation, the high mortality both in the mining and non-mining areas continued well into the 1940s.[233] It was clearly recognised that the single most important factor that would alleviate the

231.ibid., (1935-36), p. 19.
232.ibid., (1924-25), p. 20.
233.ibid., (1943), p. 3.

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problem was an improved living standard, but this was expected to be long in coming.[234]

The measures taken to combat tuberculosis were of general and specific nature. The main object aimed at by these measures was the removal of foci of infection from contact with the general population. These measures, from the 1920s under the leadership of Dr Selwyn-Clarke, the Medical Officer of Health of Accra, began to be prosecuted in 1922.[235] The measures were several. Steps were taken to strengthen the Infectious Diseases Ordinance. In 1924, tuberculosis was declared an infectious disease under this ordinance.[236] It became, by law, notifiable by government medical officers (but not by private medical practitioners, a practice which persists till today). In 1925, it became compulsorily notified in Mining Health Areas under a new Mining Health Regulations Ordinance.[237] The new regulation also provided for disinfection of houses in which tuberculosis occurred. The voluntary isolation of cases so notified at contagious disease hospitals was advocated. In 1922, an experiment was commenced, in this regard, at Accra. Patients were housed in a small isolation camp where they received treatment and were encouraged to live in open air.[238] It was hoped that the experiment, if proved a success, might develop into a large sanatorium for tuberculosis. A similar isolation camp

234.ibid., (1936), p. 24.
235.ibid., (1 Jan to 31 March 1922), p. 46.
236.ibid., (1924-25), p. 19.
237.loc. cit.
238.ibid., (1 April 192 to 31 March 1923), p. 46.

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was planned for Sekondi but was never instituted. The question of a sanatorium came up again and again in succeeding years. But the regular review of the disease in the late 1920s and early 1930s indicated that tuberculosis, though a killer disease, was considered not of sufficiently high incidence to justify the establishment of an expensive sanatorium for it. By 1940 the view which gained currency was a preference for improvement in housing and sanitary conditions rather than the building of sanatoria for expensive curative measures.

Another specific measure taken was the recruitment of a special medical officer specialising in tuberculosis.[239] By 1930, the addition of a half block to the Korle Bu Hospital with a specially selected tuberculosis officer in charge, was effected.[240] And in 1928, Tarkwa, the heart of the mining industry and the area with the highest incidence of tuberculosis, had acquired a special tuberculosis officer.[241] But it was not till 1938-39 that special X-ray equipment was installed there for the principal purpose of enhancing work on tuberculosis as well as investigating the suspected linkage between silicosis and tuberculosis amongst mine workers.[242]

The tuberculosis problem was sufficiently grave for the government to send Dr Crocket to South Africa in 1938 to gain experience in

239.ibid., (1937), p. 22.
240.ibid., (1926-27), p. 11.
241.ibid., (1928-29), p. 25.
242.Stationed at Tarkwa were Dr Crocket, a medical officer skilled in X-ray work and interpretation of results, and a medical officer of health with tuberculosis experience, Dr Murray: ibid., (1938), p. 25.

its handling by the mines of South Africa.Dr Crocket and Dr Murray carried out at Tarkwa work on silicosis and its relationship with pulmonary tuberculosis, as well as a limited survey of tuberculosis. Their report, published in 1942, showed the existence of both tuberculosis and silicosis in the mining community. And that the prevalence of tuberculosis among the general population was such as to justify an investigation of the problem. Accordingly in 1942, the centre of investigation was moved from Tarkwa to Kumasi and a survey of the roads in Ashanti and the Northern Territories was done to determine the type of mobile radiological unit that would be required. By 1949 mass radiography with the objective of identifying, on a national scale, all foci of tuberculous infection, was being, not only contemplated, but carried out.[243] And in 1952, the tuberculosis specialist stationed at the Korle Bu Hospital had a mobile mass radiography unit.[244] He also took over direction of treatment of tuberculosis patients at all main centres, and introduced BCG vaccination of nurses and those likely to benefit from it.[245]

By this time antibiotics and anti-tuberculous chemotherapy had begun to be introduced. A downward trend in the death rate from tuberculosis actually began about 1946, and by 1952, hopeful but cautious observations were being made on it.[246] It was early recognised that the improvement of every factor constituting

243.ibid., (1949), p. 5.
244.ibid., (1952), p. 16.
245.loc. cit.
246.ibid., (1951), p. 6.



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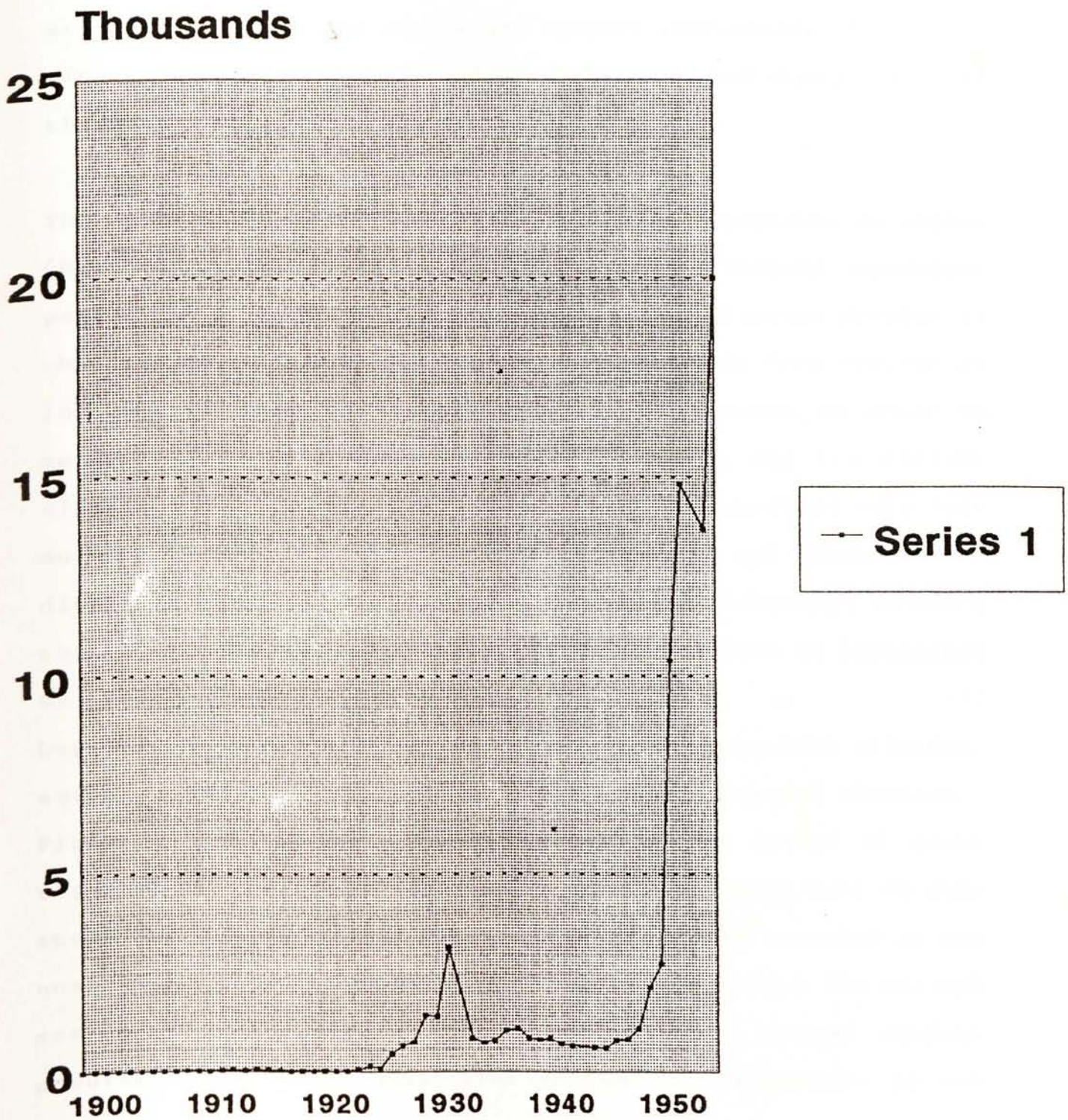
# Leprosy in Ghana: Annual Reported Cases 1898-1955

Figure 17




Note surge in numbers in mid-1920s and late 1940s

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general environmental sanitation would play an important part in the struggle against tuberculosis, with particular emphasis on housing, abolition of congested areas, elevation of general economic status of the people and dietary improvement. Similar situation exists today, the solution the same. And this in spite of the modern advances in its treatment.

## Leprosy

This is a condition due to infection with Mycobacterium leprae (Hansen's bacillus). It is characterised by a lengthy incubation period and a very chronic course during which lesions develop in the skin and in peripheral nerves. The mortality from leprosy is low, but intercurrent disease with a fatal outcome is prone to supervene in those suffering from it. There are two extreme clinical types: Lepromatous leprosy which is associated with free multiplication of the causative organisms and their ready dissemination in the body; tuberculous or neural leprosy, in which the mutiplication and dissemination of the organism is restricted by an active defensive mechanism.

Leprosy has largely disappeared from temperate and colder climates, and now largely a disease of tropical and sub-tropical climates. **Figure** 17 is a graphic representation of the number of cases reported between 1900 and 1955. Two important points must be made about the figure: Leprosy began to be noticed and reported in any numbers only after 1920 because it was from then that the medical services began to be widely available to the general African population and health facilities widespread; furthermore it was

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from then that doctors of the Department began to take an interest in,and identify and report cases of, leprosy. Secondly, the figures (any year) show only a very small fraction of lepers in the country.

The earliest recorded were six cases in 1899;[247] in 1902, three tubercular and four anaesthetic cases were recorded[248] and in 1907, the medical officer, Cape Coast, reported 8 cases even though only two were recorded in the annual returns:[249] The numbers remained small till the mid-twenties, after which the case numbers rose, reaching a maximum in 1930, fell and stabilised in the thirties and most of the forties. From the late 1940s however the number of reported cases increased arithmetically. The reasons for these changes shall become evident from the narrative that follows.

Although as early as 1914, all (including chiefs, people and medical authorities but with the exception of lepers themselves) were agreed that the segregation of lepers was desirable,[250] nothing was done about it till the 1920s; leprosy commanded low public health priority even in the 1920s[251] although there was little doubt that `there is a considerable number of lepers going about the country carrying out their usual daily avocations...'.[252] The first

247.GCGRMSD, (1899), p. 271.
248.ibid., (1902), p. 2.
249.ibid., (1907), p. 32.
250.ibid., (1914), p. 39.
251.See Guggisberg's remarks on it in Governor's Annual Address, PRO CO 98/52, p. 184.
252.GCGRMSD, (1922-23), p. 47.

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attempt to deal with the leprosy problem sytematically began at Accra in 1922, when Major M D Ahern, MOH Accra, reported the success of the treatment, with Moogrol, of three lepers he had admitted to an embryo leper colony at the contagious disease hospital at Labadi.[253] This encouraged a further three to apply for admission and treatment in 1923. From then on, the numbers grew. Submission for treatment was entirely voluntary, for no legislation existed on leprosy: they were allowed out during the day but were required to return and sleep at the hospital. The health authorities worried that their compulsory segregation might only lead to their going into hiding. In 1923 also, Dr Helen Hendrie, woman medical officer in the Northern Territories, began to report on work she had begun carrying out in the Yendi area.[254] There she started a segregated area among Konkomba lepers. Because many of the cases showed definite improvement with moogrol and chaumoogral, it began to be much easier to persuade lepers for a long course of treatment. Meanwhile, Dr Selwyn-Clarke was reporting from Kumasi that `... it is difficult to proceed for any distance without encountering a leper... most being of Hausa or NT nationality...'[255] In 1926, 446 cases were seen and treated compared with less than a hundred the previous year. It was viewed quite correctly that the increase in numbers was not an indication of increased prevalence, rather the result of the increasing interest being taken by medical

253.loc. cit.
254.ibid., (1923-24), p. 14.
255.ibid., (1924-25), p. 19.

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and political officers in the disease.[256]

The next most important development was the enhancement of interest in the disease provoked by moves in 1926 towards the formation of local Gold Coast branches of the British Empire Leprosy Relief Association (BELRA). In keeping with this move, information began to be sought on the prevalence of leprosy in the colony by BELRA; and that same year Mr Frank Oldrieve, secretary of BELRA stimulated further interest in leprosy when, on a visit to Accra, he delivered a stimulating illustrated lecture on leprosy.[257]

The next important development was that Dr F H Cooke, medical officer, Ho, started a temporary leper settlement at Dome, near Ho, in September 1926. Although admissions were initially slow, by the end of that year, he had 33 cases and more applicants still wanting admission. This valuable experience impelled him to plan for a permanent settlement for 100 lepers at the outskirts of Ho.[258] At first Dr Cooke only asked for government assistance for feeding lepers in his temporary settlement; soon, the government was persuaded to undertake the enlargement of the temporary settlement. But competition for admission to the settlement was so keen that government began to construct a permanent settlement during the early months of 1928.[259] Thus grew the Ho settlement which became a model for similar leper settlements in the colony.

The next important step in the development of leprosy service was

256.ibid., (1925-26), p. 15.
257.ibid., (1925-26), p. 16.
258.ibid., (1926-27), p. 126.
259.ibid., (1927-28), p. 111.

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the appointment in 1928 of Dr Duncan Dixey of BELRA as leprologist to the local Ghana branch of the Association. He immediately commenced the first country-wide survey on leprosy in the country. Work on leprosy grew with the assistance of BELRA. In the Northern Territories for instance, where leprosy was very prevalent, and the White Fathers had for many years done very good work amongst lepers in their area, BELRA began, by 1930, to provide financial assistance for leprosy work.[260] Here also (in the North) although thoughts were being given to a leper village outside Tamale, financial considerations prevented a practical outcome. Meanwhile the embryonic colonies at Labadi and Yendi were also growing.

By the mid 1930s, it had become necessary to formulate a clear policy on the handling of leprosy. Accordingly in 1936, Dr Muir, medical secretary of BELRA, spent several months in the country inspecting the various leper settlements. He wrote a valuable report which was used as the basis of policy on leprosy the next decade.[261] On the 20th annivessary of the Ho settlement in 1946, Dr Muir once more visited the country; his experience and views contributed to the appointment of the first full-time leprosy officer, Dr A McKilvie, in 1947; Dr McKilvie became the first head of the Ankaful Leprosarium.

Dr Cooke's work in the mid-twenties and Dixey's in the late twenties and early thirties contributed, in no small measure, to the later formulation of policy on leprosy in the next two decades,

260.ibid,. (1930-31), pp. 13, 149.
261.ibid., (1936), pp. 8, 82.

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and as such merits a glance, however brief.

In his report of 1929, Dr Cooke was saying: `... At every outstation I visited... these unfortunates attended and begged for some treatment... I conceived the idea of building a place to house them so that they could receive regular treatment...and be kept isolated...applicants began to flow in and more huts were built to meet the rush... numerous applicants have been refused admission on want of accommodation... on one occassion, a chief of a certain village brought in all the lepers of his village, ... and most regretfully, I had to send them back...'.[262] The original temporary `settlement' consisted of swish and grass huts near the Ho hospital. Dr Cooke's Ho permanent settlement consisted of three compounds with a series of huts, erected largely by the lepers themselves (with material provided by government), kitchens, superintendent's quarters (he resided there) a rest house (for housing relatives of patients unable to help themselves) bath houses and toilet facilities, water supplies, offices, a clinic and an admissions ward. There were separate facilities for males and females. Patients were provided a small maintenance allowance, cooking and eating utensils, lighting, simple agricultural implements, a yearly allowance of clothing and mats. A most important arrangement in the settlement was the provision of opportunities for artisans and farmers to put their vocation to practical use. These activities,not only kept patients busy and

262.ibid., (1926-27), p. 126.

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262.ibid., (1926-27), p. 126.

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satisfied with their lot, it also allowed them to see themselves as busy and useful citizens, an important psychological aspect of treatment. By the early thirties, the Catholic and Presbyterian missions had erected schools as well as a church in the settlement; children, both male and female attended school where they were taught by teachers who were themselves lepers. The settlement, as can be seen, became a more or less self-supporing village or town.[263]

Dr Dixey of BELRA set to work the moment he arrived. He embarked on a country-wide survey of the diseases, using a travelling motor dispensary. This enabled him to make investigation into leprosy without raising the suspicion that he was specially interested in this disease and in this way gain their confidence. Had he toured without being prepared to treat all diseases and had he made an open investigation into the prevalence of leprosy alone, he would have learned little or nothing in the areas visited.[264] Dr Dixey completed his survey in 1931.

The result of the survey indicated that the incidence of leprosy differed considerably in different parts of the country; in general, the incidence was more or less directly proportional to the distance from the coast, with prevalence highest in the Northern Territories. It was obvious from the survey that the problem of leprosy was largely secondary to the wider problem of raising the whole standard of living. The total number of cases

263.ibid., (1929-35).
264.ibid., (1928-29), p. 127.

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seen by Dr Dixey was over 4000, but it was reckoned this constituted only some 25% of cases in the country. From Dr Dixey's survey, it was clear that a policy on the disease had to include the provision of leper settlements at points in the country where the disease was most common on account of the long distances which lepers had to travel for treatment.[265] In 1931, (as result of Dr Dixey's survey work, reinforced by Dr Muir's 1936 visit and the Ho settlement experience), it was proposed to build three leprosaria to cover the entire country, under the charge of a full-time leprologist. Siting would be in districts where the disease was most prevalent; Native Authorities were to help in the establishment of leprosy villages where inhabitants would lead a normal life and supervised by the nearest leprosarium.[266] But then the depression set in, the second world war followed and nothing could be done until 1946 when these proposals were revived.[267] Action was now swift: In 1948, Dr A McKilvie, full-time leprosy officer and two lay assistants took up their duties. The Labadi settlement was closed down when a new settlement was ready and occupied at Weija in 1950. In 1953, a new settlement was opened at Ankaful; this became the headquarters of the leprosy service. A third settlement was contructed at Kpandai in the Northern

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265.ibid., (1930-31), p. 150.
266.This was based on the Ho settlement experience that lepers, after complete cure and discharge, were reluctant to leave the settlement and their relatives in their home villages and towns equally reluctant to receive them back.
267.Between the early 1930s and late 1940s little further growth in numbers occurred because of shortage of medical staff.

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Territories.[268] By 1954, a third government leprosarium was under construction at Kokofu, near Lake Bosomtwi in Ashanti; this was the traditional refuge of lepers.

By 1953, treatment was being offered by members of staff of the Leprosy Service, officers of the Ministry of Health, Christian Missionaries and voluntary agencies and the Medical Field Units. A new important feature of the service was that there was increasing confidence in out-patient treatment; and patients no longer had to travel vast distances to receive treatment because by 1954, there were over 200 treatment centres in the country. And by 1955, the number of identified lepers had exceeded 20,000.

268. The Ankaful settlement was built with Colonial Development and Welfare funds and the Kpandai one by the world-wide Evangelical Crusade Mission.

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# Chapter 9

## MEDICAL EDUCATION

As stated in earlier chapters, between appproximately 1820 and 1850 when Britain considered, from time to time, whether or not to abandon its Gold Coast and other West African settlements, it was partly on account of the heavy toll on the life of Europeans from disease. Mortality and morbidity in troops and medical men of British regiments serving in West Africa were also always excessively high, recruitment of medical officers accordingly difficult, and the services provided inadequate; double the required medical staff had to be maintained at great expense to give them regular leave in England[1]. In 1842, the Select Committee on West Africa, in its report, proposed the employment of British subjects of African descent for employment in every branch of service in Ghana, the reason for which was that blacks would be able to stand the tropical climate and diseases better.[2] In 1853, the Deputy-Secretary of War, Benjamin Hawes, proposed to resolve the problem by recruiting suitable young African students who would study medicine in England and then commissioned as army medical officers in West Africa.[3] This proposal was in keeping with that of Grey, the Secretary of State of War and the Colonies, to Winniett, the governor of Cape Coast Castle, in 1849, that portions of local tax should be used for training African medical officers in

1. Fyfe, Africanus Horton, p. 29.
2. loc. cit.
3. loc. cit.

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England.[4] In 1845, the Church Mission Society grammar school was opened in Freetown.[5] It was to this school, in 1855, that the War Office turned to recruit its first young Africans to study medicine under War Office sponsorship.[6] The War Office halted its policy of training West African doctors after Horton and Davies [7] although it was so pleased with these first two recruits, and requested for more candidates from the CMS (and two more were actually sent). No more African doctors emerged from the scheme and the arrangement with CMS lapsed. Horton and others tried, but failed, to persuade the War Office to continue the policy. But colour bar had entered the picture and the War Office became persuaded that black doctors would not command the confidence of white troops. Moreover, the advent of quinine in the treatment of malaria was making West Africa much less hazardous to whites than previously.[8] From now till 1931, the few African doctors who emerged came from families which had the means to support their training in England.[9].

The period 1880-1902 was one of persistent shortage of doctors. Because medical men were poorly paid and recruitment difficult, governor Griffith, in 1891, suggested the local training of African

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4.Metcalfe, Great Britain and Ghana, Doc. 168, p. 211. Part of Grey's plan of civilising African communities.
5.Fyfe, Africanus Horton, p. 12.
6.loc. cit. Africanus Horton and William Brougham Davies, outstanding students of the CMS school, were recruited that year. And they were to become the first generation African medical doctors. They were posted in Ghana in 1859 serving in the British Army medical service for nearly twenty years.
7.Patton, `Dr John Farrell Easmon', p. 603.
8.loc. cit.
9.loc. cit. The several factors which made it virtually impossible for the Ghanaian African to obtain training as a doctor have been examined in Chapter 5.

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practitioners at the Accra Hospital, which was then in the course of major extension works. It was his proposition that the selection of students could be made from student-dispensers.[10] Nothing came of the proposal. In 1913, governor Clifford also suggested the establishment of local training facilities for Africans, after the fashion in Ceylon, in Ghana. He saw that as one way of providing enough medical staff for his expanding medical service.[11] Clifford knew, and accepted, that enough white doctors could never be recruited or paid for by his government.[12]

Yet we note the peculiar situation that even in the face of the chronic shortage of doctors, the colonial government was not disposed to encouraging the training of African doctors. The exclusiveness of the West African Medical Service for Europeans continued to be maintained, though some modification in the rules had been made in 1913 to accept African practitioners into the medical service.[13] The pandemic influenza of 1918-1919 brought the chronic shortage of doctors into sharp focus, especially since Africans had now the right to medical treatment at government hospitals. There were many deaths. Africans were bitter about the shortage of doctors, the government denounced for its failure to

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10.Griffith to Ripon, NAG, ADM 1/2/47, Desp. No. 341 of 23.11.1894.
11.Clifford to Harcourt, NAG ADM 1/2/84, Desp. No. 233 of 14.4.1913
12.Patterson, Health in Colonial Ghana, p. 16.
13.In 1920, Dr C E Reindorf, the fourth Ghanaian African medical officer, was given a full-time appointment as `temporary' medical officer as head of the Venereal Disease Clinic at Accra. He had taken a course in venereal diseases in England at his own expense and initiative.When his appointment was terminated in 1931 for reasons of economy, - his appointment had remained a `temporary' one for a decade - it was without pension. Leg Co Debates, pp. 321-3 of 14.6.1930. Questions of Glover-Addo and J E Casely-Hayford.

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train African doctors. Governor Hugh Clifford and Dr T E Rice, the Principal Medical Officer, felt compelled to make strong statements defending the hard work of an understaffed department but Hayford's suggestion that the staffing problem be solved by recruiting more African physicians was evaded.[14] At the time there were few African doctors, anyway, available in the colony for such recruitment. Hayford's urging hinged on the training of African doctors.

In 1920, the Colonial Office's Advisory Committee for Tropical Africa suggested that a school of medicine suitable for the educated Africans of the West African Colonies and Uganda be established either at Lagos or elsewhere in one of the colonies.[15] In 1921, Dr J M O'Brien, senior medical officer in Ghana, visited Dakar and reported on the School of Medicine which had been opened there in 1918.[16] His report was widely circulated: To the Secretary of State for the Colonies and all the British West African governments and in 1922, the Medical Department was advocating the establishment of a school of medicine in British West Africa along lines similar to that at Dakar.[17] No detailed scheme was worked out at this time. This was because there was the

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14.Leg Co Debates, (19.10.1918), p. 3.
J E Casely Hayford, an African Member of the Legislative Council.
15.Minutes of the 132nd meeting of the Advisory and Sanitary Committee of 7.12.1920. PRO, CO 554/48. Professor Simpson and Dr Prout, long familiar with the Gold Coast, and British West Africa, were members of the committee.Between 1890 and 1920 then the question of local medical education in West Africa was considered from time to time. Governor McGregor of Nigeria also made a similar suggestion in 1904.
16.Governor's Annual Address, (1927-29), p. 45, PRO, CO, 98/52.
17.ibid., (1922-26), p. 139, PRO CO 98/45.

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feeling in official circles that in the British West African Colonies, the facilities for general education up to the required standard was generally unavailable. Clearly however, the problem went beyond a dearth of preliminary educational facilities. There was a strong undercurrent of prejudice of the medical establishment as to the Ghanaian African's ability to pursue a medical course. In response to Dr O'Brien's report, Dr O'Hara May (the then Acting Director of Medical and Sanitary Services) wrote in a minute in 1924: `The French native must be more keen on education than ours, as one cannot conceive the young male and female intelligentsia of the Gold Coast or Ashanti entering for a competitive examination, the result to the successful being three, four or five years' intensive study under strict rules and discipline without pay'[18], a view which Dr Peacock, DMS Sierra Leone, shared. In stating this, Dr O'Hara May and Dr Peacock were giving expression to some truths about the status of general educational facilities in Ghana (and Sierra Leone)[19] and the prevailing European's view of the African's ability to pursue the study of medicine. Yet curiously it was these same officials who

18. Dr O'Hara May's Minute dated 20.2.1924 encl.2 No.1. In: Gold Coast Committee for the Est. in Br. W. Afr. of Med. Pract. and Assts. Colleges.

