LEPROSY IN SIERRA LEONE

REPORT ON A VISIT TO THE COLONY AND PROTECTORATE OF SIERRA LEONE WITH SUGGESTIONS FOR DEVELOPMENT OF ANTI-LEPROSY WORK.

I. INTRODUCTION.

When it was proposed that the Medical Secretary of the British Empire Leprosy Relief Association should pay a visit to Nigeria and the Gold Coast, Sir Thomas Stanton suggested that Sierra Leone should be included in the itinerary. After spending two months in Nigeria and two weeks in the Gold Coast, I accordingly visited this Colony and Protectorate.

My programme was kindly arranged by the Director of Medical Services as follows:—

June 17—19	...	Freetown
„ 20—21	...	Makeni
„ 22	...	Port Loko
„ 23	...	Makeni
„ 24—25	...	Moyamba
„ 26	...	Bo
„ 27—28	...	Daru
„ 29	...	Bo
„ 30	...	Freetown.

I had an opportunity of discussing the subject with His Excellency the Acting Governor, as well as with the Director of Medical Services and the Medical Officers in the Colony and Protectorate.

II. INCIDENCE OF LEPROSY.

Recently a census of leprosy was made in the various districts of the Protectorate. The following table gives the results of this census, along with the area and population of each district, the population to the square mile, and the percentage of leprosy to the population. The districts are arranged in order of the highest percentages:—

District	Area in miles	Population	Population to the sq. mile	Number of Lepers	Percentage of Lepers to Population
Kono ...	2,000	74,000	37	343	0.46
Kailahun	1,500	156,000	104	546	0.35
Moyamba	2,600	131,000	50	430	0.32
Kenema ...	1,700	134,000	78	375	0.28
Port Loko	1,800	170,000	94	442	0.26
Kambia ...	2,600	150,000	57	359	0.24
Bo ...	2,100	168,000	80	379	0.22
Bonthe ...	1,300	98,000	75	190	0.19
Bombali ...	2,700	244,000	90	341	0.18
Pujehun ...	2,100	123,000	58	228	0.18
Koinadugu	5,500	109,000	19	23	0.03

According to this computation there are 3,656 lepers in the Protectorate. In India careful surveys by expert doctors showed that the 1921 census figures were altogether inaccurate, and that the real incidence was from 5 to 15 times as great as those collected by census enumerators unskilled in the diagnosis of leprosy. The discrepancy was due partly to ignorance and partly to intentional concealment. I take it that in a more primitive country like Sierra Leone Protectorate neither of these factors would operate as strongly as in India. Still the probability is that there are actually far more than 3,656 cases. It will be noticed that the lowest incidence (0.03 per cent.) is in Koinadugu, the district with the sparsest population, viz., 19 to the square mile. On the other hand Kono, with the highest incidence of leprosy (0.46 per cent.), has the second sparsest population. The figures for Koinadugu may be compared with the dispensary returns for Kabala, its chief town, which are as follows :—

1930	...	38	new cases of leprosy
1931	...	18	„ „ „ „
1932	...	30	„ „ „ „
1933	...	26	„ „ „ „
1934	...	27	„ „ „ „

Thus in the five years previous to the collection of figures by the District Commissioner no fewer than 139 cases voluntarily attended the Kabala dispensary. As Koinadugu has an area of more than twice the size of the district next in size, and there are no motor roads except that joining Kabala with Makeni, only a small fraction of the cases in the district can have attended the dispensary. It would appear that leprosy is not an uncommon disease in Koinadugu District —far commoner at least than the figure of 23 would indicate.

III. NATIVE IDEAS AND PRACTICES REGARDING LEPROSY.

I have heard it stated that the natives of West Africa are quick to recognise leprosy, but that they are callous about contact with the disease.

In order to find out the truth about this I questioned native chiefs and other intelligent Africans in the various places that I visited. These questions brought out the following facts:—

(1) There is a general belief among the people that leprosy is spread to healthy people by contact with lepers, while many hold that leprosy comes through infringement of certain tribal taboos, yet it is at the same time held that contact with the excretions of a leper, such as sputum and sweat, may lead to acquiring the disease, and that it is dangerous to live in the same house with, or even in the neighbourhood of, a leper.

