Report of the Director of Medical and Sanitary Services / [Ceylon].

CEYLON.

PART IV.—EDUCATION, SCIENCE, AND ART (C).

Administration Report of the Acting Director of Medical and Sanitary Services for 1935.

(*Dr. S. T. GUNASEKARA.*)

OCTOBER, 1936.

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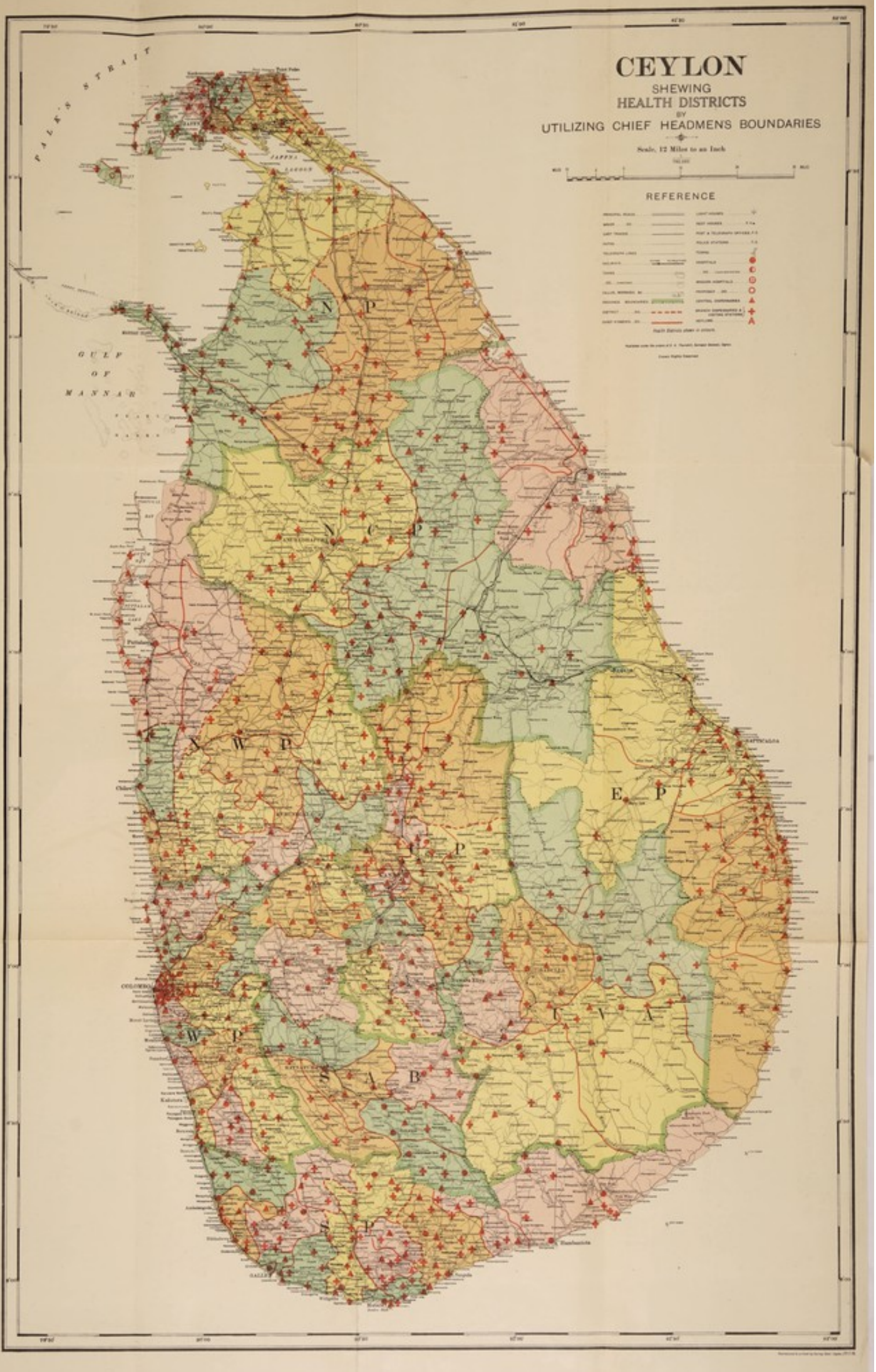

CEYLON
SHEWING
HEALTH DISTRICTS
BY
UTILIZING CHIEF HEADMENS BOUNDARIES
Scale, 12 Miles to an Inch
REFERENCE
PALK'S STRAIT
GULF OF MANNAR
JAFFNA LAGOON
Point Pedro
Trincomalee
Batticaloa
Kalutara
Galle
Dondra Head
N P
N C P
N W P
E P
C P
C V A
W P
S A B
S P

DEPARTMENT OF MEDICAL AND SANITARY SERVICES.

REPORT OF THE ACTING DIRECTOR OF MEDICAL AND SANITARY SERVICES FOR THE YEAR 1935.

TABLE OF CONTENTS.

I.—ADMINISTRATION.

(*a*) (1) Establishment (including vacancies) on December 31, 1935.

Directorate.

1 Director of Medical and Sanitary Services.
1 Deputy Director of Medical and Sanitary Services.
1 Assistant Director of Medical Services.
1 Assistant Director of Sanitary Services.
1 Administrative Secretary.
1 Senior Medical Officer, Headquarters.
1 Senior Medical Officer of Health.
1 Accountant.
1 Assistant Accountant.

Medical Side.

1 Medical Superintendent, General Hospital, Colombo.
1 Medical Superintendent, Lunatic Asylum, Angoda.
1 Medical Superintendent, Leper Asylum, Hendala.
1 Medical Superintendent, Civil Hospital, Kandy.
1 Medical Superintendent, Civil Hospital, Galle.
9 Provincial Surgeons.
1 Medical Officer-in-Charge, Anti-Tuberculosis Institute, Colombo.
1 Radiologist, General Hospital, Colombo.
1 Medical Officer-in-Charge, Dental Institute, Colombo.
56 Medical Officers in Grade I. (17 vacancies).
215 Medical Officers in Grade II. of whom 8 are women (10 vacancies).

Sanitary Side.

3 Inspecting Medical Officers of Estates.
2 Assistants to Inspecting Medical Officers of Estates (Medical Officers in Grade II.).
24 Medical Officers of Health.
4 Medical Officers for Colombo Port Health Work. (1 Medical Officer of Health and 3 Medical Officers, 1 in Grade I. and 2 in Grade II.).
1 Superintendent, Anti-Malaria Campaigns.
3 Medical Officers, Anti-Malaria Campaigns (Medical Officers, Grade II.).
5 School Medical Officers (1 in Grade I. of Medical Officers and 4 in Grade II.).
1 Superintendent of Health Education Division.
4 Sanitary Engineers (including 3 Assistant Sanitary Engineers).
38 Sanitary Inspectors, Class I.
229 Sanitary Inspectors, Class II. (15 vacancies).
4 Draughtsmen (Sanitary Engineering Division).

Laboratory Staff.

1 Director of Bacteriological and Pasteur Institutes and Vaccine Establishment.
1 Bacteriologist (Medical Officer, Grade II.).
1 Assistant Bacteriologist (Medical Officer, Grade II.).
32 Laboratory Assistants (4 vacancies).
1 Medical Entomologist.
14 Entomological Assistants (2 vacancies).
11 Laboratory Attendants.

Nursing Staff.

Recruited through the Overseas Nursing Association—

8 Matrons (1 vacancy).
1 Assistant Matron.
28 Sisters (5 vacancies).

Recruited from Religious Orders—

7 Mothers.
128 Sisters (10 vacancies).

Recruited in Ceylon—

6 Sisters (1 vacancy).
1 Relieving Sister (vacant).
1 House Matron.
33 Public Health Nurses (10 vacancies).
1 Nurse, Dental Clinics (vacant).
93 Matrons (19 vacancies).
238 Nurses (10 vacancies).
86 Pupil Nurses.
144 Hospital (73) and Health Unit (71) Midwives (3 vacancies).
60 Pupil Midwives.

Clerical Staff.

Head Office—

1 Chief Clerk, Special Class.
3 Clerks, Class I.
73 Clerks in Classes II. and III. (7 vacancies).
1 Stenographer.
1 Despatch Clerk.

Branch Offices—

80 Clerks in the various branch offices (4 vacancies).

Apothecaries.

20 Apothecaries in Special Class (2 vacancies).
100 Apothecaries in Class I. (1 vacancy).
296 Apothecaries in Class II. (43 vacancies).

Vaccination.

9 Inspectors of Vaccination (1 vacancy).
33 Male Vaccinators, Class I.
114 Male Vaccinators, Class II. (27 vacancies).
18 Female Vaccinators (5 vacancies).

Civil Medical Stores.

1 Superintendent and Chief Medical Storekeeper.
1 Assistant Superintendent.
9 Supervisors.

Ankylostomiasis.

1 Superintendent, Ankylostomiasis Campaigns (Medical Officer, Grade I.).
2 Clerks.
8 Microscopists.
31 Dispensers.

Opium Branch.

1 Opium Storekeeper.
5 Opium Clerks.
10 Opium Sellers.

Miscellaneous.

3 Hospital Stewards in Special Class.
6 Hospital Stewards in Class I.
31 Hospital Stewards in Class II.
1 Sister, X'Ray Electrical Branch.
2 X'Ray Assistants, General Hospital.
3 X'Ray Technicians.
4 Hospital Stores Clerks.
7 Hospital Admitting Clerks.
4 Bookbinders.

3 Telephone Operators.
2 Head Overseers (Sanitary Engineering Division and General Hospital).
9 Hospital Overseers.
4 Motor Ambulance Drivers.
1 Survey Overseer (vacant).

Minor Employees.

Packers Peons Overseers Hospital Orderlies Dispensary Orderlies Caretakers Male Attendants Female Attendants Opium Store Servants Disinfecting Orderlies Tappal Labourers Itinerating Labourers Latrine Labourers Garden Labourers Burial Labourers Kitchen Labourers Ward Labourers Disinfecting Labourers Nurses' Ayahs Barbers, Dhobies, &c. Cooks and Appus	about 3,500.

(2) Promotions, Appointments, &c.

Dr. S. T. Gunasekara was appointed Deputy Director of Medical and Sanitary Services and Dr. S. F. Chellappah, Assistant Director of Sanitary Services, with effect from April 1, 1935. Dr. C. F. Deutrom was promoted to the post of Superintendent and Quarantine Medical Officer, Mandapam Camp, with effect from March 21, 1935. Nine Medical Officers in Grade II. were promoted to Grade I., viz., Drs. V. Kathirgamatamby, C. Gurusamy, A. F. Seneviratne, H. P. Pieris, F. N. Spittel, J. Masillamani, G. P. de Silva, R. V. N. Selvadurai, and M. Rustomjee. Dr. H. U. Leembruggen, Deputy Director of Medical and Sanitary Services, and four Medical Officers, Drs. L. A. E. de Zilva, A. J. Fernando, R. L. Spittel, and J. A. Weerakkody, retired with effect from April 1, 1935, January 8, 1935, August 6, 1935, November 20, 1935, and November 29, 1935, respectively. The deaths of Drs. E. C. Alles, R. E. Mendis, R. R. Tambar, and W. Samarasinghe are recorded with deep regret.

(3) Officers on Leave.

Twenty-two officers of the Department, exclusive of the Nursing Staff, proceeded to Europe on long leave during the course of the year.

(4) Special Qualifications, &c.

The following officers obtained special qualifications during the year:—

Dr. V. E. P. Seneviratne obtained the degree of M.D. (Lond.) (Branch I., Medicine) and the diploma of M.R.C.P. Lond.).
Dr. C. W. A. de Silva obtained the diploma of M.R.C.P. (Lond.).
Dr. P. S. Goonewardena obtained the diploma of M.R.C.P. (Edin.).
Dr. I. A. Senanayake obtained the D.P.M. (Lond.).
Dr. S. F. Jayawardena obtained the degree of BSc. (Physiology) (Lond.).
Dr. A. Lucas obtained the diploma of *A.R.C.P. and S. (Eng.).
Dr. G. E. Ranawaka obtained the diploma of T.D.D. (Wales).
Dr. V. Nadarajah and Dr. J. D. V. Wijeratna obtained the D.P.H. (Lond.).
Dr. A. R. Arulpragasam obtained the D.P.H. (Liverpool).

Five officers of the Department obtained the diploma of L.R.C.P. and S. (Edin.) and L.R.F.P.S. (Glas.).

(*A = Anaesthetics.)

(*b*) Legislation affecting Public Health enacted during the Year.

Ordinance No. 17 of 1929—an Ordinance to amend and consolidate the law relating to Poisons, Opium, and Dangerous Drugs—and an amending Ordinance No. 43 of 1935 have been passed and will be proclaimed shortly.

The draft of a Milk and Dairies Ordinance to prevent the adulteration of milk has been submitted to the Executive Committee of Health for consideration.

The draft of a Rural Bakeries and Aerated Water Factories Ordinance to provide for the licensing and control of bakeries and aerated water factories outside the limits of local authorities has been submitted to the Executive Committee for consideration.

The draft of an Ordinance to amend the Lunacy Ordinance, 1873, to remedy certain defects now existing which has been approved by the Attorney-General, is with the Executive Committee for consideration.

The following regulations were passed during 1935:—

(*a*) Under the Quarantine and Prevention of Diseases Ordinance, 1897—

Malaria (Epidemic) Regulations—*Ceylon Government Gazettes* of February 8, 1935, and August 9, 1935.

(*b*) Under the Colombo Suburban Dairies and Laundries Ordinance, 1908—

The application of this Ordinance has been extended to the area comprised within the administrative limits of the Municipal Council of Galle—*Ceylon Government Gazette* of August 23, 1935.

(*c*) Under the Contagious Diseases (Animals) Ordinance, 1909—

Disease of tuberculosis, in the case of animals other than cattle, was included under the definition; authorizing destruction of any animals or cattle affected, or suspected to be affected, with tuberculosis—*Ceylon Government Gazette* of March 29, 1935.

(*d*) Under the Medical Ordinance, 1927—

Control of the practice of midwifery within the Nawalapitiya Urban District Council area—*Ceylon Government Gazette* of April 12, 1935; within the area of the Sanitary Board towns of—

Hambantota and Beliatta—*Ceylon Government Gazette* of May 10, 1935;

Talawakele, Dimbulla, Lindula, Agrapatana, Tillicoultry, and Kotagala—*Ceylon Government Gazette* of May 24, 1935;

within the Trincomalee Urban District Council area—*Ceylon Government Gazette* of June 21, 1935.

(*c*) Financial.

Actual Revenue and Expenditure for the Financial Year ending September 30, 1935.

REVENUE.

		Rs.
1.	Hospital and dispensary receipts	397,058
2.	Sales of drugs, &c.	5,409
3.	Sales of drugs, &c., under the Medical Wants Ordinance ..	25,300
4.	Charges for maintenance under the Medical Wants Ordinance ..	111,123
5.	Opium sales	116,142
6.	Export duties under the Medical Wants Ordinance ..	1,345,968
7.	Payment by the Railway Department for Medical and Sanitary Services	60,000
	Total ..	2,061,000

	EXPENDITURE.	Rs.
1.	Personal Emoluments	6,196,804
2.	Travelling	403,502
3.	Stationery, office furniture, and office requisites	18,543
4.	Electric current	90,731
5.	Rent	66,389
6.	Uniform	24,958
7.	Equipment and contingencies	496,726
8.	Diets	1,315,963
9.	Transport	48,628
10.	Drugs, dressings, disinfectants, and instruments	1,816,134
11.	Grants	44,946
12.	Rebates payable under the Medical Wants Ordinance ..	200,281
13.	Epidemics	860,960
14.	Destruction of rats	13,681
15.	Purchase of opium and general expenses	44,563
16.	Earthfilling, drainage, &c.	3,609
17.	Conservation of cemeteries	612
18.	Removing and relieving sick and destitute persons ..	9,146
19.	Incidental expenses	5,397
20.	Equipment for new hospitals and dispensaries	—
21.	Purchase of two new motor ambulances	11,805
22.	Purchase of X'ray outfits	24,101
—	Expenses of an Expert Adviser on Malaria	18,050
—	Investigation of foods	4,842
		11,720,371

The estimated and actual expenditure for the last ten years has been :—

	Budget Estimate. Rs.	Actual Expenditure. Rs.
1925–26	8,965,193 ..	8,598,923
1926–27	10,029,658 ..	9,104,455
1927–28	10,500,274 ..	10,211,104
1928–29	11,009,103 ..	10,216,467
1929–30	11,319,907 ..	10,669,279
1930–31	11,358,152 ..	9,703,775
1931–32	10,795,496 ..	9,805,541
1932–33	10,234,695 ..	9,275,559
1933–34	9,961,700 ..	9,442,749
1934–35	9,992,701 ..	11,720,371

The figures do not include the cost of new buildings and improvements to, and maintenance of, existing ones.

The revenue of the Island during the financial year ending September 30, 1935, was Rs. 98,993,552.

II.—PUBLIC HEALTH AND GENERAL EPIDEMIOLOGY.

A.—GENERAL REMARKS.

The Western Province was subject to the malaria epidemic which broke out in an unprecedented form towards the end of November, 1934, and continued with some severity till March, 1935. At the end of April there was a marked recrudescence of malaria which did not abate till the end of June. There was a small outbreak of cholera at Peliyagoda which was soon brought under control. Twenty-three cases of plague and 45 cases of smallpox occurred.

In the Central Province there was an increased attendance for malaria treatment in the Teldeniya, Kandy, Matale, and Nawalapitiya areas and also in the valleys adjoining the Kehelgamuwa river and Maskeliya-oya. As a result of the drought the figures for dysentery and typhoid were also above the average in the Kandy, Matale, and Teldeniya areas. Gampola also recorded an increase of the dysentery rate last year and more people were treated for malaria than in the previous year at Dambulla Hospital.

In the Southern Province the malaria outbreak continued during the year but fortunately with less intensity than in other parts of the Island. In the Hambantota District there was a fall in the number of cases by about the end of March, but a recrudescence occurred in the Matara—Wellaboda pattu soon after; the wave of intensity appeared to spread from a centre in the Weeraketiya area outwards, until with the onset of the south-west rains, it had extended to the whole of the Matara District. By August there were definite indications that the intensity was diminishing and conditions were almost normal soon after.

The Northern Province registered a fall in the death rate in 1934 from 27.7 in 1933 to 25.2 in 1934, but there was a slight increase to 25.55 in 1935. The infantile mortality rate also, although it fell from 200 in 1933 to 199 in 1934, has increased to 201.9 in 1935. There was a decided increase in the amount of malarial fever especially in the first quarter of the year after the heavy rains at the end of 1934. The number of deaths from dysentery rose from 295 in 1934 to 406 in 1935.

In the Eastern Province as an outcome of the prolonged drought there was acute food shortage particularly in Batticaloa South. The general health of the inhabitants therefore suffered considerably. Incidence of malaria was more than usual throughout the Province in the first and fourth quarters of the year.

In the North-Western Province the epidemic of malaria, which started towards the end of 1934, was particularly severe during the months of January and February, but began to subside in the beginning of March. In the middle of April however a second wave of less intensity was experienced affecting chiefly the Chilaw District. Dysentery was also much more prevalent than in recent years and a severe epidemic broke out between May and July in a group of villages near Bingiriya. The general death rate rose from 27 in 1934 to 63.9 and the infant death rate from 215 to 628 per 1,000 births.

In the North-Central Province the number of malaria cases treated was the highest ever recorded, and as usual it reached its highest level during the months of January and December. Cases of dysentery and parangi treated during 1935 were fewer than in 1934, and the latter disease showed a considerable decrease.

The Uva Province had a second year of drought in 1935. There was a general increase of malaria in the low-country all through the year. In the montane and sub-montane regions there was an epidemic of malaria, but it began only in June, reached its peak in October and gradually declined.

In the Province of Sabaragamuwa the epidemic of malaria which started during the latter part of 1934 continued until the middle of the year. The Kegalla District was most severely affected. The western part of the Ratnapura area did not suffer as much as during the latter part of 1934. There was a rise in the number of cases of dysentery.

1.—GENERAL DISEASES.

The most prevalent general diseases of hospital in-patients were rheumatism, intestinal disorders (diarrhoea and enteritis), bronchitis, and pneumonia. Year by year the number of patients who seek hospital treatment for cancer is increasing.

The following statement shows the numbers of cases and deaths of these diseases dealt with in hospitals throughout the Island during the years 1931 to 1935:—

	1931.	1932.	1933.	1934.	1935.
Rheumatism—					
Cases ..	3,418	3,154	3,133	3,934	3,643
Deaths ..	26	11	12	10	14
Intestinal disorders—					
Cases ..	3,589	3,516	3,505	7,625	10,639
Deaths ..	640	647	723	1,045	2,163
Bronchitis—					
Cases ..	3,904	4,185	5,024	6,073	6,240
Deaths ..	193	167	256	279	336
Pneumonia—					
Cases ..	6,431	6,134	6,798	9,515	10,706
Deaths ..	2,195	2,043	2,297	3,054	4,205
Malignant growths—					
Cases ..	896	1,052	1,112	1,233	1,279
Deaths ..	93	128	113	141	137

The total number of deaths from "Cancer and other tumours" reported by the Registrar-General in respect of the whole Island was 589 during the year 1935, as compared with 570 in 1934, 483 in 1933, 449 in 1932, and 468 in 1931.

Most of the operable cases of cancer resort to the General Hospital, Colombo, for treatment; of a total of 1,279 cases of cancer dealt with in all the hospitals, 745 were treated in the General Hospital.

On account of the prevalence of betel chewing the site of the disease in the majority of cases was in the region of the buccal cavity, usually the cheek. The analysis of cases treated is given on page 11.

Cancer Returns of In-patients in Hospitals for 1935.

SINHALESE.

Age.	Sex.	Cheek. C.	Cheek. D.	Tongue. C.	Tongue. D	Penis. C.	Penis. D.	Breast. C.	Breast. D.	Uterus. C.	Uterus. D.	Palate, Jaw, and Floor of Mouth. C.	Palate, Jaw, and Floor of Mouth. D.	Skin and Extremities. C.	Skin and Extremities. D.	Stomach. C.	Stomach. D.	Caecum. C.	Caecum. D.	Rectum. C.	Rectum. D.	Liver. C.	Liver. D.	Intestines. C.	Intestines. D.	Ovary. C.	Ovary. D.	Oesophagus. C.	Oesophagus. D.	Lymph Glands. C.	Lymph Glands. D.	Other Sites. C.	Other Sites. D.	Sites not specified on Notes. C.	Sites not specified on Notes. D.	Total. C.	Total. D.
20–30	Male	5	1	1	—	15	1	—	—	—	—	3	1	4	1	1	—	—	—	—	—	1	1	1	—	—	—	1	—	—	—	3	1	1	1	36	8
	Female	6	2	—	—	—	—	5	—	30	3	2	1	2	—	—	—	—	—	2	—	—	—	—	—	4	—	—	1	—	—	—	3	—	—	—	55	7
31–40	Male	21	4	13	4	11	1	—	—	—	—	2	—	6	—	2	1	—	—	—	1	1	—	2	1	—	—	—	—	1	—	—	—	1	—	—	—	70	12
	Female	8	1	1	—	—	—	12	1	62	5	4	1	3	—	1	1	—	—	2	—	5	1	—	—	4	1	1	—	—	—	5	1	2	—	—	—	117	12
41–50	Male	46	3	11	1	18	2	—	—	—	—	20	—	8	—	2	1	—	—	2	—	2	1	—	—	1	—	1	—	—	—	10	2	2	—	—	—	115	10
	Female	5	—	2	1	—	—	13	—	50	3	6	—	3	—	2	—	—	—	1	1	1	—	—	—	8	2	—	—	—	—	5	—	1	—	—	—	98	6
51–60	Male	37	2	9	1	16	1	—	—	—	—	11	1	6	—	1	—	1	—	1	1	—	—	2	1	—	—	—	—	1	—	7	—	2	—	1	—	94	8
	Female	11	—	3	—	—	—	12	2	58	5	3	1	1	—	1	1	—	—	1	—	1	1	1	1	4	1	—	—	—	—	5	2	1	—	—	—	103	13
61 and upwards	Male	29	—	9	1	19	1	1	—	1	—	10	—	6	—	3	1	—	—	1	—	9	4	1	1	3	—	—	—	—	—	18	6	—	—	—	—	107	14
	Female	7	1	1	—	—	—	4	—	11	1	1	—	3	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	33	2
Total		175	14	50	8	79	6	47	3	212	17	67	5	42	1	15	4	1	—	13	4	20	8	7	3	23	4	4	1	2	—	61	12	10	2	828	92

TAMILS.