19. Dr W H Peacock, Acting Deputy Director of Sanitary Service of Sierra Leone echoed a similar view on the subject. ibid., Dr Peacock's Minute dated 15.2.1924 encl.No.1.
Up till the late 1910s, European officials considered secondary education was premature in the colony. Up to the late 1900s, there were five schools which European officials regarded as secondary in no more than name and by 1907, the total nominal roll was only about 500 for the whole country. None taught science and none had European teachers. In a word, the Ghanaian African youth were virtually denied science secondary education till Guggisberg built Achimota. See CARGC, 1900-1910.

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resisted the establishment of government secondary schools in the country when Clifford called for it in 1915.[20]

Guggisberg, in his annual review of March 1924, proposed establishing a medical school at the Gold Coast Hospital. Medical students would receive their first two years' professional training (after specialising at Achimota School) after which they would then proceed to England to complete their training.[21] In a long letter to the Secretary of State in November 1924, he provided detailed and persuasive justification for the need for establishing a medical school in Ghana. He stated firmly and unequivocally that no satisfactory progress could ever be made on health matters in Ghana until a large staff of fully-qualified African medical and sanitary officers as well as assistant medical officers were available to do the job. He said:

> `On several occasions I have stated, and certainly at least once brought to your notice in a Despatch, I am firmly of opinion that we shall never make satisfactory progress in dealing with the great problems of medicine

20. Initiative in secondary education had come from the Christian Missions. In 1915, governor Clifford commissioned the Board of Education to examine the possibility of establishing a government secondary school. In a letter of two lines, the Acting Principal Medical Officer, agreed with the Acting Director of Education that there was no need for a secondary school. Wraith, Guggisberg, pp. 85-6.

21. Guggisberg to Thomas, Desp. No. 876 of 7.11.1924 encl. in Gold Coast Committee for the Est. in Br. W. Afr. of Med. Pract. and Assts. Colleges. See also Governor's Annual Address (1922-26), pp. 134-41, PRO, CO 98/45. Guggisberg's proposals of 1924 included the establishment of a Maternity Hospital. The Maternity Hospital did open for business and the training of midwives in 1928, a year after Guggisberg's departure.

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and sanitation affecting the public health in this country until we have a staff of fully qualified African Medical and Sanitary Officers in the West African Medical Service, supplemented by a large staff of Assistant Medical Officers. My policy to give effect to this belief is definite'.[22]

He detailed in his memorandum his plans to use Achimota School, (which at that time was in the course of construction) for the preliminary education and the special preparations necessary for entry into a medical school.

He gave the Secretary of State information on the going preparations in respect to the medical school: these included the acquisition of more land adjacent to the new Gold Coast Hospital, architectural and organisational plans and the raising of money outside the country for the project. The project included the training of medical officers, medical officers of health and sanitary inspectors. Guggisberg anticipated the medical school would be ready to start business in 1931. His plan was clearly designed primarily for the consumption of Ghana. But he was casting his net wider. He was willing to admit to the school candidates from any of the British West African Colonies and even prepared to accept African students from any part of the British Empire.

The training of assistant medical officers was only a secondary

22. These were to graduate as Assistant Medical Officers; with the provision that, if later, after further experience and study they should satisfy certain conditions, they would be re-examined with the prospect of full qualification. See Chapter 7 on the training of medical assistants in the 1930s. loc. cit.

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feature of Guggisberg's plans, his primary aim that of the training of full professional staff; provisions were to be made for those unable to obtain full qualification to become medical assistants.[23] In December 1925, the Third Conference of the Senior Members of the West African Medical Staff met at Accra, with full representation of Nigeria, Ghana, Sierra Leone and the Gambia.[24] The Conference endorsed, in entirety, Guggisberg's plans and views but also called for an initial emphasis on the training of medical assistants, because of the pressing health needs of the colonies.

The Conference considered that at full development of the College, the more promising medical assistant graduates would return and work for a full medical degree or diploma recognized throughout the British West African Possessions, the rest of the British Empire and in Great Britain. Individual students who wished to do so could proceed to England for the completion of the course. The Conference made the most important point that not only would local training be cheaper for colonial governments, the training of African students in maternity work posed a problem in Great Britain while it would not in West Africa.Furthermore the Conference took the view that medical colleges in Great Britain would not be expected to handle the training of all the large numbers of professionals the four colonies would need in future. And that

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23.loc. cit.

24.Proc. Conf. WAMS of Dec. 1925, encl in: Report of Comm. on a Br. W. Afr. Med. College, p. 56. Participants in the Conference were all Directors and DDMSS and Medical Research Institutes of the four British West African Colonies. These were men with experience and knowledge of local conditions of West Africa.

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Ghana offered the best facilities for such a college for West Africa, the two new institutions which determined this decision being the new Gold Coast Hospital and Achimota School, then in construction.[25]

The 1925 Conference's emphasis on the training of assistant medical officers and, later of full medical officers,[26] was obviously a practical and rational one without reference to political and emotional considerations. But Guggisberg considered that the Conference had deflected in its primary aim by not placing the primary emphasis on full medical training. In his despatch to the Secretary of State of 25 September 1926, he pointed this out, saying he and the people of Ghana would not accept a medical school which only trained medical assistants; even if only for a start, as the conference had proposed. Guggisberg had made a firm pledge to the country on this score:[27] that full, and not partial, medical training was the aim of his government and he was completely opposed to going back on his word. Besides,he was firmly personally committed to give Africans an opportunity of becoming fully-qualified men. Until the necessary facilities were provided he did not propose to start the training of medical assistants.

Guggisberg's views prevailed at a meeting in London with Ormsby-

25.ibid., p. 57. African medical students in the UK were not permitted to handle obstetrical work.
26.ibid., p. 58.
27.Governor's Annual Address, (1927-29), p. 140, PRO, CO 98/45. See also: Guggisberg to Amery of 25.2.1926, encl. in: Report of Comm. on Br. W. Afr. Med. College, p. 53.

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Gore and other West African colonial officials in 1927.[28]

By August 1927, A R Slater was governor of Ghana, in succession to Guggisberg whose term of office had expired that year. Ormsby-Gore sent a detailed despatch to governor Slater, empowering him to host a committee to work out details for the establishment of the West African medical school at Accra.[29] Because of the great importance of this committee and its work, its terms of reference are quoted in full:

> `To draw up a scheme for establishing in the Gold Coast a medical school, whose diploma will be admitted to recognition in the four British Colonies in West Africa; to advise as to the standard of education

28. Ormsby-Gore to Slater, 8.8.1927, encl. in: Report of Comm. on Br. W. Afr. Med. College, p. 64. At that meeting there were present also Sir Graeme Thompson, the governor of Nigeria, Dr Inness, the DMSS Sierra Leone and Dr Alexander, DMSS Nigeria. Guggisberg had completed his term of office in Ghana and was in London for re-posting. Ormsby-Gore gave his formal approval by telegram on 17 October 1927. ibid., p. 67.

29. loc. cit. Some real practical suggestions were put forward by Ormsby-Gore in respect to the orderly and systematic build-up of the School: His general plan was to build up the school in stages, year by year until it achieved full complement of staff and students by the 6th year. According to this plan, there was no need to delay in admitting students till the school was fully established: A beginning could be made by providing instructions to cover the first year while preparations were made to receiving students for the second year and so on. In the matter of recognition of medical degrees from the proposed school by the General Medical Council of Great Britain, it was agreed that, in keeping with the Council's regulations and procedures, the proposed school would get such recognition in due course:predicated upon care being taken to establish and run the school along lines which satisfied the regulations of the General Medical Council. In the meantime, it should be possible to establish a school giving instructions up to the highest possible standard, with power to grant a licence or diploma, which would be recognised in the West African Colonies. It should entitle its holder to local registration as a medical practitioner, in which event he would be on precisely the same footing as a medical man who had obtained qualifications in the United Kingdom.

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required of entrants to the school; to prepare conditions under which partial training will be recognised as qualifying students for appointments as medical assistants; to make recommendations regarding the staff required and their salaries and the buildings which will be needed; to submit estimates of the capital cost and annual expenditure required to give effect to the proposals; to advise when there is likely to be a sufficient number of suitably educated Africans to warrant the establishment of a medical school capable of giving a registrable qualification in medicine and surgery'.[30]

Slater convened the committee, chaired by the Colonial Secretary of Ghana, to work out details. The Directors of Medical and Sanitary Services of Nigeria, Ghana and Sierra Leone, the Principal of Achimota School, Rev A G Fraser, and Dr G H Macallister, Principal of the Medical College at Singapore, were members of the committee. They met at Accra on Thursday 10 November 1927, in the office of the Director of Medical and Sanitary Services (Dr Inness) and submitted its report to Slater on 22 February 1928.

30.Report of the Committee appointed by the Secretary of State to draw up a scheme for the establishment of a West African medical school: In Gold Coast Committee for the Establishment in British West Africa of Medical Practitioners and Assistants College, p 5.

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Its recommendations and conclusions were unambiguous: There was complete convergence of opinion on the need to establish a full-course medical school in West Africa with a standard which would qualify it for eventual recognition by the General Medical Council of Great Britain. It considered in great detail the question of a medical school offering training for both medical officers and medical assistants. Drawing extensively from the experience in India and Singapore, where it was attempted, had failed, and was discontinued, the committee came out strongly against it.[31] They maintained that an initial entry of ten students would justify the beginning of a college and that in the future the number would far exceed the possible accommodation. In 1928, the scheme collapsed. What were the causes of the collapse ?

In the summer of 1927, Guggisberg, the engine of the locomotive which drove on the project, was gone. Guggisberg had been prepared to go it alone when it came to the financing of the college. The political will in Ghana, Guggisberg's undisguised enthusiasm, the overwhelming support of Ghana's Medical Department, the timely arrival of Achimota as a source of suitable candidates for the

31.ibid., See text for terms of reference. The members of the committee were as follows: Dr W J D Inness, Director of Medical and Sanitary Services, Gold Coast, who was also chairman; Dr D Alexander, DMSS Nigeria; Dr J C S MacDouall, DMSS Sierra Leone; Dr T B Adam, DDMSS Nigeria; Dr G H Macalister, Principal of the Medical College, Singapore; Rev A G Fraser, Principal of the Prince of Wales College; and W T Harragin, Secretary. The committee also invited and received memoranda on the desirability of founding a medical school from some very senior memebers of the Medical Staff of the Gold Coast: These were: Dr H O'Hara May, DDMSS; Dr A J R O'Brien, Surgical Specialist; Dr W A Young, Director of Medical Research Institute; Dr E M Franklin, Senior Medical Officer. Report of the Comm. on a Br. W. Afr. Med. College, p 4.

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study of medicine and, most importantly, the favourable economic and fiscal climate in Ghana, gave impetus to the execution of the project. The commitment of the new governor Slater was however certainly nothing like Guggisberg's: He, at the time seemed more interested in the training of medical assistants, sanitary inspectors and midwives and seemed preoccupied with the cost.[32] The attitude of the Nigerian colonial government towards the proposed college was ambivalent. Initially, it showed definite interest, welcoming the resolution of the Accra Conference of 1925 that a medical college be established in Ghana for British West Africa; Moore, Deputy Governor of Nigeria, indicated his government's cordial approval.[33] Although the Nigerian government showed primary interest in a college which would provide full medical training, it also looked with approval to the training, pari passu, of medical assistants. But then Nigeria had a problem. Deputy governor Moore stated that the general standard of education in Nigeria was so low, that he feared that for some time to come, that country was not likely to have many students sufficiently well-educated to enter such a medical college at all.[34] And the Director of Education, Southern Province of Nigeria was on record as saying that if the proposed college were dependent on Nigeria for suitable candidates, he was doubtful whether it could be a success. On the

32. Slater to Thomas, Desp. No. 282 of 24.6.1924.
33. Moore to Amery, Desp. No. 603 of 29.6.1926, encl. in: Report of Comm. on a Br. W. Afr. Med. College, p. 62.
34. This is surprising considerng Nigerian nationals had been receiving medical training, thanks to the preparatory base available at the Church Mission Society Schools in that country, dating back to the 1850s.

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other hand Nigeria was working up a scheme for Nigerians to obtain medical qualification in Britain.[35]

When the economic situation in Ghana, as that of the rest of the world, began to deteriorate, the Ghana government began to look more and more, to the financial participation of the other British West African Colonies. For, in 1929, the willingness and ability of the other West African colonial governments to participate in the project became a most crucial factor. The governments of Nigeria and Sierra Leone declared that, for a considerable time to come, the number of students from their colonies, capable of entering the medical profession in any given year, would be so small as to be practically negligible. They were, not unnaturally, hesitant to commit their governments to a scheme involving heavy expenditure for which they could see no prospect of obtaining any appreciable return for years to come.[36] But Nigeria's new attitude amounted to withdrawal from the scheme, a stance which is difficult to divorce from the traditional envy and jealousy between these two West African countries.

Even if the college were to take off the ground, the Secretary of State expected a careful scrutiny of cost and the effecting of its reduction. The coming of Achimota School was well on the way to solving the problem of background education and preparation of

35.loc. cit.

36.Amery to Slater, of 4.6.1929 of Gold Coast Confidential 17.11.28. The Government of Nigeria was certainly unhappy about the projected cost of the College,claiming its capital cost was nearly 100,000 pounds more than the amount required to establish Nottingham University for 800 full-time and 2000 part-time students.

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students for entry into the medical profession. Indeed, according to Fraser, the first batch of students should be ready by 1931.[37] Although Secretary of State Amery and governor Slater were aware of this, neither considered that was enough to justify the commencement of the college, because the financial factor became the key to the project: As Amery stated in his despatch to Slater:

> `...in the Gold Coast, the prospects (ie of suitable students in reasonable numbers who would pursue medicine) are undoubtedly more favourable, but the Gold Coast cannot finance the College unassisted by contributions from the other West African Colonies'.[38]

This completely ignored Guggisberg's plan to look for foreign investment in Britain or elsewhere for the project should that need arise: Slater recommended postponement of the project and a further consideration given to it after five years, a recommendation Amery endorsed. Amery however gave the undertaking he would review the matter before the five year moratorium if there was evidence of difficulty in obtaining medical training for African students.[39] It would seem also, as Amery suggested, the political enthusiasm for the college was waning in Ghana at this time.[40] And it is quite possible this contributed to the demise of the

37.Guggisberg to Thomas, Desp. No. 876 of 7.11.1924.
38.Amery to Slater 4.6.1929, (Desp. No. unspecified) Gold Coast Confidential of 17.11.28 on Medical Training of Africans, encl.in: Report of Comm. on a Br. W. Afr. Med. College.
39.ibid.
40.Most likely the hardships of the depression focused attention of African members of Legislative Council away to more immediate and pressing problems.

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proposed college.

The collapsed scheme was immediately succeeded by a scholarship scheme for the training of African medical practitioners in the United Kingdom.

In 1929, Secretary of State Amery directed that scholarships be granted by the various governments to promising students who might wish to go to the United Kingdom to study medicine.[41] A great deal of care was taken by the Colonial Office in London to ensure that the administration of the scholarship scheme was exercised with care:Numbers were to be limited but the value of the scholarship generous. It was laid down by the Colonial Office that there should be no definite number of annual scholarships on offer: `It might be understood that Government would never provide more than a certain number, but there should be no suggestion that this number must always be maintained. If there is a fixed establishment laid down it may easily happen that a scholar of inferior qualification would be selected in order to fill a vacancy'.[42] Thus although Slater and Dr Inness had proposed four scholarships in the first year, only one was awarded, and that was in 1931. In fact in the immediate years of the scholarship scheme, financial considerations limited the annual awards to no more than one scholarship a year and, later in the 1930s, to two. These numbers were determined by the financial stringencies of the

41.Amery to Slater of 4.6.1929, (Desp. No. unspecified). On medical training of Africans, NAG CSO 26/30.
42.Passfield to Slater of 13.3.1930, (Desp. No. unspecified), loc. cit.

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1930s.[43]

In awarding the scholarships the Secretary of State laid great emphasis on a careful initial selection process. The Medical Scholarships Selection Board, from the 1930s to the early 1950s, consisted of:The Director of Medical and Sanitary Services (who was chairman and in whose office, at Victoriaburg, Accra, interviews and meetings were held), the Director of Education, Secretary of Native Affairs, and Principal of Achimota School.[44] The Colonial Office directed that the value of a scholarship granted by government was to be such an amount as to render it `...really substantial prize(s)'.[45] It was to cover the cost of education, medical and other expenses.The award was to be sufficiently

43.Du Boulay to Passfield, G.C. Confidential 26/30/39, loc. cit. Details of the value of and conditions to be attached to the scholarship were discussed in 1929 in London between Dr Duff, Assistant DMSS, Dr Stanton, Chief Medical Adviser to the Colonial Office and Mr Ezechiel, Director of Scholars. Mr Fraser was consulted.Mr Fraser's views, opinions and advice were critical in helping shape Ghana government's rules and regulations on the scholarships and the method of selection of scholars. On this see also: Du Boulay to Passfield, Gold Coast Confidential, 25.6.1930, PRO, CO 96/692/4; and encl. 2 in GC Confidential of 25 June 1930 on Memorandum of Dr David Duff on scholarships to Gold Coast Africans wishing to study medicine in the United Kingdom, NAG CSO 26/30;Passfield to Slater, 13.3.1930, loc. cit.
M S Ezechiel, Director of Colonial Scholars in London held detailed discussions with Dr David Duff the ADMSS in early 1930 in London. The discussions and consultations covered all aspects of the scholarship scheme: These included: The general principle of founding the scholarships; number of scholars; selection process; standard of education and age of scholars (on which Fraser and Ezechiel had much to say); choice of medical school; value of scholarship; bond as to service after qualifying. On this, see Duff to Inness of 18.3.1930; du Boulay to Passfield, 23.6.1930, G.C. Conf.26/30/39, loc. cit.
44.Passfield to Slater of 3.3.1930 (Desp. No. unspecified), NAG, CSO 26/30.
Dr O'Brien, a revered surgeon, now in retirement in England, was proposed by Dr Duff as special adviser to Gold Coast medical students. See also, Duff to Inness, of 18.3.1930 on scholarship to Gold Coast Africans wishing to study medicine in the United Kingdom, encl. 2 in GC Confidential of 25 June 1930, PRO, CO 96/692/4.
45.Passfield to Slater, 13.3.1930 (Desp. No. unspecified), NAG CSO 26/30.

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large to make parental and family contribution unnecessary.

On October 11 1930, the government published in the Gold Coast Gazette the first ever public notice on government medical scholarships to African students for the purpose of studying medicine in the United Kingdom.[46]

It will be recalled the Secretary of State had advised caution in stating the number of awards and that these were not be vacancies to be filled if suitable candidates were not forthcoming. This principle was followed between 1931 and the early 1950s. But as increasing numbers of eligible students were turned out at Achimota, so did the number of scholarships increase, though only slightly; in the 1940s, the number of scholarships varied between four and seven. The question of general educational requirement was crucial and Fraser played a major role in laying down the educational prerequisites.The qualification requirements embodied those of practically all British universities, the objective being to be able to place a selected candidate in any university with an opening. On award of a medical scholarship, the student was sent to Achimota School where he spent two years of study in Chemistry, Physics, Botany and Zoology to the Intermediate BSc level. This course was also known as the First MB course.On successful completion, the scholar was then sent to a medical school selected for him in Britain. It is important to grasp the fact that until the early 1950s, only Achimota provided a requisite pre-medical or

46.ibid.

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First MB course in Ghana. Consequently, any student who wished to do medicine through a government scholarship had to pass through Achimota.[47]

The Medical Department considered the choice between a Medical School (such as those of London University) and universities with faculties of medicine, preferring the latter. But this was to be left entirely to the Director of Colonial Scholars, whose responsibility it was to place students. The Medical Department and Mr Fraser were of the view that all scholars be sent to the same university. As Fraser stated:`...it would be better to keep,as far as possible, the scholars in one University. It would be kinder but it would also go to establish a tradition and an esprit de corps.They would get known in that University, and those going there would have had the way paved for them by those who had been before. So long as the tradition is good it would be most valuable to have them in one University. If at any time some of the scholars went all wrong in any University, the University should be changed for their successors'.[48]

On the question of bonding, the government only required the undertaking from the candidate to at once return to British West Africa on the successful completion of his course in order to engage in the practice of medicine. He was not even required to

47.Personal Communication, Interview of C.O.Easmon, Accra, 1989-90.Cases in point were Barnor and H S Bannerman. Students of Mfantsipim, they applied for and won government scholarships in 1939/1940, and were sent to Achimota prior to proceeding to Britain for their medical studies

48.NAG CSO 26/30 and ADM 11/1/1577.

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practise in Ghana, even though a Ghana government scholar.This certainly was a generous attitude. It accorded with the practice in Ceylon and was based on the strong views expressed against bonding by Lord Passfield, the Secretary of State (1930), and the simple and generous approach finally adopted was based on the philosophy and principle on this question laid down by him. It bore some linkage with whether or not a qualified scholar was entitled to automatic employment by government and Lord Passfield rejected such a policy.[49]

The question of the delegation of parental authority and control and student welfare was an important one.[50] This was considered particularly important in the scholar's first year in the United Kingdom. As stated elsewhere Edinburgh University was, for many years, the medical school favoured by the Ghana government. It was here that the problem of the welfare of scholars first surfaced. The question of welfare bore important relationship to race

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49.Passfield to Slater, 13.3.1930, NAG CSO 26/30. The governor and Fraser also opposed bonding, though the Medical Department, on the whole, favoured it. Passfield also had another reason for rejecting bonding: That it might be regarded as taking undue advantage of a young man's natural desire to take up a profession. It was Lord Passfield's stated philosophy on the whole question of bonding that it was better to consider these scholarships as intended to increase the number of Africans with a proper knowledge of medicine, and so long as they returned to West Africa, not to insist that they should even continue to reside in Ghana. The question of bonding received thorough discussion among officials at various level, many views expressed. It was discussed in the Colonial Office in London and in Government circles in Ghana. On this, see Duff to Inness, 18.3.1930, Encl.2 in G.C.Conf. of 25.6.1930, NAG CSO 26/30.
The suggestion that scholars should be required to serve government for 10 years after qualification was `considered too severe a condition', and was dropped.Lord Passfield considered the signing of a bond to serve government might be held to imply a promise that all scholars would be employed.
50.Gold Coast Gazette, (11.10.1930), p. 1823.

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relations. The two important questions were those of accommodation and social activity. The experience of Easmon and Akwei, the first Ghana government scholars at Edinburgh, serves to illustrate the problem:

Easmon has stated that in Edingurgh, racial prejudice, even if not given official sanction, which it was not, was practised openly. As there were no student hostels in Edinburgh University in the 1930s, students had to find their own accommodation. Such accommodation was only available outside the university premises. The letting of such `digs' was almost invariably in the hands of landladies;the University Registrar cooperated with them. Easmon's first surprising experience was that the Registrar's office kept two lists of accommodation: One for white students and another for black. Easmon and Akwei were of course presented with the list for black students. Such accommodation were located in the parts of the city where blacks were not unwelcomed. Easmon found a suitable `digs', but then lost it in 1936, after a vacation trip to Paris. He attempted to find a replacement, this time using as guide, rooms advertised in the local newspapers. He was quickly offered one over the telephone; but was rejected when he presented himself in person to the landlady. On another occasion, he and other white medical student colleagues attempted to have tea in a tea house. They were refused service. This, Easmon's white colleagues would not accept. Property at the tea house got damaged thanks to some robust protest activity of the white students. The newspapers, police, university authorities and the law courts got involved.

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Though the students were acquitted, this incident did provoke the concern of the Ghana government.[51] The matter of closer guardianship of African scholars was first raised by a former Principal of Achimota, Rev M M Grace. Grace had expressed grave concern at the lack of adequate supervision of the African students at Edinburgh University.[52] African student accommodation, as Easmon's experience illustrates, had become a vexing problem. It would appear the students, once they got to Edinburgh, were on their own. Grace's successor at Achimota, R W Stopford, took up the matter further. In a letter to the DMS at Accra in June 1942, Stopford expressed the view that student be sent only to residential universities in order to obviate the accommodation problem. Stopford's view was based on the loftier objectives that the training of Africans was expected to achieve: `I believe that it is impossible to attach too much importance to the need for our students receiving such treatment in the U K that they return with a higher appreciation of British life and civilisation. Some, in the past, [as Easmon's experience illustrates] have returned embittered by the treatment they have received'.[53]

As has been shown elsewhere, although the Ghana government began to award medical scholarships only in the early 1930s, Ghanaians,

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51.Easmon interview of 1989-90.
52.Grace to Harkness in Stopford to DMS Harkness of 5.6.1942, NAG, CSO 313B/10/43.
53.ibid. This became an important agenda on the scholarships selection board in 1942. The Board's decision certainly contributed to the subsequent dispersal of government scholars to other British universities.Badoe and Dodu for example, were sent in 1945/1946 to Sheffield University, and not to Edinburgh; though Edingurgh continued to be a popular University of Ghana scholars.

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since the time of Quartey-Papafio in the 1880s, had studied medicine in the UK under parental and family sponsorship. In the 1940s, the Ghana government modified its scholarship rules. The government began to provide grants-in-aid to private students of medicine in the 1940s.

