Leprosy in Ceylon.

(*This article is based on a Report by the Medical Superintendent, Leprosy Asylum, Hendala. Published by permission of the Director of Medical and Sanitary Services.*)

THERE is no doubt that leprosy is on the increase in Ceylon, if the number treated in this asylum can be considered as an index. The daily average sick here from 1925 to 1930 was as follows :—

1925—528·06	1927—555·65	1929—601·39
1926—540·75	1928—604·51	1930—610·00

Accommodation is only available for 508 inmates. There is, therefore, considerable overcrowding. Only two courses are available to remedy the evil.

(*a*) Prophylactic measures should be taken in hand as early as possible, or

(*b*) Increased accommodation should be provided for the increasing number of cases.

The former course is the more reasonable to adopt, as it is likely to result in more lasting benefit. Leprosy has been known in Ceylon for about three centuries and the only method of checking its spread has been through compulsory segregation and treatment.

A modest estimate of the number of cases of leprosy in Ceylon is about 3,000. Of these, only about 1,000 are known and are patients segregated in the two institutions. If the 2,000 estimated undetected cases were to infect one each annually, the rate of increase in the near future would be such that the problem of segregating them would only be solved at enormous expenditure.

A certain number of inmates are discharged on parole every year. Their addresses are taken and they are warned to report themselves every six months to the nearest Government Medical Officer, and those in Colombo to the Bacteriological Institute. This practice seems of doubtful benefit in the absence of treatment and regular bacteriological examination during the period of parole. The result is that these patients return to the asylum sooner or later, the disease having got worse.

Sir Leonard Rogers and others have indicated the general development of anti-leprosy schemes along the following lines :—

(1) A modification of rigid compulsory segregation by allowing non-infective cases to be treated at their homes or at clinics established for the purpose.

(2) Opening up of clinics in suitable centres where early cases, before they become infective, can receive treatment.

(3) As soon as a case is found, all the household should be examined for early cases and this is repeated every six months for five years.

Dr. Muir suggests the opening of outdoor dispensaries in all provincial towns in all endemic areas for the treatment of early cases as the most effective way of reducing leprosy.

Dr. H. Harold Scott states that in Jamaica enforced segregation has brought about a steady reduction so that the incidence rate is less than half of what it was 30 years ago and leprosy is now a rare disease. In Trinidad measures are inefficiently carried out ; compulsory segregation with insufficient accommodation and a system which does not prevent a considerable number absconding have resulted in a steady increase in the incidence rate.

This is what is happening in Ceylon. He gives the following as the ideal method of prophylaxis :—

(1) Compulsory notification of cases by medical men and householders.

(2) Compulsory segregation.

(3) Detection of early cases by periodical examination.

(4) Prohibition of certain trades connected with food, clothing, etc.

(5) Removal of children of infected parents as soon as possible after birth.

(6) Control of immigration.

" In India, since 1925, the Indian Council of the British Empire Leprosy Relief Association has worked to replace the old method of forcible segregation by voluntary clinics, under doctors trained in modern treatment where early cases are kept free from active signs and infection and new patients are coming early instead of hiding the disease. Propaganda work in the villages in teaching how to prevent contagion and surveys are being carried out with resulting opening of new clinics and breaking down of the old belief that the disease is irremediable." (*Muir*).

Unna Junior traces the development of public opinion when sufferers were outcasts from society, through the First Leprosy Conference held in Berlin in 1897, when compulsory isolation was still demanded, and the Second Conference at Bergen where there was a tendency to milder measures, to the Third Conference at Strasberg, in 1923, when it was recommended that measures should be suited to different countries. Since then, many writers have endeavoured to show the futility of compulsory isolation which has the effect of causing patients to conceal their disease and thus become a danger to their neighbours just at the period when they are most infectious and most easily healed.

Norway is the classic example of the progressive eradication of leprosy through the systematic isolation of cases, not however, by forced internment in leprosaria. In 1856, there were 2,858 cases ; at the end of 1908, 394 ; at the end of 1915, 235 ; at the end of 1920, 160 ; and on January 25th, 1929, 81 of whom 45 were in the Bergen Hospital. Segregation on liberal lines has, therefore, been sufficient to bring about a decline in leprosy which promises to lead to the total eradication of the disease.

Before suggesting measures to check the spread of leprosy in Ceylon, an idea of the endemicity of the disease as compiled from the inmates of the two asylums numbering 654 Ceylonese, will be useful.

Province.	*Number.*	*Rate per mille of Population.*
1. Eastern	119	6·2
2. Western	290	2·4
3. Southern	114	1·6
4. Sabaragomuwa	42	·8
5. Central	50	·6
6. Northern	18	·5
7. Uva	8	·3
8. North Western	7	·1
9. North Central	6	·1

From the above it will be seen that the Eastern Province is the most infected, and Western and Southern come next in order. Preventive measures adopted should be first directed towards these three Provinces and thereby about five-sixths of the cases could be dealt with.