Age.	Sex.	Cheek. C.	Cheek. D.	Tongue. C.	Tongue. D	Penis. C.	Penis. D.	Breast. C.	Breast. D.	Uterus. C.	Uterus. D.	Palate, Jaw, and Floor of Mouth. C.	Palate, Jaw, and Floor of Mouth. D.	Skin and Extremities. C.	Skin and Extremities. D.	Stomach. C.	Stomach. D.	Caecum. C.	Caecum. D.	Rectum. C.	Rectum. D.	Liver. C.	Liver. D.	Intestines. C.	Intestines. D.	Ovary. C.	Ovary. D.	Oesophagus. C.	Oesophagus. D.	Lymph Glands. C.	Lymph Glands. D.	Other Sites. C.	Other Sites. D.	Sites not specified on Notes. C.	Sites not specified on Notes. D.	Total. C.	Total. D.
20–30	Male	9	—	—	—	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	3	—	2	1	17	1
	Female	3	1	—	—	—	—	—	—	4	1	1	—	—	—	—	—	—	—	1	—	2	—	—	—	—	—	—	—	—	—	4	—	1	—	13	2
31–40	Male	14	1	1	—	5	—	2	1	—	—	2	—	—	—	1	—	—	—	1	1	2	—	—	—	—	—	—	—	—	—	3	—	—	—	32	3
	Female	11	—	2	—	—	—	3	1	13	2	2	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	1	—	1	—	32	3
41–50	Male	16	2	2	1	3	—	—	—	—	—	5	1	—	—	1	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	32	5
	Female	11	—	1	—	—	—	1	—	8	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	1	—	—	—	—	—	4	—	1	—	24	4
51–60	Male	14	1	2	1	3	—	—	—	—	—	2	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7	1	—	—	28	1
	Female	4	1	—	—	—	—	1	—	7	—	1	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	2	—	1	—	15	1
61 and upwards	Male	3	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	1	—	1	—	—	—	7	—
	Female	2	—	—	—	—	—	—	—	4	—	2	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12	—
Total		87	6	8	2	11	—	7	2	36	3	16	2	1	—	2	1	—	—	5	1	5	—	—	—	3	—	—	—	1	—	25	1	5	1	212	19

OTHER RACES.

Age.	Sex.	Cheek. C.	Cheek. D.	Tongue. C.	Tongue. D	Penis. C.	Penis. D.	Breast. C.	Breast. D.	Uterus. C.	Uterus. D.	Palate, Jaw, and Floor of Mouth. C.	Palate, Jaw, and Floor of Mouth. D.	Skin and Extremities. C.	Skin and Extremities. D.	Stomach. C.	Stomach. D.	Caecum. C.	Caecum. D.	Rectum. C.	Rectum. D.	Liver. C.	Liver. D.	Intestines. C.	Intestines. D.	Ovary. C.	Ovary. D.	Oesophagus. C.	Oesophagus. D.	Lymph Glands. C.	Lymph Glands. D.	Other Sites. C.	Other Sites. D.	Sites not specified on Notes. C.	Sites not specified on Notes. D.	Total. C.	Total. D.
20–30	Male	3	—	—	—	—	—	—	—	2	1	1	—	1	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	4	—
	Female	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	4	1
31–40	Male	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	6	1
	Female	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1	—	1	—	—	—	5	1
41–50	Male	2	—	3	1	—	—	2	—	1	—	1	—	2	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	14	1
	Female	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	—	—	—	—	—	5	—
51–60	Male	2	1	3	—	1	—	—	—	1	—	2	—	2	—	—	—	—	—	—	—	1	—	2	1	—	—	—	—	—	—	4	1	—	—	12	3
	Female	1	—	—	—	—	—	—	—	3	1	—	—	—	—	3	—	—	—	1	—	3	—	—	—	1	1	1	2	1	—	1	—	—	—	5	1
61 and upwards	Male	—	—	1	—	—	—	—	—	—	—	1	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	3	—	—	—	—	—	14	2
	Female	1	—	—	—	—	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5	2
Total		13	1	7	1	1	—	4	1	7	2	3	1	5	—	4	—	—	—	2	—	4	—	5	1	1	1	1	—	7	2	10	1	—	—	74	11

C = cases. D = deaths.

2.—COMMUNICABLE DISEASES.

Tables of Communicable Diseases.—The following tables show the number of cases and deaths from the communicable diseases notified for the whole Island inclusive of the three Municipal towns, and their distribution according to months and Provinces:—

TABLE I.

Notified Cases of Communicable Diseases with Deaths and Fatality Rates.

	1935.			Fatality Rate Percentage for 1934.
	Cases.	Deaths.	Fatality Rate.	
Chickenpox ..	5,266	3	·05	·03
Cholera ..	30	22	73·30	100·00
Diphtheria ..	116	14	12·07	18·08
Dysentery ..	5,170	474	9·14	7·88
Enteric ..	1,991	371	18·63	17·90
Measles ..	719	2	·27	·26
Mumps ..	485	2	·41	—
Pulmonary tuberculosis	1,955	734	37·54	44·78
Plague ..	60	56	93·30	88·50
Smallpox ..	115	15	13·00	18·00
Whooping cough	235	7	3·97	6·80

TABLE II.

Distribution by Months of Notified Communicable Diseases.

	January	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Chickenpox—													
Cases ..	722	819	862	427	336	181	218	260	334	292	323	492	5,266
Deaths ..	—	1	—	—	—	—	—	1	—	—	—	1	3
Cholera—													
Cases ..	—	26	4	—	—	—	—	—	—	—	—	—	30
Deaths ..	19	3	—	—	—	—	—	—	—	—	—	—	22
Diphtheria—													
Cases ..	18	13	5	11	11	3	8	9	12	16	5	10	116
Deaths ..	2	—	1	—	1	2	1	—	1	5	—	1	14
Dysentery—													
Cases ..	898	645	304	259	175	297	615	590	368	268	343	408	5,170
Deaths ..	67	60	22	37	19	33	41	64	36	30	31	34	474
Enteric—													
Cases ..	122	137	145	145	144	117	156	180	178	224	244	199	1,991
Deaths ..	18	26	19	36	32	17	41	31	29	38	43	41	371
Measles—													
Cases ..	134	75	153	63	61	17	23	25	27	34	42	65	719
Deaths ..	—	—	—	—	—	—	—	2	—	—	—	—	2
Mumps—													
Cases ..	22	26	26	18	18	10	31	28	41	108	59	98	485
Deaths ..	—	1	—	—	—	—	1	—	—	—	—	—	2
Pulmonary tuberculosis—													
Cases ..	137	99	141	109	178	182	215	176	180	181	200	157	1,955
Deaths ..	78	48	54	55	64	77	78	51	58	56	49	66	734
Plague—													
Cases ..	1	3	2	1	3	2	7	4	15	3	7	12	60
Deaths ..	1	3	2	1	3	2	7	4	13	3	6	11	56
Smallpox—													
Cases ..	26	9	70	7	2	—	—	—	—	—	—	1	115
Deaths ..	5	—	9	1	—	—	—	—	—	—	—	—	15
Whooping cough—													
Cases ..	32	12	15	11	10	8	11	9	11	26	48	42	235
Deaths ..	2	—	—	—	—	—	—	—	1	1	2	1	7

TABLE III.

Distribution by Provinces of Notified Communicable Diseases.

	Chicken-pox.	Cholera.	Diph-theria.	Dysen-tery.	Enteric.	Measles.	Mumps.	Pulmonary Tubercu-losis.	Plague.	Small-pox.	Whoop-ing Cough.
Western ..	2,830..	30..	101..	1,722..	746..	188..	360..	1,078..	57..	40..	89
Central ..	448..	— ..	8..	960..	227..	368..	73..	155..	— ..	1..	32
Southern ..	834..	— ..	2..	824..	525..	35..	10..	236..	2..	73..	16
Eastern ..	62..	— ..	— ..	169..	21..	15..	10..	42..	— ..	— ..	55
Northern ..	720..	— ..	— ..	123..	146..	52..	2..	51..	— ..	1..	4
North-Central ..	12..	— ..	2..	65..	41..	7..	4..	45..	— ..	— ..	8
North-Western ..	76..	— ..	3..	917..	47..	3..	6..	108..	— ..	— ..	—
Sabaragamuwa ..	239..	— ..	— ..	340..	152..	47..	11..	219..	1..	— ..	19
Uva ..	45..	— ..	— ..	50..	86..	4..	9..	21..	— ..	— ..	12
	5,266	30	116	5,170	1,991	719	485	1,955	60	115	235

Communicable Diseases: (1) **Plague.**—The following is a statement of cases, deaths, and fatality rates for the last five years:—

	1931.	1932.	1933.	1934.	1935.	Five years Average 1930–1934.
Cases ..	50 ..	77 ..	57 ..	35 ..	60 ..	53
Deaths ..	48 ..	69 ..	52 ..	31 ..	56 ..	48·4
Fatality rate ..	96 ..	89·6 ..	91·2 ..	88·5 ..	93·3 ..	92·4

The 60 cases of plague in 1935 show an increased incidence of the disease compared with the average for the previous five years (53). Of these, 42 cases were bubonic and 18 septicaemic.

The distribution of the cases according to locality is as follows:—

	Cases.	Deaths.
Western Province—		
Colombo City	57 ..	53
Southern Province—		
Telijjawila	1 ..	1
Ampe	1 ..	1
Province of Sabaragamuwa—		
Ratnapura	1 ..	1

Included among the 57 cases that occurred in Colombo is 1 case discovered at Talaimannar in the person of a Colombo resident who was on his way to India. The infection in the cases that occurred in the Southern and Sabaragamuwa Provinces was also acquired in Colombo. There was no infection among rats in these areas.

The following special study of plague in Colombo is given:—

Human Plague.—The number of human cases for the five years 1930 to 1934 is 217 with an average of 43.4 per year.

	1930.	1931.	1932.	1933.	1934.	Total.	Average
January ..	4 ..	4 ..	7 ..	9 ..	1 ..	25 ..	5
February ..	3 ..	16 ..	5 ..	7 ..	4 ..	35 ..	7
March ..	3 ..	8 ..	3 ..	3 ..	4 ..	21 ..	4·2
April ..	3 ..	2 ..	2 ..	2 ..	14 ..	23 ..	4·6
May ..	4 ..	2 ..	6 ..	— ..	8 ..	20 ..	4
June ..	— ..	2 ..	14 ..	2 ..	1 ..	19 ..	3·8
July ..	3 ..	5 ..	1 ..	1 ..	— ..	10 ..	2
August ..	4 ..	3 ..	3 ..	— ..	— ..	10 ..	2
September ..	1 ..	2 ..	6 ..	1 ..	— ..	10 ..	2
October ..	2 ..	2 ..	8 ..	1 ..	— ..	13 ..	2·6
November ..	5 ..	1 ..	6 ..	1 ..	2 ..	15 ..	3
December ..	8 ..	— ..	7 ..	— ..	1 ..	16 ..	3·2
Total ..	40	47	68	27	35	217	43·4
Average per month ..	3·3 ..	3·9 ..	5·6 ..	2·2 ..	3·0 ..	18·0 ..	3·6

The average number of cases per year is 43 and except for the two years 1931 and 1932 this average has not been exceeded.

The average number of cases per month is 3.6 and this average has not been exceeded except in the two years 1931 and 1932.

The average of 3.6 cases per month is appreciably exceeded in the months of January, February, March, April, and May.

Comparison of the monthly figures for 1935 with the monthly average is as follows:—

	Average.	1935.		Average.	1935.
January	5	1	July	2	7
February	7	1	August	2	3
March	4·2	4	September	2	13
April	4·6	1	October	2·6	5
May	4	3	November	3	5
June	3·8	2	December	3·2	12

Rat Plague.—The total number of rats found infected for the five years 1930 to 1934 is 106 with an average of 21 infected rats per year.

	1930.	1931.	1932.	1933.	1934.	Total.	Average.
January	—	1	2	2	6	11	2·2
February	1	4	—	4	1	10	2
March	4	4	—	—	1	9	1·8
April	2	1	1	—	2	6	1·2
May	2	5	11	—	1	19	3·8
June	1	—	2	2	—	5	1
July	—	1	1	2	—	4	0·8
August	—	7	2	1	—	10	2
September	—	—	14	—	1	15	3
October	—	—	6	—	—	6	1·2
November	3	—	1	—	3	7	1·4
December	—	1	2	1	—	4	0·8
Total	13	24	42	12	15	106	21·2
Average per month	1	2	3·5	1	1·2	8·7	1·7

The average number of cases of rat plague per year is 21.2 and except for the two years 1931 and 1932 this average has not been exceeded.

The average number of infected rats per month is 1.7 and this average has been exceeded in the years 1931 and 1932. The average 1.7 per month is appreciably exceeded in January, February, May, August, September.

Comparison of the monthly figures for 1935 with the averages is as follows:—

	Average.	1935.		Average.	1935.
January	2·2	—	July	0·8	3
February	2	—	August	2	—
March	1·8	4	September	3	—
April	1·2	15	October	1·2	17
May	3·8	—	November	1·4	26
June	1	—	December	0·8	4

The averages for 1934 and 1935 according to type of disease, race, sex, age, and occupation are as follows:—

	Average for 1934 and 1935.
Type of Disease—	
Bubonic	30
Septicaemic	14
Pneumonic	—
Unknown	1
Total	45
Race—	
Indian Tamils	17
Muslim	13
Sinhalese	6
Malayalee	3
Ceylon Tamils	2
Indian Moors	3
Others	1
Total	45
Sex Distribution—	
Males	42
Females	3
	45

	Average for 1934 and 1935.
Ages—	
Unknown	1
10–14	5
15–19	10
20–24	7
25–29	7
30–34	3
35–39	6
40–44	1
45–49	2
50–54	2
55–59	—
60–64	1
	45
Occupations—	(1935 only.)
Unknown	32
Labourers	5
Hawkers	3
Salesmen	6
Servants in boutiques	4
Traders	2
Cattle and dairy-keepers	2
Collector	1
Schoolboy	1
Pensioner	1
Total	57

(2) **Cholera.**—The following is a statement of cholera cases and deaths for the five years 1931-1935 :—

	1931.	1932.	1933.	1934.	1935.
Cases	6	—	—	1	30
Deaths	6	—	—	1	22

There have been during 1935, 30 cases with 22 deaths giving fatality rate of 73.3 per cent.

The distribution of these cases by locality is as follows :—

	Cases.	Deaths.
Colombo City	7	4
Colombo Port	1	1
Western Province exclusive of Colombo City and Port	22	17

The 22 cases outside Colombo City and Port occurred at, and in the vicinity of, Peliyagoda. These along with the 7 cases in Colombo City formed one outbreak. The port case had no connection with the outbreak as it occurred in a person arriving at Colombo by the ss. " Incomati " from Calcutta where apparently the infection was acquired. The first known case in the Peliyagoda outbreak occurred in a Malayalee who was however not a recent arrival from India. Another case appears to have occurred earlier and to have been missed from whom the infection had spread.

The first case within the Colombo Municipaltiy was reported from Grandpass on the bank opposite to Peliyagoda of the Kelani-ganga in the person of a Sinhalese. There is no doubt that the infection was introduced from Peliyagoda. There is also reason to believe that fresh infection from India might have been responsible for a few of these cases. The epidemic occurred during the period February 10, 1935, to February 23, 1935.

(3) **Smallpox.**—There were 115 cases of smallpox with 15 deaths giving a fatality rate of 13 per cent.

The infection of the cases during the year was from the cases that occurred in 1934. A number of concealed and missed cases no doubt kept up the infection.

The following table shows the number of cases, deaths, and fatality rates for the past five years :—

	1931.	1932.	1933.	1934.	1935.
Cases	9	106	337	72	115
Deaths	3	16	62	13	15
Fatality rates	33·3	15·0	18·4	18	18

The cases and deaths during 1935 were distributed as follows :—

	Cases.	Deaths.
Western Province—		
Colombo City	17	2
Colombo Port	1	—
Exclusive of Colombo City and Port	22	3
Southern Province—		
Galle Municipality	14	3
Exclusive of Galle Municipality	59	6
Northern Province	1	1
Central Province	1	—
	115	15

Distribution of cases and deaths is as follows :—

According to—

	Cases.	Deaths.	Fatality Rate.
(*a*) Type of disease—			
Modified	38	1	2·6
Discrete	51	4	7·8
Confluent	19	7	36·8
Haemorrhagic	1	—	—
Unknown	6	3	50·0
	115	15	13·0

	Cases.	Deaths.	Fatality Rate.
(*b*) State of vaccination—			
Vaccinated	74 ..	6 ..	8·1
Unvaccinated	17 ..	3 ..	17·6
Unknown	24 ..	6 ..	25·0
(*c*) Race—			
Sinhalese	43 ..	7 ..	16·3
Muslims	61 ..	7 ..	11·5
Malays	5 ..	— ..	—
Ceylon Tamils	2 ..	1 ..	50·0
Indian Tamils	2 ..	— ..	—
Burghers	1 ..	— ..	—
Others	1 ..	— ..	—

The details of cases according to locality are as follows:—

Colombo Municipality.—Of the total 17 cases in the Municipal area of Colombo 14 occurred in Slave Island, 1 at Barber street, and 2 in Church street, Fort. One case occurred in the port in a person arriving at Colombo from Calcutta.

Western Province.—Outside the Municipality of Colombo 22 cases occurred with 3 deaths at the following places: Kalapaluwawa 3, Attidiya 2, Rayigama 1, Ratmalana 1, Egoda Uyana 4, Wekada 8, Alutgamweediya 3. The source of infection in all these cases except those at Alutgamweediya could not be definitely determined but there is reason to believe that the infection was directly or indirectly acquired in Colombo. The Alutgamweediya cases acquired their infection at Welitara in the Southern Province to which place the infection was brought from Colombo.

Southern Province.—Within the Municipality of Galle 14 cases occurred with 3 deaths at Katugoda, a Muslim area. The infection was acquired at Welitara and concealment of the cases caused the spread of the disease to a large number of persons.

Outside the Galle Municipality there occurred 59 cases with 6 deaths at Welitara near Balapitiya. Here also the infection was brought from Colombo and several cases had occurred before the existence of the disease was discovered. Concealment of cases played a great part in the spread of the disease.

Northern Province.—One fatal case occurred at Moolai near Vaddukoddai in a Tamil. The source of infection could not be traced.

Central Province.—A case which terminated in recovery occurred at Mount Pleasant estate, near Kandy, in a female Tamil who had recently arrived from India where the infection was acquired.

The following are the figures of vaccination done in connection with the cases of smallpox that occurred during the year:—

Western Province—	
Colombo Municipality	4,746
Excluding Colombo Municipality	41,376
Southern Province—	
Galle Municipality	2,527
Welitara, Balapitiya	13,358
Northern Province—	
Moolai, Vaddukoddai	2,811
Central Province—	
Peradeniya, Mount Pleasant estate	293
Total ..	65,111

(4) **Chickenpox.**—5,266 cases as compared with 6,885 cases in 1934 were reported to the Sanitary Branch during the year with 3 deaths, giving a fatality rate of .05 per cent. Of these cases 53.7 per cent. occurred in the Western Province, 15.8 per cent. in the Southern Province, 13.7 per cent. in the Northern Province,

8.5 per cent. in the Central Province, and 8.3 per cent. in the other Provinces. On an average 440 cases were reported each month with the maximum 862 in March and the minimum 181 in June.

The following is a statement of cases by years for the past five years:—

	Cases.		Cases.
1930	5,061	1933	7,439
1931	4,324	1934	6,885
1932	6,902		

(5) **Diphtheria.**—116 cases as compared with 99 cases in 1934 were reported to the Sanitary Branch during the year with 14 deaths giving a fatality rate of 12.07 per cent. Of these cases 87.0 per cent. occurred in the Western Province. All the cases were of the faucal variety. On an average 10 cases were reported monthly with the maximum 18 in January and the minimum 3 in June.

The following is a statement of cases and deaths by years for the past five years:—

	Cases.	Deaths.		Cases.	Deaths.
1930 ..	52	.. 12	1933 ..	72	.. 18
1931 ..	41	.. 12	1934 ..	99	.. 18
1932 ..	61	.. 16			

The following table shows the number of cases and deaths in hospitals and total registered deaths from diphtheria for the Island in the past five years:—

	1931.	1932.	1933.	1934.	1935.
Hospital cases ..	27 ..	36 ..	60 ..	84 ..	84
Hospital deaths ..	11 ..	14 ..	21 ..	27 ..	23
Total number of deaths for the Island ..	18 ..	22 ..	30 ..	32 ..	41

Of the 84 cases treated, 54 were at the Infectious Diseases Hospital, Angoda, 7 at the Lady Havelock Hospital, 2 at Pimbura Hospital, 4 at the General Hospital, Colombo, 2 at Anuradhapura Hospital, 2 in Udugama, 2 in Nuwara Eliya, 2 in Ratnapura, 2 in Kegalla, 1 each in Kandy, Dambulla, Deniyaya, Galle, Trincomalee, Rakwana, and Aranayaka hospitals. Most of the cases were children.

(6) **Measles.**—719 cases as compared with 5,201 in 1934 were reported to the Sanitary Branch during the year with 2 deaths giving a fatality rate of .27 per cent. Of the cases 51.2 per cent. occurred in the Central Province, 26.1 per cent. in the Western Province, 7.2 per cent. in the Northern Province, 6.5 per cent. in the Province of Sabaragamuwa, and 9.0 per cent. in the other Provinces. On an average 60 cases per month have been reported with the maximum 153 in March and the minimum 17 in June.

The following is a statement of cases by years for the last five years:—

1930	741	1933	9,101
1931	279	1934	5,201
1932	3,700		

(7) **Mumps.**—485 cases as compared with 235 in 1934 were reported with 2 deaths. Of these cases 74.2 per cent. occurred in the Western Province, 15.1 per cent. in the Central Province, and 10.7 per cent. in the other Provinces. On an average 40 cases were reported monthly, with the maximum 108 in October and the minimum 10 in June.

The following is a statement of cases by years for the past five years:—

1930	542	1933	333
1931	199	1934	235
1932	221		

(8) **Whooping Cough.**—235 cases as compared with 279 cases in 1934 were reported with 7 deaths giving a fatality rate of 3.9 per cent. Of these cases 37.9 per cent. occurred in the Western Province, 23.4 per cent. in the Eastern Province, 13.6 per cent. in the Central Province, 8.1 per cent. in the Province of Sabaragamuwa, and 17.0 per cent. in the other Provinces. The incidence shows a rise in the months of November and December. On an average 20 cases were reported monthly with the maximum 48 in November and minimum 8 in June.

The following is a statement of cases by years for the past five years:—

1930	309	1933	374
1931	166	1934	279
1932	461		

(9) **Enteric.**—The following table shows the number of cases and deaths in hospitals and the total registered deaths from enteric fever in the Island for the past five years:—

	1931.	1932.	1933.	1934.	1935.
Hospital cases ..	2,354	2,791	2,745	2,858	2,387
Hospital deaths ..	631	595	606	577	543
Total number of deaths for the Island ..	796	783	794	715	690

The actual prevalence of the disease cannot be judged from hospital admissions since many cases resort to ayurvedic treatment and the majority of cases probably are not notified. The number of registered deaths does not indicate the actual mortality from this disease, as some deaths from enteric are undoubtedly included amongst those reported as due to pyrexia. There were 22,507 deaths due to pyrexia in 1935 as against 15,467 in 1934.