The earliest Colonial Ghana government scholarship was awarded to Grant. Selected in 1931, he was attached to Achimota School for preliminary studies and proceeded to England in 1932. His progress was not satisfactory and his scholarship was terminated in 1937.[54] The other early scholars were: Akwei (1932); Easmon (1933); Oku-Ampofo*; Martinson (1934); Quarshie (1934); Djoleto (1935); KA Taylor(1936). Between 1933 and 1937, one scholarship was awarded each year.[55] By 1940, the annual award of scholarships had become an established commitment and practice of the government, in which Dr David Duff played a most important role. Dr Duff had entered the WAMS in 1910, disembarking that February at Sekondi, when an outbreak of yellow fever among Europeans there was causing considerable anxiety. As Assistant Director of Medical and Sanitary Services, he was closely involved in the scholarship scheme at its conception in 1929, in its work-up, and as Director of Medical Services between 1932 and 1939, in its administration till his retirement in 1939. He had served in Ghana for nearly 30 years. An attempt was made by the Gold Coast Youth Conference whose

54.There is a brief reference to this in the GCGRMSD, (1937).*First at Edinburgh but unable to qualify MB ChB. Barnor interview, Accra, 1995.
p. 43; Prof Easmon supplemented this information when interviewed in 1990.
55.GCGRMSD, (1937), p. 43.

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secretary-general was Dr J B Danquah, to have the new Cape Coast Hospital named after him, in appreciation and memory of his services to the colony. This proposal, though appreciated, was naturally turned down on account of being contrary to official policy.[56]

In 1942, 4 males and the first female scholar, Matilda Clerk, were awarded scholarships. The latter caused quite a stir in the country, the Medical Department referring to it as the outstanding event of that year.[57] Thus far, this was the greatest number in any single year.[58] In 1943,there were a total of 9 awards. Others were to follow, at the annual rate of 2 to 6, till 1952.

Meanwhile some had qualified and begun to return to Ghana, the first to return Akwei and Easmon in 1941. Akwei was to become the

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56.NAG CSO Case P 3986. Dr David Duff, an Irishman, was born in 1883. He received his medical education at Trinity College, Dublin. A gold medallist, he graduated in 1909 and became a medical officer on WAMS in 1910. He was one of the young medical officers who landed at Sekondi with Dr Rupert Boyce (an expert on yellow fever) who had been sent out by the Colonial Office to stamp out an outbreak of yellow fever at Sekondi in 1910. In 1913, he acted as District Commissioner, Registrar of Marriages and Deputy Sheriff at Ada. He became senior medical officer in 1925, Assistant Director of Medical Services in 1928, Deputy Director of Medical Services in 1931 and Director of Medical Services in 1932, in succession to Dr Inness. By 1930 he was MD and DPH. When his retirement was announced in 1939, the Gold Coast Youth Conference (whose secretary was Dr J B Danquah) made a resolution that `in the opinion of this Committee, a fitting tribute to his memory will be to name one of the medical centres after Dr David Duff...the recently built African Hospital at Cape Coast be named David Duff Hospital..'. The conference recounted the important changes he supervised in the 1930s: The establishment of medical and dental scholarships, village dispensaries, midwifery services...and above all the role he played in creating opportunities for the employment of Africa Medical Officers. The Government noted with pleasure the resolution passed but that `..it was against government practice to name buildings erected entirely from government funds after serving or retired officers'.

57.GCGRMSD, (1942), p. 2.

58.ibid., (1943), p. 2.

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first African Director of Medical Services in 1955, and Easmon the first Ghanaian surgeon and the first Dean of the University of Ghana Medical School. Martinson, upon qualifying, requested permission in order to specialise in Ear Nose and Throat surgery. When persmission was refused, he found work in the United Kingdom. When the Colonial Office attempted to force his return to Ghana, Martinson's riposte was to find a lawyer who successfully argued that Colonial Office regulations required him to return to West Africa after qualifying without indicating how soon after qualifying; and that he was within his legal rights to stay till he attained the age of 70 if he so chose. Martinson stayed. Becoming an Ear Nose and Throat Surgeon, the first Ghanaian to achieve this, he took up an academic position in the faculty of Medicine at the University of Ibadan in the 1950s, and there, became a professor of surgery till he retired in the 1980s.[59]

In keeping with post-war Africanisation measures, from 1950 on, annual awards never fell below 6. In 1950, six scholarship awards were made, three locally and three already studying medicine in the United Kingdom, in keeping with the policy begun to be implemented in the mid-1940s that allowed grants-in-aid to private scholars who sought and merited such awards. By 1950, there were 23 scholars in various phases of their studies in the United Kingdom, two who had qualified but had not yet returned, and three who had quailified and returned to Ghana that year.[60]

59. Easmon, 1990. Martinson and Easmon were at Edinburgh in the late 1930s.
60. GCGRMSD, (1950), p. 17.

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By 1951, preliminary training had become available also at the newly established University College of the Gold Coast where the first seven students began their science course.[61] By then also, sixth form facilities and courses were becoming increasingly available in Ghana. These educational changes widened the catchment area for promising prospective medical students.For the first time, in 1952, four scholarships were awarded by the Colonial Development and Welfare Organisation.

In their report in 1946, the Committee on Higher Education was saying Ghana was looking forward to the day when it could have its own medical and dental schools attached to its own University College.[62] The report of this committee was to contribute, in 1948, to the establishment of the University College of the Gold Coast, a College of the University of London. The Nkrumah government decided, as soon as it was formed, to establish the long-awaited medical school. In 1951, at the joint request of the Ghana government and the University College of the Gold Coast, a delegation from the University of London visited the country for the purpose of drawing up a scheme for medical education.[63] That year, 1951, the delegation, led by Dr Boland, Dean of Guys Hospital Medical School, studied the problem and made their recommendations. A major objective of the delegation was to obtain information on the country's physical and human resources; and

61.ibid., (1951), p. 2.
62.The Committee on Higher Education, (Accra, 1946), No. vii, passim.
63.Easmon interview, 1990.

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whether these could support the establishment of a medical school; and to detail a scheme for its establishment. As an initial step, the delegation conferred with and sought information from the University College of the Gold Coast, whose Principal was Dr David Balme. It also visited various secondary schools in the country to permit the assessment of the quantity and quality of science education in the country. It discovered, to its horror - and this was in 1951 - that the entire country produced only some 25 A level science graduates annually. In the delegation's opinion, a viable medical school, considering the investment in money and other resources, would require the yearly admission of some 25 students. It took the obvious position that even if government allowed annually 15 of the 25 A level science graduates into the study of medicine, there would be very few left over for other scientific professions. And the country needed these scientific professions equally urgently. The delegation did not recommend the establishing of a medical school.[64]

It nevertheless worked out a very detailed scheme for a medical school; assuming such a school might be eventually established in the near future. The estimated annual cost of the institution proposed by them was 231,200 pounds.[65] This was based on two assumptions: That Korle Bu Hospital would receive the extension appropriate for a teaching hospital and the annual intake of students would be 40-50.

64. ibid.
65. Maude Commission, p. 32.

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The Maude Commission endorsed this recommendation in 1952. They also compared the costs of training a doctor locally and in the United Kingdom. The conclusion was inescapable: local training was horrendously more expensive and that:

> `We have seen that a sum of 1.2 million pounds has been set aside in the Development Plan of 1951 as capital expenditure for the Medical Faculty of the University College. The interest on this money at only 3% per annum would maintain fifty medical students in the United Kingdom'.[66]

The facts were only too plain to see. The Maude Commission, like the London University delegation,recommended the continuation of the sending of medical students to Britain for training. And that the number of government medical scholarships, which at that time stood at about 3-6 a year, should be substantially increased.

The government accepted both the Boland and the Maude recommendations, saying in its white paper:

> `After most careful consideration the Government have decided to accept the recommendation of the Commission (Maude) that the Government should not at the present time establish a Medical Faculty of the University College...The Government will accordingly

66. loc. cit. This contrasts the situation in 1927 when the Committee charged with working out a scheme for establishment of the West African Medical College calculated that it would be cheaper training medical practitioners locally than in the United Kingdom. Essentially similar information was provided by Easmon when interviewed in 1990.

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> postpone for the next few years further consideration of the proposal for a Medical Faculty...the Government will make every endeavour to find places at medical schools in the United Kingdom for all suitable students..this is the most realistic way of training medical practitioners for some time to come..'.[67]

For historical and practical reasons, the government accepted the principle that medical training should be done in the United Kingdom (and Grade A medical Colleges in the US).The Maude Commission suggested consideration for training in the new Faculty of Medicine in Ibadan, Nigeria. But this would have been preferred if this faculty had fully established clinical departments, which it had not in 1952. This was to be given serious consideration when the Faculty of Medicine in Ibadan acquired a teaching hospital approved by the University of London.[68]

In 1951, Oduro, now Professor Emeritus of Anaesthesia of the University of Ghana Medical School, the first Ghanaian medical student, entered the Medical Faculty of the University College, Ibadan, and in 1953, a second, Annan, and then others followed. These were all private scholars; the government was holding in abeyance the sending of its medical scholars there until full clinical teaching was established at this University. In 1957, the first three government medical students entered Ibadan, full clinical training was now being available.And Ghanaian medical

67.Government Statement on Maude Commission Report, p. 3.
68.Higher Education, para. 42.

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students continued to receive their medical training at Ibadan till 1963 when the country's own medical school went into business. Till 1963, some three to five young Ghanaian doctors were turned out annually by this medical school. In this exercise of using Ibadan for training, a most crucial role was played by David Carmichael, a Scotsman of the Colonial Civil Service who, in the 1950s and 1960s, was a high official of the then most important Scholarships Secretariat. Carmichael's role in the training programme went beyond the official duty of ensuring the smooth operation of the scholarship scheme; his personal activities provided students with the much-needed assurance and confidence and his personal intervention ensured these students had nothing but the best that the new African government was capable of offering. These government scholars were handled as though they were `the chosen few' under Carmichael's supervision. Today there are several eminent Ghanaians men, especially in the world of medicine, who owe the successful prosecution of their studies to Carmichael. He died in London in 1975.

By 1955, Ghana was producing A level science graduates in substantial numbers, thanks to the massive expansion of the government's education programme: Science education in the already-existing secondary schools was greatly expanded, new secondary schools which taught science opened. The government of the Ghana, in 1955, sought the assitance of the Royal Colleges of Surgeons and Physicians of England on the issue of a medical school for the country. A delegation was sent to Ghana, once

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again, to investigate it.This time, the delegation found to its satisfaction,on completion of its mission, that Ghana could afford the annual minimum of 25 A level science student graduates to enter its own medical school.[69] Indeed, the delegation found that a new medical school in the country could handle only a fraction of eligible students, large numbers of these being sent to Germany and Eastern Europe for medical training under the sponsorship of the Cocoa Marketing Board. When the Royal Colleges' delegation assessed the readiness of the country to start its own medical school, the problem which now arose was one of finance, very much like the problem of 1927-29.

The massive development undertaken by Nkrumah's government, within a comparatively short time, had taken its toll on the exchequer. The government needed to know both how soon a medical school could be started and what assistance the British government could

69. In December 1955-January 1956, a University of London Delegation of the Inter-University Council visited Ghana and produced an interim report on the setting up of a medical school. The delegation, well aware of the desire of the Ghana government to establish a medical school without delay, nevertheless thought it extravagant that such a school would only take in 15 students a year. In their report, the delegation emphasised that it would cost little more to take in 50-100 students a year, but considered that the spinoffs resulting from a medical school might justify the expense and the proposed small annual intake of students. The step, though expensive, was adjudged wise. PRO, CO 554/1107.
In 1956, the governor reported to the Secretary of States that the Ghana government had agreed in principle to the establishment of a medical school at the University College and was making provision for preclinical training at Legon, and a capital expenditure of 1/2 million pounds on Korle Bu Hospital for clinical training. Governor of the Gold Coast to Secretary of State, Desp. No. 137 of 8.2.1956 encl. PRO, CO 554/1107.

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provide toward its establishment.[70] The delegation recommended, in their report, the medical school could start as soon as possible. But most important, it recommended the limitation of the British government's assistance to the financing of the Basic Medical Sciences: The Ghana government was to bear the entire cost of building a teaching hospital and running it.And this Nkrumah's government lacked the financial resource to do. The recommendation of the delegation that the Ghana government took on the larger load was probably on the British government's instructions, and consequently political. Nkrumah was openly flirting with the East by the late 1950s; and the cold war had been joined in earnest. The shrill anticolonial obloquy of the Nkrumah government did not endear Ghana to Britain. The reason for the British government's stance could also have been financial. Or both.

The recommendations of the Royal Colleges were however accepted. A British dean designate, Professor Morgan of Khartoum University, was soon appointed. But professor Morgan was never to get the opportunity to take up his appointment in Ghana.

The failure - or reluctance - of Britain to provide a more substantial assistance to Ghana caused Nkrumah's government to turn

70.All information above was obtained at interview of Easmon in 1990. Easmon participated in the work of both the Boland Committee of 1951 and that of the Royal Colleges of 1955. The entire account set out below is based on Easmon's narrative. At the time of the interview, Easmon said that all participants in both the Boland Committee and the Royal Colleges' Delegation work had died; Easmon was then the only person alive who could have provided such detailed information. Supplementary information was provided at interview of Professor Harold Philips. A physician and physiologist, Dr Philips is currently a private medical practitioner. He was the third Dean of the University of Ghana Medical School.

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to the United States for help in 1958, finance being now the critical factor. The Eisenhower Administration was in its final year.The Americans, who had also undertaken to finance the building of the Akosombo Hydroelectric Dam, agreed to help. An American delegation visited Ghana to make its own investigations. The delegation, after a country-wide survey and conversations with Nkrumah's government, wrote a report for Eisenhower, recommending support for the project: America was to finance the project in its entirety, a most generous offer. Eisenhower's administration accepted the recommendation.The medical school was to be based entirely on the American model of medical education, a condition the government of Ghana also accepted.

When the Americans stepped in, willing to build the entire medical school at their own expense, a new American Dean designate, Professor Cross, was appointed. But the government of Ghana failed to inform Professor Morgan of their changed plans. This unhappy ommission was to sour relations between the British government and British medical circles on the one hand, and the Ghana government on the other, for many years. British disenchantment was so complete that when the medical school did get under way, eventually, British help was completely witheld.

President Eisenhower was however succeeded by President Kennedy in 1958/1959. In 1960, President Kennedy sent another delegation to to re-assess the project before committing his government to it. This delegation was joined in its investigations by Dr Easmon and Dr Cruise O'Brien, Vice-Chancellor of the University of Ghana.

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They made a detailed study, held long and detailed conversations with government and university officials.Their report also fully supported the American financing the project in its entirety.

The American plan was the establishment of a Medical School Complex and to be known as a Medical Centre, American fashion. At the proposed Medical Centre,all aspects of the teaching of medicine were to be emplaced in one massive complex, including a brand new teaching hospital.Matters went far and fast. The delegation visited and chose the site at Legon for the Medical Centre, a part of which Noguchi Memorial Institute for Medical Research currently occupies. Dr Easmon, along with the delegation, actually inspected details of the site on foot. This large tract of land was delimited and acquired by government for the medical complex.

In 1960/1961 the governments of the United States and Ghana signed an agreement which committed the American government to the establishment of a medical school for Ghana. In the agreement, the American government undertook to bear the full cost of building the Medical Centre; and providing all the medical school staff at its own cost. Medical postgraduate activity was planned for the immediate future. Ghanaian doctors were to be provided opportunities for gaining the experience and expertise to enable the eventual phasing out of Americans.

The initial American activities in the consummation of the agreement were channelled through the American Assistance for International Development, USAID. The American government selected and signed an agreement with the Philadelphia Colleges of Surgeons and

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Physicians nominated by the USAID, to sponsor, oversee, organise and run the Medical Centre and the Medical School. The American Universities drawn into the project were Temple University, Hahnemann University, Women's Medical College, Jefferson University and Pennsylvania State University:all in the State of Pennsylvania, with Professor Cross of Penn State University dean-designate.A Philadelphia group of five hospitals were to run the Medical Centre. Staff recruitment started immediately.

In its recruitment drive the Americans had to proffer unusually attractive terms to prospective staff, terms which necessarily had to be superior to those they were already enjoying in America.When an American delegation, including the Dean designate, arrived at Accra in 1961, it was with the happy news that some 25 American doctors of various specialties, experienced in medical education, had been recruited. Even so Dean-designate Cross was showing anxiety about recruiting basic medical science teachers in March 1961. For instructions in the basic medical sciences were scheduled to start October that year. And there was a Ghanaian Committee in place to oversee the progress of the project.[71] This Committee, chaired by the Minister of Health Lawrence Abavana, consisted of Professor Boateng, Dr Kwapong, Dr Cruise O'Brien, Professor Gilman and Dr Easmon.

The recruitment and assembling of other staff was in progress. These men had committed themselves to their new jobs in Ghana.They

71.Easmon interview, crossed-checked and amplified by Professors E A Badoe and H Philips at interviews at Accra, 1992 and 1993.

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had resigned their former positions in the various medical schools in which they worked. And the American government had taken over the payment of their salaries.

Matters developed rapidly. Architectural drawings were made, models constructed and contract awarded for architectural and construction works to a well-known French firm. The commencement of the project was a closed matter. Seventy medical students were selected and commenced a two-year pre-medical preparatory course at the University of Ghana; it was a compromise between the American system which requires the possession of a BSc by the medical student, and the British system which required the A level. The first batch of students were to start their medical studies in 1963. Then the situation changed abruptly. In 1963 Nkrumah abrogated the agreement.

In 1962, the Ghana government established a National Health Institute with the principal aim of promoting research into health matters in the country.[72] Heading the Institute was Professor Gilman, a South African physiologist, with a taste for high politics. It is said by some that Gilman persuaded Nkrumah into believing there were Ghanaian doctors in the country capable of running a medical school. And that this contributed to Nkrumah's decision to abrogate the agreement. There are also those who say that a well-known American visitor (and some say Gilman) alerted Nkrumah to the presence of CIA agents on the list of 25 Americans

72. Information provided by H. Philips, at interview at Accra in 1993.

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being assembled by Dean designate Cross.The actual truth has never been told.

Whatever the reason, Nkrumah manufactured a political justification for the abrogation. In March 1963, Nkrumah met with the American Ambassador, Vice-Chancellor Dr Cruise O'Brien, Dr Easmon and Secretary to the Cabinet, Okoh. Various versions of the narrative which follows are current.[73] He announced his withdrawal from the agreement to this small group which had gathered in his office at the Flagstaff House. He stated his decision was a political one and was final. He based his withdrawal on his inability to accept the virtual diplomatic status written into the agreement in favour of all American personnel connected with the project. As Easmon recounts: `The President turned to the American Ambassador, telling him directly that he, the President, had sad news for the ambassador; that he had come to the conclusion that Ghanaians themselves were capable of building and running the medical school themselves.That hitherto the fiscal aspects of the project had submerged all political considerations. That he had been saying all along that there were Ghanaian doctors capable of running a medical school. The President then turned to me, and addressing me Professor Easmon (Easmon was no professor, he had never engaged in academic medicine and had no idea how a medical

73.I assign the most accurate, the nearest to the truth and the most plausible, to the version described by Dr Easmon. This is because of the simple but important reason that Easmon was at the centre of things from their beginning to the very end when the drama was played out. The account which follows is based entirely on Dr Easmon's memory of the events; He was the only one living, at the time of interview, of those who attended this crucial meeting.

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school was run) enquired whether that was not the case'. Easmon says he gave a cautionary, furtive response. Thoroughly shaken, at this juncture, the American ambassador, in expotulation, demanded explanation. The President retorted that it was in the nature of Americans to demand only the best for themselves; that this was evident from the fact that the 25 Americans recruited to commence teaching in the medical school were, according to American insistence, to work in Ghana, get paid tax free, and bring in even their personal effects duty free, and that the fact that they were teaching in a medical school did not entitle them to their being granted diplomatic status. The anti-American lobby, of which Gilman formed an important part,had clearly done their work well on the President.

The ambassador pleaded with the President to reconsider his decision; that the matters he raised could be worked out;that Nkrumah's decision would bring great hardship to those recruited and who had already left their jobs. As Easmon recounts:`The ambassador did his best to have Nkrumah change his mind.But the President was unbending. Nkrumah took the position that from the political point of view, it was in the best interest of Ghana that the agreement be abrogated. The President thereupon turned to O'Brien, Okoh and me (Easmon), asking whether, in their opinion, Ghanaians could not do the job. Cornered, we all three nodded our assent'.The lobbyists had won the day. The American stood alone, protesting in vain.At this point, it was clear to all, all was lost. Easmon's account continues: `At this juncture I asked

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the President what was to be done with the 70 premedical students at Legon; and how the medical school was to be started. The President's response was that I was going to start the medical school'. The American ambassador, now a very angry man, got up from his chair, picked up his papers and, stating that these decisions were a pity but that it was the President's, he walked out. Whatever the ambassador reported to his government, these events could only have established a sourness between the two governments. The political reasons Nkrumah used to abrogate the agreement do not seem particularly impressive. Weightier reasons, such as the alleged presence of CIA agents among the initially-recruited American academic staff, seem more plausible.

When the American ambassador departed from the Flagstaff House meeting, Nkrumah continued his discussion with the others. That the President had been lobbied was evident from what he had to say.Nkrumah told Easmon that some of his surgeon colleagues could teach anatomy, physicians physiology and biochemistry and so on. Nkrumah made the policy statement that all teachers of medicine were to be Ghanaians; no whites outside the country were to be recruited into the new school. Whites working for the government and were already in the country were excepted; this betrays the possible role Gilman played in the events unfolding. As Easmon says today, the fact that Nkrumah seemed to demonstrate some knowledge of some of the technicalities of medicine such as what the basic medical sciences were and the phases of medical education during which these are taught, suggested to Easmon that some medical man

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with political clout was briefing Nkrumah behind the scene. The accusing finger clearly pointed at Professor Gilman.

There are however those who say that it was the Americans who withdrew their offer to build the medical school, upon learning the Ghana government was in the process of deciding whether or not to abrogate the agreement between the two governments. No tangible explanation for the changed position of the Ghana government is forthcoming from those who hold this view.If that were the truth, as seems unlikely, the Americans had decided to get their blow in first.

Nkrumah insisted further that the medical school was to be designed by a Ghanaian architect, built by a Ghanaian contracting firm. He,for political reasons, was excluding all white participation. He was out to prove that Ghanaians could organise their own medical school without foreign help.

The next day, Easmon was invited by the President to a pre-lunch drinks party at the Castle, Osu. The President announced to Easmon he should consider himself Dean of the Medical School from that day. Nkrumah inquired from Easmon whether he had found his teachers; though teasing, Nkrumah was in great hurry about his medical school and Easmon was urged to hurry. He had not had the time even to look around, let alone identify and appoint anybody. Gilman, present at the party, hovering in the wings, and never far from the President, remarked flatly there were quite a few Ghanaian medical men, clever, who could do all the teaching. Gilman had completed his job. Dodu was present at the party.

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Dr Easmon was given the unpleasant responsibility of alleviating the fears of the premedical students, following the abrogation of the agreement. He fulfilled the task, though with difficulty. President Nkrumah appointed an 8-man committee in 1963, with the task of overseeing the commencement of Ghana's first Medical School.[74] The members of this committee included Mr Abavana, Dr Grant and Professor Gilman both of who had the ears of the President, Dr Easmon, Dr Kwapong, Dr Dodu and Dr Badoe. Notwithstanding the President's original decision not to seek any external help, a delegation of three, (Easmon, Kwapong and Badoe) was permitted to visit the Nigerian Medical Schools in Ibadan and Lagos in 1963. There they had ample opportunity to acquaint themselves with the structural and organisational features of a medical school. Ready advice and help were offered by Nigerians such as Dr Adesola, Dr Elebute, Dean Thomas and Professor Dosekun of Lagos and several others. The Nigerians even provided the delegation with some initial teaching materials.The report of the delegation re-affirmed Nkrumah's decision that the medical school be established and run by Ghanaians; the Nigerians were doing just that in Lagos.President Nkrumah appointed, immediately at the medical school's inception, Easmon, Dodu and E H Q Bannerman professors. Bannerman declined the appointment. Easmon was appointed Dean and Dr S N Ottoo Vice-Dean. Easmon was to be Academic Dean and Ottoo administrative. This arrangement was soon

74.A great deal of the information on which the rest of the narrative is based was provided by Professor Badoe. Easmon of course provided the bulk of it.

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found unworkable and the administrative and academic responsibilities were amalgamated and vested in the Dean. The first Vice-Dean was appointed by government, but this procedure soon changed; the Vice-Deanship became an elected position, Professor Dodu the first elected Vice-Dean in 1965. In February 1965, the President gave the important directive which transferred the medical school from the control of the Ministry of Health to the Council of Higher Education; this removed the negative effects of the prevailing unwholesome intereference by the Ministry of Health.The President's directive also granted financial and administrative autonomy to the medical school, stipulated a 6-year instead of a 7-year medical course and the setting up of the Korle Bu Hospital Management Board. The initial funding of the medical school was generous.

Nkrumah fell from power in 1966. The new regime, the NLC, appointed a committee of three,Sir John Cockcroft, Professor Busia and Mr Dowouna, by whose recommendation the medical school became part of the University of Ghana in 1969, the latter to control academic standards and make academic appointments. The medical school acquired its own Executive Council, and was allowed to retain its financial autonomy. The deanship was opened to competition through advertisement. Easmon's term of office ended in 1970/1971. The position was advertised and Professor Dodu appointed the second dean. Subsequent deans were Philips, Engmann and Archampong.