(2) Three distinct types of leprosy are recognised, viz.:
- (a) that with shortening of fingers and toes and deformity of the hands and feet;
- (b) that with red patches on the face or body;
- (c) that with thickening of the face and ears.

Most of those questioned considered, erroneously, that the first of these is the most dangerous and likely to spread infection. When lepers of different types were lined up, they chose as the most infectious cases those in whom the infection had died out, leaving deformity and trophic ulcers of the extremities, and in whom, because of their helplessness, ring-worm and complicating skin diseases had added to the unsightliness of the victims. Likewise many chose as disease-spreaders second in importance the patients with well-marked macules, and considered the highly infectious cases with thickened face and ears as the least dangerous of all.

(3) Most of those whom I questioned were able to diagnose leprosy from other diseases with somewhat similar appearance, such as ringworm, yaws, elephantiasis and psoriasis. They based this recognition of leprosy upon appearances alone; testing for loss of sensation seemed to be unknown to them.

(4) While it is acknowledged that all lepers should be isolated, this precaution appears to be carried out in only a minority of cases. One chief declared that isolation of lepers was enjoined in the Koran, but said that it was wise not to press pagans too far. Near Makeni a chief told us that one man was suspected of having leprosy and that he was isolated

in the bush. A visit to this man's hut showed him to be living outside the village. Examination showed that he was suffering not from leprosy but from yaws, which had caused a certain amount of deformity. Along with him in his single-roomed hut were his wife and six young children. There were three important facts: (a) isolation from the fellow villagers on the suspicion of leprosy; (b) faulty diagnosis; (c) no attempt at isolation of the young children from their supposedly leprous father, though children are much more susceptible to leprosy than adults.

At Batkanu, a case in which the leprous infection had long since died out leaving deformity, was kept isolated in a separate room. He was covered from head to foot with ringworm which was mistaken for active leprosy.

(5) Children, especially in the first few years of life, are much more susceptible to leprosy than adults, and those infected in childhood tend to develop a much more serious and infectious form of the disease than those infected in adult life. These are the cases which are chiefly responsible for passing on the disease to the next generation. These facts were not known to those whom I questioned. One chief said that leprosy was uncommon among children, and that they did not acquire it until puberty. This remark showed correct observation, but a wrong conclusion from the facts observed. It is true that leprosy often does not *show* itself till puberty, but in these cases infection often takes place in early childhood and spreads through the body, suddenly showing itself at puberty in the most serious form.

Thus we have the power to recognise leprosy, knowledge of its infectiousness, a desire to prevent its spread by means of isolation, and the carrying of isolation into practice by certain efficient and intelligent chiefs and others. The effectiveness of isolation is however negatived by the limited degree in which it is enforced, ignorance as to which is the most infectious type, and misinterpretation of such observations as the comparative rareness of the appearance of signs of leprosy in children.

IV. SUGGESTIONS FOR ANTI-LEPROSY WORK.

In my reports on Nigeria and the Gold Coast I have recommended the formation of large leper settlements with whole-time expert doctors and sisters. Several of these are already in existence in Nigeria. The largest and most effective settlements in Nigeria are run through co-operation with Missions, the funds being supplied by Government or Native Administrations. It is advised that in Nigeria these colonies

be used not only for isolating infectious cases and as centres of treatment, but also as training centres for intelligent patients, who will later, on recovery, take part in the formation of clan settlements on a voluntary basis, in treating cases of leprosy, and in health propaganda work in the villages chiefly with regard to leprosy but also regarding other diseases and conditions which predispose to leprosy. I have also suggested co-operation of the educational authorities in the campaign against leprosy. For details of this scheme reference should be made to the Nigerian Report.

I am informed that through lack of funds and because of many other pressing medical and public health requirements which will need first consideration, the Government of Sierra Leone is unable to afford large monetary commitments for leprosy. At present therefore a leper settlement on the lines of those in Nigeria may be considered impracticable. This would cost, in addition to initial expenses of about £8,000, some £2,500 annual expenditure.

I do not consider that small leper camps such as that at Kissy, near Freetown, are of sufficient importance from the public health stand point to be worth duplicating in other parts of the Protectorate or Colony.