1,991 cases were notified in 1935 to the Sanitary Branch of this Department as compared with 2,785 in 1934 with 371 deaths giving a fatality rate of 18.6 per cent. Of these cases 37.5 per cent. occurred in the Western Province, 26.4 per cent. in the Southern Province, 11.4 per cent. in the Central Province, 7.6 per cent. in the Province of Sabaragamuwa, and 17.1 per cent. in the other Provinces. On an average 166 cases were notified per month. Investigation of outbreaks points to the existence of carriers and contact infection. Anti-typhoid inoculations were administered as follows:—

1st dose	9,739
2nd dose	5,973

The following is a statement of cases reported by years for the past five years:—

1930	2,535	1933	2,638
1931	2,317	1934	2,785
1932	2,510		

(10) **Dysentery.**—The following table shows the number of cases and deaths in hospitals and the total registered deaths from dysentery for the Island in the past five years:—

	1931.	1932.	1933.	1934.	1935.
Hospital cases ..	6,320	5,599	5,299	5,804	7,858
Hospital deaths ..	742	638	663	785	1,429
Total number of deaths registered for the Island ..	2,496	2,178	1,886	2,279	6,175

4,487 cases or 57.1 per cent. of the total number of cases were stated to be amoebic and 1,667 cases or 21.2 per cent. bacillary. These figures, however, are not of great value since the distinction was often made on clinical grounds. Only a small percentage of the cases were submitted to complete laboratory investigation and among them the bacillary type greatly preponderated (*vide* Section IX.). The mortality rates of amoebic dysentery were 17.5 per cent. and of bacillary 16.9 per cent.

The following Provinces contributed the majority of the hospital cases:—

Western Province 2,200 cases with 401 deaths.
North-Western Province 1,273 cases with 315 deaths.
Central Province 1,314 cases with 279 deaths.
Province of Sabaragamuwa 890 cases with 204 deaths.
Northern Province 629 cases with 34 deaths.
Southern Province 507 cases with 76 deaths.

39,818 out-patients were treated for this disease during the year, as against 34,369 during 1934. The distribution of out-patient cases is as follows:—

	1933.	1934.	1935.
Western Province	2,883	3,230	4,919
Central Province	2,958	5,364	9,165
Southern Province	2,456	2,924	2,532
Eastern Province	2,889	4,264	3,885
Northern Province	4,585	4,997	4,622
North Western Province	2,180	4,821	6,381
North-Central Province	2,058	5,116	3,038
Province of Uva	1,038	1,664	1,380
Province of Sabaragamuwa	1,567	1,989	3,896

These figures show an increase of the disease in most of the Provinces as compared with those of the previous year and in the Western, Central, North-Western, and Sabaragamuwa Provinces the increase has been very marked, owing to the prevalence of the malaria epidemic in those Provinces.

5,170 cases as compared with 5,049 in 1934 were notified to the Sanitary Branch of the Department during the year with 474 deaths giving a fatality rate of 9.14 per cent. Of these cases 33.3 per cent. occurred in the Western Province, 18.6 per cent. in the Central Province, 17.7 per cent. in the North-Western Province, 15.9 per cent. in the Southern Province, and 14.5 per cent. in the other Provinces. On an average 430 cases were reported monthly—the largest number 898 in January and the smallest 175 in May. The dysentery that occurred was largely of the bacillary type and investigations carried out point to carriers and contacts as the chief factors in the spread of infection.

The following is a statement of cases reported by years for the past five years:—

1930	3,814	1933	2,559
1931	2,961	1934	5,049
1932	2,729		

(11) **Influenza.**—The following table shows the number of cases and deaths in hospitals and total registered deaths for the Island in the past five years:—

	1931.	1932.	1933.	1934.	1935.
Number of cases treated at dispensaries ..	169,125	142,556	192,413	216,731	159,379
Hospital cases ..	7,877	5,059	6,762	9,749	6,103
Hospital deaths ..	178	111	104	163	157
Total number of deaths for the Island	2,393	1,602	1,920	2,305	1,917

(12) **Tuberculosis of the Lungs.**—The following table shows a comparison between the figures for 1935 and the figures for the previous four years:—

	1931.	1932.	1933.	1934.	1935.
Hospital cases ..	4,245	4,508	4,229	4,278	4,851
Hospital deaths ..	1,071	1,087	1,108	1,126	1,382
Total number of deaths registered for the Island ..	3,174	2,966	3,118	3,094	3,387

Four special institutions—the Anti-tuberculosis Institute, Colombo (outdoor), Kandana Sanatorium, Western Province, and the Kankesanturai Sanatorium, Northern Province, for early cases, and the Ragama Tuberculosis Hospital, Western Province, for moderately advanced cases, are maintained to deal with this disease. Details of work at these institutions are given in Section VI. The number of cases treated at the outdoor dispensaries in the Island was 2,263.

(13) **Leprosy.**—During the year 1,261 cases with 97 deaths, as against 1,242 cases with 100 deaths in 1934 were treated at Government hospitals including the two asylums which are maintained in the Island for the segregation of lepers under the Leper Ordinance, No. 4 of 1901. A report on these two asylums is given in Section VII.

Leprosy Survey.—The methods of survey during 1935 were based on the same lines as in the previous year. During the early part of the year, the remaining part of the Kalutara District was surveyed, thus completing the survey of the Western Province. From the month of June, survey work was begun in the

Southern Province starting in the Municipal area of Galle and gradually extending the work to the rural areas of the Galle District. Dr. R. G. Cochrane visited Ceylon at the end of the year and reviewed the Western and Eastern Provinces assisted by one Survey Medical Officer.

The staff consisted of two Medical Officers and an Apothecary.

The area surveyed during the year was about 400 square miles in extent with a population of about 500,000. This includes the following Health areas and Chief Headman's Divisions:—

Health Area.	Chief Headman's Division.
1. M. O. H., Kalutara ..	Kalutara totamune
2. M. O. H., Panadure ..	Panadure totamune
3. Galle Municipality ..	—
4. M. O. H., Galle District ..	Four Gravets, Wellaboda, Gangaboda, and Talpe pattus
5. M. O. H., Matara District ..	Schools in Weligama
6. Review work of Western and Eastern Provinces.	

During the year two centres were opened in addition to the already existing four.

1. Clinic at Beruwala—Friday afternoon.
2. Clinic at Kalutara—Wednesday morning.

Officers in the areas surveyed were made familiar with the methods of early diagnosis and treatment of cases. Lectures and demonstrations were given to the Medical Students and Sanitary Learners. Special propaganda was carried on in the schools and infected villages.

In the areas surveyed in 1935, the Survey Officers detected 410 cases of which 62 were cases discharged on parole. Forty cases were detected by other Medical Officers, making a total of 450 cases.

41,955 children in 222 schools were examined and 119 cases detected amongst them.

Statement of Cases Outside Asylums to end of 1935.

Province.	1933.	1934.	1935.	Total.
Eastern ..	76	19	17	112
Western ..	140	485	201	826
Southern ..	—	2	130	132
Northern ..	—	1	8	9
Central ..	—	12	44	56
North-Western ..	—	—	7	7
North-Central ..	3	—	—	3
Sabaragamuwa ..	—	15	24	39
Uva	—	1	14	15
No fixed place ..	—	—	5	3
Total ..	219	535	450	1,204

Of the total of 1,204 cases, 226 have been admitted into the two asylums during the year, 18 have died and 22 have left the Island. The remaining 938 are being treated and observed in the various clinics.

Statement of Cases in the two Asylums at end of 1935.

Province.	Hendala.	Mantivu.	Total.
Eastern	2	115	117
Western	384	7	391
Southern	144	4	148
Northern	8	3	11
Central	29	7	36
North-Western	11	1	12
North-Central	13	7	20
Sabaragamuwa	41	2	43
Uva	6	29	35
Indians	91	40	131
Total ..	729	215	944
Total segregated in asylums ..	..	..	944
Total treated and observed outside ..	..	..	938
		Total cases in 1935 ..	1,882

(14) **Parangi (Yaws).**—The following table shows the number of cases and deaths in hospitals and total registered deaths for the Island in the past five years:—

	1931.	1932.	1933.	1934.	1935
Hospital cases ..	1,200	1,352	1,043	795	986
Hospital deaths ..	4	4	3	2	3
Number of cases treated at dispensaries ..	24,708	23,208	18,368	10,366	9,385
Total number of deaths for the Island	4	9	5	8	9

Owing to decrease in the number of cases, the Itinerating Medical Officers who numbered 13 in 1930 were reduced to 4 in 1931 and to 2 in 1933. The work of these two officers had to be suspended from November, 1934, till the end of 1935 owing to the malaria epidemic.

3.—VACCINATION.

The total number of primary vaccinations performed during the year under review was 96,583; of these 86,666 were successful and 2,669 were failures. In 7,248 cases the results were not determined. The percentage of successful primary vaccinations was 89.7.

Vaccination is carried on throughout the year by trained male and female vaccinators. The former vaccinate in towns, villages, and estates periodically according to a fixed programme; the latter work in towns and villages and vaccinate Muslim women and children.

A vaccine station for the preparation of calf lymph is maintained by Government (*vide* Section IX. of this report).

The following table gives the number of vaccinations done, according to Provinces, during the year 1935:—

Province.	Primary Vaccination.	Secondary Vaccination.	Total.
Western	21,974	4,698	26,672
Central	14,317	1,603	15,920
Southern	19,945	21,993	41,938
Northern	8,872	2,393	11,265
Eastern	6,669	6	6,675
North-Western	7,636	—	7,636
North-Central	1,669	4	1,673
Uva	7,373	135	7,508
Sabaragamuwa	8,128	2,047	10,175
Total ..	96,583	32,879	129,462

During the year most of the vaccinators were engaged in work connected with the malaria epidemic and hence vaccination work was suspended in some Provinces.

B.—VITAL STATISTICS.

1935 stands out, owing to an unprecedented epidemic of malaria, as the most unhealthy year that Ceylon has experienced during the period for which vital statistics are available.

The large number of deaths from malaria, viz., 47,317 in 1935 against 2,333 in 1934, chiefly accounts for the increase in the year's death rate to 36.6 from 22.9 in 1934.

TABLE I.

Population, Births, Deaths, Immigration, and Infant Mortality since 1871.

	Average Annual Estimated Population (Mid-year Estimates for 1926–35).	Average Annual Number of Births registered (Actual Numbers for 1926–1935).	Average Annual Number of Deaths registered (Actual Numbers for 1926–1935).	Excess of Registered Births over Deaths.	Excess of Immigrants over Emigrants.	Average Annual Birth Rate per 1,000 (Annual Rates for 1926–1935).	Average Annual Death Rate per 1,000 (Annual Rates for 1926–1935).	Average Annual Infant Mortality, *i.e.*, Deaths of Children under 1 Year of Age per 1,000 Births (Annual Rates for 1926–1935).
1871–1880	2,584,780	70,815	58,836	11,979	23,862	27·4	22·4	—
1881–1890	2,888,104	83,664	69,238	4,426	10,398	28·9	24·0	158
1891–1900	3,295,279	112,204	89,664	22,540	34,070	34·1	27·2	169
1901–1910	3,838,750	145,962	110,347	35,615	17,735	38·0	28·7	180
1911–1920	4,311,328	164,807	132,866	31,941	9,225	38·2	30·8	196
1921–1930	4,920,028	194,611	128,916	65,695	14,880	39·5	26·2	182
1926	4,928,122	206,888	124,884	82,004	732*	42·0	25·3	174
1927	5,009,394	205,469	113,003	92,466	11,194*	41·0	22·6	160
1928	5,090,666	213,308	132,334	80,974	298	41·9	26·0	177
1929	5,171,938	198,005	135,274	62,731	18,541	38·3	26·1	187
1930	5,253,210	205,106	133,708	71,398	9,874	39·0	25·4	175
1931	5,325,354	199,170	117,453	81,717	31,581*	37·4	22·1	158
1932	5,386,106	199,370	110,650	88,720	28,837*	37·0	20·5	162
1933	5,514,516	209,032	114,690	94,342	58,170*	38·6	21·2	157
1934	5,551,623	206,512	127,069	79,442	94,534	37·2	22·9	173
1935	5,598,467	192,755	204,823	—	7,861*	34·4	36·6	263

* Excess of emigrants over immigrants.

TABLE II.

Vital Statistics by Provinces.

Province.	Area in Square Miles.	Population.	Number of Births.	Number of Deaths.	Birth Rate per 1,000 of the Population.	Death Rate per 1,000 of the Population.	Infant Mortality Rate per 1,000 Births registered.
Western	1,432	1,515,000	43,265	37,377	28·6	24·7	172
Central	2,290	1,044,500	37,547	45,028	35·9	43·1	294
Southern	2,146	806,000	33,104	21,714	41·1	25·3	165
Northern	3,429	405,000	13,610	10,528	33·6	26·0	202
Eastern	3,840	218,600	9,491	7,491	43·4	34·3	200
North-Western	3,016	564,800	16,676	36,100	29·5	63·9	628
North-Central	4,009	96,700	4,119	6,189	42·6	64·0	435
Uva	3,277	329,800	14,023	10,606	42·5	32·2	196
Sabaragamuwa	1,893	618,000	20,920	27,790	33·9	48·2	337

TABLE III.

Vital Statistics by Urban and Rural Areas.

	Population Estimated to the Middle of 1935.	Births.		Deaths.		Maternal Deaths.		Infant Deaths.	
		Number.	Rate.	Number.	Rate.	Number.	Rate per 1,000 Live Births.	Number.	Rate per 1,000 Births.
Urban (residents and non-residents in 37 towns) areas	753,100	26,109	34·7	32,151	42·7	971	37·2	5,473	210
Corrected, for residents only	—	*20,115*	*26·7*	*19,870*	*26·4*	—	—	*4,225*	*210*
Rural areas	4,845,400	180,856	37·6	103,412	21·5	4,194	25·1	45,260	272
Whole Island	5,598,500	192,755	34·4	204,823	36·6	5,165	21.1	50,733	263

Stillbirths are registered only in the urban areas. During 1935 in the 37 principal towns, there were 2,164 stillbirths giving a rate of 83 per 1,000 live births.

TABLE IV.

Vital Statistics (A) By Races and (B) By Communities.

Races and Communities.	Estimated Population at Mid-year, 1935.	Births. Number registered, 1935.	Births. Rate per 1,000 Persons living, 1935.	Deaths. Number registered 1935.	Deaths. Rate per 1,000 Persons living, 1935.	Infant Deaths. Number registered. 1935.	Infant Deaths. Rate per 1,000 Births registered, 1935.
(A) *Races*—							
1. All races	5,598,500	192,755	34·4	204,823	36·6	50,733	263
2. Europeans	10,100	133	13·2	92	9·1	4	30
3. Burghers and Eurasians	36,600	1,063	29·0	689	18·8	118	111
4. Sinhalese	3,753,600	131,087	34·9	149,291	39·8	36,857	281
5. Tamils	1,393,900	47,795	34·3	39,627	28·4	10,095	211
6. Moors	354,600	11,285	31·8	13,878	39·1	3,374	290
7. Malays	16,700	771	46·2	585	35·0	137	178
8. Others	33,000	621	18·8	662	20·1	148	238
(B) *Communities*—							
1. Ceylonese (*i.e.*, total population less Europeans and Indians)	4,912,800	166,863	34·0	186,598	37·9	45,635	273
2. European (including officials)	10,100	133	13·2	92	9·1	4	30
3. Indian immigrant population on estates	675,600	25,759	37·9	18,133	26·7	5,094	198

Indian Population on Estates.—Section 2 of the Medical Wants Ordinance, No. 9 of 1912, defines an "Estate" as "any estate in which labourers are employed having ten acres of land actually cultivated in tea, rubber, coffee, cacao, cardamoms, camphor, pepper, or cinchona". The Indian population of the tea and rubber estates had declined greatly during the years 1929 to 1933 on account of the depression in trade, but during 1934 and 1935 the depression began to lift and considerable recruitment of labour from India took place.

TABLE V.

Vital Statistics of Indian Population on Estates for the past Ten Years.

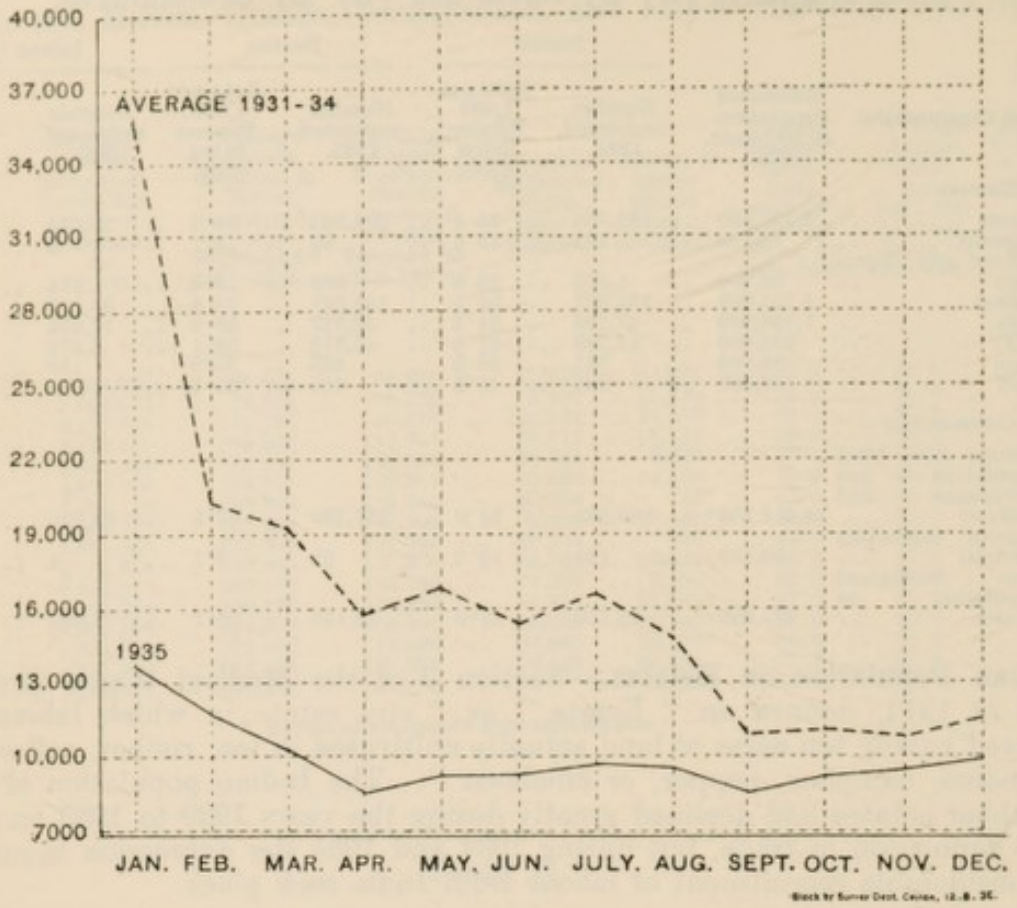
	Mean Population.	Births. Number.	Births. Rate.	Deaths. Number.	Deaths. Rate.	Infant Deaths. Number.	Infant Deaths. Rate.	Immigrants.	Emigrant.
1926	638,847..	27,515..	43·1..	19,168..	30·0..	5,751..	209..	101,746..	63,707
1927	691,855..	24,079..	34·8..	19,478..	28·2..	5,489..	228..	159,398..	89,783
1928	717,480..	24,767..	34·5..	19,823..	27·6..	5,215..	211..	133,712..	97,088
1929	731,177..	25,064..	34·3..	18,382..	25·1..	5,338..	213..	105,095..	104,411
1930	740,863..	24,813..	33·5..	16,346..	22·1..	4,804..	194..	91,422..	106,190
1931	685,527..	23,441..	34·2..	14,231..	20·8..	4,303..	184..	68,337..	91,573
1932	664,322..	24,324..	36·6..	12,431..	18·7..	4,576..	188..	50,869..	72,495
1933	618,314..	24,335..	39·4..	11,688..	18·9..	4,397..	181..	32,898..	88,969
1934	650,564..	23,346..	35·9..	13,709..	21·1..	4,666..	200..	140,607..	54,785
1935	679,201..	25,759..	37·9..	18,133..	26·7..	5,094..	198..	43,018..	43,036

TABLE VI.

Number of Deaths for the Whole Island each Month for the past Five Years.

Month.	Number of Deaths, 1931.	Number of Deaths, 1932.	Number of Deaths, 1933.	Number of Deaths, 1934.	Average Monthly Deaths, 1931–34.	Number of Deaths, 1935.
January	12,639	11,907	13,005	11,541	13,870	36,251
February	10,387	10,964	11,353	9,964	11,777	26,550
March	9,034	9,228	10,050	9,105	10,093	19,065
April	8,050	8,439	8,276	8,786	8,629	15,928
May	8,649	8,614	8,906	9,116	9,099	16,688
June	10,093	8,248	8,679	8,739	9,093	15,450
July	12,266	8,135	9,210	9,476	9,924	16,242
August	10,635	8,785	9,274	9,967	9,675	14,561
September	8,720	7,692	8,524	8,540	8,431	10,888
October	8,991	8,450	8,917	9,910	9,084	10,913
November	8,770	9,680	9,447	12,198	9,593	10,872
December	9,220	10,507	9,049	19,728	9,867	11,415
Total	117,454	110,649	114,690	127,070	119,135	204,823

SEASONAL CURVE OF MORTALITY



Causation of Deaths.—The registration of births and deaths is compulsory throughout the Island, but the causes of deaths given cannot be accepted as completely accurate since in the rural districts deaths are not usually medically certified and the majority of the registering officers are not medical men. The Registrar-General compiles separately the vital statistics of the 37 principal towns in Ceylon and these figures are more reliable as regards the causes of deaths, since most of them are based on the certificates of medical practitioners.

TABLE VII.

Causes and Numbers of Deaths in the 37 Principal Towns for the past Three Years.

Causes.	Number of Deaths. 1933.	1934.	1935.
I.—*Infant Mortality*	4,576 ..	4,923 ..	5,473
(*A*) *One Week and under.*			
1. Prematurity	567 ..	776 ..	781
2. Debility	817 ..	762 ..	877
3. Convulsions	159 ..	161 ..	175
4. Tetanus	11 ..	15 ..	22
5. Bronchitis	1 ..	1 ..	4
6. Pneumonia	4 ..	7 ..	6
7. Other causes	72 ..	96 ..	106
(*B*) *Over One Week and under One Year.*			
1. Prematurity	119 ..	128 ..	142
2. Debility	833 ..	758 ..	837
3. Convulsions	466 ..	481 ..	493
4. Diarrhoea	65 ..	87 ..	95
5. Enteritis	373 ..	396 ..	330
6. Tetanus	18 ..	11 ..	12
7. Bronchitis	106 ..	112 ..	110
8. Pneumonia	460 ..	515 ..	461
9. Syphilis	35 ..	46 ..	43
10. Other causes	470 ..	571 ..	979

Causes and Numbers of Deaths in the 37 Principal Towns for the past Three Years—*contd.*

Causes.	Number of Deaths. 1933.	1934.	1935.
II.—*General Mortality (One Year and over)* ..	16,659	18,735	26,678
1. Plague	15	19	35
2. Smallpox	17	1	3
3. Chickenpox	1	1	—
4. Measles	8	2	3
5. Influenza	412	527	353
6. Enteric fever	529	491	509
7. Malaria and malarial cachexia ..	704	1,148	5,696
8. Cholera	—	—	3
9. Diarrhoea	499	602	1,072
10. Enteritis	630	663	969
11. Dysentery	505	665	1,032
12. Ankylostomiasis	699	765	959
13. Diseases due to other intestinal parasites	686	637	571
14. Cancer	244	240	279
15. Pulmonary tuberculosis ..	1,282	1,373	1,234
16. Other tuberculous diseases ..	111	113	110
17. Anaemia	86	64	118
18. Diabetes Mellitus	233	243	256
19. Paralysis	368	493	388
20. Convulsions	218	344	341
21. Tetanus	91	112	120
22. Heart disease	663	774	876
23. Bronchitis	342	374	375
24. Pneumonia	2,293	2,826	3,753
25. Other diseases of the respiratory system	174	234	273
26. Bright's disease and nephritis ..	733	792	1,035
27. Puerperal eclampsia ..	101	105	96
28. Puerperal septicaemia ..	361	428	435
29. Accidents of childbirth ..	276	338	440
30. Accidents and negligence ..	440	457	556
31. Homicide	76	116	91
32. Suicide	88	58	82
33. Execution	42	25	53
34. All other causes	3,732	3,705	4,562
Total, all causes ..	21,235	23,658	32,151

TABLE VIII.