Dean Easmon took an important step which was to assure, in the

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long term, the supply of medically qualified men with specialisation in the basic sciences: medically qualified basic science lecturers were granted professional allowances identical to that allowed clinical lecturers. This encouraged the specialisation by graduates of medicine in the basic medical sciences, a step in emulation of the practice at Lagos. When he was the Director of Medical Services in the late 1950s, Easmon had accelerated the specialisation of Ghanaian doctors.[75] And that was at the time when the possibility of a medical school for Ghana was still exceedingly moot.In quick succession Ghanaian medical men had been sent to Britain to specialise in surgery, paediatrics, urology, microbiology, obstetrics and gynaecology, pathology, haematology and chemical pathology. So that when the medical school did get established these men were in position to mount clinical and paraclinical teaching. The commencement of clinical teaching therefore did not suffer the problems which attended the commencement of basic science teaching.

Perhaps the most difficult phase of the establishment of the medical school was the commencement of the basic sciences departments and instructions. Several reasons explain this. In those days, world-wide, basic science teachers with medical qualification were a rarity. There was hardly a Ghanaian properly qualified in any.To recruit them from abroad was forbidden by President Nkrumah, difficult even if allowed. There was none in Ghana when the

75.Badoe interview, Accra,1993.

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medical school was started. While Korle Bu Hospital which, at this time, was being expanded from a 250-bed hospital to a 1000-bed one, and would be certainly ready for clinical teaching, there was no basic science building. This had to be started from zero. The Director of NIH, Professor Gilman offered his premises at Korle Bu, as pied a terre, for commencement of basic sciences teaching. The teaching of anatomy started in this building. Dissection tables and other facilities for anatomical work were improvised.

The medical course, started at Korle Bu in October 1964, with instructions in anatomy. There was no anatomist. Dr Quartey, the urological surgeon heroically temporarily abandoned his surgical practice for the next two years to organise and teach it. Others joined in:surgeon Evans-Anfom and Dr Engmann, none a trained anatomist. They learned, improvised and taught. Their determination and enthusiasm were matched by those of the students. Later Professor Crop, a Canadian anatomist was to take over the Department of Anatomy, Engmann to go to Britain for proper training in anatomy.

The Department of Zoology at Legon and NIH at Korle Bu provided temporary space for physiology. By means of similar improvisation the teaching of physiology was begun. This post-dated anatomy by three months. Dr Philips had been recalled in haste from his physiological studies in America. Abandoning his studies, he organised and commenced the teaching of physiology, with the later assistance of other Ghanaian doctors. The teaching of biochemistry was begun in the latter part of 1965 on arrival of Dr B Y A Andoh;

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he had been persuaded to leave a senior position at Max Planck Institute in West Germany. The basic sciences building was not to be ready till 1965.

Vaughan, a PWD architect, was ordered to design a basic science building immediately the decision was taken by the government to establish the medical school without foreign participation. He had never seen a medical school, never designed one. The result was a basic sciences building ready in 1965, with problems of gas, water and electricity supply and poor siting.[76] As stated earlier, the luck was that when the first medical students were ready to begin their paraclinical and clinical studies, the extensions to Korle Bu Teaching Hospital were done. And several Ghanaian specialists had assumed duty after their specialisation. The transition from basic sciences to paraclinical and clinical was smooth. There were in place pathologists, microbiologists, general surgeons, urologists, orthopaedic surgeons, ENT surgeons, paediatricians, obstetricians and gynaecologists, physicians and so on; an important advantage was provided by these specialists being all based at Korle Bu.They could then combine their normal clinical duties and the teaching of medical students. The Ministry of Health paid their salaries. Those of them who wished to, could take up full appointment with the medical school. Some did. Others did not.

With the passing of the Nkrumah government,Dean Easmon engaged in

76.Philips interview, Accra, 1993.

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extensive travels to recruit staff. His travels took him to America, Canada, Great Britain, Australia, Europe including Eastern Europe. In the early years of the medical school, the principal foreign lecturers were Eastern Europeans.The WHO provided valuable assistance in the form of research and training grants as well as visiting academic staff.

The first doctors graduated from the medical school in 1969.

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# SUMMARY

When Ghana became a formal colony of Great Britain in 1874, no modern public health service existed in the country. In 1881, the erstwhile British West African Army medical service metamorphosed into a civil public health service. During its first 35 years, the service was, by policy, directed almost wholly at the health and wellbeing of the European population because of the legendary horrendously high European mortality in the West African colonies. The common African was excluded though encouraged to use the service.

The first primitive hospitals were located along the coast, at centres of European population. As Ashanti and the Northern Territories came under colonial administration, so the service was extended into the interior.

Governor Clifford began to change the policy of European exclusiveness to African inclusion in the service in 1913. This policy led to the construction of increased numbers of hospitals and dispensaries for Africans and the spread of the service to parts of the country where none previously existed. The prosperity of the 1920s made it possible for governor Guggisberg to greatly amplify Clifford's policy of African inclusion in the service. From the 1920s till Ghana became independent, public health services were directed largely at the indigenous African. This was because the Colonial Office recognised the economic value of good health of the indigenous subjects of her empire; European wellbeing was no longer in primary focus because their mortality was now as good as

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in the United Kingdom.

From the late 1910s, good modern hospitals began to be built for Africans. This culminated in the opening of the most up-to-date modern Gold Coast Hospital for Africans in 1923.

Africans at first viewed hospitals with suspicion. But from the 1920s on, they increasingly embraced modern medicine. The depression of the 1930s and the second world war halted expansion of physical structures and caused serious erosion of the services, but not disastrously. Fresh hospital building activity started again in the late 1940s under governor Burns. This was responsible for the reduction of overcrowding (which characterised the 1930s and 1940s) in hospitals in the 1950s. The late 1940s and 1950s also saw further extension of health facilities to rural Ghana through Rural Health Centres and Medical Field Units. The first African government placed a moratorium on hospital building till late the 1950s in order for the training of health service personnel to catch up with physical facilities. But by 1960, the first African government had started its own major hospital building programme.

Sanitary reforms commenced in 1908 with the establishment of the Sanitary Branch. Prior to this date sanitation was ill-organised and the medical department had no specific establishment for sanitary officers. Sanitation activity commenced in 1910 and by the 1950s the foundation for modern sanitation had been laid. Medical research commenced in the early 1900s and by 1920, a Medical Research Institute had been established. Research prospered particularly from the late 1910s to the early 1930s, but from about

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the mid-1930s till the 1950s, research suffered, while laboratory services prospered.

At first the medical officers were very few indeed, their quality questionable. The establishment of WAMS in 1902 and the colony's increasing prosperity from the early 1900s saw increasing recruitment of British medical officers of unquestionably-high quality. Up till 1920, practically all medical officers were Europeans. African medical officers began to slowly enter the service from then on. But it was not till the early 1950s that officers of both races were accorded the same conditions of service and Africans began to exceed Europeans in numbers. By 1960, practically all medical officers in the public health services were Africans. Specialists began to see service from 1923. The numbers were 2-4 till the early 1950s when an explosive increase in specialist positions began to occur.

The plan to commence a medical college at Accra collapsed in 1929. This was succeeded by the annual granting of medical scholarships to Ghanaian Africans to study medicine in the United Kingdom. The process was stepped up by the African government in the 1950s. The country's first medical school was not started till 1963, after its postponement in the early 1950s.

Until 1923, the supporting medical staff received training by apprenticeship. By 1930, nursing, midwifery, dispenser and sanitary schools were doing business at Korle Bu. But it was not till 1948 that a nursing school with the higher standard was established.

Yellow fever, smallpox, cerebrospinal meningitis, malaria, sleeping

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sickness, yaws and the helminthiases were endemic in the country at the time the Medical Department was established. By 1960, yaws, smallpox, yellow fever and sleeping sickness had virtually disappeared, thanks mainly to the Sanitary Branch and the Medical Field Units as well as the Medical Research Institute. Cerebrospinal menigitis, though not abo lished, was tamed. Malaria remained and has remained a problem disease. From the 1920s, tuberculosis and leprosy began to receive increasing attention. And the helminthiases have continued to remain a national health problem.

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## Appendix I

**Clifford's attempts to rectify European notions on the West African Climate and the continued bad press on Ghana into the 1910s.**

Through the rapid establishment of anti-malarial and other general prophylactic health measures, European mortality had so fallen that by the early 1910s the dreaded coast was now considered by some, rather exaggeratedly, `as healthy as Brighton'and `even those parts where tropical diseases are endemic,have ceased to deserve the name of the white man's grave'[1]. But the bad press for Ghana and West Africa persisted into the 1920s and 1930s.

Governor Clifford took undisguised umbrage to the bad press given to the colony he governed, and expressed himself freely against the general and official view and attitude. For the bad press was recognised as scaring potential investors away from the colony and inhibiting development, a state of affairs Clifford attempted to rectify.[2]

Climate and disease or health are distinct separate issues, although a link often exists between them. The nature of a particular climate determines the fauna of that environment so that mosquitoes and flies, for instance, are happier in a particular tropical environment. If these happen to carry microorganisms capable of infecting man, so the diseases they cause establish themselves in that environment. Provided the modes of transmission of those diseases are known, then through the appropriate control of the vectors and other simple measures, it is possible to avoid

1. From the African Mail, London of 30.5.1913. CO 554/13.
2. Clifford to Bonar Law, NAG ADM 1/2/112, Desp.No. 740, of 11.10.1916.

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the diseases in question. These basic principles were increasingly used in the late 19th and early 20th centuries in Ghana and other West African territories (and very successfully in Central America and Southern United States), particularly in relation to malaria, yellow fever, trypanosomiasis, and so on. The spectacular improvements in European mortality in Ghana and the rest of British West Africa by 1910 were not the result of any change in the climate per se, or its control (an impossibilty). Yet Europeans continued to refer to the climate as `foul', `unhealthy' and so on. Apart from the bad press such references to West Africa continued to create, and thus inhibiting investment by Europeans in West Africa,European officials also took advantage of the `harzadous climate' to secure for themselves salaries and conditions of service which they could never have obtained anywhere else, thus effectively draining colonial treasuries [3]. Clifford was appreciative of this unhappy state of affairs and its deleterious effect on development when he stated in a despatch in 1913, `...the Government is not justified, out of consideration for the well-being of Europeans only, in imposing upon this Colony burdens greater than it can bear without serious detriment to its development in more important directions...'.[4]

So that Europeans serving in British West Africa, even in the 1910s and the following decades, were better salaried than their counterparts in other British colonies. So that for instance, it

3.Clifford to Harcourt, NAG, ADM 1/2/84, Desp.No. 233, of 14.4.1913.
4 Clifford to Harcourt, NAG, ADM 1/2/87, Desp. No. 573 of 12.8.1913.

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was standard condition of service that European officials had a 12 month tour of duty followed by 5 months' leave. They were provided free annual return passage to England, a practice unknown in the Asian colonies.

Clifford was the first substantial authority in Ghana who attempted to explode the negative traditional opinion on climate and disease in Ghana (and, by extension, the rest of West Africa). He made clear his opposing views to the established traditional views in numerous despatches to the Colonial Office and no doubt verbally and personally in Colonial official circles in London.[5].

While it was clear to some that climate and mortality were no longer the serious problems they were the previous century to Europeans, Dr. Claridge, a medical officer in the service of the Ghana colonial government since 1903, was referring to Ghana, in 1915, as retaining and deserving its reputation for having one of the dealiest climates in the world. Clifford vigorously attacked Claridge's view. This view was set out by Claridge in his book 'History of the Gold Coast and Ashanti'(London,1915) whose publication was paid for by the Ghana Colonial Government in 1915, and to which Clifford had to write an introduction. He noted that Claridge, who had been in the service of the Medical Department since 1903, should know a lot better than that kind of loose statement; all Clifford did not say was that Claridge had lied on the subject, for some unknown reason. Clifford repudiated

5.See Clifford to Harcourt, NAG, ADM 1/2/87, Desp.No. 587 of 12.8.1913.

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Claridge's malignant view and supported it vigorously with facts, ending his attack with the cutting swipe that `...it is neither more nor less accurate or logical to blame the "climate" for cases of yellow fever, malaria or dysentery, than it would be to hold the climatic conditions of India accountable for the injuries which a man had sustained in an encounter with a Bengal tiger. In each case the person affected has fallen victim to the onslaught of the local fauna which require a tropical climate for their comfort and well-being'.[6]

Clifford's position was clear: Basing his position on the current statistics on European death and invaliding rates, he asserted that the widely exaggerated notions that the climate was deadly was no longer justified. He provided evidence to prove that the climate of Ghana was significantly more pleasant than those of several tropical climates, many of which he had personally experienced.It is highly interesting to note that Clifford appreciated that uninterrupted residence in a climate, an experience precluded to Europeans in Ghana on account of their very long annual leaves, acclimatises the person to the local environment.

He blamed the Europeans' attitude to the climate of the colony on the fact that their stay in the colony was short at any one tour of service and lived after the fashion of a `picnic', only waiting when they would pack their bags for the annual return journey to Europe. He even linked the poor productivity of European officials

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**6.Clifford to Bonar Law, NAG, ADM 1/2/112,Desp. No.740 of 11.10.1916.**

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with their reluctance to come to terms with the climate, which he said, after all, was much better than many tropical climates.[7] Clifford, when he became governor on 26 December 1912, had established himself as one with wide experience of tropical climates and therefore could speak on them with authority. He had spent nearly twenty years in the Colonial administration of the Malay Settlements, nearly four years as Colonial Secretary in Trinidad and five as Colonial Secretary in Ceylon. When he left Ghana in 1919, he briefly became Governor of Nigeria, then of Ceylon, ending his colonial service as Governor of the Malay Straits Settlement He had made known to the Colonial Office his desire to end his official career in Malaya. And in this he was obliged.[8]

7.Clifford to Bonar Law, NAG, ADM 1/2/112, Desp.No.740 of 11.10.1916
8 Governor of the Strait Settlements and High Commissioner of the Federated Malay States,Appointment of Sir Hugh Charles Clifford As. PRO CO 323/978/1.

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# Appendix II

## Sanitation

### The Sanitation problem in the 1880s and 1890s

Although the original concept of town councils in the 1880s was to train Africans at self-government, it soon became clear that its main purpose was to permit the colonial government's abdication of responsibility for sanitation. The local councils would levy their own taxes and thus spare the colonial government the use of its own scarce resources. The government promulgated a Municipalities Ordinance in 1889. The Secretary of States ruled out government grants to any council however.[1] The Africans raised objections.Among their objections was that `they wanted a genuine town council and not merely a board responsible for sanitation; they argued that they paid enough indirect taxes to create surpluses in most years'.[2] The Colonial Office stood its ground, and in 1889, stopped all expenditures on public works and sanitation except as necessary to ensure the comfort of European officials.[3]The Colonial Office thus abandoned its former policy of encouraging colonial governments to undertake sanitary reforms. Africans were to tax themselves, from now on, if they wanted sanitary improvements.[4] As Gale states: `It is difficult to see how the authorities could seriously have expected town councils to

1.Knutsford on Griffith to Holland, Encl., 26.3.1888, C.O. 96/190.
2.Griffith to Knutsford & Encl., 6.5.1889, C.O.96/201.
3.Knutsford on Griffith to Knutsford, 18.6.1889, C.O. 96/202.
4.T S Gale, 1993.

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construct expensive public works projects when no government, even with the full resources of a colony behind it, had been unable to provide one town with a satisfactory water, drainage, or sewer system'. An attempt by Governor Maxwell to levy hut taxes for the council in 1898 provoked riots.[5] It was the hopelessness of the sanitary situation which impelled Dr Easmon to recommend the separation of European from African dwellings at Accra.

Other measures of the colonial government bred resentment. In 1888, the government closed two local ponds at Accra from which the Africans drew water and constructed in its place a larger pond called the Victoriaborg Resevoir.[6] The water from this resevoir was described in 1891 by a government analyst as `unfit for domestic application'.[7] Meanwhile European officials were provided with water from publicly-financed metal tanks. The Africans' resentment was not mitigated by Governor Maxwell's suggestions the Africans purchased their own water tanks, an expenditure he knew was beyond them.[8]

Governor Griffith encouraged the building of markets and a new one was ready for use at Accra in 1891. He focussed attention beyond Accra, for public latrines were being erected in various towns and provisions made for extending such facility to any town that required them. He saw that the construction of street drainage was being taken in hand and the number of scavengers were being

5.Gold Coast Chronicle, 30.4.1898 and 16.5.1898.
6.Gold Coast Independent, Accra, 29.1.1898.
7.Gold Coast Chronicle, Accra, 25.3.1899.
8.ibid., Accra, 16.10.1897.

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increased and Inspector of Nuisances appointed in the bigger towns.[9]

Resolutions of Liverpool Chamber of Commerce in 1903 on Sanitation

The Liverpool Chamber of Commerce Resolution of 1903 called for: A qualified MOH for every West African Colony Municipal town with the sole duty of attending to sanitary matters in those towns; the appointment of an expert Sanitary Commissioner, on the Indian model, visiting and supervising sanitation, in all the West African colonies, supervising sanitary statistics and advising the Colonial Office on sanitary matters; the publication by the Colonial Office of annual reports on sanitation in each of the West African Colonies.[10] Chamberlain reminded the Chamber that relevant medical statistics were already being published in Parliamentary Papers and that `details regarding sanitary work done in these Colonies are published in the [Colonial] Annual Reports', which indeed was the

Sanitation Expenditure 1899-1914[11]

| Year | Sanitation Expenditure | PWD Expenditure |
|---|---|---|
| 1899 | NA | 2,087 |
| 1900 | NA | 3,700 |
| 1901 | NA | 4,833 |
| 1902 | NA | 10,113 |
| 1903 | NA | 9,464 |

9.Griffith to Ripon, ADM 1/2/47, No. 246, 27.7.1893]
10.Sanitation: West Africa, Vol. VI of 22.7.1903, PRO CO 96/411.
See Chamberlain's reply of September 1903 (MO/27242) in Encl. CO 96/411.
11.Data obtained from GCGRMSD of the years indicated. The expenditures under PWD were made on hospital construction and improvement, construction of wells, drains, latrines, mosquito proofing of tanks wells etc. and other sanitary improvements. In addition to these expenditures, special votes were often made for major sanitation works in the larger towns. There are no figures between 1915 and 1920. NA means Not Available.

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| Year | Sanitation Expenditure | PWD Expenditure |
|---|---|---|
| 1904 | NA | 5,698 |
| 1905 | NA | 4,923 |
| 1906 | NA | 11,295 |
| 1907 | NA | 7,315 |
| 1908 | NA | 6,706 |
| 1909 | NA | NA |
| 1910 | 8,537 | NA |
| (Additional 9,305 and 3,574 for yellow fever outbreak an sleeping sickness in 1910). | | |
| 1911 | 20,617 | NA |
| 1912 | 38,955 | 52,399 |
| 1913 | 43,822 | 41,350 |
| 1914 | 54,104 | 37,240 |

case.

The following brief construction can be put on the above figures: The new Sanitary Branch began to get its vote in 1908. For that time the initial vote was not insubstantial. By 1914, this vote had become quite substantial. The PWD cooperated closely and importantly with the Sanitary Branch in its activities; this is evidenced by the substantial sums expended by the PWD on the recommendation of the Sanitary Branch and the Medical Department as a whole. The figures shown above were obtained from the Annual Medical and Sanitary Reports of the years shown. Since the Sanitary Branch of the Medical Department only came into existence in 1908, sanitation expenditures between 1899 and 1907 formed a part of expenditures of the Medical Department.

**Duties of the new Sanitary Branch as set out in 1910**

The ordinary routine work consisted of: vaccination; birth and death registration; inspection for the removal of nuisances and destruction of mosquito larvae and their breeding places; prosecutions for the creating and non-removal of larval breeding

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places after due notice and for failure to orders regarding the removal of nuisances, protection of wells, tanks etc; conservancy and clearing of rank vegetation; maintenance and repair of drains; protection of water supplies; inspection of houses, markets and slaughterhouses; collection, removal and disposal of sewage and refuse; approval and sanction of site and construction of buildings; medical inspection of ports; general prophylactic measures against diseases; inspection and advice on all sanitary matters in connexion with railways and railway construction.

The extraordinary duties dealt with sudden outbreaks of endemic or epidemic diseases; quarantine measures; preparing, assisting in the preparation of, or advising on new water supply schemes, new drainage schemes and construction of drains, new methods of collection, removal, and disposal of sewage and refuse, filling up and draining particular marshes and lagoons, laying out villages and towns, demolition of infected or unhealthy houses or huts, special investigations and maintenance of laboratory for diagnostic purposes and the analysis of food and drink. The Senior Sanitary Officer arranged that he or the Junior Sanitary Officer visited the locality and introduced measures likely to check the outbreak and prevent its spreading to other places. He also instituted investigations as to the origin and mode of spread of the disease.[12]

Sanitary Organisation 1920-1950

All sanitary staff were paid by government. In addition each Town

12.Clifford to Harcourt, NAG, No. 780, ADM 1/2/94, 19.10.1914.

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Council employed a certain number of African Inspectors who worked under the Medical Officer of Health but were paid from Town Council funds. Part of the money for Sanitation was controlled by the Deputy Director of Sanitary Services who issued funds to the various Medical Officers of Health. Part of the revenue of the Town Councils was raised by house rates, court fines, wheel dues, spirit licences and part consisted of grants-in-aid from Government. In other smaller towns funds were entirely provided by Government and sanitation directed entirely by the Medical Officers in charge.

An important aspect of the sanitary reforms begun in 1910 had been the introduction of Sanitary Committees.

When sanitary reforms were inaugurated, it was laid down that the responsibilities of the health services should be shared between the Central Government and the local government bodies. During the late 1940s and early 1950s, the local government bodies were the Town councils of Accra, Cape Coast, Sekondi-Takoradi and Kumasi. The other local bodies which shared in the responsibility of sanitation services were the Native Authorities. Native Authority administration was soon replaced by district, local and urban councils following constitutional changes in the early 1950s. As regards Central Government administration of sanitary services, prior to 1946, a distinction was drawn between medical and health services: In the more important and bigger towns, there was a medical officer whose duties mainly centred on the district hospital and the district's outlying dispensaries. There was also a medical officer of health who directed and supervised the work of

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sanitary inspectors and other sanitary staff employed by government in the district. In the less important towns however, the local medical officer in charge doubled as medical officer of health. At headquarters in Accra, the top official was the Director of Medical and Sanitary Services, as it had been since the 1910s. Also stationed at Accra and reporting to him were two Deputy Directors, as it was since the 1920s. Each of the latter was responsible to his own group of medical officers. Up to 1946, there was no Assistant Director stationed at any regional administrative headquarters, except one at Kumasi who was responsible for Ashanti and the Northern Territories. Prior to 1939 a medical officer of health was responsible specifically for mining districts. His duties lay in the enforcement and supervision of statutary Mining Health Areas. In the 1930s, retrenchment reduced the staff of medical officers of health to about ten. This number was maintained more or less throughout the ensuing war. At war's end, although the establishment for medical officers of health was increased, there was persistent difficulty in keeping the position up to strength.[13] This had led to the reorganisation of the Health Branch in 1946. An Assistant Director who had previously held an appointment, and with the experience of a medical officer of health was stationed in each regional headquarters. From there, he supervised and controlled health work in the region in the manner stated above. By 1952 there were in the employment of government eleven medical

13.Report of the Medical Department, 1952, p 2.

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officers of health holding diplomas in public health. Out of these only five held positions as medical officers of health: One of these was stationed at Tamale. His duties covered the whole of the Northern Territories. Two were stationed at Kumasi one of whom was seconded to the Kumasi Municipal Council where his services were employed for Kumasi alone. The other was responsible for the rest of Ashanti. The fourth was responsible for Sekondi-Takoradi and Port Health work at Takoradi. The fifth was stationed at Accra where his duties were as part-time officer for the Accra Municipal council for work at Accra itself, as well as work in the administrative district of Accra. A medical officer of health took up the duties of the Assistant Director of each region when the latter was on leave. At headquarters at Accra, was an Assistant Director with special knowledge of public health matters in the country, whose duty it was to advise the Director of Medical and Sanitary Services. The chain of command in sanitary services was therefore from the Director through the Regional Assistant Director to Medical Officers of Health or District Medical Officers. In addition to medically qualified health personnel, there were about 20 sanitary superintendents and several sanitary officers of junior rank. Practically all the superintendents as well as the majority of sanitary inspectors were goverment officers. In brief, the government, through its medical and sanitary officers, exercised a general control and supervision over the many sanitary operations. They had wide sanitary powers of regulation and control in the four municipal towns of Accra, Sekondi-Takoradi, Cape Coast and Kumasi

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at this time. In addition the government had assumed direct responsibility for the provision of water supplies service.[14] In the rural areas, sanitary administration, which was of a very simple nature, came under Native Authorities. Men under various names were employed by the Native Authority, who were responsible for sanitary conditions of villages. Some had received training at the Accra and Kintampo schools of sanitation. Most had had no regular training. The bulk of work they did did not require elaborate training but there were men who did sanitation work with such previous experience as court registrars. One drawback of this arrangement was that, whereas in the earlier years of sanitary reform,sanitary inspectors were rigorously tutored in the handling of their jobs, now they tended to do their work rather mechanically and their efficiency judged by how much money they brought into the Native Authority Treasury. The bulk of the work of these rural sanitary officials were the supervision of labourers removing night soil and refuse, collection of conservancy fees, inspection of houses and the issuing of summonses for sanitary offences such as accummulation of water, rubbish and other nuisances, much as it was from the 1910s. The sanitary functions of the four municipal towns under the administration of Town Councils were much more elaborate than those of the Native Authorities: Here, the principal officers were the town clerk, treasurer, medical officer of health, town engineer and a chief sanitary inspector. The councils employed

14.Maude Commission Report, pp 7-9.