The following measures are suggested as suitable for Ceylon.

1. Propaganda.
2. Leprosy census and endemiological survey with registration of cases.
3. Modification of compulsory segregation.
4. Leprosy clinics in all the Government Hospitals and outdoor dispensaries in endemic areas.
5. Examination of the households of cases of leprosy every six months for early cases and continue for five years.
6. Control of immigration.
7. Institution of a demonstration centre to stamp out the disease from a given area within a given period.
8. Appointment of a leprosy expert to initiate and superintend the above scheme.

Propaganda.—This may be carried on by means of pamphlets in English and the vernacular languages, detailing the altered conception of leprosy as a curable disease in its early stages, benefits of voluntary notification instead of hiding suspicious cases, and the methods of prevention of contagion by lectures illustrated by lantern slides in endemic areas. This should be of such a nature as to infuse confidence in the minds of people who should voluntarily co-operate with the authorities in the common object of stamping out the disease.

A leprosy census and endemiological survey with registration of cases.—All these could be undertaken at the same

time. A skeleton idea as to how to proceed can be obtained by tabulating the addresses of the present inmates of both the asylums and of those on parole, and home isolation into areas in the different provinces. A house-to-house inspection should be initiated in these areas and every case found, registered. A Medical Officer who is well versed in the early diagnosis of leprosy, with a portable laboratory by which every case could be examined bacteriologically to separate the infective cases from non-infective ones, and the necessary staff, will be required.

Modification of Compulsory Segregation.—Compulsory segregation as carried out in Ceylon has not reduced leprosy. It is, therefore, now high time to try an alteration in the method. It is suggested that only the infective cases be compulsorily segregated. Voluntary segregation may be allowed in the case of non-infective crippled paupers, who should be housed separately. All the non-infective cases should be allowed freedom to follow their own occupations, provided they take regular treatment.

Leprosy clinics in all the Government Hospitals and outdoor dispensaries in endemic areas. The non-infective cases should receive bi-weekly treatment and advice free in these clinics. The patients attached to each clinic should be bacteriologically examined once in three months.

The households of cases should be examined every six months for early cases, and this should continue for five years. By this means, early cases can be detected and submitted to treatment before they become infective.

Control of Immigration.—From the figures for 1929, 15 per cent. of the cases of leprosy treated in both the asylums were Indian immigrants. These immigrants find their way into Ceylon with the coolies recruited in India, and when detected, have to be repatriated at Government expense provided their relatives who can take charge of them can be traced. The others become a burden to Ceylon. It is suggested that efforts should be made at the Mandapam Camp to prevent sufferers from leprosy passing over to Ceylon. There is a patient here who absconded, went over to his village in India and returned undetected and surrendered for re-admission.

A suitable centre should be selected to carry out prophylactic measures along the lines suggested, thereby to demonstrate the period within which leprosy could be stamped out.

I URES FOR YEAR 1931.
HENDALA LEPROSY ASYLUM.

	Ceylonese.		Indians.		Europeans.		Total.
	Males.	Females.	Males.	Females.	Males.	Females.	
Numbers of cases at the beginning of 1931	404	107	72	14	—	—	597
Admissions during 1931	113	22	34	9	—	—	178
Total	517	129	106	23	—	—	775
Deaths during 1931 ...	26	10	5	2	—	—	43
Discharges during 1931	34	12	31	6	—	—	133
Total deaths and discharges	110	22	36	8	—	—	176
Remaining at the end of 1931	407	107	70	15	—	—	599
*Number of ex-patients living in Home Isolation	—	—	—	—	—	—	120
Number receiving treatment with chaulmoogra oil or its derivatives	—	—	—	—	—	—	366

*Total number living in home isolation in the Island, 195.

FIGURES FOR YEAR, 1931.
MANTIVU LEPROSY ASYLUM.

	Ceylonese.		Indians.		Europeans.		
	Males.	Females.	Males.	Females.	Males.	Females.	Total.
Number of cases at the beginning of 1931 ...	113	32	15	3	—	—	163
Admissions during 1931	48	6	9	—	—	—	63
Total	161	38	24	3	—	—	226
Deaths during 1931 ...	16	2	3	—	—	—	21
Discharges during 1931	27	—	1	—	—	—	28
Total deaths and discharges	43	2	4	—	—	—	49
Remaining at the end of 1931	118	36	20	3	—	—	177
Number of ex-patients living in Home Isolation	2	—	—	—	—	—	2
Number receiving treatment with chaulmoogra oil or its derivatives.	All the patients with the exception of 15 were treated with chaulmoogra oil by mouth; 142 patients received injections.						