Deaths according to the Class of Diseases for the whole Island during the past Two Years.

I.—Infectious and parasitic diseases—	1934.	1935.
(*a*) Infectious and parasitic diseases (less tuberculous and venereal diseases)	16,265	66,047
(*b*) Tuberculous diseases	3,443	3,848
(*c*) Venereal diseases	162	188
II.—Cancer and other tumours	570	589
III.—Rheumatic diseases, nutritional diseases, diseases of the endocrine glands and other general diseases ..	7,690	8,322
IV.—Diseases of the blood and blood-making organs ..	2,465	2,884
V.—Chronic poisonings and intoxications	14	11
VI.—Diseases of the nervous system and of the organs of special sense	16,371	20,348
VII.—Diseases of the circulatory system	1,767	2,070
VIII.—Diseases of the respiratory system	13,170	16,656
IX.—Diseases of the digestive system	9,827	12,807
X.—Non-venereal diseases of the genito-urinary system and annexa	1,825	2,549
XI.—Diseases of pregnancy, childbirth, and the puerperal state	4,155	5,165
XII.—Diseases of the skin and cellular tissue	11,144	14,453
XIII.—Diseases of the bones and organs of locomotion ..	27	38
XIV.—Congenital malformations	52	39
XV.—Diseases of early infancy	9,929	11,593
XVI.—Old age	6,720	7,577
XVII.—Violent and accidental deaths	2,827	2,979
XVIII.—Ill-defined causes and death	18,647	26,661

TABLE IX.

Deaths due to Diseases of Special Interest in Ceylon for the whole Population during the past Five Years.

	1931.	1932.	1933.	1934.	1935.
1. Dysentery ..	2,496	2,178	1,886	2,279	6,175
2. Pulmonary tuberculosis ..	3,174	2,966	3,118	3,094	3,387
3. Infantile convulsions ..	12,135	10,867	11,666	12,939	16,501
4. Diarrhoea ..	6,930	5,978	6,609	8,047	11,146
5. Pneumonia ..	7,626	6,307	6,900	8,398	11,431
6. Ankylostomiasis ..	2,247	1,955	1,877	2,118	2,644
7. Dropsy	1,738	1,819	2,051	2,020	2,381
8. Anaemia	1,787	1,805	2,217	2,244	2,645
9. Intestinal parasites ..	3,995	3,562	3,689	4,372	4,832
10. Puerperal septicaemia ..	1,474	1,328	1,336	1,461	1,647
11. Malaria	1,661	1,681	1,409	2,333	47,317
12. Enteric fever ..	796	783	794	715	690
13. Rickets	3,860	4,300	4,696	4,878	5,133
14. Tetanus	333	270	248	266	286
15. Rabies	47	52	56	58	85
16. Cholera	6	1*	1*	—	22
17. Influenza.. ..	2,393	1,602	1,920	2,305	1,917
18. Leprosy	68	96	89	104	98
19. Plague	48	70	53	32	57
20. Scarlet fever ..	—	—	—	—	—
21. Anthrax	—	1	—	1	1
22. Smallpox.. ..	3	4	87	10	20
23. Diphtheria ..	18	22	30	32	41
24. Parangi	4	9	5	8	9
25. Pyrexia	16,553	14,514	13,776	15,467	22,507

* These were cases of acute choleraic diarrhoea.

The above table shows that, excluding malaria, pyrexia and infantile convulsions continue to be the two principal causes of death followed by pneumonia and diarrhoea.

TABLE X.

Causes and Numbers of Deaths among the Indian Population on Estates for the past Five Years.

	1931.	1932.	1933.	1934.	1935.
1. Dysentery ..	706	445	330	491	683
2. Debility	2,398	2,558	2,513	2,620	2,840
3. Diarrhoea and enteritis ..	846	663	523	626	897
4. Pneumonia ..	1,949	1,422	1,508	2,242	2,360
5. Ankylostomiasis ..	1,019	878	709	835	1,091
6. Infantile convulsions ..	1,023	967	889	963	1,174
7. Dropsy	60	32	29	33	52
8. Pulmonary tuberculosis ..	283	254	236	230	217
9. Anaemia ..	60	33	24	17	45
10. Other diseases ..	5,887	5,179	4,927	5,652	8,773

III.—HYGIENE AND SANITATION.

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

Public health work has made steady progress during the year.

Control of soil pollution through construction, maintenance, and use of sanitary latrines is recognized by the authorities and the people as necessary in conserving the health of the people. As evidence of this are the aided schemes for provision of private latrines by Urban District Councils by which they contribute the whole or part of the cost and recover the money in small instalments. Voluntary organizations have been formed in rural areas to promote health work and they have made latrine construction their chief project. One of the forms of relief work in the malarial districts by Government was the installation of pit

latrines. The only part of the Island where satisfactory progress has not been made is the Northern Province where there is still a good deal of opposition to latrine construction.

General sanitation continues to be satisfactory in urban and rural areas. A scheme of work which promises to be of great use in the future progress of health work in the Island is the securing of the co-operation of the people by the formation of health leagues for the promotion of health work in their respective areas. This has been successfully carried out in a number of rural districts. The formation of health leagues is engineered by the Sanitary Inspector of the area and the leagues make themselves responsible for providing squatting plates and getting people to build latrines, for protecting wells from pollution, for seeing that communicable diseases are reported and for assisting in child welfare and school health work. The Medical Officer of Health and the Sanitary Inspector work through these leagues.

Provision of protected water supplies in urban and rural areas has been kept in view. Although much progress has been made with the protection of wells in rural areas and in the investigation of sources of piped supplies for urban areas there is, nevertheless, a large population that is not provided with a wholesome supply of drinking water.

Control of communicable diseases continues to receive attention. There was an outbreak of cholera at Peliyagoda with a few cases in Colombo during the early part of the year, the infection being introduced from India. There was also a fairly large outbreak of smallpox at Welitara near Balapitiya due to infection from Colombo which had it from India. Both outbreaks were promptly dealt with. Plague is endemic in Colombo and fresh infection from time to time is introduced from outside. Control of the disease in Colombo which is still under consideration is of importance to towns in the interior of the Island. The enforcement of antiplague measures throughout the Island is being carried on but the progress made is slow. There have been outbreaks of dysentery of the bacillary type. Typhoid fever is being controlled through inoculations the value of which people are beginning to appreciate as demonstrated by the readiness with which they seek and submit to them. With funds provided by the Rockefeller Foundation an investigation into the incidence of typhoid at Kalutara which was commenced in 1934 was continued during the year.

Maternity and Child Welfare work continues to be popular and the value of the work is appreciated both by the local authorities and the general public as evidenced by the attendance at clinics and instances of co-operation in the form of donation of buildings for Child Welfare work. The Urban District Councils are beginning to provide maternity homes for the expectant mothers of their areas.

School health work has been carried on as reorganized in 1933. An additional Medical Officer was appointed for school health work in the Colombo Mudaliyar's division. Work had to be curtailed in 3 School Medical Officers' areas for short periods on account of the malaria epidemic, and many of the District Medical Officers who were carrying out work could not contribute much on account of their having increased work in their hospitals on account of the malaria outbreak. School health education received increasing attention and more interest was created in it by the offer of a Shield by the Society of Medical Officers of Health of Ceylon for the school that carried out the best school health education programme. Special emphasis was placed during the year on the correction of defects. Increasing interest is being taken in the health of the school child, and as a result mid-day meals were provided at Government expense during the malaria epidemic in areas affected by the outbreak, with much benefit to the children, and the question of the provision of mid-day meals throughout the Island is receiving the attention of Government.

The hookworm campaign made satisfactory progress during the year. The dispensers who had been switched on to malaria epidemic work were put back to their campaign work.

The leprosy survey has completed the Eastern and the Western Provinces and during the year work was carried on in the Southern Province. With the completion of the Southern Province it is not proposed to take up the other Provinces till the scheme of work is satisfactory in operation in these three Provinces.

Health work under local authorities continues to be carried on satisfactorily except in the three Urban District Council areas mentioned in the last year's report. Two of these still continue to employ part-time private practitioners as their Medical Officers of Health while the third has no Medical Officer of Health at all.

Intensive health work in areas that could be effectively looked after by one Medical Officer of Health with an adequate staff was organized in 3 additional areas thus bringing the total of such areas to 11. In the remainder of the Island district health work is carried out.

In spite of the 24 new Sanitary Inspectors trained and appointed during the year, there is still a great need for Sanitary Inspectors to carry on work in areas already developed for health work as well as to take up areas that do not have their services at all.

1.—PREVENTIVE MEASURES.

(*a*) Mosquito or Insect-borne Diseases.

(1) **Malaria.**—Malaria, the most prevalent disease in the Island, assumed epidemic proportions in the Western, Central, North-Western, and Sabaragamuwa Provinces, in November, 1934, and the peak of the epidemic was reached about the middle of December, 1934. From the beginning of 1935, the epidemic gradually abated until the middle of April, when a second wave occurred which lasted till the end of June. The further decline in the epidemic continued unchecked until the beginning of the usual autumnal rise at the end of October, 1935. In the Province of Uva malaria prevailed in epidemic form from the beginning of April to end of November. The towns of Badulla and Welimada and the villages in the neighbourhood were more or less severely affected.

The hospital admissions for the disease were 161,313 cases as against 41,551 in the previous year and the cases treated at the dispensaries and out-patients' departments of hospitals were 5,293,468 as against 2,293,224 in 1934. There were 5,340 deaths in hospitals from malaria in 1935, giving a death rate of 3.3 per cent. as contrasted with 988 deaths with a rate of 2.4 per cent. in the previous year. During the epidemic the proportion of cases of the malignant type of the disease was greater than usual and many deaths were due to cerebral malaria and to convulsions among children.

The number of malaria cases treated annually in hospitals and dispensaries during the last ten years is as follows:—

Year.	Cases treated in Hospitals.	Percentage of the Total Number of Patients treated in the Hospitals.	Cases treated in Dispensaries.	Percentage of the Total Number of Patients treated in the Dispensaries.
1926	29,334 ..	14.2 ..	1,061,457 ..	36.9
1927	25,146 ..	12.5 ..	865,594 ..	31.4
1928	44,356 ..	19.7 ..	1,542,029 ..	44.2
1929	37,591 ..	17.8 ..	1,629,586 ..	44.6
1930	36,901 ..	18.0 ..	1,722,210 ..	45.2
1931	27,714 ..	14.4 ..	1,419,807 ..	38.2
1932	32,696 ..	15.7 ..	1,506,194 ..	38.0
1933	23,101 ..	11.1 ..	1,199,075 ..	31.8
1934	41,551 ..	16.5 ..	2,293,224 ..	44.5
1935	161,313 ..	40.8 ..	5,293,468 ..	65.4

The following table shows the hospital admissions and deaths on account of malaria in the different Provinces for the past three years:—

	1933.		1934.		1935.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
General Hospital, Colombo	976	42	1,978	122	8,664	380
Western Province	1,498	30	4,273	111	21,866	716
Central Province	3,153	59	7,927	177	52,997	1,590
Northern Province	3,251	67	2,327	49	3,715	79
Eastern Province	944	16	973	11	1,798	34
Southern Province	2,700	81	3,574	97	7,959	203
North-Western Province	2,650	86	4,795	159	14,484	983
North-Central Province	1,260	20	2,124	39	3,660	114
Province of Uva	3,305	31	5,371	56	13,001	208
Province of Sabaragamuwa	3,339	51	8,176	167	32,955	1,021
Lunatic Asylum	25	1	33	—	214	12
	23,101	484	41,551	988	161,313	5,390

Special arrangements had to be made in order to render medical aid in the epidemic areas. Where no hospital or dispensary existed treatment centres were established at distances of about three miles from one another in the case of the more populous areas. In badly affected villages these were in charge of qualified officers.

47,177 lb. and 4,301,400 five-grain tablets of quinine which cost Rs. 1,014,340 were issued free through various agencies for curative and preventive purposes.

A full report of the epidemic till April 30, 1935, was published as Sessional Paper XXII. of 1935.

Anti-Malaria Campaigns.—The same anti-malarial measures as in 1934 were carried out in the various centres of work, details of which are given below:—

Anuradhapura: *Staff, &c.*—This was the thirteenth year of anti-malaria work in this town.

The staff consisted of 1 Medical Officer, 2 Sanitary Inspectors, 1 Overseer, 3 kanganies, and 37 labourers, excluding the Convict Gang which had a daily average of 40 men.

Oiling.—209 wells, 650 ponds, 2,408 borrow-pits, 6,119 drains, and 11,352 breeding places covering an area of about 2,648,200 square yards were oiled during the year.

The amount of oil mixture used was 6,401 gallons and its cost Rs. 2,680.30. The cost of labour for this item was Rs. 1,118.51.

Compared with the previous year, there was a slight increase in the cost of this work. This is explained by the increase in the number of rainy days and the number of recently created breeding places.

Maintenance Work: (a) General.—General maintenance work was done on an extensive scale. 4,673 drains of a total length of 660,028 feet and 2,364 ponds and borrow-pits were maintained in satisfactory condition. 467 pits were filled with 69½ cubes of earth. 786 water collections were drained and 622 pits were dug to bury water-holding receptacles. The total cost of general maintenance was Rs. 3,920.47.

The Convict Brigade was employed in cleaning, repairing, and turfing the Wan-ela from January to July. Clearing the sides of the Malwatu-oya within the controlled area was done from August to December.

(b) Halpanu-ela.—This ela is 3⅓ miles and is divided into 3 tracts. From October to November, extensive repairs were done in Tract No. 3 and this tract with Tract No. 2 was kept in good repair throughout the year. The total cost of maintenance of the Halpanu-ela was Rs. 1,446.53.

(c) Toluwila-ela.—This ela is 1.55 miles long and is divided into 3 tracts. Filling up and repairing of broken places was done between February and March and again from May to early June. From July to September, revetting

in pegs, filling up erosions and turfing of sides were done in Tracts Nos. 1 and 2. Stone paving of the sides of the channel was started in Tract No. 3 in August and continued till November when work ceased owing to the rains. The Urban District Council has undertaken to supply metal to complete the work. The total cost of maintenance was Rs. 1,929.50. In all 230 drains of a total length of 3,401 feet and 48,446 feet of the ela were maintained.

(*a*) *Wan-ela* is .78 of a mile in length and begins at the Nuwarawewa spill and falls into the Malwatu-oya. Jungle growth was cleared up, new drains opened, and stagnant pools filled in by the Convicts Brigade near its source. The campaign maintenance gang was employed to pave the sides of the smaller drains leading into the ela during July. The cost of this item was Rs. 119.60.

Malaria Drainage Works under Construction: (*a*) *Diulgahakotuwa-ela.*—The work on this channel was started on August 8 and out of a total length of 8,042 feet only 300 feet remained to be cut at the end of the year. One pond connected with the channels was filled and two others were partly filled. The cut portion of the channel is being turfed. The total earthwork done was 493.25 cubes cutting and 484.33 cubes filling. One masonry fall has been built.

(*b*) *Nuwarawewa Spill Channel.*—This work, too, was started on August 8 and 2,700 feet out of a total length of 3,200 feet were cut. 271.28 cubes of earth cutting and 135.80 cubes of soft rock cutting have been done. The progress of the work was held up by the rains.

Biological Control of Wells.—This work was started in July when the drought had dried up about 50 per cent. of the wells in the area. " Millions " were found in only 10.5 per cent. of the wells while the larval rate was 15.8 per cent.

In August after fish introduction, the rate for " millions " rose to 33 per cent. and the larval rate dropped to 12.3 per cent.

In September, after fish introduction to more wells, the " millions " rate was 33.9 per cent. while the larval rate was reduced to 9.9 per cent.

With the change of weather conditions in October, " millions " thrived in 50 per cent. of the wells under control. The uncontrolled wells bred anophelines and raised the larval rate to 15.4 per cent.

In November, owing to an increase in the number of uncontrolled wells, the millions' rate was 43 per cent. and the larval rate 21 per cent.

December saw more settled weather conditions and with intensive control, the " millions " thrived in 61 per cent. of the wells and the larval rate dropped to 8.4 per cent.

Quinine Distribution.—13,717 five-grain tabloids, 8,774 four-grain tabloids, and 13,462 three-grain tabloids of quinine were distributed to school children and the general public.

The spleen rate of town children under 12 in January was 24.06 per cent. and in October 21.3 per cent.

The same rates for children living outside the town were 62.2 per cent. and 37.0 per cent. respectively.

Exceptional weather conditions prevailed during the early part of the year. Poor rainfall and drought conditions extending from 1934 resulted in failure of crops.

The total annual rainfall in 1935 was 49.08 in., over 20 in. of which fell in the month of November and December. The rainfall in 1934 was 39.95 in. and in 1933, 52.17 in.

Kurunegala.—The staff consisted of 2 Sanitary Inspectors, 1 Quinine Distributor, 1 Overseer, 2 kanganies, and 24 labourers under the supervision of the Medical Officer of Health, Health Unit. As 1 Sanitary Inspector was employed on the oiling of rivers, the strength was reduced to only 1 Inspector during the latter part of the year.

Oiling.—All pools, borrow-pits, quarry pits, trenches, marshes, elas, drains, irrigation channels, &c., and a few of the unused wells in the town were regularly oiled once a week. The area oiled during the year was 1,235,350 square yards

comprising 92,658 breeding places. 12,139 gallons of the mixture were used for the purpose at a cost of Rs. 4,612.82 for the mixture and Rs. 1,913.60 for labour.

Petrolization of Wells and Introductions of " Millions ".—At the beginning of the epidemic, almost all the wells were found breeding anophelines. Intensive petrolization and fish introduction were carried on till the epidemic abated.

From October more intensive treatment of wells was done to control breeding and in December petrolization and fish introduction were carried out weekly.

There are about 600 wells in the town and before intensive treatment was done 12.9 per cent. of them were positive to anopheline breeding. This rate dropped to 2.8 per cent. after weekly treatment was started.

151 gallons of petrol costing Rs. 211.40 were used on 6,219 wells during the year.

Maintenance.—This work consisted of cleaning and grading of drains, cleaning streams, and cutting new drains where necessary. 2,316 drains totalling 659,010 feet in length were maintained in good condition at a cost of Rs. 2,819.59.

Filling.—There was very little filling to be done, the work having been completed during previous years. Fifty-four breeding places with a capacity of 3,668 cubic feet were filled at a cost of Rs. 56.40.

Quinine Distribution.—All children in the nine schools were regularly treated with quinine by the Quinine Distributor. 348,232 grains of quinine were distributed during the year.

General.—A total of 67.9 inches of rain fell during the year, of which a little over 29 in. fell during the last three months of the year. The highest fall for any one month was in October (12.16 in.) and the lowest in February (1.24 in.).

The spleen examination carried out in February gave the following results :—

	Per Cent.
Children under 12 years in town	61·8
Children under 12 years outside town	68·3
Children over 12 years in town	30·5
Children over 12 years outside town	22·8

Chilaw.—The year under review was the eighth year of anti-malaria activities in the town.

The staff consisted of a Medical Officer of Health, 2 Sanitary Inspectors, 1 Entomological Assistant, 1 Field Attendant, 1 Overseer, 1 kangany, and 43 labourers.

Oiling.—Shell anti-malaria mixture was used throughout the year with satisfactory results. A total of 9,160 gallons of the mixture was used in treating breeding places covering an approximate area of 9,160,000 square yards. The cost of this item of work was Rs. 5,702.17 of which Rs. 1,959.27 was for labour and Rs. 3,742.90 for oil and the monthly average cost per 100 yards ranged between .04 and .09 cents. The efficiency rate for borrow-pits, coconut trenches, pools, gala wells, ponds, &c., was between 88.8 per cent. and 100 per cent.; for streams and channels, between 97.8 per cent. and 100 per cent.; and for swamps the figure fell to 82 per cent. in December after having been maintained at 100 per cent. for the rest of the year.

Paris Green Dusting.—In addition to the gala wells that were treated, a few ponds were included for treatment with this larvicide. 1,766 lb. of the mixture costing Rs. 82.85 was used in spraying an area of about 496,000 square yards at a cost of Rs. 1,074.65 for labour. The average monthly cost per 100 square yards ranged between 18 and 30 cents while the efficiency rate varied between 68.9 per cent. and 100 per cent.—a fairly satisfactory rate for this larvicide.

Filling of Abandoned Gala Wells.—As in the previous year, a sum of Rs. 2,000 was voted by the Urban District Council for this work. Thirty-nine gala wells were filled during the year with sea sand and coir dust in the proportion of 2/3 and 1/3. The cost of material used was borne by the Urban District Council while the expenditure on labour was met from the campaign votes.

Filling of Abandoned Pits and Trenches.—The Chairman, Urban District Council, placed at the disposal of the campaign the town refuse and this was used in filling up 22 pits, 1 swamp, and 11 trenches. A layer of coir dust was spread over to prevent fly breeding.

Maintenance.—All breeding places were cleaned and their edges trimmed prior to treatment with either oil or Paris green. In addition to this work, the gang filled up 162 minor borrow-pits, cleared jungle, and regraded drains. 19,536 situations were thus attended to at a cost of Rs. 6,580.72 (for labour).

Quinine Distribution.—Quinine was distributed in the town schools and to the public on application. 13,265 five-grain tablets and 16,020 three-grain tablets were given to the schools and 6,360 five-grain tablets and 820 three-grain tablets were distributed to the general public during the year.

Fish Distribution to Wells.—All wells including gala wells were examined from time to time and " millions " introduced in such wells as were found with no " millions " or positive to anopheline larvae. In some gala wells, the " millions " were thriving so well that these were used as subsidiary nurseries and fish drawn for introduction into other wells in the town.

The efficiency rate for this work was quite satisfactory, being always above 98.0 per cent.

General.—The epidemic of malaria which broke out in epidemic form in various parts of the Island including the Chilaw District continued until the early part of 1935, but as far as the town was concerned, it is gratifying to note that the health of the people was very satisfactory.

The spleen examinations conducted during the year showed a marked improvement in the condition of the children being 6.3 per cent. in January, 1935.

The rainfall for the year was below average and was 53.38 inches.

The hospital attendances for in-town malaria cases showed very marked increases in the beginning and the end of the year, but much reliance cannot be placed on the differentiation of the in-town and outside town cases at the hospital.

Badulla.—The staff at this centre consisted of a Medical Officer of Health, 2 Sanitary Inspectors, 1 Overseer, 1 peon, and 14 labourers.

Oiling.—The work was mainly confined to the oiling of the margins of the Badulla-oya, Kuda-oya, and Rambukpota-oya and the numerous sand pools and rock pools in the beds of these rivers.

All pits, stagnant pools, and similar breeding places within the control limits were also oiled.

3,443 gallons of the mixture costing Rs. 1,421.63 were used to oil an area of 1,731,500 square yards at a cost of Rs. 2,491.71 for labour. The efficiency rate for all breeding places varied between 87.27 per cent. and 100 per cent.

Maintenance.—This consisted of (*a*) river cleaning, viz., trimming and clearing margins of the three oyas referred to above, (*b*) filling up of sand pools and rock pools in river beds and draining them where possible, and (*c*) filling up of pits, borrow-pits, and stagnant pools in the various sections of the town.

5,344 sand pools and rock pools in the beds of the rivers and 1,291 pits and pools in the town were filled up at a cost of Rs. 2,498.75 for labour.