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substantial subordinate staff. Here however powers and functions of local authority and government tended to overlap with the unfortunate situation whereby neither government nor local body could be sure who was responsible for certain duties. Worse, there was the tendency to `pass the buck' when it came to apportion responsibility for certain important but difficult duties. In Accra for instance under the Town Ordinance of 1943, the Council had very wide powers and responsibilities; but in practice the government, mainly because of financial reasons, had practically taken over important sanitary duties including the very important water supply, the maintenance of the principal streets and sanitary services connected with government property. The ill-defined border line between Government and Council responsibility led to gross shortcomings in sanitation of the town. [15]

**Effectiveness of the Mosquito Ordinance 1910-1920**

At Accra, Cape Coast and Sekondi, in 1910, 28,780 inspections were done; and in 1920, 198,202 inspections. The growing effectiveness of the application of the Ordinance is indicated by the fact that in 1910, there were 4804 prosecutions [16] in the three towns put together. In 1920, the number of prosecutions had dropped to 2005. Thus whereas in 1910, 16% of inspections at Accra, Cape Coast and Sekondi combined, resulted in prosecutions, the corresponding

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15. ibid.
16. Prosecutions included offences for public nuisance, but the majority were for larval offences.

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figure for 1920 was about 1%.[17]

Some details on growth of pipe-borne water supply in 1920s, 1930s, 1940s and 1950s.

The growth of Accra necessitated the construction of a new service reservoir in 1925 and additional plant installations in the late 1930s. The latter effort received a temporary setback when the 1939 earthquake caused extensive damage to the works.[18] When completed, it enabled the supply of water to more parts of the town. In 1926, work on the detailed scheme for water supply to Kumasi and Tamale were commenced and a great deal of progress made. Investigations of a similar scheme for Koforidua commenced that year.[19] Rapid progress was made for Tamale and in 1931 the town's new water supply was commissioned; soon enough a water purification plant was on stream and giving satisfaction. The Owabi scheme for pipe-borne supply for Kumasi continued at satisfactory pace and on 29 March 1934, the first pipe-borne water supply for Kumasi was at last turned on by the Chief Commissioner of Ashanti.[20] Another important development in 1934 in Ashanti was the completion of water supply to Nsuta and Zongo sections of Obuasi under the auspices of the Obuasi Sanitary Board and the planning of the installation of filters by Ashanti Goldfiedls for the supply to staff bungalows and their hospital. This important Board was a composite one on which both the Government and Ashanti Goldfields were represented.[21] In the early

17. See GCGRMSD, of 1910-1920.
18. GCGRMSD, (1939), p. 5.
19. ibid., (1927-28), p. 28.
20. ibid., (1934), p. 19.
21. ibid., (1933-34), p. 32.

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1930s, claim for water supply for such towns as Nsawam, Tarkwa, Larteh,Somanya, Akropong, Odumasi and other towns was considered legitimate but financial stringency could not allow immediate action.[22] But by 1937 serious consideration was being given to the supply of piped water to both Tarkwa and Nsawam.[23]

In 1935, the Government decided to extend the Cape Coast pipe water supply to Elmina and Saltpond and proceed with the initial phase of supply for Koforidua.[24] The activities in the Northern Territories centred at this time on investigative and experimental work by the Geological Survey Department, bearing on the problem of water supply in this part of the country. And by 1939 two large impounding dams had been erected by the Geological Survey in rural areas in the Northern Territories, one at Savelugu and the other at Yendi.[25] One of the problem areas of water supply was the Akwapim ridge and its environs, which together, had the perennial problem of water shortage particularly in the dry season, on account of various factors, including topographical. This part of the country was not ignored in the effort of government to extend pipe-borne water to as many communities as possible. The yellow fever outbreak in the Eastern Province in 1937 accelerated the urgent examination of the water problem in this part of the country.In this regard, in 1938, a survey of the water supply problems in the Krobo, Akwapim

22.ibid., (1932-33), p. 28.
23.ibid., (1937), p. 26.
24.ibid., (1935), p. 23.
25.ibid., (1939), p. 5.

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and Shai areas in the Eastern Province was started.[26] These were the areas hardest hit by the 1937 yellow fever epidemic, the greatest in the colony's history. The 1938 survey raised knowledge of the problem there from the anecdoctal to the definitive. It importantly, provided the very definitive information that `the large majority of the towns and villages in these areas had deficient natural supplies and that conditions approaching a water famine are the rule in the dry season'.[27] That same year the Public Works Department was formulating plans for water supply to these areas.

The Department of Rural Water Development had, in 1950, been grouped with others under the Ministry of Agriculture and Natural Resources.[28] Between 1944 and 1950, the Department had constructed 889 village wells, 658 in the Northern Territories, 104 in Ashanti, and 127 in the Colony proper. In 1949-1950 year, 223 wells were constructed. Additionally the Department had constructed several resevoirs, boreholes, tanks and ponds and given, as part of its duty, advice and assistance to Native Authorities on the construction of suitable water supplies. The expenditure of the Department that year was about 100,000 pounds.[29] In the year 1949-1950, the Native Authorities completed the following `water works':

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26.ibid., (1938), p. 32.
27.ibid.
28.Maude Report, p. 43.
29.ibid., p. 43.

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| | Wells | Ponds | Tanks | Other |
|---|---|---|---|---|
| Colony | 74 | 5 | 11 | 3 |
| Ashanti | 73 | 11 | - | 1 |
| Northern Territories | 361 | 3 | - | - |
| **Totals** | 508 | 19 | 11 | 4 |

It is clear from the table that at least effort was concentrated mainly on the North. It is also clear that there was still much to be done in supplying the rural community, where over 90% of the people lived and were obviously the greater contributor to national revenue, with potable water. It was the considered opinion of the Maude Commission that it was the shortage of skilled labour, particularly in the North, rather than inefficiency and inertia which determined the slow pace of work of the Department. What was clear from the Maude Commission's findings was also that the urban communuties were preponderantly favoured in the provision of water supply.

By 1950 piped water supply was being provided the following towns: Accra, Kumasi, Winneba, Cape Coast, Sekondi-Takoradi, Koforidua, Tamale and Pong-Tamale. And further schemes for Nsawam and the states of Manya Krobo and Yilo Krobo were nearing completion. The Development Plan of the new African government provided for supplies to Dunkwa, Keta, Oda-Akim Swedru, Swedru-Appam, Tarkwa-Aboso and Tamale-Savelugu. In Obuasi, the town drew its water provided in part by Ashanti Goldfield Corporation, and in part by the Obuasi Sanitary Board.

As stated above, the Department of Rural Water Development was established in 1944. It became the sole body responsible for water

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supply to all rural communities. This body had its headquarters at Kumasi. Reasons for locating a first Government Department there are not clear. But it would seem to the author that various factors such as the following might have influenced that decision. First, Kumasi is geographically ideal in its situation more or less in the middle of the country; since the country as a whole was, and is, one huge rural community, it makes sense that the headquarters should be so located, to be of equal striking distance from the rest of the country. Apart from this geopraphical advantage, a historical one was probably used to support the decision: Ashanti had had a good record of interest as a region which had demonstrated an appreciation of good water supply at the rural level. Whereas rural communities in the Colony proper demonstrated what might be described as `caring less' for clean water, in self-help in its procurement, and in the appreciation of rural sanitation, Ashanti demonstrated the exact opposite. It might seem then sensible to locate the administrative centre for rural water development in an area where action in rural water development was likely to be most productive. A further and most important factor would seem to be the proximity of the Northern Territories to Kumasi. This part of the country, contiguous with Ashanti, remote from the coastal part of the country, suffered a chronic neglect in the matter of water and other development.The Maude Commission in 1952 singled out the Northern Territories as the part of the country needing the most urgent attention. The colonial government of course was appreciative of this fact, and as been stated above,

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had worked out ambitious schemes for the North in the 1930s. All these together probably determined the choice of Kumasi as headquarters.[30]

**Administration of water supplies in the 1950s**

Until an African government replaced the colonial one in 1951, responsibility for the provision of water rested with one central authority: the government. With the introduction of a new local government system by the Ordinance of 1951, there was a temptation in official circles to abandon the then current system of central responsibility and offload the whole responsibility for rural water onto the local authorities. The Maude Commission warned against such a step, saying that `in a country of this size and population, which has hitherto had a single water authority, namely the government, it would in our view be a retrograde step to split the organisation into fragments'.[31] The Commission recommended instead that, as regards piped water supply, the system should be for a central organisation to continue to provide water supplies in bulk. That the aim should be gradually as and when the local councils found their feet and demonstrated the necessary administrative and financial capacity, to transfer to them the responsibility of water distribution. The Commission recommended that since water supply was an essential commodity and which cost money, the consumers of piped water should pay for it; this proposal was already in operation in the urban centres and it only became a matter of

30.passim.
31.ibid., p.44.

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adjusting the rates and administer its efficient collection. In regard to non-piped water, and this applied largely to the rural areas, government was encouraged to continue to bear the organisation and sinking of wells for instance; with the proviso that once in place, the local councils would then take charge, pay the government for the installation, and take the responsibility of supply; except where the community was far too poor. Local authorities, backed by planning expertise and technial help, might wish to secure their own local water supplies. And they should be encouraged to undertake such projects. Most important, the Commission recommended the setting up of a Statutary Board or Corporation to handle the service of water supply. Such a corporation should have a close liaison with the Medical Department. Interestingly, the Commission recommended Kumasi as the headquarters of such a body. The Corporation was to be assisted by an Advisory Committee, one of whose duties would be to advise on the question of priorities in the distribution of water throughout the country. For the rest the work should be left to competent engineers and geologists. Thus was born the Ghana Water and Sewerage Corporation.

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Appendix III

## The Maude Commission

The Commission held their enquiry partly in public and partly in private, evidences collected formal and informal, and eyewitnesses heard in private. At a conference at Accra 20 February, the Commission requested the Press to provide publicity to the enquiry and inform readers of the Commission's willingness to consider constructive suggestions. As a result of this, large volumes of letters and memoranda were received, in many cases the writers invited to confer with the Commission. The Commission at the very onset spent much time visiting different parts of the country, sometimes together, other times in separate parties. Altogether they visited about 45 places: from Accra in the south to Bawku and Nandom in the North; from Takoradi in the west to Keta in the east. They held discussions with the Governor, the Officer Administering the Government (R H Saloway), the Minister of Finance (Mr RP Armitage), several members of the Legislative Assembly, the Chief Commissioners, the Director of Medical Services (Dr Cheverton) and all the senior medical and nursing staff of the medical department, the senior medical and nursing staff of the hospitals at Accra, Kumasi, Tamale, Sekondi-Takoradi and Cape Coast; and the senior medical and nursing staff of the district hospitals visited. They held discussions with representatives of the Ministries of Health and Labour, Local Government, Education and Social Welfare, Agriculture and Natural Resources, Justice and communications and Works. They met and talked with the chief officers of the four

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municipal towns, the principal of the University College of the Gold Coast, headmaster of Achimota School, the Asantehene, representatives of the principal Missionary Societies, the Red Cross and the Society of Friends of Lepers, Chamber of Mines, representatives of the Ghan Medical Practitioners Association, the Pharmaceutical Association and the Midwives Association. The Commission referred to and read over 50 reports and publications relevant to their enquiry, not to speak of the Annual Medical and sanitary Reports on the Gold Coast between 1892 and 1951. The enquiry was the most exhaustive study on medical matters ever undertaken in the colony's history. [1]

1. Maude Commission, p.2.

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## Appendix IV

### Organisation and Operations of Health Centres

See Chapter 3 on the staff of health centres. The other members of the health centre team were a midwife, preferably with a nursing qualification, a sanitary inspector, and a nurse. As health visitors became available, they largely replaced midwives.They held ante-natal and welfare clinics. This arrangement was of particular importance because it enabled the carrying into the rural community the huge benefits of maternal and child welfare service, a service from which only the large centres had benefited in the 1920s 1930s and 1940s. The important role of the sanitary inspector in the health centres organisation cannot be overstated: He supervised the sanitary organisation of the local authorities. He also gave instruction on environmental hygiene to junior sanitary staff and village communities. This arrangement provided opportunity of carrying health education to the rural community in a practical way; educational prophylaxis had engaged the attention of the Medical Department since the turn of the century.

A vital organisational feature of the health centres was their integration with the local medical service. In concept and application, the health centres acted as filter to prevent the flooding of out-patient departments of hospitals and to select suitable cases for transmission to hospital. To carry this out effectively and efficiently the district medical officer was required to pay regular and frequent visits, say about once a week, to the health centre where he held a clinic to see cases referred

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to him by the clinic superintendent. Such regular visits also provided the medical officer opportunities to review and advise on the work of the centre. These arrangements rendered mobile clinic obsolescent and wasteful. At the health centres, curative was to receive less emphasis than the preventive aspect of medicine, and treatment was to be looked on as a means of gaining the confidence of the people and securing through this confidence their active cooperation in preventive and educational measures. This lesson had been learned in the 1920s when the Maternal and Child Welfare movement was started in the country.

The concept, functions, organisation and operations of the health centres as narrated above had been widened by 1960. The overall purpose of the rural health centre was now conceived as an organisation which helped to improve the social and health standards of the rural community. This broad function could not be achieved by health personnel alone. It required the concerted efforts in agriculture, education, health and community development. Organisationally, the health aspects of the centre would be looked after by the team of the centre. Its main link with the community and its families would be the community health nurse. A similar counterpart in agriculture supported by the Ministry of Agriculture's district and regional experts would deal with agricultural development; these would be trained agricultural assistants.[1]

1.Health Services in Ghana, p. 17.

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Additional members of the team would be representatives of the Ministry of Education and a community development field officer. This integrated concept of a health centre was an advance on that of the Maude Commission. But the expanded concept was rather over-ambitious for actual execution. How far this ambitious scheme might have been carried if Nkrumah's government had not fallen in 1966 is conjectural.

It was considered that if these health centres were to provide an efficient service they must be under the effective supervision of a medical officer and their recommended distribution; they were to be reasonably grouped round and act as satellites of existing or projected hospitals. Because doctors in the early 1950s were in such short supply, the officer in charge of the centre, as we have seen above, was usually a Clinical Superitendent. With the improvement in the medical staff situation in the 1960s, a doctor was stationed and became responsible for a health centre. He became responsible for all the health problems in the population under his care. He attended to the out-patients, medical aspects of child welfare, ante-natal care, school health and health education. He became the head of a medical team of the health centre which consisted of a health superintendent (clinic superintendent), health inspector (sanitary inspector), midwives and community health nurses. The main link with the communities was the community health nurse whose duties were child and school health, nutrition, personal hygiene, immunisation and maternal care as well as follow up of medical treatment. The health team was expected to work

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closely with community development staff and leaders of the local community.

Because of the rapid pace of development in the country the distribution of health centres was frequently reviewed. The role of local authorities in the health services of the country were clearly defined by the new government. In consonance with the recommendation of the Maude Commission, dressing stations, as we have seen above, became the responsibility of local authorities. They, from now on, had the advantage of expert supervision by clinic superintendents and/or medical officers of the local health centres whose salaries were met by the central government. The government also considered that sanitation was a proper responsibilty of local authorities and wished to relieve itself of this responsibility and commitment as soon as possible. Its new policy was to provide advice and guidance to local authorities. The central government declared its awareness of the importance of health education and its intention to stimulate it through `all suitable media and in particular on the part of health officers such as health visitors, midwives, sanitary inspectors and others'.[2] The Ministry of Education and Social Welfare was given roles in this policy and its implementation. Local authorities were also assigned the responsility for school health service, maternity and child welfare and health visitor service.

2. Government Statement the Maude Commission Report, p. 2.

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Functions of health centres

The functions of the rural health centres were to be several: Outpatient clinics; maternal and child welfare; school medical service; follow-up of tuberculosis, leprosy and yaws patients and families; environmental sanitation; health education; collection of and reporting of sociological, epidemiological, morbidity and mortality data; implementation of specific health and research projects. These tasks were to be performed by an establishment consisting of one doctor to 9000 population; one health superitendent; one staff nurse; one community health nurse for every 3000 population; one midwife for every 5000 population; one public health nurse for every 10-15 community health nurses; three health inspectors; one laboratory technician; one pharmacist and one school dental nurse.[3]

3.ibid., p. 21.

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Appendix V

## Medical Field Units: The technique of field survey

Prior to the arrival of the survey team in a village, on foot or by lorry, the target village was informed and the number of people to be examined each day was decided. In the evening two members of the team went round, identified those to attend for examination, recorded their numbered names.At 6am the following day each person was called, seen by a selector and examined for cervical glands and obvious evidence of disease. He had also `...a thick blood film taken, with his number written on the slide in blue and this is handed to him. If he has enlarged cervical glands, he is given a second slide numbered in green.If he is to be included in the sample survey for onchocerciasis, he is given a third slide numbered in red.If he has yaws, he gets a yaws treatment card. At the next table he is vaccinated. At the next table skin snip and gland puncture are done if needed, the specimen being mounted on the green or red numbered slide and his blue numbered slide is taken from him for staining....gland juice and skin snip specimens are examined immediately they have been taken...blood slides are stained.Afterwards, examination of blood slides occupies the rest of the day.The man in charge of the team, or the medical officer, if present, teaches as clinical and microscopic material offer the chance. Trypanosomiasis cases are referred to an ad hoc treatment

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team, the pace of whose progress is independent of that of the survey team'.[1]

1. GCGRMSD, (1954), p. 46.

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## Appendix VI

### Medical Education

The 1927 Committee proposed a detailed administrative scheme for the Medical College.[1] The College was to be known The Royal Medical College of West Africa, His Majesty the patron, and the Governors of British West Africa the vice-patrons. The top governing body was to be a Council whose membership was detailed. The Council had the legal right to grant diplomas to students who would have passed an examination in medicine, surgery and midwifery, as licentiates of the College to be known as Licenciate of the Royal Medical College (L.R.C.M). It also had the legal obligation to determine timing of qualifying examinations and appointment of Board of Examiners. Other legal duties of the Council included: Ensuring the standard required from candidates at any qualifying examination to that laid down by the General Council of Medical Education and registration of Great Britain; cancellation of diplomas; the institution of post-graduate courses in hygiene and other professional subjects and the granting of special diplomas for such after examination. Detailed rules and Regulations under which the Council should operate were carefully laid down by the Committee. The proposed membership of the council was as follows: President, DMSS of the Gold Coast; Vice-President, the Colonial Secretary; a treasurer; Secretary of Native Affairs; Dean of the College and Medical Superintendent of the Hospital; Principal of

1.Report of Comm. on a Br. W. Afr. Med. College, passim.

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the Prince of Wales College; DDSS; One official member nominated by each of the governors of Nigeria and Sierra Leone; Two unofficial members nominated by the governor of the Gold Coast and one by the governor of Nigeria and one by the governor of Sierra Leone; Secretary and Bursar who would also be the secretary of the Council.

The rules and regulations were several and of precise character. The Committee even went into the detail of laying down rules and regulations on the selection, duties and remunerations of temporary officers and temporary lecturers appointed locally.

The general management of the College was to be under the direction of the Dean assisted by an Executive Committee, subject to the control of the Council.The membership of the Executive Committee was spelled out to the letter. Consideration was given to the very important question of administrative relations between the College and the Gold Coast Hospital and merits quoting: the objective was

> '...securing smooth working and avoiding administrative difficulties, defining precisely the position of the College, its staff and its students, in regard to the Medical Department generally and to the Gold Coast Hospital in particular'. [2]

2.ibid.

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To avoid ambiguities of control and procedure it was decided that the College must be completely absorbed in the Medical Department, and that the medical officers on the teaching staff placed in their due grade of seniority in the list of the West African Medical Staff. Non-professional officers on the College staff, as well as subordinate personnel, would also come on to the Medical Establishment.

The entry requirements were detailed. It required the production of evidence of age; evidence for having passed an entrance examination in general education accepted for matriculation or entrance to the Faculty of Arts or Pure Science in the United Kingdom; presentation of fitness by medical examination.

After giving very careful consideration to the important question of administrative relations between the College and the Hospital and after considering various possible schemes of control, the Committee decided to combine the two institutions into a single administrative unit under the direct management of one responsible officer. This officer, the Dean, was to be placed under the authority of the Director of Medical and Sanitary Services.

Rules were specifically laid out for professional examinations, the subject matter for each of the examinations precisely stated. There were to be three professional examinations and rules and regulations for the guidance of students were to be made.

The teaching staff and their salaries were worked out in great detail. The principle used was that suggested by Ormsby-Gore the Secretary of State. Staff recruitment and arrival to commence work

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was organised in annual waves right up to the 6th year. In the general programme of work for the students, it was laid down that the licentiate of the College should be on precisely the same footing and enjoy the same privileges as a medical man who had qualified in Britain. The curriculum would therefore follow precisely the recommendations and requirements of the General Medical Council for Medical Education and Registration. In drafting the rules and regulations for the course of study the Committee gave very careful consideration to the various reports of the General Medical Council and to other memoranda on the subject of medical education. The course would cover a period of six years. The first year, to be known as the pre-medical or pre-registration year, students would acquire a knowledge of the general principles of natural science; they would attend lectures and classes in chemistry, physics and biology. At conclusion of these studies, the student would sit an examination in these subjects. If successful, he would register as a medical student. A student would not proceed to further studies until this had been accomplished. In the second and third years, the student would acquire a knowledge of the normal structure and function of the human body by attending lectures and practical classes in anatomy and physiology. His knowledge in these would be tested by examination at the end of the third year. He would not proceed to higher studies until this examination was passed. These two examinations should be considered as stringent efficiency bars. A high standard was recommended so that deficient students could be

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discovered early for early elimination to provide such students opportunities to pursue other callings.A student who failed these examinations after a reasonable number of attempts should be required to leave the College. The last three years of the course would be devoted to the study of pathology and bacteriology; medicine; surgery and midwifery in their general and special branches; hygiene and forensic medicine. The lectures, practicals and clinical duties were so planned that the student would acquire a theoretical and practical grasp of the science and art of his profession. The student was to be entrusted with a series of hospital appointments of responsibility so graded that on completion of his course, when he had passed his final examination and had received his diploma, he was fitted to enter into the practice of his profession.

In 1924 an area 216,124 acres in size was acquired for the projected College.This piece of land, adjacent to the Gold Coast Hospital, was inspected by the Committee and the Acting Chief Architect and two officers of the Public Works Department and found satisfactory. It was judged to suit the proposed Medical College and Residential Area.Architectural plans of the buildings were worked out and submitted to the Committee.

Assuming the annual output of licentiates of the College of 30, the average cost per student would not exceed 1,674 pounds.The minimum cost of professional training in Britain was 2,100 pounds or considerably higher.The Committee, on the evidence of these figures, concluded the establishment of the West African Medical

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College had a sound economic basis.

Medical scholarship scheme

The value of the scholarship was to be 300 pounds per annum for five years, an outfit allowance of 50 pounds and medical expenses up to 50 pounds during the period of the scholarship.A free second class passage to England at the beginning of the scholarship and a first class return passage to Ghana on successful completion of the course were provided. These terms of the scholarship were similar to schemes in other Colonial countries. Disbursement of passage money and outfit allowance were made by the treasurer in Ghana; while the Crown Agents and the Director of Colonial Scholars in London handled all payments for all authorised expenses in the United Kingdom.

Candidates were not to be less than 17 but not more than 20 and they were to be unmarried and stay unmarried throughout the course. One student, Taylor, was to lose his scholarship when in 1942, he got married.

The question of requirement of general education was crucial and Fraser played a major role in laying down the educational prerequisites. In 1941, Latin was dropped as a requirement.The requirements were stringent; few were likely to meet them for years to come. But by 1942, there were so many candidates for scholarships. These had passed or were sitting for London Intermediate Science or London First examinations for Medical degrees. Candidates who had only Matriculation qualifications-qualifications deemed sufficient prerequites for

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Appendix VII

## Medical Research

Scientific papers published from the Accra Laboratory and the Medical Research Institute.[1]

| Year | Number of Papers Published |
|---|---|
| 1914 | 1 |
| 1915 | 7 |
| 1916 | 8 |
| 1917 | 10 |
| 1919 | 3 |
| 1920 | 21 |
| 1921 | 13 |
| 1922 | 13 |
| 1923 | 7 |
| 1924 | 6 |
| 1925 | 3 |
| 1926 | 2 |
| 1927 | 5 |
| 1928 | 2 |
| 1929 | 1 |
| 1930 | 2 |
| 1931 | 2 |
| 1932 | 9 |
| 1933 | 2 |
| 1934 | 1 |
| 1935 | 0 |
| 1936 | 2 |
| 1937 | 0 |
| 1938 | 1 |
| 1939-1942 | 0 |
| 1943 | 1 |
| 1944 | 1 |
| 1945 | 4 |
| 1946 | 2 |
| 1947-1948 | 0 |
| 1949 | 4 |
| 1950 | 5 |
| 1951 | 5 |
| 1952 | 7 |
| 1953 | 9 |
| 1954 | 13 |

1. Data obtained from GCGRMSD of years indicated.

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award of medical scholarships in the 1930s-were no longer considered. In accordance with Stopford's (Headmaster of Achimota School in the early 1940s) suggestion, by 1942,the entrance qualification for application for scholarship was raised to the London Intermediate BSc or the London First Examination for Medical Degrees.