At Kissy the superintendence of the camp forms one of the many duties of the Medical Officer; there are 11 patients, 6 infectious and 5 non-infectious.

I do not consider that the treatment of leprosy as conducted at many of the dispensaries in the Protectorate is likely to cure any but the earlier and more hopeful cases, though the treatment of complicating diseases, ulcers and nerve pains, is of distinct value.

I think there is a danger that the disease may spread as the country develops, and suggest that an effort should be made to educate the people to practise effective isolation.

The little that I have seen of Sierra Leone suggests that there is, at least in certain places, a dread of leprosy, ability up to a certain point to recognise the disease, acknowledgement that it is spread by contact, and a desire to prevent the spread of infection by isolating lepers. Isolation is carried out at present to a certain extent, and this may partly account for the fact that leprosy is not still more prevalent.

If isolation, especially of highly infectious cases, can be effected more thoroughly and intelligently than at present, then there is a likelihood that leprosy will gradually die out. For leprosy, though a difficult disease to cure, is not difficult to prevent.

The salary and expenses of a whole-time leprosy doctor

are not likely to be available at present. A lay worker, however, who has been thoroughly trained in anti-leprosy work, might succeed in carrying out preventive work.

Supposing such a man to be provided, along with his salary, by or through some outside organisation, travelling and other working expenses being met by the Sierra Leone Government or from local sources, anti-leprosy work might be begun on an experimental basis as follows:—

(1) The area for operation would be carefully chosen as one in which leprosy is common, where the native population and especially the chiefs are likely to co-operate, and where help can be had from the Medical Officer, District Commissioner, or some Mission engaged in medical and educational work.

(2) One or more clinics would be begun for the treatment of lepers, but having as their main object gaining the goodwill and confidence of those suffering from the disease. Cases would be followed up from the clinic to their homes, contacts examined, and the history of the disease in the villages worked out. All cases would be listed, a distinction being made between infectious and non-infectious types. The final object would be the effective isolation of all infectious cases from the community and especially from children, as the latter are most susceptible to infection. The lepers could be isolated either individually, or, better, in communities forming leper villages, in which the able-bodied would help those less strong.

In carrying out preventive measures the customs of the people would be studied, and the exact method of procedure might vary in different areas and among various tribes.

In India work along similar lines has given hopeful results. In Nigeria, as mentioned in the Report on leprosy in that country, lepers have voluntarily isolated themselves in villages, while in Sierra Leone at least an attempt at isolation is already being made as mentioned above. I am also informed by Mr. Songo-Davies, Member of the Legislative Council, that the Paramount Chief of Gbagbu (Kenneh Coker of Jimmy town) in the Pujehun District, has already expressed a desire to isolate in separate villages the lepers in his chiefdom. The Paramount Chief of Jawi at Daru has signified a similar desire.

The organisation of leper villages, if properly carried out, is a much better method than isolation individually or even in small groups of 2 or 3. There is the social and economic life of the village, so essential for healthy life; and lepers supporting themselves within a community by their own

farm produce will be less likely to wander into non-leper villages. They would have their own chiefs who would be responsible to the Paramount Chief. As lepers thus segregated would be under a definite economic disability, it might be well to release them from the payment of taxes. It would be necessary however that they should have certificates, renewed every year, from the Medical Officer to the effect that they are suitable cases; and a certificate, also annually renewed, from the Chief and Paramount Chief declaring good behaviour and obedience to definite segregation laws. Relief from taxes would be a distinct inducement towards entering leper villages, and a help towards making them efficient. One of the greatest difficulties in connexion with village settlements would be the isolation of children from leprous parents. This matter is discussed in the Nigerian Report.

The possibility therefore of the success of such a scheme is not remote. If success were met with in one or more areas, the method might be introduced by Medical Officers, District Commissioners and others in other parts of the country, the leprosy officer paying a visit to each district and remaining sufficiently long to initiate the method.