River Training Experiments.—These experiments were started in June, 1935, and carried on till November when the work had to be suspended on account of the continuous rain and flooding of the river.

The work consisted of (*a*) making of pyramidal concrete blocks with steel moulds about 1 foot wide and 1 foot high, (*b*) laying of such blocks at different spots in the river bed where there were sand banks to encourage siltage and protect such banks from being washed away by floods, (*c*) laying of submerged wire-netting logs across the river bed for the retention of sand at such places where sand banks were likely to be formed, (*d*) filling up of rock holes with small boulders and gravel and sealing them with bitumen emulsion, (*e*) pot hole filling with concrete as well as cement mortar, and (*f*) draining of rock holes where possible by breaking away the sides of such holes.

The work was carried on by a special overseer under the direction of the Sanitary Engineer.

Quinine Distribution.—The town schools and the general public were given quinine, the quantity distributed being 17,815 five-grain tabloids and 29,520 three-grain tabloids.

General.—The rainfall during the year was 66.16 in. and is below that of the previous year (74.38) and still less than in 1933 (127.97).

There has been a marked increase in the number of malaria cases in town seeking treatment at the local hospital during the last quarter of the year.

It will be noticed that 1933 was a comparatively healthy season as far as malaria was concerned, the total percentage of malaria to all cases being 18.5.

The season of 1934 was definitely bad, the total malaria cases being 2,559 for the quarter. This is 36.4 per cent. of the total cases for the quarter.

The season of 1935 was considerably worse, the cases of malaria for the season being 8,266, comprising 67.6 per cent. of all cases.

This increase in malaria during 1934 and 1935 in Badulla apparently bears no direct relation to rainfall, the precipitation in Badulla during the seasons mentioned being:—

	1931.	1932.	1933.	1934.	1935
Rainfall 3rd quarter—					
Total	5 in. ..	9 in. ..	18 in. ..	1·4 in. ..	9·5 in.
Rainfall last quarter—					
Total	53 in. ..	25 in. ..	53 in. ..	36 in. ..	33 in.
Malaria cases	1,951 ..	2,150 ..	924 ..	2,559 ..	7,016

Puttalam.—The year under review is the sixth year of anti-malaria activities in Puttalam town. The area of the town is 8§ square miles, of which only 2.12 square miles were under control.

The staff here consists of 1 Sanitary Inspector in charge, another Sanitary Inspector, 1 Entomological Assistant, 1 Field Attendant, 1 peon, 2 kanganies, and 25 labourers.

Oiling.—All breeding places, except wells and paddy fields under cultivation and large tanks, were treated with Shell anti-malaria mixture. There was a marked reduction in the consumption of oil in spite of treating a large number of fresh breeding places created in a settlement. The reduction is due to the draining and filling of the low-lying lands. 12,255 breeding places were oiled with 4,306 gallons of oil at a cost of Rs. 789.35 for labour. The efficiency rate was 96.6 per cent. for the year.

Fish Distribution to Wells.—There were 458 wells of all types in the control area as compared with 423 the previous year. All these wells were examined once a month and " millions " were introduced wherever necessary. Many of the wells dried up during the dry season with consequent extinction of the fish introduced. In about 6 per cent. of the wells, carnivorous fish killed the " millions ".

The efficiency rate for this item was 99 per cent. and the cost of labour Rs. 166.

Forty-five wells were bailed to remove carnivorous fish. This work cost Rs. 76.50.

Filling.—Some breeding places were filled with earth obtained at the spot thus eliminating about 40 per cent. of them.

In all 71 pools, 132 borrow-pits, 13 swamps, and 10 low-lying areas were filled at a cost of Rs. 1,162.55 for labour.

Maintenance.—Preliminary cleaning of ponds, pools, and other breeding places prior to oiling, cleaning of drains, and ditches and maintaining them, and clearing of edges of tanks were satisfactorily carried out.

The labour cost Rs. 1,122.15 and the number of breeding places attended to was 2,797.

Semi-permanent Drainage.—The following works were carried out during the year:—

(*a*) Four new drains were opened to drain the water in the low-lying areas. This work cost Rs. 187.25 for 2,460 feet.

(*b*) Improvements were effected to 8 drains to ensure swifter flow. The cost of this work was Rs. 177.45.
(*c*) 48,151 feet of channels and drains were improved at a cost of Rs. 1,692.60.
(*d*) Various other improvements to channels and their tanks were carried out at a cost of Rs. 581.90.

Quinine Distribution.—The children attending the five schools in the town were treated twice a week with quinine during the fever season January to March and October to December. The campaign staff and the general public too were given quinine free whenever application was made for a supply. A total of 30,453 tabloids (five-grain and four-grain) was used.

General.—The campaign labourers' lines were repaired at a cost of Rs. 287.96 and a barbed wire fence with 3 gates was provided.

A spleen survey of children who encamped by the river Mi-oya during the dry months July to September was made in January. 289 such children examined gave 101 positives (34.9 per cent.). Of the positives, 42.5 per cent. were living within ¼ mile, 48.5 per cent. between ¼ and ½ mile, and 8.9 per cent. outside the town.

A similar spleen examination of children who did not encamp by the Mi-oya was made for purposes of comparison.

227 children examined gave 90 positives (39.6 per cent.). Of these 8.8 per cent. were living within ¼ mile, 15.4 per cent. more than ¼ mile but less than ½ mile, and 75.5 per cent. outside the town.

The town of Puttalam did not apparently show a violent form of the malaria epidemic which swept over the towns of Kurunegala, Kegalla, and Matale.

Trincomalee.—The anti-malaria activities at this centre were in charge of a Sanitary Inspector and a gang of labourers under the supervision of the Medical Officer of Health, Health Unit.

Oiling of all breeding places in the Urban District Council area was done. The mixture used was fuel oil and kerosene oil and 1,363½ gallons of the mixture were used to treat a total area of 17,150 square yards. The Railway area and the Maniavely quarry pits outside the Urban District Council limits were also oiled and the cost of such work recovered from the respective departments.

Minor filling was done where necessary.

A systematic examination of all wells in the town numbering 1,084 was undertaken and " millions " were introduced into all wells that either bred anophelines or proved negative to " millions ".

An outlet for the flood water in the Uppuvely area was taken in hand.

All the drains—mostly in private lands—with a length of about 6 miles were cleaned and maintained in good condition.

The outlet drain of " Horse Pond " was partly turfed in October.

The cost of all these activities was borne by the Urban District Council which had voted Rs. 3,500.

Railway Anti-Malaria Work, Maho.—The staff consisted of 1 Sanitary Inspector, 1 kangany, and a gang of labourers up to a maximum strength of 29.

Oiling.—A total of 13,856 breeding places were oiled during the year. 1,041 gallons of oil costing Rs. 395.58 were used for the purpose while labour employed on this work cost Rs. 446.05.

Maintenance.—In addition to the regular preparation of breeding places prior to oiling 204,088 feet of drains were maintained in good condition during the year.

2,070 feet of drains were opened up. Rank vegetation on Railway land, in front of the running bungalow and the resthouse was cleared. The edges of two tanks were cleared. The total cost of this item of work was Rs. 3,297.21.

Filling.—Sixty-three permanent pits and 145 temporary pits were closed up at a cost of Rs. 1,511.13 for labour.

Wells.—There were 45 wells in the area and these were petrolized from April. In all 27 gallons of petrol costing Rs. 47.25 were used.

Quinine Distribution.—2,465 quinine tablets were distributed to 585 persons during the year.

The year began with a marked rise in the local dispensary attendances for malaria but in March there was a drop to less than half of the January figure. Gradual decreases were observed from month to month till in September it dropped to 923, which was about $\frac{1}{8}$ the figure for January (7,906).

There was a slight increase from October to December.

Minneriya Colonization Scheme: *Staff.*—The staff consisted of 1 Sanitary Inspector, 1 Apothecary, 1 Dispensary Orderly, and a gang of 8 to 15 labourers under the supervision of the District Medical Officer, Polonnaruwa.

Oiling.—Up to September, those breeding places which were positive to anopheline larvae were regularly oiled over the whole area from the bottle-neck up to the railway line. In September *A. culicifacies* was found in the Minneri-oya and extensive oiling was commenced in this oya which had hitherto not been oiled. The labour force was strengthened and an experienced oiling overseer was appointed on October 16. The entire area was divided into 7 sections and each section was treated once a week.

The maintenance work required before oiling was done by another gang of labourers. This involved the clearing of floatage from pools, undergrowth, draining, and filling, &c.

21,520 places were oiled, the consumption of oil being 1,721 gallons.

Destruction of Adult Mosquitoes.—Shell-tox spraying in huts was carried on till July 19 when it was discontinued and restarted in October and extended to Hatamune in November.

Two labourers were employed on this work and each hut in the area was sprayed once a week with shell-tox.

Prophylactic Treatment for Malaria.—The drugs used were quino-plasmoquine and quinine bisulphate five-grain tablets. The former was given to the dry zone colonists at Hatamune and to a group of colonists, about 100 in number, over a selected area. The dose was one tablet to each person on three consecutive days. The rest of the people in the district including the dependants of the above selected colonists were given a tablet of quinine for two consecutive days in the week. This programme was carried on by the Sanitary Inspector and the Apothecary till the end of September.

With the onset of the rains and the return of the colonists and their dependants from other malarial districts, these methods were strengthened. Every person in the area was given a tablet of quinine each for three consecutive days in the week and quino-plasmoquine was omitted.

Housing of Colonists.—The colonists have failed to go into the residential sites and build up permanent houses. They preferred to stay in their allotments scattered over the area and the Sanitary Inspector's work of drug distribution was therefore made difficult. Only one colonist had built a fairly substantial house on the residential site.

General Health.—From October 1, 1935, with the onset of the rains and the return of colonists and dependants from other malarial districts, these measures were strengthened. Every person in the district, colonist, dependant of labourer was given a tablet of quinine bisulphate five-grain each for three consecutive days in the week and the quino-plasmoquine was omitted altogether. The constant fluctuation of the population in and out of other malarial districts did not permit of an accurate study of the relative merits of the two drugs. The quino-plasmoquine did not appear to be superior to quinine as a prophylactic and the general impression gained was that quinine was as good if not better as a prophylactic and certainly cheaper. The results as seen at the end of the year seemed to have justified the change. The two drugs were given from the very inception and quinine alone was given for three days a week from October 1, 1935.

The table below shows the good results of the continued persistence of prophylaxis:—

	Number of Colonists and Dependants treated.			Doses of Quino-plasmoquine and Quinine given.			
		Dependants.		Colonists.		Dependants.	Others.
	Colonists.	Adults.	Children.	Q.P.	Quin.	Quin.	Quin.
January	108	21	17	477	548	—	100
February	152	35	21	440	330	444	75
March	206	49	28	824	953	970	125
April	200	50	29	661	840	681	50
May	185	35	30	794	758	1,016	225
June	172	41	24	681	667	820	150
July	171	28	20	624	664	721	150
August	136	36	28	807	642	817	419
September	133	35	28	630	776	718	388
October	182	50	37	—	2,283	1,157	429
November	182	55	44	—	1,995	1,121	610
December	182	64	44	—	1,735	1,022	178

The incidence of malaria as gauged from the Hingurakgoda dispensary figures was less in 1935 than in 1934. A total of 76 colonists and dependants were treated at Polonnaruwa hospital and 29 of them were for malaria. Sixty-seven blood films from the colonists were examined in March and 5 proved positive.

An outbreak of typhoid occurred in January. Three persons who contracted the disease were treated at the hospital. Mass inoculation was done. Another case occurred in October and the man was treated at the hospital and the contacts inoculated.

One case of phthisis was detected in August and the man ultimately died in Anuradhapura hospital. His hut was burnt down as a sanitary measure.

The general health of the colonists and others continued to be satisfactory.

General Sanitary Measures.—The Medical Officer and the Sanitary Inspector attend to this. The bazaar area is frequently inspected. The colonists have not built any permanent latrines. A few pit latrines were built but the rains proved that they were unsuitable. Arrangements are being made to put up dry earth latrines.

The Irrigation Department had dug 18 bored hole wells and three large wells. The water in these was tested and found satisfactory. The water supply of the area, however, remains in an unsatisfactory state.

Kataragama.—Anti-malaria work in connection with the Esala Festival at Kataragama was started on May 5, 1935—about seven weeks before the commencement of the festival.

The chief control measure was the oiling of the Menik-ganga. This work commenced on May 28 and was continued at weekly intervals till July 9. 150 gallons of kerosene fuel oil mixture was used during the period.

Clearing of jungle and subsequent burning were carried out from the time the Sanitary Inspector arrived there.

Quinine was distributed to the residents of the village on two consecutive days a week from the early part of May till the end of the festival.

All living rooms at Kataragama were regularly sprayed with Chatham Insecticide for destroying adult mosquitoes.

Alawwa.—At a meeting of the Departmental Committee on Malaria held on November 12, 1935, it was considered urgently necessary to start anti-malaria work at Alawwa in view of the entomological findings.

As a preliminary to launching an anti-malaria campaign, shell-tox spraying of all houses was started on November 19 and with the arrival of a Sanitary Inspector on December 14 anti-larval work was started.

Shell-Tox Spraying.—A kangany and 4 labourers were detailed for this work. The total number of houses in the area was grouped into three sections and each section was sprayed twice a week.

31⅛ gallons of Shell-tox were used from November 19, 1935, to January 15, 1936, the cost of the insecticide being Rs. 179.

Oiling.—One kangany and a gang of 8 men were employed in oiling all breeding places other than paddy fields, irrigation channels, and swamps. 226 gallons of the Shell mixture were consumed up to January 15, 1936.

Paris Green Dusting.—Spraying of Paris green in paddy fields, swamps, and irrigation channels was done by a gang of 6 transport labourers and 6 sprayers under the supervision of the overseer. This work was stopped on December 23, 1935, at the request of the Government Agent.

A total of 8,020 lb. of the mixture costing Rs. 360.90 was sprayed over 365⅝ acres of breeding places at a cost of Rs. 85.40 for labour.

Filling and Clearing.—With the stopping of Paris green work, the gang of labourers were drafted on to filling up of breeding places. Thirty-nine borrow-pits were filled and 715 feet of drains were cut at a cost of Rs. 30.10 for labour.

Petrolizing of Wells.—There were 200 wells in the control area and each well was petrolized once a week. Five gallons of petrol was used for the purpose, the total cost of this work being Rs. 29.30.

The cost of labour for all items of work from December 1, 1935, to January 15, 1936, was Rs. 533.50.

With the decrease in malaria in this area the work was stopped as from January 15, 1936.

Central Laboratories, Torrington Square.—An important line of investigations was commenced in May, 1935—the periodical examination of children in schools and villages in selected areas within the zone recently invaded by the epidemic.

The examinations are conducted every quarter and both blood and spleen examinations are performed in great detail. Monthly and quarterly reports are submitted. Over 18,000 blood films were examined from the observation centres and from other places in connection with the malaria epidemic.

Considerable time is now given to studying the various meteorological features of the Island and monthly reports for each Province are forwarded for the information of Provincial Surgeons.

Five meetings of the Departmental Committee on Malaria were held in 1935 at which both epidemic and routine malaria matters were discussed and action taken.

(2) **Dengue.**—There were no cases of dengue during 1935.

(3) **Filariasis.**—There were 41 cases of filarial diseases admitted to hospitals in 1935 with one death. In addition, 218 cases were treated as out-patients, of which 91 were in the Northern Province, 52 in the Eastern Province, 40 in the Southern Province, and 35 in the other Provinces.

(*b*) HELMINTHIC DISEASES.

Ankylostomiasis.—The following table shows a comparison of the 1934 figures with the figures for the previous five years:—

	1930.	1931.	1932.	1933.	1934.	1935
Number of cases at dispensaries	171,375..	246,620..	303,769..	271,564..	315,237..	208,452
Cases admitted to hospitals ..	10,288..	9,902..	12,421..	13,674..	15,444..	15,096
Total number of deaths in hospitals	857..	724..	679..	723..	721..	1,061
Total number of deaths registered for the Island ..	2,330..	2,247..	1,955..	1,877..	2,118..	2,172

Ankylostomiasis Campaign: *Introduction.*—The activities of the Ankylostomiasis Campaign were seriously handicapped in every direction by the malaria epidemic which began to make itself felt during the fourth quarter of 1934, and continued its ravages unabated far into the year 1935.

Administrative Organization: Personnel.—The campaign staff remained the same as during the previous years, viz., 1 Superintendent, 2 Clerks, 32 Dispensers, 8 Microscopists, 1 Office Peon, and 2 Laboratory Attendants.

Procedure of the Campaign.—The same procedure was carried out as in the previous year, "Anky" dispensers being attached to various officers of the

Department for varying periods to work under their supervision. Officers in charge of Government hospitals and dispensaries were also expected to give ankylostomiasis treatment to as many as possible of those calling at their institutions for treatment. Furthermore, these officers were expected to treat as many schools and estates in the immediate neighbourhood of their institutions for ankylostomiasis without the aid of the campaign dispensers. Immigrant labourers from India to estates in Ceylon continued to be treated at the Mandapam Camp during their period of quarantine prior to their arrival in Ceylon.

Work accomplished.—As in previous years, the work was carried out through the following agencies, viz., (1) Government Institutions, (2) Campaign Dispensers, (3) Health Units, (4) Mandapam Camp, (5) Estate Medical Staff.

TABLE. I.

Treatments by all Agencies in 1935 and 1934.

Agencies.	Treatments, 1935. First.	Subsequent.	Total.	1934. Total.
Government Institutions :—				
(1) At Institutions ..	951,619	75,554	1,027,173	1,346,817
(2) Outside Institutions ..	44,530	—	44,530	61,907
Campaign Dispensers :—				
(1) School children ..	56,264	—	56,264	82,572
(2) Estate labourers ..	76,152	—	76,152	138,993
(3) Villagers	28,736	—	28,736	88,390
Health Units	25,744	1	25,745	37,755
Mandapam Camp	36,623	—	36,623	125,849
Estate Medical Staff ..	87,383	19,356	106,739	109,632
Total ..	1,307,051	94,911	1,401,962	1,991,915

The total treatments given during the year 1935 were fewer by 589,953 than the number of treatments given during 1934. This falling off is due to the epidemic of malaria and its after effects both direct and indirect.

TABLE. II.

Ankylostomiasis Treatments given by all Agencies, and Average Egg-count per c.c. per Person and Percentage infected before and after Treatment, by Provinces, for the Year 1935.

Province.	Treatments. First.	Subsequent.	Total.	Microscopical Examinations by Stoll's Method only. Before Treatment. Number examined.	Average Egg-count.	Percentage infected.	After Treatment. Number examined.	Average Egg-count.	Percentage infected.
North-Western ..	150,945..	4,728..	155,673..	631..	1,900..	84·3..	29..	800..	34·5
Eastern	81,643..	1,635..	83,278..	880..	1,600..	83·3..	131..	1,400..	71·8
Sabaragamuwa ..	123,975..	6,582..	130,557..	85..	1,000..	76·5..	55..	800..	72·7
Western	268,135..	25,625..	293,760..	2,332..	1,500..	76·2..	368..	800..	61·1
Southern	225,142..	25,791..	250,933..	1,034..	1,000..	74·6..	190..	700..	57·9
Central	198,615..	26,313..	224,928..	878..	1,300..	73·1..	176..	800..	65·3
Northern	87,440..	1,083..	88,523..	640..	900..	63·1..	137..	600..	54·7
North-Central ..	28,187..	232..	28,419..	35..	600..	54·3..	— ..	— ..	—
Uva	106,346..	2,922..	109,268..	203..	500..	50·7..	24..	700..	45·8
Mandapam Camp ..	36,623..	— ..	36,623..	— ..	— ..	— ..	— ..	— ..	—
Total ..	1,307,051	94,911	1,401,962	6,718	1,400	75·1	1,110	800	61·3

In the previous table the number of treatments given in the various Provinces and at the Mandapam Camp and also the average egg-count per c.c. per person, before and after treatment are shown.

The average egg-count for the Island which was 2,000 in 1934 and 1,600 in 1933, was found to be 1,400 during the year under review and the percentage infected 75.1 per cent. as against 81.2 per cent. in 1934 and 74.1 per cent. in 1933. It was possible to examine only 1,110 after treatment specimens of faeces. The average egg-count per c.c. of after treatment specimens was found to be 800 as against 1,000 in 2,657 samples examined in 1934. The rate of infection, on the results of Stoll's method of egg-counting on the basis of formed stools, was reduced from 75.1 per cent. before treatment to 61.3 in after treatment.

(1) *Medical Institutions.*—Table III. gives the figures of treatments at Government Medical Institutions.

TABLE III.

Ankylostomiasis Treatments at Government Institutions during the Year 1935.

Province.	Attendance (First Visits).	Treatments.			Percentage of Total Treatments to First Attendance.
		First.	Subsequent.	Total.	
Uva	245,910	57,715	865	58,580	23·8
Southern	990,922	200,218	24,764	224,982	22·7
Northern	329,275	73,434	1,083	74,517	22·6
Eastern	312,144	64,708	1,635	66,343	21·3
Western	1,682,341	210,704	24,584	235,288	14·0
Central	1,233,439	98,755	14,124	112,879	9·2
North-Central	335,140	27,947	232	28,179	8·4
North-Western	1,462,738	136,510	4,654	141,164	9·7
Sabaragamuwa	1,180,569	81,628	3,613	85,241	7·2
Total for 1935	7,772,478	951,619	75,554	1,027,173	13·2
Total for 1934	4,944,492	1,264,877	81,940	1,346,817	27·2

The percentage of treatments to first attendance is 13.2 per cent., which is very low. This is due to the very large number of persons who could not follow the treatment owing to the malaria epidemic.

Table IV. shows the treatments given by the officers of the Department outside their institutions without the aid of campaign dispensers. Only 145 units were attended to with a total of 44,530 treated as against 61,907 treated in 278 units during 1934.

TABLE IV.

Treatments given by the Medical Officers of the Department outside their Institutions without the Aid of the Campaign Staff during 1935, by Provinces.

Province.	Schools.		Estates.		Villages.		Total.	
	Number.	Number treated.	Number.	Number treated.	Number.	Number treated.	Number.	Number treated.
Central	1	61	59	23,611	—	—	60	23,672
Uva	1	30	11	7,143	2	43	14	7,216
Sabaragamuwa	—	—	20	6,448	—	—	20	6,448
Western	1	180	16	3,728	1	32	18	3,940
North-Western	4	148	—	—	4	1,562	8	1,710
Northern	15	770	—	—	1	30	16	800
Southern	—	—	1	465	—	—	1	465
Eastern	5	164	1	30	2	85	8	279
Total for 1935	27	1,353	108	41,425	10	1,752	145	44,530
Total for 1934	49	2,704	156	53,037	73	6,166	278	61,907

(2) *Campaign Dispensers.*—The following is the statement of work done by the campaign dispensers during the year:—

TABLE V.

Ankylostomiasis Treatments given by the Campaign Dispensers in Schools, Estates, and Villages during 1935.

Province.	Census of School Children.	Treatments.				Percentage of School Children treated to Census.
		School Children.	Estate Labourers.	Others.	Total.	
Western	44,540	22,262	9,319	5,959	37,540	
Uva	2,941	2,037	23,999	2,393	28,429	
Central	1,456	679	22,813	129	23,621	
Sabaragamuwa	2,757	2,270	17,656	842	20,768	
Southern	19,496	7,388	2,200	5,088	14,676	
Eastern	7,330	4,660	12	9,415	14,087	
Northern	21,804	10,828	37	2,341	13,206	
North-Western	10,741	5,930	116	2,539	8,585	
North-Central	255	210	—	30	240	
Total for 1935	111,320	56,264	76,152	28,736	161,152	50·5
Total for 1934	161,959	82,572	138,993	88,390	309,955	51·0

The census represents the average daily attendance in schools during the three months preceding the month of treatment.

This work has been supervised by the officers in charge of institutions, Medical Officers of Health, School Medical Officers, and Assistant Inspecting Medical Officers.

The work of the campaign staff in the areas served by the Health Units is not shown in this table.