The requirements embodied those of practically all British Universities, the objective being to be able to place a selected candidate in any university with an opening. On award of a medical scholarship, the student was sent to Achimota School where he pursued two years of study in Chemistry, Physics, Botany and Zoology to the Intermediate BSc level. This course was also known as the First MB course.On successful completion, the scholar was then sent to a medical school selected for him in Britain. It is important to grasp the fact that until the early 1950s, only Achimota provided a requisite Pre-medical or First MB course in the Gold Coast. Consequently, any student who aspired to do medicine through a government scholarship had to pass through Achimota.Cases in point were Barnor and H S Bannerman. Students of Mfantsipim, they applied for and won government scholarships in 1939/1940, and were sent to Achimota prior to proceeding to Britain for their medical studies.[3]

3.Report of Comm. on a Br. W. Afr. Med. College, passim.

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The Medical Research Institute 1923

The new laboratory consisted of the :General office, Director's office, pathologists' room, incubator room,photographic and dark room, media etc preparation room, room for patient consultation, a hall and a garage.It had an animal house with concrete cages, pens for sheep, kennels for dogs and large cages for monkeys. It also has a mosquito proof house and special cages for ineffective mosquito work, a store and a gas plant. The internal fittings were excellent, bench and cabinet space abundant. An acetylene gas plant supplied gas. The supply of electricity was adequate.The floors were covered with material of special composition for ease of walking and cleaning.There was also an animal post-mortem room.The Institute also had a new library which, in 1923, held 418 volumes and 32 journals.The Library provided as far as possible, all references to tropical medicine in current literature.[2]

2.GCGRMSD, (1923-24), p. 20.

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## Appendix VIII

### Dispensers and Nurses

The Table below shows that the number of dispensers-dispenser pupils rose dramatically from 1929 onwards. The explanation for this follows. (Data from GCGRMSD of years shown)

### Dispensers and Dispenser Pupils

| Year | Dispensers | Dispenser-Pupils | Total |
|---|---|---|---|
| 1907 | 18 | 16 | 34 |
| 1910 | 11 | ? | |
| 1912 | 18 | 16 | 34 |
| 1913 | 25 | 16 | 41 |
| 1914 | 25 | 16 | 41 |
| 1915 | 25 | ? | |
| 1916 | 25 | ? | |
| 1917 | 28 | ? | |
| 1918 | 28 | ? | |
| 1919 | 29 | ? | |
| 1920 | 32 | ? | |
| 1921 | 33 | ? | |
| 1922 | ? | ? | |
| 1923 | ? | ? | |
| 1925 | ? | ? | |
| 1928 | ? | ? | |
| 1929-1930 | ? | ? | 78 |
| 1935-1936 | ? | ? | 99 |
| 1937-1938 | ? | ? | 104 |

### Nurses

| Year | Nurses | Pupil Nurses | Nurses+Pupil Nurses |
|---|---|---|---|
| 1913 | | | 52 |
| 1914 | 30 | 22 | 52 |
| 1915 | | | 54 |
| 1916 | | | 55 |
| 1918 | | | 64 |
| 1919 | | | 64 |
| 1920 | 32 | 28 | 60 |
| 1921 | 16 | 48 | 64 |
| 1929 | | | 229 |
| 1930 | | | 256 |
| 1932 | | | 222 |
| 1933 | | | 222 |

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| | |
|---|---|
| 1934 | 229 |
| 1935 | 217 |
| 1936 | 217 |
| 1937 | 235 |
| 1938 | 279 |

(Excludes Mental Nurses, Midwives and Nurse-Midwives. No figures are available between 1939 and 1950, partly because of the second world war. Data from GCGRMSD of the years shown).

## Nurses on the Register 1952[1]

| | Total registered | Not in practice | NGS | GS |
|---|---|---|---|---|
| SRN(F) | 121 | 49 (40%) | 17 | 55 |
| SRN(M) | 1 | | | 1 |
| QRN(F) | 242 | 34 (14%) | 32 | 176 |
| QRN(N) | 585 | 56 (10%) | 166 | 363 |
| Other SRN | 1 | | | 1 |
| Other QRN | 40 | 23 (58%) | 1 | 16 |
| **Total** | **990** | **162** | **216** | **612** |
| **Per Cent** | **100** | **16** | **22** | **62** |

From the late 1940s, there were two categories of entrants to the school of nursing:

1. Those with elementary education up to Primary School Leaving Certificate or with less than four years secondary education. In this group the training extended over four years, the first of which was spent in post-primary or pre-nursing school at Achimota School. These students were those who had not already passed the Senior Cambridge Examination or its equivalent. Entrance was carefully controlled by competetive examination and interview. The subjects chosen for teaching were those which would be of greatest assistance to the pupils in the later period of training.

2. The second group of students were those who held the Senior

1. Data from the Maude Commission Report. NGS: Non-government service; GS: Government service.

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Cambridge School Certificate. For this group too, competetive examination and interview were an essential part of the selection process. For them, the general course lasted three years. They were however required to do a preliminary nursing course of four months' duration, in which pupils of the first group joined after successfully passing the test at the end of their pre-nursing course at Achimota.The preliminary four months' course was designed to judge a pupil's suitability for nursing and to give her a grounding in elementary theory. The course included History of Nursing, Anatomy and Physiology, Hygiene or Science of Health, Elementary Dietetics and Cookery, Junior and Senior Nursing, Bandaging, First Aid; Medical, Surgical, Paediatric, Gynaecological, Ear Nose and Throat and Ophthalmic nursing; Theatre technique, Pharmacology and Microbiology. A prelimianry examination was held at the end of the first year of training. Later, the syllabus was revised and Mental, Obstetric and Public Health Nursing were added.

On passing the first state examination a nurse was required to train for 18 months at the Maternity Hospital in Accra and thus become eligible to qualify as a midwife.[2]

Strength of Nurses and Midwives in Government Service in 1960[3]

| | |
|---|---|
| Public health nurses | 30 |
| Midwives | 130 |
| Health Superitendents | 34 |
| Mental nurses | 170 |
| Tutors | 14 |
| All other nurses | 1306 |
| **Total** | **1684** |

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## Midwives

| Year | Number of Pupil-Midwives in Training Each Year |
|---|---|
| 1928-1935 | 6 |
| 1936 | 23 |
| 1937 | 24 |
| 1938 | 40 |
| 1943 | 63 |
| 1945 | 84 |
| 1951 | 104* |
| 1952 | 104* |
| 1960 | 173** |

*About 70% at Accra and 30* at Kumasi. Number of registered midwives in 1952 was 362. In 1990 there were 4772 Enrolled Nurse-Midwives.

### The Midwives Board

The Board has power to make rules for the training of midwives and to appoint a supervisory authority over any midwives or class of midwives. The rules provided for a course of training at an approved training school lasting three years, or in the case of a woman who is already a registered nurse, 18 months. No woman who was not registered may claim to be a qualified midwife and in certain scheduled towns of the country, no one but a doctor or registered midwife could habitually attend women at birth. Outside these towns there was no restriction on midwifery service.[4]

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2. Maude Report and Fact Sheet on Ghana.
3. Data from Health Services in Ghana.
4. Maude Report, p. 37.

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## Appendix IX

### Maternal and Child Welfare

During the Boer War large numbers of would-be recruits had to be rejected on medical grounds. This led to the establishment of school medical service in order that many of the conditions found to be present amongst young adults between 18-22 could be prevented or could receive appropriate treatment during school life. Soon after the introduction of school inspection it was found that a certain proportion of the `starters' (those between 5 and 8) were suffering from conditions resulting from disease or neglect in their pre-school life. This inevitably led to the formation of welfare centres to which mothers were encouraged to bring their babies and children of pre-school age. By 1918 there were some 900 voluntary and 1550 state-aided Welfare Centres in England. It was not long before it was found that certain of the conditions seen were the result of illness in the expectant mothers; hence the commencement of ante-natal clinics. At first purely preventive, advisory and educative in its aims and operations, the centres soon found the need to offer curative service. This had the advantage that it obviated having to refer the child and mother elsewhere that was unfamiliar; and a systematic follow-up of the progress of mother and child as well as the insurance that advice given were adequately complied with.[1]

1. This review is based on an eighteen-page memorandum on Child and Maternal Welfare written, in defence of the movement, by Dr Selwyn-Clarke, Deputy Director of Medical and Sanitary Services on 21 March 1932. In the early 1930s, the

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Attendance at Maternal and Child Welfare Centres[2]

| Year | Children | Pregnant Women |
|---|---|---|
| 1925 | 20,327 | |
| 1926 | 28,982 | |
| 1927 | 61,749 | 2,010 |
| 1928 | 71,826 | 5,436 |
| 1929 | 112,675 | 13,370 |
| 1930 | 135,745 | 23,414 |
| 1931 | 106,861 | 19,462 |
| 1932 | 74,317 | 18,826 |
| 1933 | 74,160 | 18,873 |
| 1934 | 121,059 | 21,795 |
| 1935 | 110,039 | 28,744 |
| 1936 | 107,900 | 18,205 |
| 1937 | 140,774 | 34,669 |
| 1938 | 106,729 | 46,483 |
| 1939 | 93,012 | 40,993 |
| 1940 | 105,797 | 40,823 |
| 1941 | 139,069 | 43,083 |
| 1942 | 142,993 | 49,104 |
| 1943 | 149,594 | 54,843 |
| 1944 | 147,660 | 63,373 |
| 1945 | 192,683 | 74,121 |
| 1946 | 168,903 | 72,912 |
| 1947 | 194,778 | 96,187 |
| 1948 | 189,561 | 87,729 |
| 1949 | 194,561 | 96,187 |
| 1950 | 187,380 | 83,453 |
| 1951 | 173,887 | 61,739 |
| 1952 | 172,712 | 63,875 |
| 1953 | | |
| 1954 | 153,513 | |
| 1955 | 189,409 | |

extremely popular Welfare Centres stood the danger of closure or extreme abbreviation on account of the Depression. It was his extraordinary dedication to the movement and energy to rescue it that it was saved. Appendix 3, No. 1488/63/1930, NAG.

2. The table was compiled from data in GCGRMSD of 1925-1955.

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Appendix X

## The Korle Bu Hospital

As stated elsewhere, the foundation stone of the first Colonial Hospital for Accra was laid by Governor Rowe in 1881, and opened in 1883. The accommodation provided by this small building was obviously inadequate. It was enlarged during the governorship of Sir Brandford Griffith in the 1890s, by the erection of a second block with a connecting verandah. This hospital was a distinct advance on the series of huts which had done duty as hospital between 1878 and 1883. It was soon found that the accommodation was too limited to cater for the growing needs for treatment of the inhabitants of Accra; Africans were being gradually weaned away from their faith in native fetish priests and were steadily becoming more alive to the efficacy and advantages of European medicine. The necessity for a new hospital with much more accommodation for patients, up-to-date appointments, and provision for the application of the latest discoveries and methods of medical science to the healing of disease, was generally recognised, and specially advocated by Dr F G Hopkins Principal Medical Officer of the Gold Coast between 1911 and 1916. His recommendations were opportunely supported at the time by an earthquake which cracked the eastern block from end to end. This part of the hospital was then condemned as dangerous, but it was patched up by temporary supports. The outbreak of the First World War put a temporary, but prolonged stop, to major construction work. Plans for the construction of a new hopsital for Accra were

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postponed.[1]

The actual original plans and designs for a new African hospital for Accra were drawn in 1911 by Dr C V Le Fanu. Dr Le Fanu had entered the Medical Department in 1907 (check date) as Medical Officer, became a Medical Specialist in 1913 (check the date). He belonged to the West African Medical Staff. He was to attend Guggisberg during his last weeks of illness at Bexill-on-Sea in 1933.[2] Dr Le Fanu's plans were drawn under the guidance of Dr Hopkins and the site west of the Korle Lagoon tentatively selected for it on condition a bridge was built across the lagoon to permit easy access to the town without the hospital actually being in the town. In 1914, Dr D Alexander, who succeeded Dr Rice as Senior Sanitary Officer, proposed that the plan drawn and agreed in 1911 be reconsidered and redrawn. It was this plan which Dr Rice reworked for consideration in 1916.[3]

Dr T E Rice re-enterd the Ghana scene in 1916 when he replaced Dr Hopkins as Principal Medical Officer. As Senior Sanitary, Dr Rice had overseen the commencement of sanitary reforms and the inauguration of the Sanitary Branch in 1910. He was transferred on promotion as Principal Medical Officer to Sierra Leone in 1913. Dr Rice re-worked the plans for a new hospital and gave further

1.Address of Governor Guggisberg at Opening of of the Gold Coast Hospital in 1923. NAG, ADM 11/1/850.
2.Wraith, Guggisberg, 1967, p. 331.
3.Robertson to Harcourt, NAG, ADM 1/2/94, Desp. No.631, 31.7.1914.

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careful consideration to a suitable site for it. He had been familiar with Dr Le Fanu's original 1911 plan, during his earlier service in the Gold Coast as Senior Sanitary Officer. The proposals were submitted to governor Clifford, who himself had taken a keen interest in the scheme from its inception. In October 1916 a Board assembled to fix a site for the new hospital. They finally decided on the present site as suitably within easy reach of the town. The plans were elaborated in 1917 by Mr Morrison, the government architect of the Public Works Department. That year, the plans were sent to the Colonial Office for approval. Through governor Clifford's careful husbanding of the Colony's revenue, money was available for the commencement of construction. But the continuing war did not permit it. It was abandoned for the time being. The War was over in 1918. Guggisberg succeeded Clifford as governor in 1919. Meanwhile the plans had underegone further revision and amplification. Immediately he arrived in the country, Guggisberg had the revised plans sent to the Medical and Sanitary Advisory Board of the Colonial Office in London for criticisms and comment. The drawings were back at Accra in March 1920 with a list of the Committee's recommendations and suggestions. Prior to giving out the work to contract, the report of the Advisory Committee was carefully studied by the Principal Medical Officer and the Director of Public Works. The suggestions of the Advisory Committee were adopted where possible and suitable for local needs. Following this, work began on the final set of plans; this involved many meetings discussions and deliberations between members of the

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Medical and Public Works Departments. It was through the cooperation of these two departments that the final plans were readied for construction to start. The eventual plan adopted had resulted from frequent consultations, careful consideration of suggestions of the Medical Advisory Board of the Colonial Office, and the adoption of other ideas suggested by local knowledge and experience. The plan conceived, worked out and accepted would result in a hospital `which when completed will challenge comparison with any building of a similar character in any of our colonies'.[4]

In March 1920 tenders were called for and in August Messrs Thomas and Edge, West African Building and Engineering Company Limited, was awarded the contract for the construction of the Hospital. The first portion of the building given out to contract was designed to form a complete hospital unit, capable on completion, of being immediately used for the admission and treatment of patients. This portion of the hospital was to be completed first, and the remainder constructed subsquently. It was however soon realised that the number of patients likely to seek treatment would far exceed its accommodation. Therefore in early 1922, governor Guggisberg caused another careful review, whose upshot was the addition of another block, to be constructed along with the first; these together provided a total of 192 beds. Adequate accommodation on the most modern and up to date lines were provided for the

4.Address by Guggisberg at Opening Ceremony of the Gold Coast Hospital, 1923, NAG, ADM 11/1/850.

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examination and treatment of outpatients. The entire hospital building was lighted throughout by electricity and special up to date fittings installed in the operating theatre; so the ophthalmological and X-ray rooms. Elevators were installed. The hospital possessed its own electricity generator, for which a back-up was provided for breakdowns and emergencies. A complete water carriage central sewerage system was laid; it was the first such scheme in the Colony. A causeway was constructed across the Korle lagoon, providing ready means of access of the hospital to the town. The facilities provided at the hospital were many and comprehensive. Accommodation in the immediate vicinity of the hospital was provided for the African staff. The administration block was equipped for offices, staff rooms, and lecture rooms for teaching pupil nurses and dispensers. The two operating theatres were provided with all available modern equipment and special lighting, as well as modern sterilising facilities. Other facilities included kitchen, laundry, disinfector house, medical stores, power house, mortuary, lodges, a Pathological Laboratory building, bungalows. The governor gave instruction for the naming of the first four wards after the four officers most intimately connected with the details of construction: These were Dr D Alexander, Dr C V Le Fanu, Dr A J R O'Brien and Mr Hedges, Architect, Public Works Department. When all the work had been completed and grounds laid out, the Gold Coast Hospital became the largest and the most up to date hospital in all Africa. The hospital was officially opened 9 October 1923.

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Appendix XI

## Some Major Diseases

### Influenza

Between 1918 and 1955, the annual number of cases ranged between some 200 and 1500. There are no figures for 1956; and for 1957 when a pandemic occurred. In fourteen of the 40 years under consideration some 500 or more cases were reported annually; the greatest inter-pandemic cases were reported in 1935 and 1950. In the 1918 pandemic, 7756 cases were reported though this represented a very small fraction of the actual numbers, put at about 60% of the population which then was a little over 2 million. As stated earlier, there are no figures for the 1957 pandemic and it could be assumed some 50% of the population suffered from it; the population in 1957 was about 5 million. In 1928 and 1953, though only 147 and 465 cases were reported, five and seven deaths were also reported respectively; it would seem then that those years, influenza was unusually severe. Apart from the 1918 pandemic, there was no relationship between the number of cases and the number of deaths. No pattern in case numbers is evident when the three decades, 1920-1950, are compared.

In general, about 70% of reported cases were males and the rest females. This was a reflection of the general pattern that more males attended hospitals than females. Also since the major government establishments were practically all males, and to them medical services were available as a matter of priority, more males were bound to feature in the returns than females. Also socio-

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economic reasons tended to keep women at home even if ill. In those years that both in-patient and out-patient cases were recorded, in general, only 5-10% of all cases received hospital admission: a testimony to the general mildness of the disease.[1] During the 1891 epidemic, Governor Griffith addressed a public meeting with Chief Medical Officer Easmon for the purpose of warning against the dangers of the African cold water system of treatment. The Africans were not impressed. A semi-educated man spoke out against the European method, saying Africans had treated such fevers for generations by cold water method; he saw no reason for changing that method. This man's sister caught influenza, the man treated her by the cold water method; she died within three days. The man himself was attacked by the disease and he applied cold water freely to himself; he died the day after his sister. These cases produced profound impression on Africans and caused the abandonment of cold water treatment for fevers. The Medical report states that ` The very natural resentment at this visitation (of an epidemic disease such as influenza) found its vent in attacks upon the Government in the lay press'.[2] We can assume, on the evidence, that no part of the colony was spared, and some 4% of the population might have succumbed to it. It also can be assumed that the disease probably ran a course of about five weeks in any locality it hit, as it did in the 1918 pandemic. Its severity is undoubted. For death from it was sufficiently impressive and rapid

1.GCGRMSD, (1892), Quoted in GCGRMSD, (1918), p. 14.
2.ibid., (1918), p. 15.

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for the Medical Department to postulate in 1912, that it might have been plague.[3]

The 1918 epidemic commenced at Accra in the middle of September. By the 25th of October it had run its full course and subsided. Most cases occurred between 25 September and 15 October, a period of three weeks. It reached its peak about 1st October. From the 25 September there was an explosive increase in the number of cases; the decline in numbers occurred with similar rapidity.[4] The time-course of deaths from influenza showed a pattern similar to that of the appearance of cases. Hospital deaths from the disease at Accra began to be registered on 18th September-three days after the identification of the first hospital case. Six days elapsed before the next four occurred. From September 24th on, the number of deaths increased relentlessly, parallelling closely, but laggging slightly behind total deaths in the town until the 29th September. From then on deaths from influenza and total deaths in the town became congruent: Clearly from the 29th September till the epidemic burned out, practically all deaths recorded in the town were from influenza. The majority of deaths were recorded on the 1st of October, while the majority of daily cases reached its maximum of 60 the previous day. In general then the time-course of deaths from the epidemic followed a similar course as the numerical appearance of cases in hospital.

The clinical manifestations were universally similar in all the

3.GCGRMSD, (1912), p. 93.
4.Scott, Epidemic diseases, p. 188.

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centres which sent in reports on the disease. Those for Accra described below were typical for cases in all other centres. The incubation period was usually 2-4 days, the onset sudden but varying in character: it varied from severe nasal and pharyngeal congestion to a sudden onset of high fever with urgent symptoms and great prostration. About forty-seven percent of the cases at Accra constituted the uncomplicated variety. The remaining 53% manifested in mostly respiratory symptoms although a few presented with gastro-intestinal symptoms right at the onset. One case presented at once with marked cerebral symptoms and ended up with a double lobar pneumonia. Five cases in all developed double pneumonia. All ended fatally.

In the uncomplicated cases fever usually lasted some four days, the patient was on the road to convalecence by the fifth day. As stated above the serious cases were those who soon developed respiratory symptoms: For this group, the disease lasted some 6-7 days. The respiratory affections were capillary bronchitic, broncho-pneumonic, and diffuse bronchitic. The appearance of the disease in the Accra area coincided with unusually cold weather with high winds and the high proportion of respiratory cases was attributed to this. The harmattan had played a similar role in the 1891 epidemic.[5]

5.GCGRMSD, (1918), p. 11.

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Weather and communication are two potent means of transmission of influenza

In the pandemic of 1918, the first entry appeared to have been Cape Coast when the steamship SS Shonga arrived there on 31 August 1918. A mail officer boarded the ship on his duties, complained he was unwell but his sypmtoms appeared to have been insufficiently severe to interrupt his work. On 11 September, also at Cape Coast, a telegraphist was diagnosed as having influenza.[6] The epidemic appears to have really started on this date; at Cape Coast, the epidemic reached its peak about the end of the month. Meanwhile a case had landed on 5 September by boat at Sekondi; Sekondi was the principal port of the colony. By 18 September, the local epidemic was ravaging the town. It appears also that the Accra epidemic gained its entry by ship about the middle of September and had developed into a full epidemic within a week or so of that date. Then the disease began to move inland by various routes. Koforidua was one of earliest inland towns afficted: The first case being a girl who had arrived there unwell from Accra on 19 September; she had contracted the disease a few days after its introduction at Accra. Influenza was introduced into Axim about 25 September by a member of a boat crew from Sekondi which had been struck about ten days earlier. In similar fashion, a member of a boat crew from Accra introduced the infection into Winneba. Kumasi reported its first cases about the 23rd of September and Yeji, a little later, about the end of the first week of October. Some five weeks later

6. GCGRMSD, (1918), p. 10.

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it appeared in Tamale. The northeastern and northwestern parts of the Northern Territories were struck a little earlier than Tamale. In the north there was both east-west spread as well as northerly spread from the south.[7]

**Tuberculosis: Professor Simpson's findings in mine labourers:**

1.The prevalence of ankylostomiasis which lowered resistance and increased liability to disease. Ankylostomiasis was maintained and aggravated by constant reinfestation from infected latrines in the mines and villages.

2.A considerable proportion of the men and youths from the North were unfit, many tuberculous. They soon broke down from the underground work which was unsuitable for their condition.

3.The men from the North were allotted housing at a compound which was overcrowded and insanitary.

Their plight was worsened by the underground work and living conditions which conspired to increase their susceptibility to tuberculosis. Mine underground labourers soon acquired silicosis, further increasing their susceptibility to pulmonary tuberculosis. Pay and diet were poor. Their ignorance of the simplest rules of hygiene and sanitation was total. The mortality in these Northern labourers was accordingly exceedingly high.The concentration of the bulk of mining activity in the Tarkwa area gave this town the evil reputation of possessing the highest incidence of tuberculosis in the country.[8]

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7.ibid., (1918), p. 10-11.
8.GCGRMSD, (1924-25).

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## Sleeping Sickness

Following is a brief historical review, the objective is to state the key milestones in knowledge acquired on the disease prior to its recognition as a major problem in Ghana.

Sleeping sickness has been known in West Africa since the 17th and 18th Centuries. It has been stated that slave traders, operating in the 17 and 18 Centuries, knew about it, and used the prominent cervical gland enlargement in the disease for recognising it and rejecting infected slaves.[9] In 1784 John Atkins, in the publication `Navy Surgeon', gave a good description of the disease on the Guinea Coast, calling it `sleeping distemper'.[10] In 1803, Winterbottom described the disease in Africans in Sierra Leone, calling it `Negro Lethargy', again emphasisng the important clinical feature of sleepiness in some stage of the disease. Winterbottom emphasised the importance of cervical gland enlargement as a diagnostic feature. In 1840, Clark observed it in Sierra Leone and on the Ivory Coast and called it `Narcotic Dropsy' once more pointing to lethargy as a key clinical manifestation. In his studies of the disease, Danguise simply called it `Hypnosis' in 1861. Prior to 1900 or so its diagnosis was entirely clinical; it was in 1901 that Forde found the parasite causing the disease in the blood of a European patient in the Gambia; and in 1902 Dutton identified it as a trypanosome and gave it the name Trypanosoma

9. ibid., (1933-34), p. 100.
10. Tropical Diseases, 1913, p. 14.

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gambiense. At about the same time, Castellani found trypanosomes in the cerebrospinal fluid of sleeping sickness patients and also established that trypanosomes found in blood and the central nervous system were identical. In 1903, Bruce, Nabarro and Grieg confirmed this discovery and showed that it was the cause of the disease, and that the distribution of sleeping sickness and a particular tse-tse fly, Glossina palpalis, coincided absolutely in Uganda, furnishing evidence that G.palpalis was the vector of T.gambiense.

It was also around 1900 that the microscope came into increasing use in medical diagnosis of disease. 1903 was important in other respects: Trypanosomiasis was first mentioned in the Annual Medical Report in 1903;one case was reported.[11] Sleeping sickness had been found widespread in adjoining German Togoland. In 1903, the Imperial German Government established a sleeping sickness camp in Togoland; it is said that all the cases admitted to the camp died.[12] In 1909, Horn carried out a careful investigation in the Volta River District and concluded that the disease was endemic in this region.[13] In 1905, Thomas of the Liverpool School of Tropical Medicine introduced Atoxyl (an arsenical) in the treatment of trypanosomiasis and in 1908, the Sleeping Sickness Bureau was established in London. Its objective was to coordinate the research

11.Scott, Epidemic Disease, p.139.
12.GCGRMSD, (1933-34), p. 100.
13.ibid.