In the meantime a questionaire might be sent out to each district in order to gather more definite information, through the chiefs, of the attitude of the people to leprosy, their ideas concerning the disease, and what efforts are at present in force to prevent the spread of the disease through isolation of lepers. The following is suggested as the basis of a questionaire :—

(1) How do you recognise leprosy?
(2) What types of leprosy do you recognise?
(3) How do you consider that leprosy is caused?
(4) Which type of leprosy do you consider most dangerous, that is most likely to spread the disease to other people?
(5) What do you consider the best plan to prevent leprosy from spreading from a leper to others?
(6) Have you any lepers at present isolated in your area? If so, how many and what types?
(7) In what does isolation consist?
    (a) Is the leper living in a house outside the village?
    (b) If so how far away?
    (c) Is he (or she) living in a separate room of a house in which other adults, or under 10 live?

(d) Is the leper allowed to go into the village or town, or does he do so without permission?
(e) Is he allowed to buy things in the market?
(f) Is he allowed to sell his produce in the market?
(8) What is thought of the danger of infecting young children? Are children considered more likely, or less likely, to be infected than adults?
(9) If a man or woman is a leper, are the children allowed to live in the same house with the leper patient?

In my Report on Nigeria, Section VIII, I have suggested that educational authorities should be supplied with a "practical, well-illustrated guide dealing with the subject." If this suggestion is accepted, copies of this guide might be obtained from Nigeria and supplied to Government Officials and others engaged in filling up the questionnaire.

I consider that Medical Officers, District Commissioners, Missionaries and others, who in the course of their duties visit the villages and come in contact with chiefs and other leading and intelligent people, could do a great deal towards bringing about the effective knowledge, and have before them a definite policy such as that suggested above.

Later, if and when funds are available, I consider that a leprosy unit should be established along the lines recommended in my Nigerian Report. This would include a large Leper Settlement, with one or more whole-time doctors and nurses. If this materialised, the Settlement might be used as a centre of training which would be used not only in the control of leprosy but also in combatting other endemic diseases, dietary errors, etc., and in general public health work.

V. SUMMARY AND CONCLUSIONS.

(1) The relative importance of leprosy, as compared with other diseases and public health problems, should be considered.

It has been shown that the estimate of 3,656 lepers in Sierra Leone Protectorate is probably very short of the actual number. The highest incidence is probably in the Kono, Kailahun, Koinadugu Districts, in the south west of Kambia, and the west of Port Loko District. The actual incidence can however only be guessed at, and cannot be learned till definite anti-leprosy work has been in progress for some time.

In India leprosy is found most commonly among aboriginals when they first begin to leave their primitive life, give

up their tribal traditions, and mix with other peoples. If the same holds good in Sierra Leone, there may be a danger of the spread of the disease in the near future, unless means are taken to control it.

The importance of leprosy should not be judged by its mortality but by the mental and physical suffering which it brings about.

(2) Small leper camps connected with hospitals and superintended by medical Officers as a part of their duties are not of much avail either in the cure of leprosy or in stopping the spread of the disease. They generally shelter the crippled cases which have ceased to be infectious.

Dispensary treatment is of value in dealing with the accompanying diseases and complications of leprosy, but is not likely to lead to cure of the disease except in early and resistant cases; as patients attend for too short a time or irregularly, and it is generally impossible to secure suitable diet and other essentials for recovery.

(3) On the other hand special leprosy clinics are of great value when the patients are followed up to their houses, contacts examined and isolation of infectious cases, preferably in leper villages, secured through teaching the chiefs and leaders of the people the nature of the disease.

In order to initiate this kind of work I have suggested the need of whole-time, especially trained workers, who will try out methods experimentally in carefully selected areas, and later, if successful, extend this type of work. In carrying this out Medical Officers, District Commissioners and Missionaries may render considerable help.

(4) Later a large leper settlement may be started on the lines of these institutions in Nigeria, when funds are available.

(5) A questionnaire to gather further information about leprosy in the Protectorate and Colony is suggested.

(6) The dread in which leprosy is generally held may be used as an incitement towards general sanitary improvements, without which leprosy cannot be controlled.

(7) Release from taxes may be used as an inducement to effective segregation in carefully certified cases.

VI. ACKNOWLEDGMENTS.

I wish to express my indebtedness to the Government of Sierra Leone, to the Director of Medical Services and to the Medical Officers, District Commissioners and others, who planned my visit, and by their hospitality, help and interest, facilitated my tour in the Colony and Protectorate.