The number of treatments given by the dispensers during the year was 161,152 as against 309,955 during 1934.

The table below gives a list of the different supervising officers with the number of units supervised:—

TABLE VI.

Number of Schools, Estates, and Villages treated by Campaign Dispensers under the Supervision of various Officers of the Department during the Year 1935.

Supervising Officers.	Schools.	Estates.	Villages.
District Medical Officers and Assistants	265	220	99
Apothecaries-in-charge of dispensaries	384	46	315
School Medical Officers	88	—	—
Medical Officers of Health of districts	168	6	21
Assistant Inspecting Medical Officer, Bandarawela	—	16	—
Superintendent, Ankylostomiasis Campaign	6	—	—
Total for 1935	911	288	435
Total for 1934	1,275	497	1,323

In Table VII. is shown the work on estates by the campaign staff and by whom this was supervised.

TABLE VII.

Treatments given by Campaign Dispensers on Estates during 1935.

Supervising Officers.	Number of Estates treated.	Census.	Number treated.
District Medical Officers and Assistants	220	72,881	57,056
Apothecaries-in-charge of dispensaries	46	13,010	10,434
Medical Officers of Health of districts	6	2,836	1,495
Assistant Inspecting Medical Officer, Bandarawela	16	8,172	7,167
Total for 1935	288	96,899	76,152
Total for 1934	497	172,751	138,993

(3) *Health Units.*—The number of treatments given in Health Unit areas had dropped from 37,755 in 1934 to 25,745 in 1935. This is due to the fact that some of the Health Units could not carry out mass treatment owing to the epidemic of malaria.

TABLE VIII.

Ankylostomiasis Treatments given by Health Units in 1935.

Health Units.	1934.	1935.
Matara	6,121 ..	6,034
Kalutara	5,003 ..	4,772
Dehiwala	5,208 ..	3,766
Kurunegala	5,194 ..	3,657
Panadure	3,120 ..	3,391
Trincomalee	2,680 ..	2,569
Kadugannawa	6,134 ..	1,391
Kegalla	4,295 ..	165
Total ..	37,755	25,745

(4) *Mandapam Camp.*—The number of arrivals had been fewer than during the previous year and consequently fewer treatments.

TABLE IX.

Ankylostomiasis Treatments at Mandapam Camp in 1935.

Month.	Number arrived.	Number treated.	Percentage treated.
January	1,251 ..	1,106 ..	88·4
February	2,091 ..	1,867 ..	89·3
March	3,091 ..	2,616 ..	84·6
April	3,204 ..	2,847 ..	88·9
May	4,516 ..	3,885 ..	86·0
June	6,076 ..	5,167 ..	85·0
July	5,830 ..	5,025 ..	86·2
August	3,733 ..	3,210 ..	86·0
September	4,524 ..	3,811 ..	84·2
October	2,990 ..	2,540 ..	85·0
November	3,044 ..	2,555 ..	83·9
December	2,396 ..	1,994 ..	83·2
Total for 1935 ..	42,746	36,623	85·7
Total for 1934 ..	142,500	125,849	88·3

(5) *Estate Medical Staff*—There is a drop of 2,893 in the number of treatments given during the year by the estate medical staff when compared with the number treated in 1934.

TABLE X.

Ankylostomiasis Treatments as given by the Estate Medical Staff during 1935.

Province.	Census.	Treatments.		
		First.	Subsequent.	Total.
Central	266,355 ..	51,176 ..	12,189 ..	63,365
Sabaragamuwa ..	87,548 ..	14,966 ..	2,969 ..	17,935
Uva	75,403 ..	12,986 ..	2,057 ..	15,043
Western	19,965 ..	4,023 ..	1,040 ..	5,063
Southern	8,649 ..	3,749 ..	1,027 ..	4,776
North-Western ..	2,427 ..	483 ..	74 ..	557
Total for 1935 ..	460,347	87,383	19,356	106,739
Total for 1934 ..	410,179	88,268	21,364	109,632

Educational Work.—In collaboration with Dr. Samson A. Gunawardena, Helminthologist, General Hospital, a popular hand-book on hookworm disease has been compiled by the Superintendent, Ankylostomiasis Campaign, with the object of presenting the subject in a form which is easily understood by the lay public, especially student teachers in training schools.

It is well known that efforts at control and cure of hookworm disease will be inadequate, unless it is appreciated by those concerned that ultimate success will come only when satisfactory sanitation is established with the co-operation of the people.

This education method is a sure measure of winning the confidence and consequent co-operation of those who are bound down by customs which have prevailed for generations.

Laboratory Work.—The following table gives the degree of infestation for different age groups:—

TABLE XI.

Intensity of Infection and Incidence Rate by Age Groups in 1935.

		Before Treatment.		
		Number examined.	Average Egg-count per c.c. per Person.	Percentage infected.
0–4 years	Males	4	400	25·0
	Females	5	800	60·0
	Both sexes	9	700	44·4
5–18 years	Males	3,938	1,500	77·7
	Females	2,217	1,200	73·0
	Both sexes	6,155	1,400	76·0
19–40 years	Males	306	1,000	63·1
	Females	173	900	66·5
	Both sexes	479	1,000	64·3
41–60 years	Males	46	1,200	76·1
	Females	24	1,000	70·8
	Both sexes	70	1,100	74·3
Over 60 years	Males	3	700	100·0
	Females	2	—	—
	Both sexes	5	400	60·0
All ages	Males	4,297	1,500	76·6
	Females	2,421	1,200	72·4
	Both sexes	6,718	1,400	75·1

The following table shows the different intestinal parasites found during the course of microscopical examinations:—

TABLE XII.

Intestinal Parasites found in the Course of Microscopical Examinations made in the Central Laboratory in 1935.

	Before Treatment.		After Treatment.			Multiple Parasitic Infestation.	
	Number.	Percentage infected.	Number.	Percentage infected.		Before Treatment.	After Treatment.
Specimens examined	8,924		1,114				
Infected with—							
Necator americanus	6,892	77·2	758	68·0	Harbouring no parasite	386	37
Ascaris lumbricoides	6,361	71·3	738	66·2	With one kind of parasite	1,211	165
Trichuris trichiura	7,106	79·6	839	75·3	With two kinds of parasite	2,251	360
Enterobius vermicularis	157	1·8	4	·4	With three kinds of parasite	5,004	551
Taenia (sp.)	10	·1	—	—	With four kinds of parasite	72	1
Total examined before and after treatment	10,038				Total infected with some kind of parasite	8,538	1,077

Research Work.—Investigations have been made to determine the value of tetrachlorethylene as an anthelmintic, to note any untoward symptoms and signs, and to determine the effects of treatment on patients suffering from hookworm disease.

During the year 1935, almost complete investigations on the above lines have been carried out on fifteen cases. No untoward symptoms were noted except in a patient of 55 years old who showed signs of temporary intoxication, talking incoherently for about 20 minutes, immediately after treatment. There was a marked improvement in the total red cell count and the haemoglobin percentage in every case.

Work was continued on complicated cases of ankylostomiasis at the General Hospital and Lying-in Home, and a microscopist is stationed at the General Hospital to do egg and worm counts.

Anthelmintics used in the Campaign.—The anthelmintics used during the year were oil of chenopodium, carbon tetrachloride and tetrachlorethylene. Towards the close of the third quarter, September 12, 1936, the issue of carbon tetrachloride from the Civil Medical Stores ceased and tetrachlorethylene was used instead.

The effect of tetrachlorethylene on children under six years of age is under trial from December 19, 1935, at the Lady Ridgeway Hospital.

The following are the quantities of anthelmintics issued from the Civil Medical Stores during the financial year 1934-35:—

	lb.
Oil of chenopodium	1,054
Carbon tetrachloride	1,517
Tetrachlorethylene	482

Conference of Ankylostomiasis.—One quarterly conference was held on November 16, 1935, when the reports for the three quarters of the year 1935 were submitted. The reports on the work done were discussed and the superintendent was instructed to carry out certain measures calculated to advance the usefulness of the campaign.

2.—GENERAL MEASURES OF SANITATION.

Conservancy.—The proper disposal of human excreta is still an important public health problem in Ceylon. The hope of the department is to see eventually every home provided with a sanitary latrine. An endeavour is being made to get constructed 15,000 latrines annually with cement concrete squatting plates.

The introduction of the cement concrete squatting plate has created greater interest in latrine construction and a very hopeful sign is the active co-operation shown by local organizations in village areas which have taken up latrine construction as one of their health activities.

The Department recognizes as a sanitary latrine only that provided with a cement concrete squatting plate.

In the successful carrying out of this project a proper organization for making available cement concrete squatting plates to the people is necessary. In each Sanitary Inspector's area there are stations or depôts conveniently located where squatting plates are made or stocked. Village Committees, Health Leagues, and Co-operative Credit Societies are being induced to make and sell these plates. Where these organizations are not available, the Sanitary Inspector under the supervision of the Medical Officer of Health makes stocks and sells them. A sum of Rs. 5,000 provided by the Rockefeller Foundation in 1932 for making and selling these plates continues to prove very useful. Where a Sanitary Inspector's area is large, a definite portion of it is set apart for latrine construction. In this portion one village is taken up for intensive work while in the remainder work on a casual basis is carried out. In the village taken up for intensive latrine construction a definite period is decided on for completion of the work. When the work is completed in it an adjoining village is taken up for similar work.

The types of latrines that are in vogue are the dry-earth, deep pit, mound, and bored-hole. For the better class of houses at Nuwara Eliya and for bungalows on estates water carriage is being introduced with disposal by means of septic tanks. In Sanitary Board and Urban District Council towns where conservancy organizations are available the latrines are of the dry-earth type.

In rural areas the latrines are of the pit type, the pits being dug on an average to a depth between 15 and 20 feet.

Bored-hole latrines which have been introduced since 1928 continue to function satisfactorily in places where such latrines have been constructed. The experience so far has been that if bored in good soil it will last a family of 5 between 4 and 5 years. They are not useful as public latrines.

In areas with high subsoil water and where the dry-earth system is not possible, mound latrines as an experiment are being constructed. When it is necessary to line these latrines to prevent caving, empty tar barrels with holes made in their sides for seepage are used. The mounds are made either of earth turfed over, of cabook or wattle and daub supports. The squatting platform is of cement concrete and superstructures of temporary material. Careful records as to their suitability, presence or absence of nuisances and their prevention, are being kept. From information available, the greatest nuisance is the breeding of mosquitoes but this has been got over by the application of waste oil once a week to the pits.

The waste water in dry-earth latrines is got rid of by means of catch and soakage pits, according to the nature of the soils, placed behind the bucket chamber.

Difficulty has been experienced in the removal of catch pit water and to obviate such removal, sealed pits for disposal of waste water are being tried and in suitable soil they have proved very satisfactory. The sealed pit is a pit about 8 to 10 feet deep for private latrine dug without reaching subsoil water level with the mouth built up and covered with a cement concrete slab that cannot easily be removed. The water is led into it by means of a 2-in. pipe placed under the cover. In the case of public latrine the pit has to be deepened to about 15 to 20 feet owing to the larger quantity of water to be dealt with. It is essential to have a few feet of soil between the bottom of the pit and the subsoil water to allow of soakage. The pit is not filled with rubble. Where the soil has a tendency to cave in, the pit is lined with empty tar barrels with the ends removed. These pits are of no use in areas with high subsoil water where catch pits have to be used.

Emphasis has been placed on the proper location of latrines. They are being built within 30 feet of the back door of the house so as to be easily accessible and away from fences and trees.

Latrine construction as a relief measure was undertaken during the outbreak of malaria in the Kurunegala and Kandy Districts. At first pits were dug with relief labour, plates were supplied free and the superstructures were paid for. Later superstructures had to be put up at the expense of the householder. In the Kurunegala and Kandy Districts 3,337 and 3,665 plates respectively were made and 1,478 and 991 latrines respectively were built out of relief funds.

(1) *Public Latrines.*—During the year under review 14 public latrines according to departmental type plan were built by the Sanitary Boards and Village Committees throughout the Island as tabulated below:—

Province.	Number of Latrines.
Western	1
Central	1
Southern	4
Northern	7
Sabaragamuwa	1
	14

(2) *Private Latrines.*—9,562 latrines were constructed during the year. The following is a statement of work in this connection throughout the Island:—

(*a*) Number of notices served during the year—	
(1) To construct latrines	14,810
(2) To repair latrines	1,998
(3) To convert pit into dry-earth latrines	465

	Bored-hole.	Deep Pit.	Mound Latrines.	Dry-earth Latrines.
(*b*) Number of latrines—				
(1) Completed	197 ..	7,726 ..	34 ..	1,681
(2) Repaired	3 ..	710 ..	— ..	852
(3) Pit latrines converted into dry-earth latrines ..			..	164
(*c*) Number of persons who failed to comply with the requirements of the notice ..	..	..	..	5,435
(*d*) Number of prosecutions entered ..	..	..	..	1,433

The following statement shows the work done in connection with the latrine construction in the various provinces during the year 1935 :—

	Latrines completed.				Latrines repaired.				Latrines rendered Sanitary.		Squatting Plates.	
Province.	Bored hole.	Deep Pit.	Mound.	Dry-earth.	Bored hole.	Deep Pit.	Mound.	Dry-earth.	Dry-earth.	Pit.	Made.	Sold.
Western ..	120..	2,505..	18..	629..	1..	276..	— ..	233..	241..	244..	4,748..	3,938
Central ..	5..	1,531..	— ..	244..	— ..	70..	— ..	98..	56..	57..	3,466..	1,843
Southern ..	33..	1,254..	9..	153..	— ..	66..	— ..	41..	134..	66..	1,164..	1,023
Northern ..	— ..	250..	— ..	195..	— ..	— ..	— ..	2..	— ..	— ..	274..	222
North-Western .	16..	1,390..	3..	204..	— ..	234..	— ..	188..	183..	216..	3,678..	2,368
North-Central ..	15..	1..	— ..	60..	— ..	— ..	— ..	18..	18..	— ..	134..	130
Eastern ..	— ..	— ..	4..	35..	— ..	5..	— ..	29..	— ..	— ..	74..	32
Uva ..	— ..	222..	— ..	118..	— ..	36..	— ..	229..	229..	36..	388..	300
Sabaragamuwa	8..	573..	— ..	43..	2..	23..	— ..	16..	16..	22..	650..	560
Total ..	197	7,726	34	1,681	3	710	—	854	877	641	14,576	10,416

Disposal of Night Soil.—In the Sanitary Board and Urban District Council towns disposal is usually by trenching which has been carried out in a satisfactory manner. Most of the houses have sufficient land specially set apart for the purpose, but in the Nuwara Eliya District only 2 out of 10 Sanitary Board towns have satisfactory trenching grounds. In the other towns night soil is trenched among the tea bushes. At Talaimannar and Diyatalawa night soil is incinerated. Recently disposal by composting night soil with town refuse has been carried out in the following towns :—Kurunegala, Wadduwa, Horana, Kolonnawa, Dehiwala-Mount Lavinia, and Wattegama. In this method of disposal a nuisance is created by the breeding of flies and in consequence the work has to be carried out far away from human habitations. In one or two places the work had to be given up on account of this drawback.

Scavenging and Disposal of Refuse.—Scavenging was carried out in all Sanitary Board and Urban District Council towns under the supervision of Sanitary Inspectors. An adequate labour force is employed for this purpose and the work has been satisfactorily done. The refuse from residential and trade premises is stored in covered dust bins and left by the roadside for removal by scavenging carts. Refuse is disposed of by one of the following methods, viz., dumping, burial in trenches, incineration, composting.

Water Supplies.—The question of a pure and adequate water supply is a very important one and much work has been done in the investigation of sources of supply for towns.

The majority of the towns in the low-country obtain their water from wells and the majority of towns in the up-country are provided with pipe-borne supplies. The greater number of wells, however, are shallow and unprotected and as a routine, action is taken to protect them whenever possible.

Public Wells.—155 were built during the year as shown below :—

Province.	Number built.
Western	1
Southern	21
Northern	17
Central	79
North-Central	3
North-Western	16
Eastern	3
Uva	1
Sabaragamuwa	14
	155

Private Wells.—The following statement shows the work done in connection with private wells:—

	W. P.	C. P.	S. P.	N. P.	N.-W. P.	N.-C. P.	Uva.	Sab.	Eastern.	Total.
Number of inspections made ..	198,183..	4,665..	9,224..	12,610..	9,598..	1,861..	775..	5,350..	4,037..	246,303
Number of wells found unprotected ..	19,991..	1,329..	4,883..	2,837..	3,687..	182..	359..	2,363..	2,106..	37,737
Number of notices served ..	6..	2..	34..	36..	— ..	7..	1..	46..	— ..	132
Number of wells improved ..	1,086..	57..	134..	126..	47..	24..	36..	44..	15..	1,569
Number of persons prosecuted ..	7..	— ..	1..	1..	— ..	— ..	— ..	— ..	— ..	9
Number of persons convicted ..	4..	— ..	1..	1..	— ..	— ..	— ..	— ..	— ..	6

Examination of Water Supplies.—The following statement gives the number of samples of water taken for analysis and the number found unfit for consumption:—

Province.	Number of Samples sent for Examinations.		Number of Samples found Unfit.	
	Bacteriological.	Chemical.	Bacteriological.	Chemical.
Western ..	6	2	1	1
Central ..	7	6	—	—
Southern ..	1	1	1	—
Northern ..	2	2	2	2
Eastern ..	1	1	—	—
North-Central ..	3	—	2	—
North-Western ..	—	—	—	—
Uva ..	1	1	—	—
Sabaragamuwa ..	2	1	—	—
Total ..	23	14	6	3

Safeguarding of private water supplies, which are chiefly from wells in rural areas, still continues to be a difficult problem for lack of proper legislation. Tactful persuasion and education have been responsible for whatever has been done in this direction. The work of the Sanitary Engineering Division in connection with water supplies of towns and hospitals is described in the section dealing with Sanitary Engineering.

Licensed Trades.—The following is a statement of the applications for licensed trades:—

	Number of Applications.	
	Received.	Recommended.
(1) *Food and Drink Handling Establishment*—		
1. Bakeries ..	631	590
2. Tea and coffee boutiques ..	2,142	2,017
3. Eating-houses ..	549	517
4. Dairies ..	327	300
5. Butchers' stalls ..	237	224
6. Fish stalls ..	118	117
7. Pork stalls ..	18	15
8. Aerated water manufactories ..	16	16
(2) *Licensed Trade Premises*—		
1. Public galas ..	52	48
2. Manure stores ..	24	22
3. Soap manufactories ..	4	3
4. Hide stores ..	7	6
5. Lime kilns ..	46	41
6. Brick kilns ..	13	12
7. Laundries ..	80	69
8. Cabook quarries ..	2	2
9. Metal quarries ..	3	3
10. Public bathing places ..	11	7
11. Pits for soaking coconut husks ..	46	45
12. Fibre mills ..	13	12
13. Desiccating mills ..	22	18
14. Tanneries ..	2	1
15. Salt fish stalls ..	10	10

In Sanitary Board and Urban District Council towns, all food handling trades (viz., bakeries, tea and coffee boutiques, eating-houses, dairies, vegetable, fish and meat stalls) are licensed yearly on the recommendation of the Medical Officer of Health.

The Sanitary Inspectors of the area visit the trade premises regularly and see that they are maintained in a clean and sanitary state.

Maintenance of Sanitary Conditions of Licensed Trade Premises.—

(*a*) Number of premises inspected	7,042
(*b*) Number of notices served for breach of rules-	1,062
(*c*) Number of notices voluntarily complied with	1,477
(*d*) Number of persons prosecuted	369
(*e*) Number of persons convicted	274
(*f*) Number of persons warned and discharged	58

Sanitary Inspections.—The inspection of private premises constitutes one of the routine duties of the Sanitary Inspector. In the course of his inspection, he endeavours, as much as possible, to get premises cleaned up in his presence, collections of rubbish burnt or buried and other defects attended to whenever practicable. Though it entails more time, this method has always proved very satisfatory and is being encouraged. In addition to this work he gives talks on sanitation and personal hygiene to group of villagers while on inspection.

The following is a statement of inspections done:—

(*a*) *Private Premises.—*

	W. P.	C. P.	S. P.	N. P.	E. P.	N.-C. P.	N.-W. P.	Uva.	Sab.	Total.
Number of inspections made during the year	274,217..	118,739..	79,255..	41,938..	28,457..	11,727..	55,027..	42,254..	48,819..	700,433
Number of premises found insanitary ..	105,983..	43,935..	25,837..	11,781..	5,787..	4,251..	15,802..	15,600..	19,106..	248,082
Number of mosquito breeding places detected ..	26,406..	11,713..	2,266..	2,484..	355..	48,307..	3,450..	1,859..	63,347..	160,187
Number of notices served to abate nuisances ..	459..	204..	405..	219..	136..	75..	83..	470..	283..	2,334
Number of nuisances abated without prosecution ..	39,916..	12,653..	8,031..	1,253..	172..	52..	37..	364..	954..	63,430
Number of persons prosecuted ..	28..	36..	90..	8..	15..	23..	5..	34..	59..	298
Number of persons convicted ..	26..	27..	51..	7..	10..	23..	4..	25..	52..	235
Number of persons warned and discharged	1..	9..	7..	1..	1..	— ..	— ..	9..	1..	29

(*b*) *Railway Premises.—*

	Inspected.	Defective.	Defects remedied.
(1) Of Stations—			
Premises	232 ..	18 ..	13
Drains	331 ..	113 ..	40
Latrines	53 ..	44 ..	40
Mosquito breeding places	161 ..	6 ..	2
Water supplies	123 ..	2 ..	1
Scavenging	124 ..	1 ..	1
Conservancy	— ..	— ..	—
(2) Of Bungalows—			
Premises	789 ..	206 ..	193
Drains	806 ..	75 ..	44
Latrines	883 ..	77 ..	39
Mosquito breeding places	1,402 ..	1,402 ..	1,377
Water supplies	526 ..	92 ..	86
Scavenging	496 ..	86 ..	85
Conservancy	496 ..	85 ..	85
(3) Of Lines—			
Premises	764 ..	347 ..	281
Drains	477 ..	97 ..	70
Latrines	465 ..	137 ..	38
Mosquito breeding places	3,542 ..	3,537 ..	3,477
Water supplies	286 ..	20 ..	10
Scavenging	298 ..	5 ..	5
Conservancy	294 ..	3 ..	2

The following statement gives particulars of offences against sanitary regulations for which people have had to be prosecuted:—

Offences.	Number prosecuted.	Number convicted.
Erection of unauthorized buildings	162	121
Alterations to buildings without permit	31	27
Failing to demolish temporary sheds	2	2
Occupying buildings after compulsory closure	4	4
Occupying buildings without certificate of competence	40	33
Failing to improve insanitary houses	139	108
Deviating from approved plan	37	24
Sinking wells without permission of Chairman, Sanitary Board	5	3
Faecal pollution	65	63
Carrying on trades without permission	547	471
Depositing rubbish in drains	24	22
Depositing rubbish on public roads	74	61
Failing to clear rank vegetation	17	17
Failing to provide dust bins	19	12
Exposing for sale food on roadside	43	39
Exposing food to the contamination of flies	10	6
Exposing for sale food unfit for human consumption	59	42
Failing to notify cases of infectious diseases	56	50

3.—SCHOOL HEALTH WORK.

This activity was carried out on the same lines as in 1934. Were it not for the malaria epidemic, when the personnel normally engaged in school health work had to devote their time to the immediate problem, school health work would have shown much greater progress than in the previous year.

Schools and School Population.—The number of schools (excluding those which are unregistered and of special type) is about 5,351 and the school population amounts to 717,287. The total number of schools in which health work has been carried out during the year increased from 1,097 in 1934 to 1,538 in 1935. Of these 747 were primary, 678 junior secondary, 97 senior secondary, and 16 collegiate; 339 boys', 312 girls', and 887 mixed schools; 542 Government, 962 Government aided, and 34 unaided. These schools are distributed by Provinces as follows:—Western 668, Central 158, Southern 104, Northern 215, Eastern 80, North-Central 6, North-Western 73, Uva 21, Sabaragamuwa 213.