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into the disease. That same year, Klein showed that a tse-tse-fly was only infective a fortnight or so after biting and in 1909, Stephens and Fantham described a new trypanosome, T. rhodesiense, in a case of sleeping sickness from a European who had been in Rhodesia, while York and Stannus recorded a case of sleeping sickness due to T. rhodesiense from Nysaland. In 1912, Kinghorn and York showed that this type of trypanosome existed in several species of antelope in Rhodesia and that it was transmitted by Glossina morsitans. Finally, in 1912, Bruce and others stated that the sleeping sickness of Nyasaland was due to T. rhodesiense and was not the same as sleeping sickness elsewhere.[14]

In Ghana, the infection was first recognised by microscopy in 1906; that was in a patient at Gambaga.[15]

**Yellow Fever, historical review**

This historical review is based on material presented at the Ghent Exhibition, 1913, by Professor J W W Stephens.[16] During the 16th and the 17th centuries yellow fever was often confused with plague and commonly refered to as "the contagion". In 1635 Du Terre described the existence of the disease in Guadalupe. Between approximately 1635 and 1708, it was generally referred to as "Siam Disease" because of its commonness there. The first medical description of the disease appears to have been given by Ferreira da Rosa in 1694. Yellow fever began to be recognised as a disease carried by ships,

14.Tropical Diseases, p. 14.
15.GCGRMSD, (1906), p. 29.
16.In Handbook to the Tropical Diseases, p. 126.

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roughly during the period 1709-1790 and this resulted in the establishment of quarantine regulations. In 1848 Nott proposed that an insect might be the transmitter of the disease and five years later Daniel de Beayperthy stated that the disease was transmitted by Culex fasciatus. It began to be clear the disease was caused by a filterable virus and in 1881, Finlay formulated the hypothesis that this virus is inoculated by mosquitoes. The following year, Gerard fed a mosquito on a yellow fever patient and then immediately fed it on himself. He contracted a mild form of yellow fever. In 1898, H C Carter made the important observation that the carrier could only transmit yellow fever after an interval had lapsed after the carrier had been infected by a yellow fever patient. In 1900 Reed, Carrol, Agramonte and Lazear obtained the important proof that the mosquito Stegomyia fasciata was the transmitting agent and the same year, based on these discoveries, a successful yellow fever campaign was launched in Havana, Cuba. A similar successful anti-yellow fever campaign was accomplished in Rio de Janeiro in 1903 and yellow fever eliminated there that year. Similar success was achieved in New Orleans in 1905 and only one case of yellow fever was seen in Havana between 1900 and 1908. In 1910, the year of the first major Sekondi outbreak, Sir Rupert Boyce was saying yellow fever was endemic in natives of West Africa.

**Measures usually employed in yellow fever outbreaks**

1. Destruction of mosquitoes in ports and large towns and beyond if the staff position allowed it.

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2.Segregation of Europeans in special residential areas. This has been dealt with in detail elsewhere.

3.Constant watch for cases of the disease.

The emergency measures included:

1.Intensification of the usually routine anti-larval campaign in the locus of infection and surrounding areas.

2.Temporary evacuation of uninfected susceptibles (Europeans) from the focus of infection.

3.Proclamation by law of infected areas in order to obtain emergency powers for the Sanitary Authority to deal with the outbreak.

4.Isolation and careful screening of cases and fumigation of houses where such cases had occurred.

Of all these measures constant anti-mosquito-larval war to eradicate the Stegomyia mosquito was the most important. The high mortality of yellow fever infection, and the absence of specific treatment for it, demanded the most vigorous preventive measures. The outbreak of 1937 which assumed epidemic proportions provoked the most energetic action from the Medical Department. The anti-larva campaign was pursued with exceptional vigour.

The geographical pattern of the disease has been worked out and according to Scott, `The area in which it is principally found... lies in the south-eastern part of the country, to the south-east of the line Axim-Tarkwa-Kpandu' and can be considered the endemic zone

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of the disease. Within the distribution zone are pockets of hyperendemicity.[17]

Yellow fever was only occassionaly seen in Ashanti and territory north of it.

17.Scott, Epidemic Diseases, p. 58.

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## Appendix XII

### Number of Reported Cases a Year 1898-1955

| Malaria | | | | Yaws | | | |
|---|---|---|---|---|---|---|---|
| Year | Number | Year | Number | Year | Number | Year | Number |
| 1898 | 165 | 1941 | 38234 | 1898 | 7 | 1941 | 78808 |
| 1899 | 165 | 1942 | 38358 | 1899 | 6 | 1942 | 95915 |
| 1900 | 111 | 1943 | 47038 | 1900 | 1 | 1943 | 143317 |
| 1901 | 241 | 1944 | 50207 | 1901 | 0 | 1944 | 143782 |
| 1902 | 361 | 1945 | 48896 | 1902 | 1 | 1945 | 155044 |
| 1903 | 533 | 1946 | 46071 | 1903 | 0 | 1946 | 133867 |
| 1904 | 487 | 1947 | 59234 | 1904 | 6 | 1947 | 144420 |
| 1905 | 409 | 1948 | 78831 | 1905 | 10 | 1948 | 143789 |
| 1906 | 394 | 1949 | 101947 | 1906 | 4 | 1949 | 143270 |
| 1907 | 2365 | 1950 | 87635 | 1907 | 409 | 1950 | 140071 |
| 1908 | 2576 | 1951 | 100505 | 1908 | 437 | 1951 | 115363 |
| 1909 | 2994 | 1952 | 137194 | 1909 | 592 | 1952 | 152337 |
| 1910 | 2817 | 1953 | 129118 | 1910 | 508 | 1953 | 128721 |
| 1911 | 2316 | 1954 | 68763 | 1911 | 535 | 1954 | 125023 |
| 1912 | 2282 | 1955 | 70548 | 1912 | 627 | 1955 | 25460 |
| 1913 | 2612 | | | 1913 | 634 | | |
| 1914 | 2729 | | | 1914 | 613 | | |
| 1915 | 2748 | | | 1915 | 529 | | |
| 1916 | 3607 | | | 1916 | 463 | | |
| 1917 | 3501 | | | 1917 | 362 | | |
| 1918 | 3171 | | | 1918 | 440 | | |
| 1919 | 3741 | | | 1919 | 477 | | |
| 1920 | 4696 | | | 1920 | 531 | | |
| 1921 | 5935 | | | 1921 | 487 | | |
| 1922 | 7497 | | | 1922 | 1368 | | |
| 1923 | 5945 | | | 1923 | 5310 | | |
| 1924 | 5206 | | | 1924 | 6119 | | |
| 1925 | 6567 | | | 1925 | 9576 | | |
| 1926 | 6480 | | | 1926 | 18083 | | |
| 1927 | 8947 | | | 1927 | 26081 | | |
| 1928 | 16043 | | | 1928 | 54456 | | |
| 1929 | 18924 | | | 1929 | 52945 | | |
| 1930 | 24972 | | | 1930 | 69785 | | |
| 1931 | 30011 | | | 1931 | 62524 | | |
| 1932 | 20349 | | | 1932 | 62536 | | |
| 1933 | 25538 | | | 1933 | 60374 | | |
| 1934 | 24535 | | | 1934 | 65784 | | |
| 1935 | 25815 | | | 1935 | 66692 | | |
| 1936 | 25125 | | | 1936 | 77713 | | |
| 1937 | 24366 | | | 1937 | 83666 | | |
| 1938 | 28944 | | | 1938 | 75497 | | |
| 1939 | 25609 | | | 1939 | 64891 | | |
| 1940 | 31912 | | | 1940 | 68976 | | |

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| Tuberculosis | | | | Respiratory Diseases | | | |
|---|---|---|---|---|---|---|---|
| Year | Number | Year | Number | Year | Number | Year | Number |
| 1898 | 4 | 1941 | 2022 | 1898 | 89 | 1941 | 21558 |
| 1899 | 6 | 1942 | NA | 1899 | 74 | 1942 | NA |
| 1900 | 6 | 1943 | 2302 | 1900 | 51 | 1943 | 27220 |
| 1901 | 16 | 1944 | 2408 | 1901 | 90 | 1944 | 26920 |
| 1902 | 6 | 1945 | 2444 | 1902 | 96 | 1945 | 30069 |
| 1903 | 6 | 1946 | 2318 | 1903 | 166 | 1946 | 27545 |
| 1904 | 10 | 1947 | 2946 | 1904 | 158 | 1947 | 35431 |
| 1905 | 7 | 1948 | 3262 | 1905 | 124 | 1948 | 50295 |
| 1906 | 25 | 1949 | 2213 | 1906 | 127 | 1949 | 56789 |
| 1907 | 4 | 1950 | 2303 | 1907 | 3455 | 1950 | 50302 |
| 1908 | 10 | 1951 | 2677 | 1908 | 3486 | 1951 | 56562 |
| 1909 | NA | 1952 | 3201 | 1909 | NA | 1952 | 85204 |
| 1910 | 30 | 1953 | 2735 | 1910 | 4658 | 1953 | 70606 |
| 1911 | 191 | 1954 | 5329 | 1911 | 3496 | 1954 | 33597 |
| 1912 | 134 | 1955 | 2562 | 1912 | 4848 | 1955 | 27784 |
| 1913 | 141 | | | 1913 | 4407 | | |
| 1914 | 271 | | | 1914 | 4736 | | |
| 1915 | 274 | | | 1915 | 4561 | | |
| 1916 | 281 | | | 1916 | 5187 | | |
| 1917 | 258 | | | 1917 | 4739 | | |
| 1918 | 236 | | | 1918 | 4624 | | |
| 1919 | 269 | | | 1919 | 5302 | | |
| 1920 | 355 | | | 1920 | 5414 | | |
| 1921 | 337 | | | 1921 | NA | | |
| 1922 | 385 | | | 1922 | 7022 | | |
| 1923 | 398 | | | 1923 | 6414 | | |
| 1924 | 392 | | | 1924 | 4928 | | |
| 1925 | 555 | | | 1925 | 7487 | | |
| 1926 | 698 | | | 1926 | 7164 | | |
| 1927 | 885 | | | 1927 | 10148 | | |
| 1928 | 1189 | | | 1928 | 19272 | | |
| 1929 | 1193 | | | 1929 | 18083 | | |
| 1930 | 1249 | | | 1930 | 20579 | | |
| 1931 | NA | | | 1931 | NA | | |
| 1932 | 1186 | | | 1932 | 14705 | | |
| 1933 | 1160 | | | 1933 | 16816 | | |
| 1934 | 1206 | | | 1934 | 16630 | | |
| 1935 | 1223 | | | 1935 | 18119 | | |
| 1936 | 1563 | | | 1936 | 16932 | | |
| 1937 | 1355 | | | 1937 | 21954 | | |
| 1938 | 1414 | | | 1938 | 18670 | | |
| 1939 | 1531 | | | 1939 | 21994 | | |
| 1940 | 1654 | | | 1940 | 21690 | | |

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## Smallpox

| Year | Number | Year | Number |
|---|---|---|---|
| 1898 | 308 | 1941 | 1470 |
| 1899 | 189 | 1942 | 2025 |
| 1900 | 519 | 1943 | 161 |
| 1901 | 834 | 1944 | 143 |
| 1902 | 222 | 1945 | 702 |
| 1903 | 19 | 1946 | 1646 |
| 1904 | 59 | 1947 | 848 |
| 1905 | 25 | 1948 | 1269 |
| 1906 | 34 | 1949 | 91 |
| 1907 | 4 | 1950 | 353 |
| 1908 | 89 | 1951 | 474 |
| 1909 | 217 | 1952 | 695 |
| 1910 | 165 | 1953 | 865 |
| 1911 | 275 | 1954 | 79 |
| 1912 | 283 | 1955 | 14 |
| 1913 | 60 | | |
| 1914 | 22 | | |
| 1915 | 11 | | |
| 1916 | 4 | | |
| 1917 | 358 | | |
| 1918 | 5 | | |
| 1919 | 23 | | |
| 1920 | 298 | | |
| 1921 | 77 | | |
| 1922 | 13 | | |
| 1923 | 9 | | |
| 1924 | 19 | | |
| 1925 | 1948 | | |
| 1926 | 172 | | |
| 1927 | 34 | | |
| 1928 | 102 | | |
| 1929 | 280 | | |
| 1930 | 600 | | |
| 1931 | 210 | | |
| 1932 | 5 | | |
| 1933 | 46 | | |
| 1934 | 48 | | |
| 1935 | 0 | | |
| 1936 | 59 | | |
| 1937 | 43 | | |
| 1938 | 123 | | |
| 1939 | 167 | | |
| 1940 | 77 | | |

## Yellow Fever

| Year | Number | Year | Number |
|---|---|---|---|
| 1898 | 0 | 1941 | 4 |
| 1899 | 0 | 1942 | 1 |
| 1900 | 0 | 1943 | 1 |
| 1901 | 0 | 1944 | 0 |
| 1902 | 2 | 1945 | 5 |
| 1903 | 0 | 1946 | 0 |
| 1904 | 0 | 1947 | 0 |
| 1905 | 0 | 1948 | 0 |
| 1906 | 0 | 1949 | 22 |
| 1907 | 0 | 1950 | 23 |
| 1908 | 0 | 1951 | 25 |
| 1909 | 0 | 1952 | 6 |
| 1910 | 11 | 1953 | 0 |
| 1911 | 9 | 1954 | 1 |
| 1912 | 6 | 1955 | 3 |
| 1913 | 20 | | |
| 1914 | 15 | | |
| 1915 | 1 | | |
| 1916 | 6 | | |
| 1917 | 5 | | |
| 1918 | 4 | | |
| 1919 | 11 | | |
| 1920 | 2 | | |
| 1921 | 4 | | |
| 1922 | 22 | | |
| 1923 | 13 | | |
| 1924 | 10 | | |
| 1925 | 8 | | |
| 1926 | 86 | | |
| 1927 | 44 | | |
| 1928 | 2 | | |
| 1929 | 0 | | |
| 1930 | 2 | | |
| 1931 | 17 | | |
| 1932 | 5 | | |
| 1933 | 4 | | |
| 1934 | 2 | | |
| 1935 | 7 | | |
| 1936 | 3 | | |
| 1937 | 73 | | |
| 1938 | 18 | | |
| 1939 | 2 | | |
| 1940 | 0 | | |

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## Cerebrospinal Meningitis

| Year | Number | Year | Number |
|---|---|---|---|
| 1898 | 0 | 1941 | 26 |
| 1899 | 0 | 1942 | 255 |
| 1900 | 4 | 1943 | 644 |
| 1901 | 3 | 1944 | 1061 |
| 1902 | 3 | 1945 | 10368 |
| 1903 | 1 | 1946 | 719 |
| 1904 | 8 | 1947 | 1297 |
| 1905 | 3 | 1948 | 11002 |
| 1906 | c 2000 | 1949 | 10943 |
| 1907 | c 8000 | 1950 | 1029 |
| 1908 | c 6000 | 1951 | 1077 |
| 1909 | 0 | 1952 | 317 |
| 1910 | 0 | 1953 | 281 |
| 1911 | 0 | 1954 | 134 |
| 1912 | 0 | 1955 | 173 |
| 1913 | 0 | | |
| 1914 | 0 | | |
| 1915 | 0 | | |
| 1916 | 0 | | |
| 1917 | 0 | | |
| 1918 | 0 | | |
| 1919 | 1041 | | |
| 1920 | NA | | |
| 1921 | ? | | |
| 1922 | 2 | | |
| 1923 | 4 | | |
| 1924 | 2 | | |
| 1925 | 14 | | |
| 1926 | 3 | | |
| 1927 | 0 | | |
| 1928 | 4 | | |
| 1929 | 1 | | |
| 1930 | 3 | | |
| 1931 | 3 | | |
| 1932 | 0 | | |
| 1933 | 2 | | |
| 1934 | 0 | | |
| 1935 | 1 | | |
| 1936 | 0 | | |
| 1937 | 0 | | |
| 1938 | 4 | | |
| 1939 | 839 | | |
| 1940 | 149 | | |

## Trypanosomiasis

| Year | Number | Year | Number |
|---|---|---|---|
| 1901 | 0 | 1944 | 4500 |
| 1902 | 0 | 1945 | 4872 |
| 1903 | 1 | 1946 | 5059 |
| 1904 | 6 | 1947 | 4226 |
| 1905 | 7 | 1948 | 4477 |
| 1906 | 3 | 1949 | 3312 |
| 1907 | 34 | 1950 | 2200 |
| 1908 | 16 | 1951 | 2586 |
| 1909 | 45 | 1952 | 2498 |
| 1910 | 52 | 1953 | 2348 |
| 1911 | 83 | 1954 | 1480 |
| 1912 | 104 | 1955 | 992 |
| 1913 | 57 | 1956 | 710 |
| 1914 | 12 | 1957 | 778 |
| 1915 | 17 | 1958 | 893 |
| 1916 | 8 | 1959 | 830 |
| 1917 | 12 | 1960 | 928 |
| 1918 | 10 | 1961 | 699 |
| 1919 | 14 | | |
| 1920 | 27 | | |
| 1921 | 8 | | |
| 1922 | 3 | | |
| 1923 | 15 | | |
| 1924 | 6 | | |
| 1925 | 26 | | |
| 1926 | 37 | | |
| 1927 | 67 | | |
| 1928 | 59 | | |
| 1929 | 94 | | |
| 1930 | 121 | | |
| 1931 | 224 | | |
| 1932 | 250 | | |
| 1933 | 685 | | |
| 1934 | 1179 | | |
| 1935 | 1973 | | |
| 1936 | 3885 | | |
| 1937 | 4820 | | |
| 1938 | 5599 | | |
| 1939 | 5611 | | |
| 1940 | 6826 | | |
| 1941 | 6165 | | |
| 1942 | 5630 | | |
| 1943 | 4758 | | |

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| Venereal Diseases* | | | | Leprosy | | | |
|---|---|---|---|---|---|---|---|
| Year | Number | Year | Number | Year | Number | Year | Number |
| 1898 | 23 | 1941 | 8059 | 1898 | 0 | 1941 | 673 |
| 1899 | 32 | 1942 | 9714 | 1899 | 6 | 1942 | NA |
| 1900 | 17 | 1943 | 10056 | 1900 | 0 | 1943 | 628 |
| 1901 | 42 | 1944 | 9666 | 1901 | 0 | 1944 | 608 |
| 1902 | 30 | 1945 | 10265 | 1902 | 7 | 1945 | 802 |
| 1903 | 36 | 1946 | 12175 | 1903 | 0 | 1946 | 826 |
| 1904 | 35 | 1947 | 16687 | 1904 | 0 | 1947 | 1078 |
| 1905 | 31 | 1948 | 22743 | 1905 | 2 | 1948 | 2140 |
| 1906 | 55 | 1949 | 20717 | 1906 | 2 | 1949 | 2731 |
| 1907 | 701 | 1950 | 19286 | 1907 | 21 | 1950 | 10379 |
| 1908 | 884 | 1951 | 18030 | 1908 | 20 | 1951 | 14814 |
| 1909 | 874 | 1952 | 14933 | 1909 | 0 | 1952 | NA |
| 1910 | 999 | 1953 | 19852 | 1910 | 40 | 1953 | 13679 |
| 1911 | 935 | 1954 | 10365 | 1911 | 43 | 1954 | 20007 |
| 1912 | 1241 | 1955 | 13250 | 1912 | 34 | | |
| 1913 | 1112 | | | 1913 | 64 | | |
| 1914 | 1195 | | | 1914 | 45 | | |
| 1915 | 1309 | | | 1915 | 42 | | |
| 1916 | 1141 | | | 1916 | 15 | | |
| 1917 | 1505 | | | 1917 | 20 | | |
| 1918 | 1612 | | | 1918 | 15 | | |
| 1919 | 1693 | | | 1919 | 19 | | |
| 1920 | 1699 | | | 1920 | 7 | | |
| 1921 | 1163 | | | 1921 | 21 | | |
| 1922 | 2553 | | | 1922 | 44 | | |
| 1923 | 3266 | | | 1923 | 145 | | |
| 1924 | 4752 | | | 1924 | 96 | | |
| 1925 | 5562 | | | 1925 | 445 | | |
| 1926 | 5263 | | | 1926 | 667 | | |
| 1927 | 5136 | | | 1927 | 753 | | |
| 1928 | 8032 | | | 1928 | 1427 | | |
| 1929 | 5011 | | | 1929 | 1404 | | |
| 1930 | 4685 | | | 1930 | 3148 | | |
| 1931 | 3548 | | | 1931 | NA | | |
| 1932 | 4116 | | | 1932 | 848 | | |
| 1933 | 3851 | | | 1933 | 735 | | |
| 1934 | 4498 | | | 1934 | 786 | | |
| 1935 | 4313 | | | 1935 | 1034 | | |
| 1936 | 5272 | | | 1936 | 1090 | | |
| 1937 | 4812 | | | 1937 | 845 | | |
| 1938 | 5676 | | | 1938 | 813 | | |
| 1939 | 6137 | | | 1939 | 841 | | |
| 1940 | 8031 | | | 1940 | 714 | | |

*Figures for syphilis ad gonorrhoea combined. All figures obtained from GCGRMSD of the years shown.

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## Public Health Expenditure 1883-1955

| Year | Med Exp Sterling | Year | Med Exp Sterling | Year | Med Exp % Ann Rev | Year | Med Exp % Ann Rev |
|---|---|---|---|---|---|---|---|
| 1883 | 6196 | 1936 | 312413 | 1883 | 3.5 | 1936 | 13.4 |
| 1884 | 6789 | 1937 | 339720 | 1884 | 3.7 | 1937 | 12.5 |
| 1885 | 6781 | 1938 | 349981 | 1885 | 3.5 | 1938 | 11.6 |
| 1886 | 3379 | 1939 | 357556 | 1886 | 2.8 | 1939 | 11.1 |
| 1889 | 3698 | 1940 | 304603 | 1889 | 3.3 | 1940 | 9.5 |
| 1890 | 3124 | 1941 | 298841 | 1890 | 2.0 | 1941 | 12.4 |
| 1891 | 10662 | 1942 | c 385759 | 1891 | 5.7 | 1942 | c 9.3 |
| 1892 | 12464 | 1943 | 355622 | 1892 | 6.8 | 1943 | 9.8 |
| 1894 | 15325 | 1944 | 352795 | 1894 | 7.0 | 1944 | 10.6 |
| 1895 | 15618 | 1945 | 289542 | 1895 | 6.8 | 1945 | 9.1 |
| 1897 | 20074 | 1946 | 519693 | 1897 | 8.6 | 1946 | 9.5 |
| 1898 | 20939 | 1947 | 596350 | 1898 | 6.9 | 1947 | 6.6 |
| 1900 | 17753 | 1948 | 755430 | 1900 | 3.0 | 1948 | 7.8 |
| 1901 | 25284 | 1949 | 890379 | 1901 | 3.6 | 1949 | 7.9 |
| 1903 | 34410 | 1950 | 965020 | 1903 | 5.9 | 1950 | 6.9 |
| 1904 | 36178 | 1951 | 1037794 | 1904 | 5.3 | 1951 | 4.2 |
| 1905 | 36054 | 1952 | 1607545 | 1905 | 6.2 | 1952 | 4.2 |
| 1906 | 34536 | 1953 | 1801596 | 1906 | 5.0 | 1953 | 4.2 |
| 1907 | 35243 | 1954 | 1904293 | 1907 | 5.0 | 1954 | 4.4 |
| 1908 | 40405 | 1955 | 2345686 | 1908 | 6.8 | 1955 | 4.8 |
| 1909 | 43268 | | | 1909 | 6.9 | | |
| 1910 | 52931 | | | 1910 | 5.3 | | |
| 1911 | 70000 | | | 1911 | 6.8 | | |
| 1912 | 84918 | | | 1912 | 7.9 | | |
| 1913 | 94560 | | | 1913 | 10.4 | | |
| 1914 | 104316 | | | 1914 | 9.9 | | |
| 1915 | 116565 | | | 1915 | 8.0 | | |
| 1916 | 115029 | | | 1916 | 6.3 | | |
| 1917 | 115425 | | | 1917 | 7.1 | | |
| 1918 | 119499 | | | 1918 | 9.0 | | |
| 1919 | 120300 | | | 1919 | 4.6 | | |
| 1920 | 205219 | | | 1920 | 10.0 | | |
| 1921 | 229042 | | | 1921 | 7.6 | | |
| 1922 | 221828 | | | 1922 | 6.6 | | |
| 1923 | 220094 | | | 1923 | 5.9 | | |
| 1924 | 263022 | | | 1924 | 6.6 | | |
| 1925 | 277484 | | | 1925 | 4.7 | | |
| 1926 | 268934 | | | 1926 | 8.2 | | |
| 1927 | 221384 | | | 1927 | 9.3 | | |
| 1928 | 306804 | | | 1928 | 12.0 | | |
| 1929 | 358294 | | | 1929 | 13.3 | | |
| 1930 | 369083 | | | 1930 | 13.3 | | |
| 1931 | 320144 | | | 1931 | 11.9 | | |
| 1932 | 285110 | | | 1932 | 10.8 | | |
| 1933 | 278124 | | | 1933 | 12.1 | | |
| 1934 | 282258 | | | 1934 | 12.1 | | |
| 1935 | 293431 | | | 1935 | 11.3 | | |