The total school population dealt with in these schools amounts to 250,603 of which 61,005 are in the boys' schools, 47,172 in girls' schools, and 142,426 in mixed schools; 113,464 in primary schools, 109,118 in junior secondary schools and 24,353 in senior secondary schools, 3,158 in collegiate; 76,916 in Government schools, 169,710 in Government aided schools, and 3,977 in unaided schools. The school population dealt with classified by Provinces is as follows:—Western 111,572, Central 21,044, Southern 23,778, Northern 37,130, Eastern 8,306, North-Central 513, North-Western 12,335, Uva 2,699, Sabaragamuwa 33,226.

Personnel.—The personnel engaged on School Health Work during the year consisted of 6 School Medical Officers, 25 Medical Officers of Health, 30 District Medical Officers, and 7 School Nurses. They were distributed according to Provinces as follows:—

Province.	School Medical Officers.	Medical Officers of Health.	Medical Officers.	Nurses.
Western	3	7	2	3
Central	1	4	5	1
Southern	1	3	4	1
Northern	1	1	7	2
Eastern	—	2	1	—
North-Central	—	1	—	—
North-Western	—	3	1	—
Uva	—	1	6	—
Sabaragamuwa	—	3	4	—
Total	6	25	30	7

Visits to Schools.—Of 747 primary schools 669 were visited and of the 791 secondary schools 540 were visited. Total visits paid number 5,041 or 4.1 visits per school.

Activities carried out: (1) *Medical Inspection of School Children.*—35,813 children in 1,209 schools were medically examined in the year as compared with 45,281 in 937 schools in 1934. Fewer children were medically examined in a larger number of schools than in the previous year. The malaria epidemic affected a large number of children with the result that fewer children were present at the time of examination. Of the children examined, 22,121 or 61.7 per cent. were boys and 13,692 or 38.3 per cent. were girls; 16,563 or 46.2 per cent. were from primary schools and 11,412 or 31.8 per cent. were from junior secondary schools, 6,455 or 18.1 per cent. from senior secondary schools, 1,383 or 3.9 per cent. from collegiate schools.

Province.	Scholars examined.					
	Total.	Boys.	Girls.	Primary.	Junior Secondary.	Senior Secondary.	Collegiate.
Western	15,242	9,158	6,084	5,507	5,799	2,686	1,250
Central	1,076	666	410	681	352	43	—
Southern	3,864	2,114	1,750	2,628	524	712	—
Northern	5,789	3,266	2,523	2,870	1,916	870	133
Eastern	3,859	2,610	1,249	1,461	582	1,816	—
North-Central	513	294	219	513	—	—	—
North-Western	2,343	1,818	525	552	1,791	—	—
Uva	1,315	952	363	1,315	—	—	—
Sabaragamuwa	1,812	1,243	569	1,036	448	328	—
Total	35,813	22,121	13,692	16,563	11,412	6,455	1,383

Of 35,813 children examined, 24,626 or 68.6 per cent. received the first examination; 4,535 or 12.6 per cent. received the second examination; 806 or 2.2 per cent. received the third examination; 5,846 or 16.6 per cent. received a special examination. 28,358 or 79.2 per cent. were found to be defective with 52,843 defects or 1.8 defects per defective child as shown in the table below:—

Province.	Schools examined.	First.	Second.	Third.	Special.	Total.	Number Defective.	Percentage. Defective.	Number of Defects.	Defects per School Child
Western	377	10,025	799	258	4,160	15,242	13,699	89·8	27,243	2
Central	71	1,010	30	1	35	1,076	852	79·9	1,770	2
Southern	56	2,301	1,512	51	—	3,864	2,462	64·0	3,513	1·4
Northern	237	4,573	1,053	163	—	5,789	4,804	83·0	9,463	1·9
Eastern	195	3,402	448	7	2	3,859	2,654	68·7	4,264	1·6
North-Central	6	324	103	26	60	513	306	59·6	481	1·5
North-Western	56	1,013	113	225	992	2,343	1,915	81·7	3,396	1·7
Uva	13	945	241	75	54	1,315	409	31·0	521	1·3
Sabaragamuwa	198	1,033	236	—	543	1,812	1,257	69·3	2,192	1·7
Total	1,209	24,626	4,535	806	5,846	35,813	28,358	79·2	52,843	1·8

The examinations of scholars by different groups of Medical Officers were as follows:—

Province.	School Medical Officers of Health.	District Medical Officers of Health.	Health Unit Medical Officers of Health.	Medical Officers.
Number	6	17	8	30
Western	6,509	3,168	4,315	—
Central	174	636	890	98
Southern	2,260	532	434	1,321
Northern	4,279	671	—	1,129
Eastern	—	1,503	1,012	945
North-Central	—	513	—	—
North-Western	—	1,467	651	103
Uva	—	436	—	952
Sabaragamuwa	—	1,670	—	145
Total	13,222	10,596	7,302	4,693

(2) *Correction of Defects.*—The following tables show the nature of defects found in children at medical inspection, the percentage each forms to total defects, defects corrected, and their percentages:—

Defects found.

Defects.	Total.	Percentage each Defect forms to Total Defects.	Defects found at							
			W. P.	C. P.	S. P.	N. P.	E. P.	N.-C. P.	N.-W. P.	Uva.	Sab.
Malnutrition	5,415	10·2	1,636	323	193	2,344	252	31	195	15	426
Uncleanliness	1,665	3·2	594	47	70	857	—	4	82	9	2
Unvaccinated	1,445	2·7	678	50	107	354	106	12	35	12	91
Eyes	671	1·3	421	—	36	126	74	—	8	4	2
Ears	506	1·0	404	18	18	51	5	—	5	2	3
Defective vision	1,190	2·3	895	46	43	126	17	4	49	10	—
Defective hearing	64	·1	7	3	1	12	6	—	—	—	35
Enlarged glands	2,032	3·8	1,470	40	50	435	2	—	17	17	1
Enlarged spleen	780	1·5	—	—	83	34	300	—	—	117	246
Lymph glands	193	·4	72	12	107	—	—	—	—	2	—
Dental caries	7,641	14·5	6,396	601	482	11	—	90	3	50	8
Teeth and gums	6,301	11·9	2,395	170	206	1,684	1,081	—	367	30	368
Nose	241	·5	173	1	8	39	20	—	—	—	—
Adenoids	1,465	2·8	890	170	72	136	62	2	96	37	—
Tonsils	3,763	7·1	978	824	408	824	185	39	200	125	180
Anæmia	2,317	4·4	1,202	95	194	237	360	—	197	3	29
Heart	207	·4	64	6	20	25	73	—	7	—	12
Lungs	91	·2	46	1	14	18	11	1	—	—	—
Hernia	1	·05	—	—	—	—	—	—	1	—	—
Orthopaedic	85	·2	24	—	1	51	7	—	2	—	—
Nervous system	40	·1	2	—	3	34	—	1	—	—	—
Rickets	5	·01	—	—	—	5	—	—	—	—	—
Skin	1,109	2·1	838	40	26	88	39	15	51	8	4
Scalp	49	·1	19	1	2	8	15	—	1	—	3
Hookworm	7,038	13·3	3,473	539	794	681	508	229	353	72	389
Malaria	2,470	4·7	77	69	181	100	247	114	1,569	—	113
Abnormal behaviour	5	·01	1	—	—	4	—	—	—	—	—
Mental deficiency	20	·05	6	—	1	11	—	—	1	—	1
Speech	28	·1	11	—	1	12	4	—	—	—	—
Scabies	1,086	2·1	393	12	38	490	110	—	18	7	18
Pediculosis	3,537	6·7	1,458	202	440	514	513	34	85	1	290
Ringworm	51	·1	15	4	14	8	6	—	4	—	—
Other defects	1,332	2·5	516	71	107	221	276	40	62	19	20
Total	52,843	100·0	25,154	3,345	3,720	9,540	4,279	616	3,408	540	2,241

Defects corrected.

Defects.	Total Defects found.	Total Defects corrected.	Percentage corrected.	Defects corrected at							
				W. P.	C. P.	S. P.	N. P.	E. P.	N.-C. P.	N.-W. P.	Uva	Sab.
Malnutrition	5,415	1,379	25·5	470	32	218	415	57	21	67	5	94
Uncleanliness	1,665	616	37·0	230	38	10	320	—	4	5	6	3
Unvaccinated	1,445	566	39·2	324	18	46	70	14	1	6	11	76
Eyes	671	227	33·8	127	—	62	11	17	—	—	9	1
Ears	506	156	30·8	142	—	4	8	—	—	—	2	—
Defective vision	1,190	389	32·7	356	—	21	9	2	1	—	—	—
Defective hearing	64	52	81·3	—	—	—	—	—	49	—	—	3
Enlarged glands	2,032	424	20·9	405	—	—	2	2	—	—	15	—
Enlarged spleen	780	63	8·1	—	—	—	9	54	—	—	—	—
Lymph glands	193	6	3·1	2	—	4	—	—	—	—	—	—
Dental caries	7,641	2,542	33·3	2,285	13	165	4	—	49	—	26	—
Teeth and gums	6,301	583	9·3	180	5	2	134	236	—	—	12	14
Nose	241	44	18·3	30	—	—	7	5	—	—	2	—
Adenoids	1,465	321	21·9	304	—	—	—	3	1	—	13	—
Tonsils	3,763	321	8·5	96	9	29	28	32	27	—	61	39
Anaemia	2,317	538	23·2	290	30	41	47	129	—	—	1	—
Heart	207	41	19·8	2	—	—	3	36	—	—	—	—
Lungs	91	10	11·0	6	—	—	—	3	1	—	—	—
Hernia	1	—	—	—	—	—	—	—	—	—	—	—
Orthopaedic	85	11	12·9	2	—	—	9	—	—	—	—	—
Nervous system	40	1	2·5	1	—	—	—	—	—	—	—	—
Rickets	5	—	—	—	—	—	—	—	—	—	—	—
Skin	1,109	437	38·0	190	8	182	30	1	15	4	6	1
Scalp	49	15	30·6	1	—	—	—	10	—	—	1	3
Hookworm	7,038	2,943	41·8	1,418	86	291	125	342	129	156	22	374
Malaria	2,470	320	13·0	37	30	42	35	2	114	33	8	19
Abnormal behaviour	5	—	—	—	—	—	—	—	—	—	—	—
Mental deficiency	20	—	—	—	—	—	—	—	—	—	—	—
Speech	28	—	—	—	—	—	—	—	—	—	—	—
Scabies	1,086	573	52·8	270	6	36	199	14	—	21	10	17
Pediculosis	3,537	1,420	40·1	715	128	14	159	196	34	—	—	174
Ringworm	51	51	100·0	3	—	40	4	4	—	—	—	—
Other defects	1,332	492	36·9	257	—	60	58	77	2	8	19	11
Total	52,843	14,541	27.5	8,143	403	1,267	1,686	1,236	448	300	229	829

The more common defects found at inspection were dental caries (14.5 per cent.), hookworm (13.3 per cent.), other defects of teeth and gums (11.9 per cent.), malnutrition (10.2 per cent.), diseases of tonsils (7.1 per cent.), and pediculosis (6.7 per cent.). These six defects constituted 63.7 per cent. of the total defects.

Dental Caries.—As in the previous year it tops the list of the defects among the school children. Out of 35,813 children examined 7,641 or 21.1 per cent. were found with dental caries. In addition to these, other defects of teeth and gums, of which the chief is salivary calculus, were found in 6,301 or 17.6 per cent. of the children examined. The two together constituted 26.4 per cent. of the total defects found. Of the total 13,942 defects of teeth and gums, 3,125 or 22.4 per cent. were corrected during the year. Of these 2,542 were corrections for dental caries and 583 for other defects of teeth and gums. 2,465 or 79 per cent. out of a total of 3,125 corrections were done in the Western Province mainly due to the facilities available for dental care in Colombo.

In addition to the facilities available in the Government Institute in Colombo properly equipped dental chambers have been provided at St. Peter's College, Zahira College, Good Shepherd Convent, Kotahena, and St. Thomas' College, Mount Lavinia. Arrangements have also been made to provide a dental chamber at Milagiriya girls' school, Colombo, in the coming year. Cases of dental caries corrected outside the Western Province number 257, of which 165 were corrected in the Southern Province. Of this number 154 defects were corrected by an arrangement with a qualified dentist practising in Galle. Children from three colleges—Richmond, St. Aloysius', and Southlands—received attention.

A monthly contribution per child was made by the authorities to meet the expenses. The work, however, was stopped at the end of the first term as the dentist left the town.

Number of children dealt with at the Colombo Dental Chambers was as follows:—

St. Peter's College	548
Zahira College	389
Good Shepherd Convent	346
St. Thomas' College	217
	1,500

Work done at Galle was as follows:—

Permanent fillings	13
Temporary fillings	35
Extractions	15
Other	91
	154

Hookworm Infestation.—Next to dental caries, hookworm is the most common defect. 7,038 or 19.6 per cent. of children examined were noted to be in this condition. The diagnosis is made on the anaemia observed during medical examination and not on a microscopical examination of stools; the picture of hookworm infestation revealed by the figures above is therefore an inaccurate one. This defect forms 13.3 per cent. of the total defects found. Of the 7,038 children who showed signs of this disease 2,943 or 41.8 per cent. were treated. Mass treatment for hookworm is carried on as a routine measure in the schools.

Malnutrition.—This forms 10.2 per cent. of the total defects and 15 per cent. of the children examined were found to be under-nourished. The usual index by which this condition is ascertained is the average weight for the age and height; even though the children may not weigh below the average weight for their respective ages and heights, other signs of lack of nourishment are seen in many of them. The figures given are therefore an under-estimate. Of 5,415 children showing this defect, 1,379 or 25.5 per cent. had it corrected.

Vitamin "A" Deficiency.—In the course of routine medical inspection the Medical Officers detected a number of children with peculiar skin conditions (phrynoderma) and other signs caused by deficiency of Vitamin "A" in their diet. These cases were treated with Cod Liver Oil. In the Southern Province the School Medical Officer followed up a group of cases with phrynoderma, superficial ulceration of the angles of the mouth, and superficial erosion of tongue, by treating them regularly with Cod Liver Oil as a result of which the condition disappeared completely.

Provision of mid-day meals in Colombo schools continues. Forty-seven schools in Colombo had provision made for this purpose, 44 receiving contribution from the Municipal Council and 3 from private funds. School kitchens have been restarted in 4 schools each receiving a monthly allowance for this purpose.

In the Provinces where the malaria outbreak occurred mid-day meals to school children were provided as a relief measure.

In the Jaffna Urban District Council town and in the Galle Municipal area the local authorities budgeted a sum for provision of mid-day meals to undernourished school children.

In the rural areas provision of a very simple mid-day meal to school children was made by voluntary efforts, and a larger number of schools have been served during this year.

Tonsils.—Enlarged tonsils and other defects of tonsils constitute 7.1 per cent. of total defects. 10.5 per cent. of children examined were found with this condition. Total number of children in whom this defect was corrected is 321 or 8.5 per cent. of the total number noted with this defect.

Pediculosis.—3,537 children (9.9 per cent. of the total examined or 6.7 per cent. of the total defects found) were found with this condition. The majority of children with this defect were girls. 1,420 or 40.1 per cent. were deloused.

Ophthalmic Defects.—1,861 or 5.2 per cent. of children examined showed some defect of the eye. Of these 1,190 or 3.3 per cent. of the total examined had defective vision, and 671 or 2.2 per cent. had other defects of the eye. A detailed investigation into the incidence of trachoma in Paranakuru Korale Health Unit area was held up owing to the malaria epidemic, but a close watch is being maintained on the disease among school children in this area and in other Provinces also. Of 671 with other defects of the eye 227 or 33.8 per cent. were corrected; and of 1,190 with defective vision 389 or 32.7 per cent. provided themselves with glasses. Out of the funds provided by the Education Department a sum of Rs. 575.05 was spent for the supply of free glasses to poor children; of which a sum of Rs. 515.95 was utilized by the Western Division and Rs. 59.10 by the Southern Division.

Malaria.—780 children or 2.2 per cent. of the total examined showed enlarged spleens which constituted 1.5 per cent. of the total defects. 8.1 per cent. of these defects was corrected. In the areas affected comparatively more severely by the malaria epidemic the percentage of school children showing signs of malaria is very much higher than is revealed by the medical examination. Those suffering from malaria could not attend schools and escaped detection during medical inspection.

Uncleanliness.—1,665 or 4.6 per cent. of the children examined were found unclean both in body and in clothes. This condition formed 3.2 per cent. of the total defects. 616 or 37 per cent. were corrected at school clinics by the school health nurses with the assistance of the teachers.

Scabies.—1,086 or 3 per cent. of the children examined were found with this condition. This defect constituted 2.1 per cent. of the total defects. 573 or 52.8 per cent. were corrected by the nurses at the school clinics.

Ringworm.—Fifty-one cases or .14 per cent. of the children examined showed ringworm. This defect formed .1 per cent. of the total defects. Fifty-one were treated and cured.

The following statement shows by Provinces centres at which treatment clinics were held, the number of clinics held, and the conditions dealt with at them:—

	W. P.	C. P.	S. P.	N. P.	E. P.	N.-C. P.	N.-W. P.	Uva.	Sab.	Total
Number of centres	22	2	6	8	3	—	1	6	1	49
Number of clinics held	430	10	138	50	19	—	15	21	2	685
Malnutrition	406	20	108	10	3	—	30	4	4	585
Uncleanliness	122	18	4	196	—	—	4	4	—	348
Unvaccinated	51	12	—	—	22	—	3	6	3	97
Eyes	6	—	—	25	—	—	—	3	—	34
Ear and nose	510	—	—	—	—	—	—	—	—	510
Enlarged glands	383	—	—	—	—	—	—	—	—	383
Enlarged spleen	—	—	—	—	—	—	16	—	—	16
Tonsils and adenoids	339	—	—	5	—	—	—	—	4	348
Anaemia	255	20	26	15	—	—	16	—	—	332
Lungs	10	—	—	—	—	—	—	—	—	10
Nervous system	13	—	—	—	—	—	—	—	—	13
Skin	253	—	64	4	—	—	2	4	—	327
Hookworm	988	50	37	189	—	—	101	12	5	1,382
Malaria	—	—	13	28	—	—	12	5	6	64
Scabies	168	—	—	234	47	—	—	—	2	451
Pediculosis	164	76	67	84	1	—	8	17	10	427
Stomatitis	43	—	—	—	—	—	—	—	—	43
Other diseases	99	—	—	—	—	—	—	—	—	99
Total	3,810	196	319	790	73	—	192	55	34	5,469

Sanitation.—Sanitation of schools received very close attention but the progress is slow. The routine sanitary survey has been carried out in all the schools visited during the year. 2,027 schools have been visited and recommendations made to improve their sanitary conditions. The provision of adequate sanitary latrines, urinals, protected wells, vessels for storage of drinking water, and of individual drinking cups has been pressed for and as a result several schools have now been provided with the above requirements.

	W. P.	N.-W. P.	N. P.	E. P.	Uva.	N.-C. P.	Sab.	S. P.	C. P.	Total.
Schools	668..	73..	215..	80..	21..	6..	213..	104..	158..	1,538
School children	111,572..	12,335..	37,130..	8,306..	2,699..	513..	33,226..	23,778..	21,044..	250,603
Schools with latrines	607..	64..	201..	70..	16..	6..	196..	101..	113..	1,374
Total seats	1,912..	154..	518..	178..	146..	17..	418..	298..	224..	3,865
Schools with urinals	207..	2..	47..	31..	14..	1..	115..	38..	24..	479
Total urinal compartments	285..	7..	119..	37..	32..	1..	213..	71..	47..	812
Schools with protected wells	246..	49..	51..	19..	7..	2..	51..	25..	40..	490

Health Education.—Twenty training classes in school health work were held this year at which 627 teachers attended as follows:—

Province.	Number of Training Classes.	Number of Teachers trained.
Western	12	259
Central	—	—
Southern	3	112
Northern	—	—
Eastern	3	112
North-Central	—	—
North-Western	2	144
Uva	—	—
Sabaragamuwa	—	—
	20	627

The following tables show the routine health education procedure, health instruction, and other activities connected with Health Education, carried out in the schools in the different Provinces:—

Health Education Procedures.	W. P.	C. P.	S. P.	N. P.	E. P.	N.-C. P.	N.-W. P.	Uva.	Sab.	Total for 1935.	Total for 1934.
1. Daily morning inspection	505	67	107	99	78	5	48	23	184	1,116	608
2. Scoring of health habit booklet	198	18	31	12	16	—	14	17	30	336	301
3. Weighing and measuring	153	13	27	12	61	6	14	1	91	378	287
4. Use of handkerchief	121	28	15	17	—	—	13	—	19	213	157
5. Proper storage of drinking water	285	41	39	103	18	5	42	2	19	554	—
6. Use of individual drinking cup	168	45	15	1	3	4	22	1	15	274	—
7. Pupil participation, &c.	226	18	28	31	6	—	21	2	41	373	—
8. Midday meal	92	28	5	5	1	1	217	10	182	541	72
9. Health clubs	32	—	10	—	3	—	1	—	3	49	—
10. Organized play	247	45	87	27	16	5	36	19	85	567	273

Health Instruction.	W. P.	C. P.	S. P.	N. P.	E. P.	N.-C.P.	N.-W.P.	Uva.	Sab.	Total for 1935.	Total for 1934.
1. Direct teaching	502	1	78	75	76	1	56	18	79	886	633
2. Teaching by correlation	218	45	78	21	67	5	40	17	71	562	363
3. Posters, scrap books, &c.	121	20	25	6	11	3	21	4	35	246	—
4. Dramatization	21	15	1	1	3	3	3	6	13	66	—
5. Health songs and debates	20	1	7	8	5	—	7	2	12	62	—
6. Field visits	77	—	9	3	7	—	32	—	34	162	172

Other Activities.	W. P.	C. P.	S. P.	N. P.	E. P.	N.-C. P.	N.-W. P.	Uva.	Sab.	Total.
Parent-Teachers' Associations	30	—	16	—	6	—	6	—	16	74
School health demonstrations	9	—	26	2	3	—	—	—	3	43

A larger number of schools have carried out the routine health education procedures and health instruction this year than in 1934. Each item of the health education procedure and of health instruction has been carried out in a larger number of schools indicating that a good deal of progress has been made in this phase of school health work.

Control of Communicable Diseases.—The reported incidence of communicable diseases in schools by Provinces is as follows:—

Province.	Chickenpox.	Diphtheria.	Dysentery.	Enteric.	Measles.	Mumps.	Phthisis.	Whooping Cough.
Western	84	2	35	11	87	61	1	9
Central	38	—	13	3	45	33	—	3
Southern	2	—	—	1	1	—	—	1
Northern	80	—	11	2	5	—	—	—
Eastern	1	—	—	1	6	36	—	51
North-Central	—	—	—	—	—	—	—	—
North-Western	3	—	10	2	—	—	—	—
Uva	20	—	—	—	8	—	—	10
Sabaragamuwa	6	—	—	—	2	—	—	—
Total	234	2	69	20	154	130	1	74

Compared with the figures for 1934 the incidence of communicable diseases in 1935 in the schools has been less. Six schools were closed, 5 in the Western Province and 1 in Uva, on account of communicable diseases.

Quinine Administration.—Quinine is administered during the malaria season as a routine prophylactic in schools in hyper-endemic areas, and the following is a statement of the number of children who received it:—

Number of	W. P.	C. P.	S. P.	N. P.	E. P.	N.-C. P.	N.-W. P.	Uva.	Sab.	Total.
Schools	286	112	4	10	28	8	229	122	131	930
Scholars	28,659	5,409	138	192	3,122	814	32,428	5,482	19,277	95,521

Hookworm Treatment.—Administration of hookworm treatment is a routine annual procedure in schools. School Medical Officers and Medical Officers of Health give the treatment in schools. In all 669 schools were visited and 45,987 children received treatment as against 665 schools visited and 43,559 treated in 1934:—

Number of	W. P.	C. P.	S. P.	N. P.	E. P.	N.-C. P.	N.-W. P.	Uva.	Sab.	Total.
Schools	306	39	36	105	94	6	40	19	24	669
Scholars	18,043	1,938	5,190	6,636	6,956	213	3,614	1,721	1,676	45,987

Anti-typhoid Inoculation.—A total of 5,182 first doses and 4,526 second doses were administered to school children during 1935 as against 2,430 first doses and 1,704 second doses in 1934. This shows that voluntary immunization of school children against typhoid is gradually receiving an increasing response year by year.