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Figures from Blue Books 1880-1900, Colonial Annual Reports 1901-1910 and Gold Coast Government Report on Medical and Sanitary Department 1910-1955.

| Year | Per Capita Exp Shillings Sterling | Year | Per Capita Exp Shillings Sterling |
|---|---|---|---|
| 1884 | 0.2 | 1941 | 1.5 |
| 1886 | 0.1 | 1943 | 1.79 |
| 1890 | 0.04 | 1944 | 1.78 |
| 1891 | 0.14 | 1945 | 1.46 |
| 1892 | 0.16 | 1946 | 2.62 |
| 1894 | 0.20 | 1947 | 3.01 |
| 1895 | 0.20 | 1948 | 3.38 |
| 1897 | 0.26 | 1949 | 3.79 |
| 1898 | 0.28 | 1950 | 4.17 |
| 1900 | 0.23 | 1951 | 4.43 |
| 1901 | 0.24 | 1952 | 7.1 |
| 1903 | 0.46 | 1953 | 8.0 |
| 1904 | 0.49 | 1954 | 8.4 |
| 1905 | 0.49 | 1955 | 10.0 |
| 1906 | 0.46 | | |
| 1907 | 0.41 | | |
| 1910 | 0.62 | | |
| 1911 | 1.0 | | |
| 1912 | 1.3 | | |
| 1913 | 0.63 | | |
| 1914 | 0.65 | | |
| 1915 | 1.55 | | |
| 1916 | 1.5 | | |
| 1917 | 1.5 | | |
| 1918 | 1.56 | | |
| 1919 | 1.6 | | |
| 1921 | 2.2 | | |
| 1922 | 2.1 | | |
| 1923 | 1.92 | | |
| 1924 | 2.29 | | |
| 1925 | 2.42 | | |
| 1928 | 2.3 | | |
| 1929 | 2.56 | | |
| 1930 | 2.58 | | |
| 1931 | 2.02 | | |
| 1932 | 1.8 | | |
| 1933 | 1.66 | | |
| 1934 | 1.64 | | |
| 1935 | 1.66 | | |
| 1936 | 1.73 | | |
| 1937 | 1.84 | | |
| 1938 | 1.9 | | |
| 1939 | 1.8 | | |
| 1940 | 1.5 | | |

# ase:Population Ratio in the Gold Coast 1901-1951

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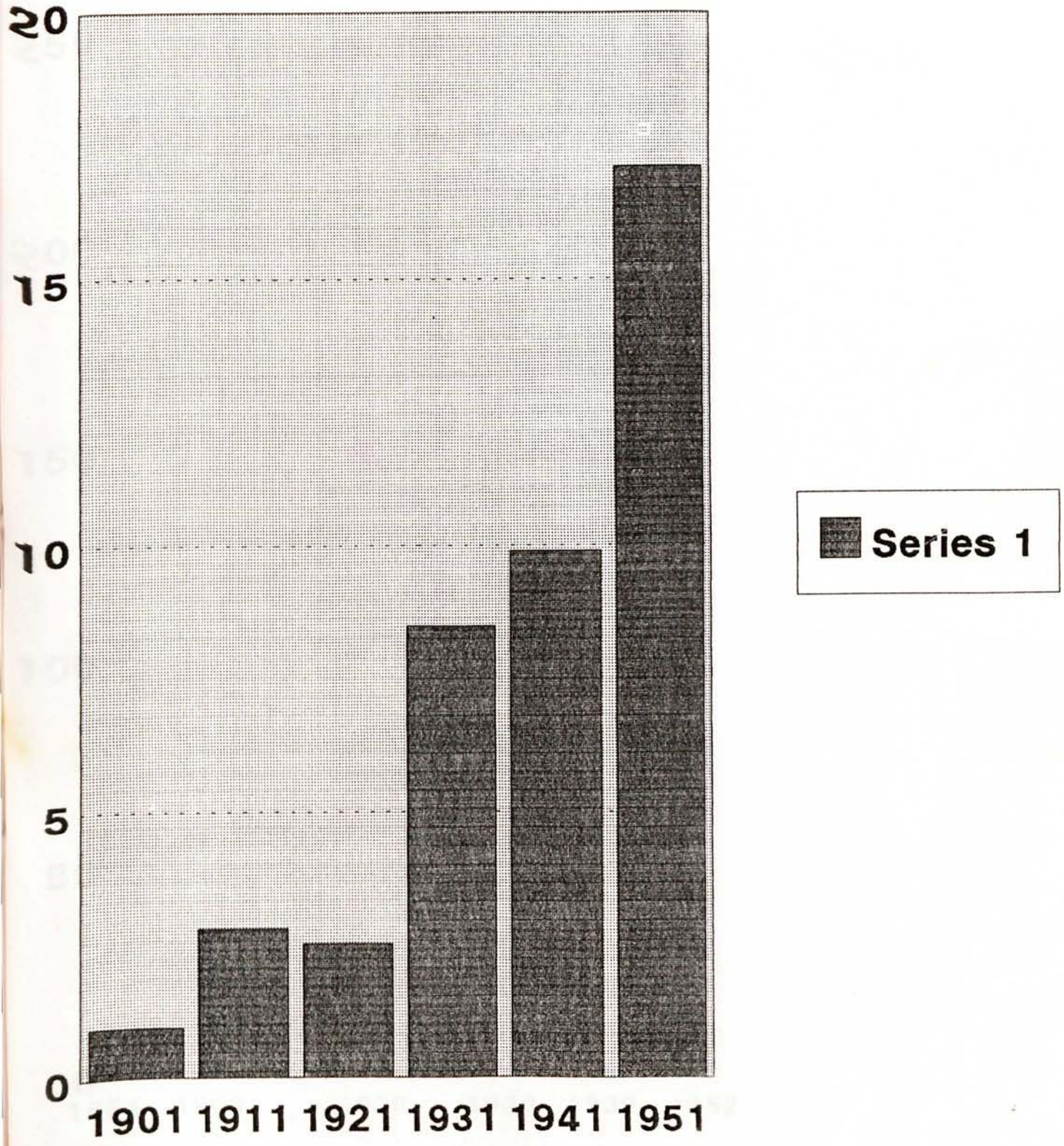


on of Population seen at hospitals and clinics:Ratios shown as percentages

# overnment Doctors in the Gold Coast 1884-1952

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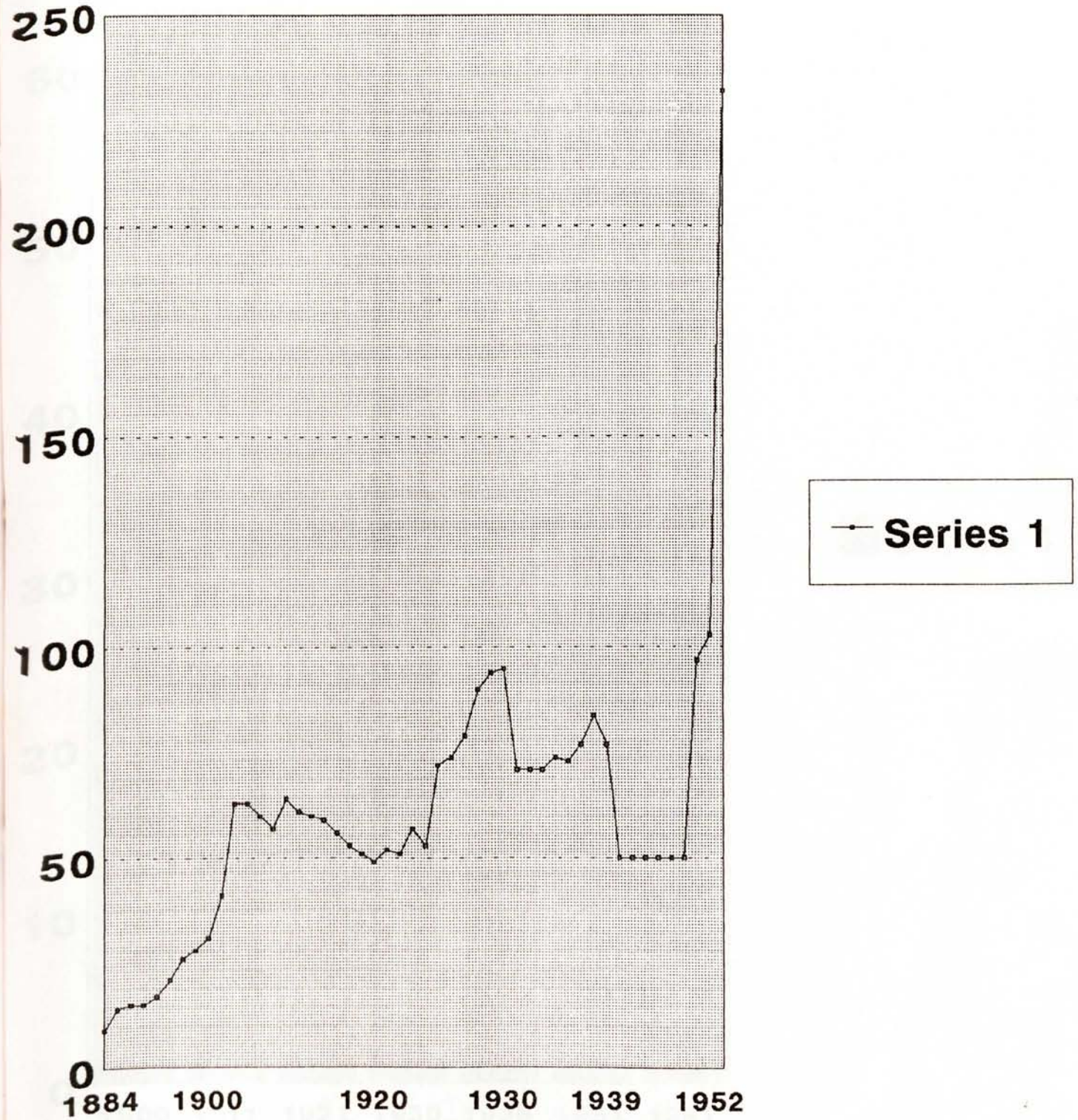
Medical Officers in Government Service




t two figures for 1952 & 1961

# Population-Doctor Ratio in the Gold Coast 1900-1962

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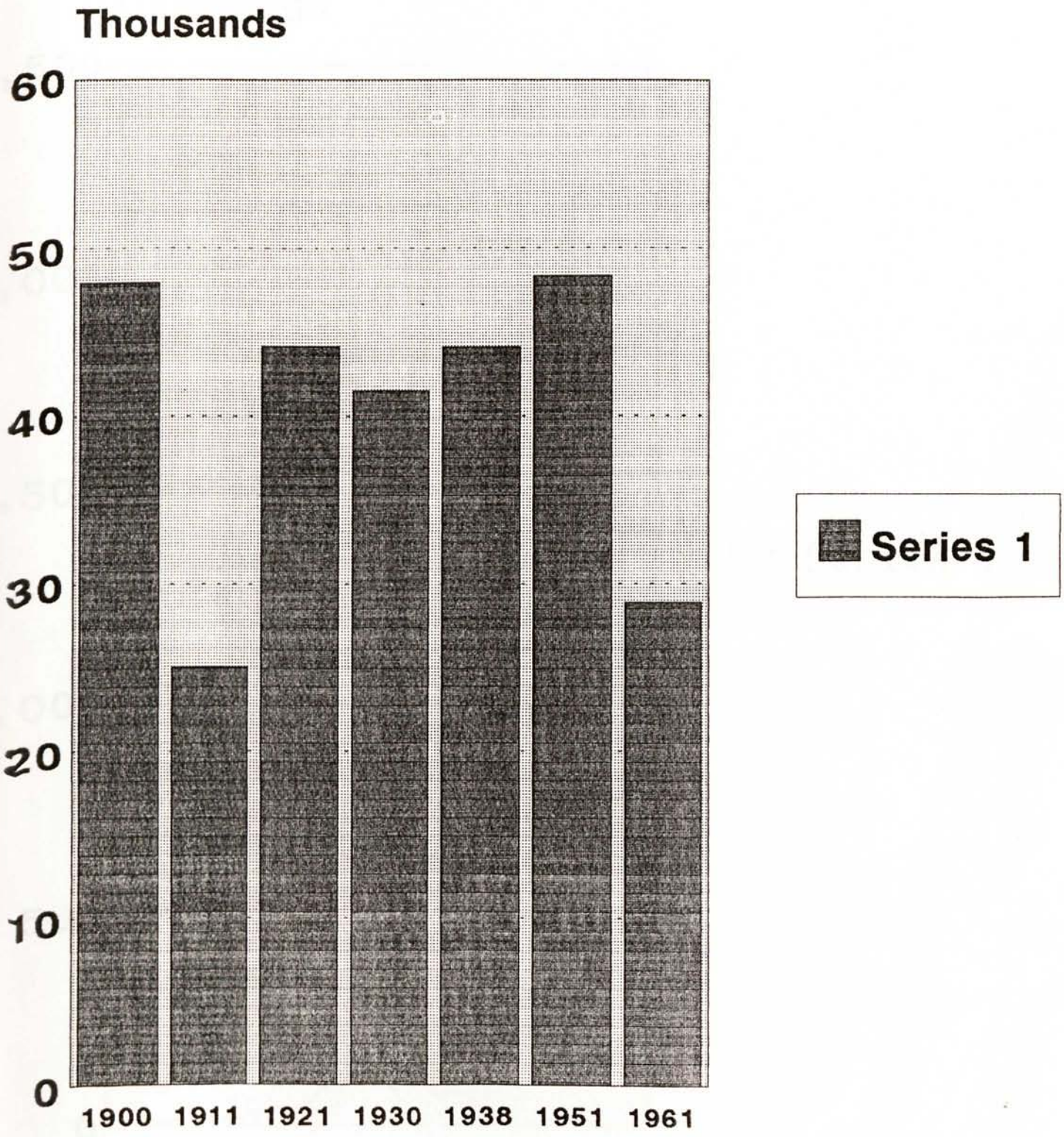
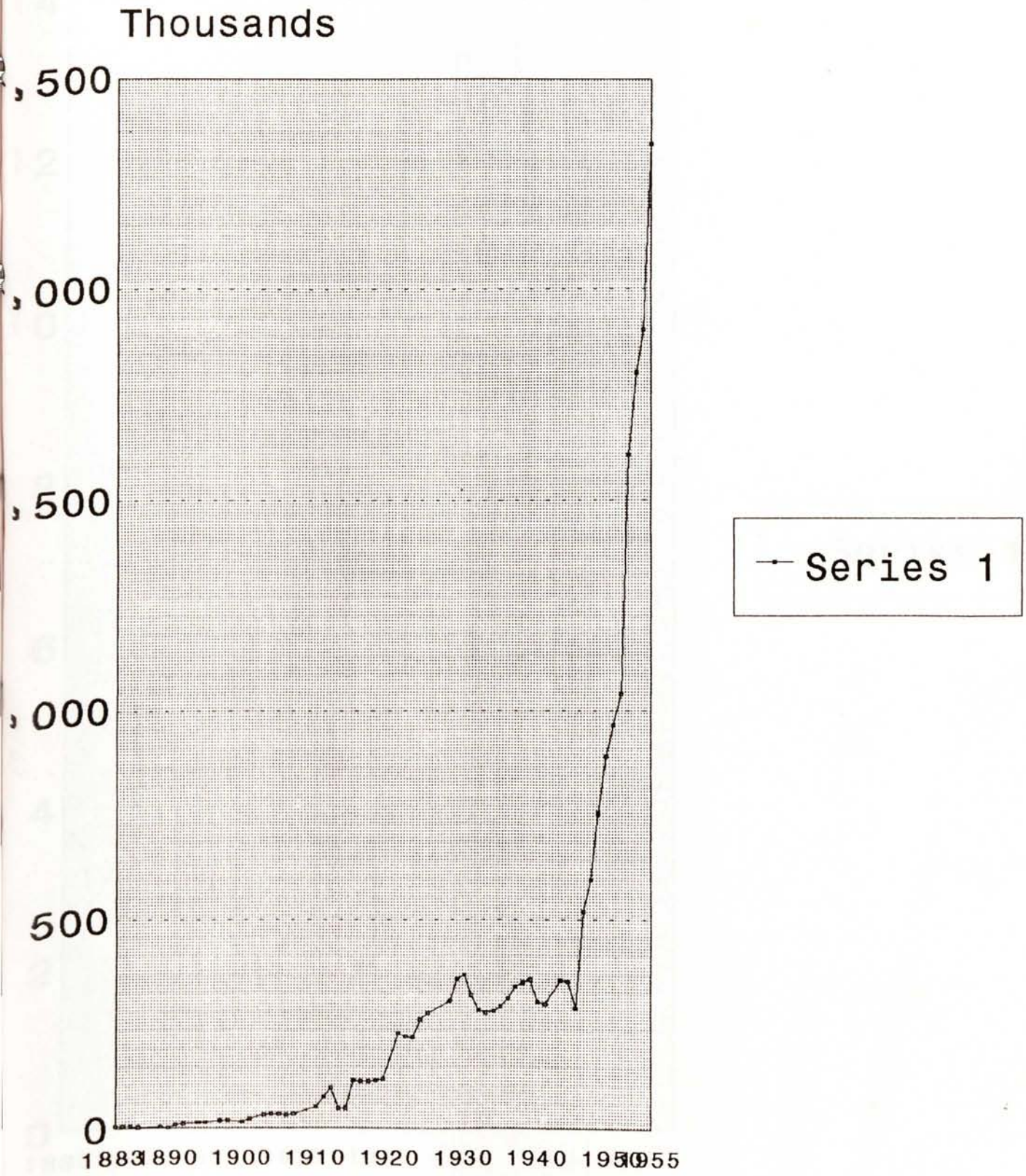



s prior to 1900 not calculated: Population figures grossly inaccurate

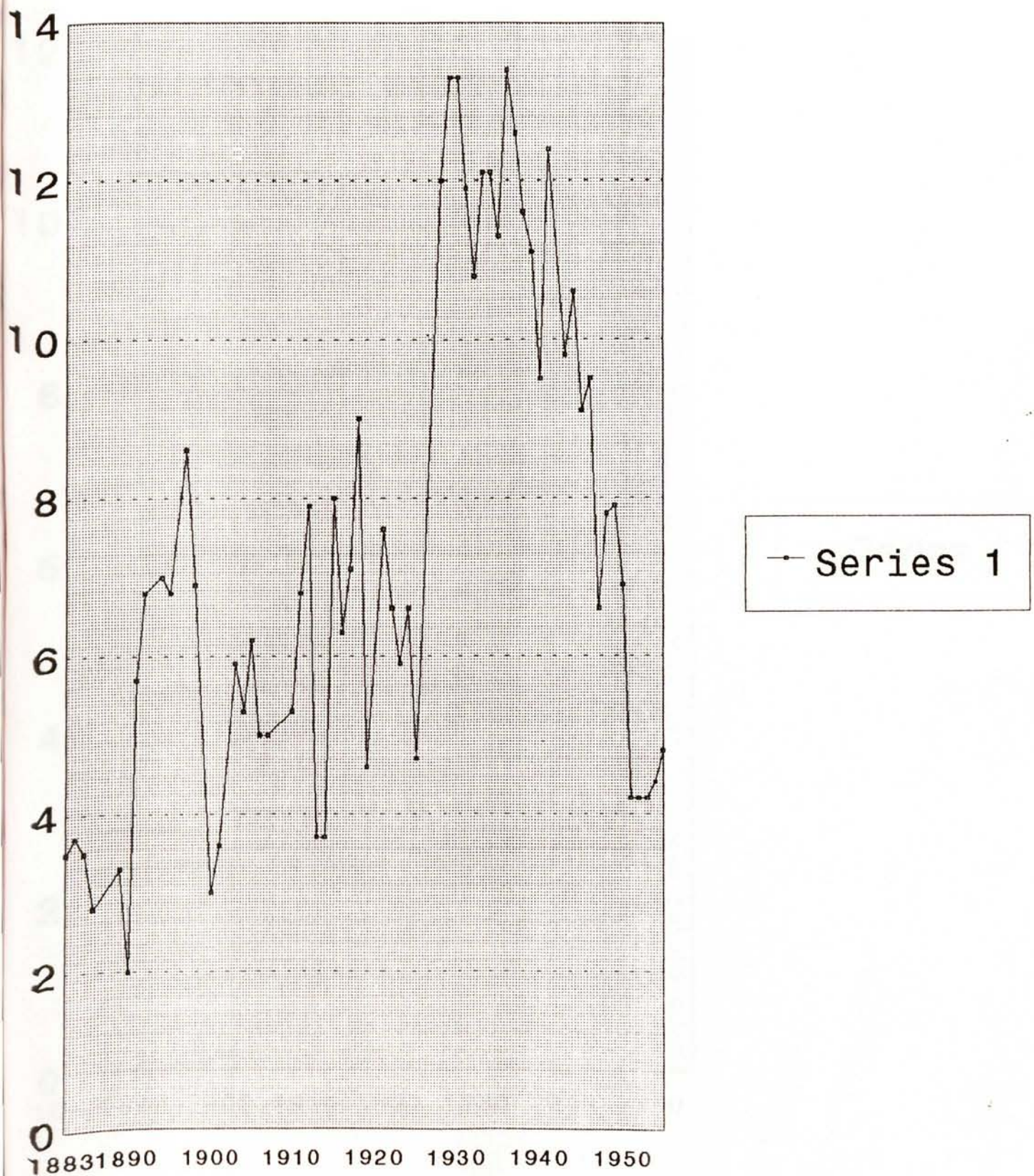
# ical Expenditure of the Gold Coast 1883-1955

University of Ghana http://ugspace.ug.edu.gh



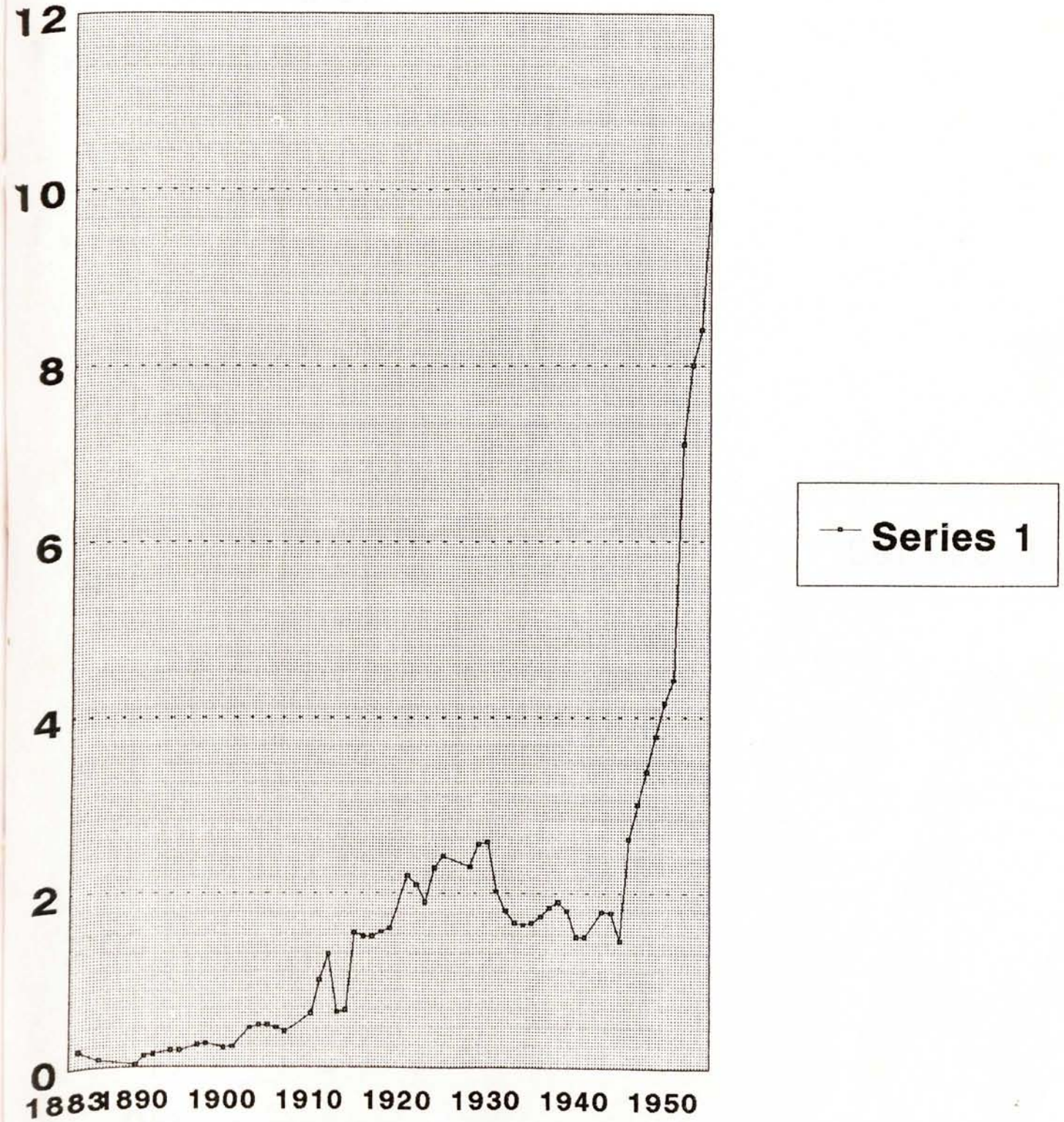
ical Expenditure as Percentage of Annual Revenue 1883-1955

University of Ghana http://ugspace.ug.edu.gh



# r Capita Expenditure on Health 1883-1955

University of Ghana http://ugspace.ug.edu.gh




capita expenditure in shillings sterling

# Total Hospital Admissions and Out-Patients 1900-1960

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