	W. P.	C. P.	S. P.	N. P.	E. P.	N.-C. P.	N.-W. P.	Uva.	Sab.	Total.
First	2,314	103	183	1,623	86	—	—	840	33	5,182
Second	1,820	103	143	1,600	85	—	—	742	33	4,526

Anti-smallpox Vaccination.—A total of 1,503 school children were vaccinated of which 494 were primary vaccinations and 1,009 secondary.

	W. P.	C. P.	S. P.	N. P.	E. P.	N.-C. P.	N.-W. P.	Uva.	Sab.	Total.
Primary	207	10	45	90	51	—	—	9	82	494
Secondary	952	3	15	7	30	—	—	—	2	1,009
Total	1,159	13	60	97	81	—	—	9	84	1,503

4.—LABOUR CONDITIONS.

In 1934 the revival of the tea and rubber industries was responsible for an increase in the number of assisted labourers arriving in Ceylon from 32,898 in 1933 to 140,607 in 1934, but in 1935 the numbers decreased to 43,018.

The continuance of the Tea and Rubber Restriction Schemes, will, it is hoped, tend to improve the financial condition of the estates and thus enable estates generally to effect some of the essential improvements in the housing and general sanitary conditions of their labourers which it was considered unreasonable and indeed impossible to insist on during the last few years.

MEDICAL WANTS ON ESTATES IN 1934.

The only change in the number of Government hospitals scheduled to estates was the addition of the Lindula Hospital. There were at the end of the year 66 scheduled Government hospitals (exclusive of 4 infectious diseases hospitals which are reckoned as part of the local district hospitals) and 104 Government dispensaries. Eighty-four estates maintained their own private hospitals, the same number as last year. 727 estate dispensaries were maintained in 1935 as against 726 in 1934.

Rebates payable to estates which maintained their own hospitals amounted to Rs. 200,281 in 1935 as against Rs. 172,590 in 1934. The value of drugs supplied to estates was Rs. 291,830 as against Rs. 227,452 in 1934.

The statement of revenue and expenditure of the administration of the Medical Wants Ordinance for the year ended September 30, 1935, is as follows:—

REVENUE.	Rs.	c.	Rs.	c.
(*a*) Surplus brought forward from previous statement			3,797,652	82
(*b*) Amount of all sums recovered as visiting or maintenance fees under section 10			111,122	78
(*c*) Amount of all fines recovered in respect of all offences against the Ordinance			—	
(*d*) Amount of all sums recovered as the cost price of drugs supplied to Superintendents under section 9 (*d*)			25,300	0
(*e*) Amount of export duty collected under section 28	1,345,967	68		
Less rebates paid	200,281	0		
			1,145,686	68
(*f*) Annual contribution out of the moneys provided for by the State Council of an amount equal to 15 per cent. of the total expenses of the administration of the Ordinance as shown under expenditure			131,937	37
			5,211,699	65

EXPENDITURE.	Rs.	c.
(*b*) *Pro rata* share of the actual expenditure (including salaries of staff) of all hospitals scheduled under the Medical Wants Ordinance	430,617	42
(*c*) Ditto of all dispensaries ditto	20,738	58
Ditto Ankylostomiasis Campaigns	35,905	46
(*d*) Annual amount sufficient to liquidate the cost of construction of all hospital or dispensary buildings completed after the commencement of the Medical Wants Ordinance which have been scheduled in terms of section 30 (*d*) together with interest at 4 per cent. per annum on any unliquidated amount in 25 equal annual instalments until the cost of construction is liquidated	—	
(*e*) Annual amount calculated on the same basis in respect of all other expenditure properly chargeable to a capital account upon such hospitals and dispensaries primarily maintained in terms of section 30 (*b*)	4,898	57
(*f*) Cost of drugs supplied to Superintendents under section 9 (*d*)	25,300	0
(*g*) Miscellaneous expenses incidental to the administration of the Ordinance:—		
(1) Issue of free drugs to estates under section 9 (*c*) of the Ordinance	291,830	97
(2) Annual subscription for upkeep of telephone and other incidental expenses connected with the telephones attached to hospitals and dispensaries	480	0
(3) Full cost of salaries and allowances of Inspecting Medical Officers	68,431	46
(4) Salary of Clerk, Civil Medical Stores, for pricing estate requisitions for drugs	1,380	0
Surplus	4,332,117	19
	5,211,699	65

Inspecting Officers.—There was no change in the system of inspection or in the number of officers. In all 386 estates were visited in 1935.

Estate Sanitation: General.—The Inspecting Medical Officers report that the sanitary conditions on the estates visited were satisfactory. This fact gave the estates a great advantage over the neighbouring villages during the severe epidemic of malaria in 1935. Many estates in the epidemic area at first suffered greatly from the disease, but owing to the medical attention and other assistance provided for the labour force by estate managers the figures of morbidity and mortality during the year were negligible compared with those for the neighbouring villages.

Of the 90 estates inspected in the Central Province Inspectorate the general sanitary condition of one was reported to be bad; in the Uva Province Inspectorate the sanitary condition of 2 out of 210 estates inspected was bad; in the Colombo Inspectorate the sanitary condition of 2 out of 86 estates inspected was bad.

Line Maintenance.—The lines were maintained in fairly satisfactory condition. The temporary and semi-permanent lines were being gradually demolished.

Line Surroundings.—The sanitary condition of line surroundings, notwithstanding the great reduction or total removal of scavenging labourers owing to depression, was generally satisfactory. The importance of removing shade from round the lines and keeping vegetable gardens and cattle sheds at a sufficient distance from the lines has not been sufficiently realized.

Line Construction.—The gradual resumption of building operations received a setback owing to the malaria epidemic.

Government requirements were met by 4,095 out of 10,135 rooms inspected in the Colombo Inspectorate, by 7,366 out of 8,502 in the Central Inspectorate, and by 19,823 out of 40,059 in the Uva Inspectorate. 27,412 line rooms did not reach the standard required. Some of these particularly on small privately owned estates were unfit for housing labour. A fair percentage of these are beyond repair and are being demolished.

Central cattle sheds on estates in which all cattle can be housed, incinerators for groups of lines for adequately disposing of rubbish, and separate kitchens or chimneys over fire places (one chimney in the centre of a partition wall to serve two cooking places) to avoid blackened walls are some items of importance and may be introduced.

Line Accommodation.—There was little overcrowding (the lines of only 22 out of 386 estates inspected were overcrowded) owing to the reduction in labour forces. The following are the figures for the past three years:—

Inspectorate.	Not overcrowded.			Slightly overcrowded.			Overcrowded.		
	1933.	1934.	1935.	1933.	1934.	1935.	1933.	1934.	1935.
Colombo	169	131	84	—	2	2	—	3	—
Central	145	135	87	1	2	3	—	12	—
Uva	181	142	186	3	5	2	6	5	22
	495	408	357	4	9	7	6	20	22

Latrines.—Although most estates have provided latrines for the use of their labourers, it is reported that they do not use the latrines. Besides educating the labourers as regards the advantages of using the latrines, estate schools should be provided with latrines so that the children may be trained while they are young. Most estates have pit latrines which are unpopular with the labourers, and if these can be replaced by bucket latrines some improvement in the extensive use of latrines may be expected.

The following table shows the latrine accommodation on the estates inspected:—

Inspectorate.	Provided a Sufficient Number of Latrines.	Provided an Insufficient Number of Latrines.	Provided no Latrines.
Colombo	68	18	—
Central	62	17	3
Uva	139	62	9
Total	269	97	12

Water Supply.—The Inspecting Medical Officer, Western Inspectorate, reported that most of the estates have now piped water supplies and that this accounts for the great decrease in bowel diseases. In the Uva Inspectorate the water supplies of about half the estates inspected were fully protected and about one-third partially protected. In the Central Inspectorate only four sources out of 90 inspected remained altogether unprotected.

In 1935, 219 of the 386 estates visited had an entirely protected supply; in 1934, 400 of the 437 estates visited had protected supplies. The number of unprotected supplies formed about 9 per cent. of the total number of supplies inspected, and were usually on estates owned by private individuals.

Maternity and Child Welfare.—The infant mortality rate for the year among the Indian labourers was 198 per 1,000 births registered as compared with 200 in 1934 and 181 in 1933. The infant mortality rate for the whole Island was 263 in 1935 as compared with 173 in 1934 and 157 in 1933.

In 1935, 2,718 male infants and 2,376 female infants died on estates, a total of 5,094 as against a total of 4,666 in 1934. The chief causes of high infant mortality among children on estates are: (1) The ignorance of the mother regarding feeding and clothing; (2) during the shifting of gangs from estate to estate, the exposure of expectant mothers and infants to hardships; (3) the exposure to severe cold in the higher hills of Ceylon of infants born in the hot plains of India; (4) the want of sufficient clothing for infants born in the hill country; (5) presence of ankylostomiasis in the mother.

The infant death rates of the different estate districts for the last five years are given below:—

	1931.	1932.	1933.	1934.	1935.
Kandy	212	223	202	227	204
Matale	175	175	153	200	270
Nuwara Eliya	219	233	213	236	202
Badulla	163	165	171	175	171
Ratnapura	138	126	134	165	157
Kegalla	127	128	112	116	251
Colombo	124	135	110	182	211
Kalutara	126	81	127	139	135
Galle	164	163	137	144	135
Matara	234	228	194	199	245
Kurunegala	106	164	182	182	740

The chief causes of death during the past four years are as follows:—

Causes.	Infant Deaths under One Year.				Percentage of Deaths to Total Infant Deaths on Estates.				Corresponding Percentage for the Island.			
	1932.	1933.	1934.	1935.	1932.	1933.	1934.	1935.	1932.	1933.	1934.	1935
Convulsions	723..	662..	674..	740..	15·8 ..	15·1 ..	14·4 ..	14·5 ..	23·1 ..	25·1 ..	24·1 ..	20·7
Tetanus	2..	2..	2..	1..	·05..	·04..	·04..	·02..	·1 ..	·1 ..	·08..	·08
Diarrhoea	51..	41..	50..	43..	1·1 ..	·9 ..	1·1 ..	·8 ..	1·0 ..	1·0 ..	1·6 ..	1·4
Bronchitis	118..	114..	146..	113..	2·6 ..	2·6 ..	3·1 ..	2·2 ..	1·1 ..	·9 ..	1·1 ..	0·7
Pneumonia	236..	196..	294..	218..	5·1 ..	4·5 ..	6·3 ..	4·3 ..	2·5 ..	·7 ..	3·0 ..	1·9
Enteritis	7..	9..	23..	16..	·15..	·2 ..	·5 ..	·3 ..	·9 ..	1·2 ..	1·3 ..	·7
Debility	2,558..	2,513..	2,620..	2,840..	55·9 ..	57·1 ..	56·1 ..	55·8 ..	21·7 ..	21·4 ..	20·5 ..	16·7
Prematurity	642..	637..	609..	744..	14·0 ..	14·5 ..	13·1 ..	14·6 ..	6·6 ..	6·6 ..	7·0 ..	5·7
Other causes	239..	223..	248..	379..	5·3 ..	5·06..	5·3 ..	7·4 ..	43·0 ..	43·0 ..	41·3 ..	52·2

Debility and convulsions are the chief causes of death. The high rate of mortality is attributed to inadequate skilled attendance ante-natal, at the confinement and after the birth. Comparatively few estates retain the services of trained midwives, this being to some extent due to the difficulty in securing the services of suitable women. The ideas and methods of the labourers themselves on the subject of maternity and child welfare are not calculated to increase the infants' chances of life, and the remedy appears to be in the training of suitable estate women as midwives as soon as estate funds permit of this being done.

As regards maternal welfare, 545 mothers died in 1935 as against 417 in 1934. Of these 545 deaths 223 were due to puerperal septicaemia, principally caused by dirt and faulty midwifery. The maternal mortality on estates was 21.2 per 1,000 births registered as compared with 17.9 in 1934, 16.9 in 1933, and 17.2 in 1932. The Island rate for 1935 was 26.8 and 20.0 during the quinquennium 1930-1934. The high rate is probably largely due to the stubborn conservatism of the Indian labourers which prevents their utilizing freely the medical benefits now provided

on estates for lying-in women. The maternity wards on estates are not much used and it is only by the gradual education of the female labourers and through their personal experience of the advantages to be derived by treatment in estate maternity wards that any considerable improvement can be expected. Besides, malaria complicated the puerperal diseases and brought about a higher mortality than usual.

Estates are required by law to allow expectant mothers a rest during the last month of pregnancy and give other benefits in the form of food and cash, though the cash bonus has in many cases been perforce reduced recently.

Principal Causes of Deaths among Estate Labourers.—Figures showing the principal causes of deaths among Indian Immigrant labourers are given in Section II., Vital Statistics. The chief causes of death were debility, pneumonia, ankylostomiasis, infantile convulsions, and diarrhoea.

Epidemic Diseases.—The severe epidemic of malaria which started in November, 1934, continued in 1935 and estates situated along river banks in the Western, Central, and Sabaragamuwa Provinces were chiefly affected. The Registrar-General's statistics show that there were 2,347 deaths in 1935 among estate labourers from malaria and malarial cachexia as against 95 in 1934 and 100 in 1933. The malaria epidemic was however less disastrous on estates than elsewhere in the epidemic areas.

5.—HOUSING AND TOWN PLANNING.

Before any building can be constructed or any alteration affected to an existing building in Sanitary Board and in Urban District Council areas, and in certain areas outside these but declared under the operation of the Housing Ordinance, application for permission has to be made to the local authority who refers it to the Medical Officer of Health for report and recommendation. Permission is given provided the building or alteration conforms to the Housing Ordinance.

Buildings are systematically inspected and in the case of those that are found to be unfit for human habitation, action is taken to improve them by taking closing orders under the Housing Ordinance.

The following is a statement of work done in connection with the enforcement of the requirement of the Housing Ordinance:—

New and Reconstructed Buildings.

Number of applications received in respect of—

	W. P.	C. P.	S. P.	E. P.	N.-C. P.	N.-W. P.	Uva.	Sab.
(1) Dwelling-houses—								
(*a*) New	344	72	99	93	71	39	36	49
(*b*) Reconstruction and repairs	189	35	64	28	32	3	40	24
(2) Other buildings—								
(*a*) New	58	91	157	18	27	44	45	5
(*b*) Reconstruction and repairs	13	15	23	—	7	—	19	7
(3) Insanitary buildings—								
(*a*) Number of insanitary buildings reported upon during the year	121	44	14	3	57	10	35	22
(*b*) Number of closing order obtained	40	9	8	1	—	6	1	8
(*c*) Number of buildings improved	2	27	3	4	14	2	20	2
(*d*) Number of demolition orders obtained and extended	—	1	7	8	—	1	2	7
(*e*) Number of buildings demolished	31	38	5	17	7	6	6	8

6.—FOOD IN RELATION TO HEALTH AND DISEASE.

A recent survey made showed a considerable incidence of vitamin A deficiency among children in rural schools. A form of vitamin A deficiency in which the skin especially around the elbow and knee, and exterior aspect of the arm and forearm showed a keratinization was discovered in prisoners. The survey among school children showed a similar condition. Other evidences were soreness at the angles of the mouth, night blindness, and Xerophthalmia.

The lack of adequate nutrition among the rural population was revealed during the malaria epidemic and the feeding of school children in the badly affected areas showed a remarkable improvement in their health.

All food handling establishments in areas under local authorities are licensed annually after inspection and recommendation by the Medical Officers of Health. In certain areas under Village Committees licensing is in force. A good deal of food is sold at village fairs and as legal control over them is inadequate a set of simple rules are being framed to enable supervision to be exercised.

Markets are provided by local authorities for the sale of meat, fish, vegetables, and fruits. They have been satisfactorily maintained.

All foodstuffs exposed for sale were regularly inspected and action taken, where necessary, under the provision of the general law dealing with food unfit for human consumption.

With endemic plague in Colombo the proper storage of rice is a matter of great importance. There are special regulations controlling it and every effort is being made to get local authorities to enforce them.

The absence of a Pure Food and Drugs Ordinance hampers better control.

Milk Supply.—A Milk and Dairies Ordinance has been drafted and awaits the approval of the Executive Committee of Health. The passing of this Ordinance will provide more effective supervision over the production and sale of milk. At the present time there is no control over the sale of milk in rural areas, while there is a fair measure of control in areas under local authorities.

It has been found that the oftener sampling of milk is done the better is the quality of milk sold. In areas where sampling is slack the adulteration is pronounced.

The following is a statement of work done in connection with sampling of milk :—

	W. P.	C. P.	S. P.	N. P.	E. P.	N.-C. P.	N.-W. P.	Uva.	Sab
Number of samples taken and sent for analysis ..	63	207	49	—	10	—	4	20	8
Number of samples found adulterated ..	31	63	43	—	9	—	4	6	8
Percentage found adulterated	49	29	88	—	90	—	100	30	100
Percentage of water varied from, per cent. ..	10 to 60	4 to 75	12 to 77	—	2 to 20	—	23 to 61	6 to 45	17 to 58
Average adulteration, per cent.	27	26	29	—	11	—	31	25	31
Number of persons prosecuted ..	24	61	27	—	—	—	4	10	18
Number convicted ..	21	48	20	—	—	—	4	10	8
Number warned and discharged ..	1	5	5	—	—	—	—	—	—
Amount of fines realized	Rs. 390	Rs. 1,127·50	Rs. 103	—	—	—	Rs. 20	Rs. 65	Rs. 80

Meat Inspection.—All cattle slaughtered are inspected before slaughter and kept in pounds for twenty-four hours. Slaughtering in areas under local authorities is carried out in slaughter-houses maintained by them. The work has been satisfactorily carried out.

All meat stalls are annually licensed and meat regularly inspected.

7.—HEALTH UNITS.

Intensive health activity was continued in the 8 areas demarcated as health units in the previous annual report. During the latter part of 1935, 3 new areas in the Western Province were added making 11 in all. The new areas were Salpiti korale, Rayigam korale, and Hewagam korale with headquarters at Moratuwa, Horana, and Padukka, respectively. The work in the new areas was not sufficiently organized to be detailed in this report; the record of work will therefore relate only to the 8 units.

Area.—The area worked in 1934 was 911 square miles. To this were added the three new areas comprising 334 square miles at the end of 1935 making a total of 1,245 square miles.

Population.—The population in the area has increased from 497,506 in 1934 to 505,851 in 1935. This population was distributed as follows:—126,145 urban, 369,646 rural, and 10,060 estate.

Personnel.—The personnel employed was as follows:—

	1933.	1934.	Added.	1935.
Medical Officer of Health ..	8 ..	8 ..	1 ..	9
Medical Officers	1 ..	2 ..	— ..	2
Supervising Sanitary Inspectors ..	2 ..	2 ..	1 ..	3
Sanitary Inspectors	57 ..	57 ..	— ..	55
Public Health Nurses	19 ..	20 ..	— ..	17
Midwives	70 ..	72 ..	6 ..	78
Clerks	9 ..	9 ..	— ..	9
Peons	8 ..	8 ..	— ..	7
Orderlies and labourers ..	11 ..	11 ..	— ..	11
Others	— ..	— ..	— ..	3

Work.—The type and scope of work have been planned to embrace as many public health activities as are suited to local conditions. Latrine construction, hookworm treatment, school health work, maternity and child welfare work, and preventive immunization have received special attention.

The investigation into the incidence of typhoid fever in Kalutara totamune was continued during this year too with the funds provided by the Rockefeller Foundation.

Births and Birth Rate.—The total number of births was 14,993 with a rate of 29.6 as compared with 15,926 births and a rate of 31.9 for the preceding year, the Island rate for 1935 being 34.4.

The table below shows the rates for the last four years by units—

	1932.	1933.	1934.	1935.
Kalutara totamune ..	29·6 ..	37·8 ..	30·0 ..	32·2
Panadure	27·1 ..	31·1 ..	25·3 ..	25·5
Weudawili hatpattu ..	39·3 ..	45·4 ..	42·0 ..	25·6
Matara Gravets, &c. ..	40·8 ..	42·4 ..	40·8 ..	40·8
Paranakuru korale ..	41·3 ..	41·2 ..	40·9 ..	34·2
Trincomalee District ..	40·0 ..	39·8 ..	40·0 ..	36·0
Yatinuwara	38·1 ..	36·9 ..	36·5 ..	31·5
Colombo Mudaliyar's division ..	24·6 ..	29·1 ..	20·1 ..	21·3

Deaths and Death Rates.—17,339 deaths occurred during the year giving a rate of 34.3 as compared with 9,877 deaths and a rate of 19.8 in 1934 and 36.6 for the Island in 1935. The toll of deaths from the unprecedented malaria epidemic has increased the rate for the entire Island and it is also reflected in those of these health areas specially of Weudawili hatpattu, Paranakuru korale, and Yatinuwara. The death rates for the different units are as follows for the last four years:—

	1932.	1933.	1934.	1935.
Kalutara totamune ..	18·0 ..	20·9 ..	23·4 ..	19·4
Panadure totamune ..	16·0 ..	16·7 ..	17·4 ..	17·0
Weudawili hatpattu ..	19·0 ..	22·0 ..	32·4 ..	95·4
Matara Gravets ..	14·0 ..	18·3 ..	19·1 ..	20·8
Paranakuru korale ..	16·0 ..	16·9 ..	19·2 ..	78·4
Trincomalee District ..	27·0 ..	26·0 ..	21·5 ..	36·0
Yatinuwara	17·0 ..	14·1 ..	18·7 ..	40·2
Colombo Mudaliyar's division ..	12·0 ..	16·6 ..	13·2 ..	13·3

Infant Mortality.—The increase of infant deaths during the year was also due to the ravages of malaria. There were 3,900 deaths with a mortality rate of 253.5 as compared with 2,413 deaths and a rate of 151 in 1934, the rate for the Island for 1935 being 263. In Paranakuru korale and Weudawili hatpattu,

two of the worst epidemic centres of malaria, the rates rose to 553 and 904.2 respectively. This year recorded one of the highest losses of infant life that Ceylon has seen. The rates for the past four years are—

	1932.	1933.	1934.	1935.
Kalutara totamune ..	118	119	134	99
Panadure totamune ..	109	102	121	92
Weudawili hatpattu ..	160	173	245	904
Matara Gravets, &c. ..	108	107	102	121
Paranakuru korale ..	124	116	128	553
Trincomalee	219	181	197	274
Yatinuwara	166	129	162	278
Colombo Mudaliyar's division ..	117	140	150	148

Maternal Mortality.—The maternal deaths amounted to 327 with a rate of 18.8 as compared with 228 and a rate of 14.3 in the preceding year, the rate for the Island in 1935 being 21.1. The figures for the last four years by units are—

	1932.	1933.	1934.	1935.
Kalutara totamune ..	19·0	16·9	16·3	15·5
Weudawili hatpattu ..	28·0	30·0	28·0	87·6
Panadure totamune ..	16·0	12·9	15·6	17·5
Matara Gravets, &c. ..	14·0	12·3	5·6	18·0
Paranakuru korale ..	14·0	14·7	10·4	27·05
Trincomalee	24·0	24·0	18·0	23·0
Yatinuwara	13·0	11·8	10·8	11·7
Colombo Mudaliyar's division ..	15·0	10·6	10·4	13·5

The outbreak of malaria has given a serious setback to the continued fall in the maternal death rate in the last four years. An increase will be noted in almost all units.

Stillbirths and Stillbirth Rate.—Figures for stillbirths are available for urban areas only. There have been a total of 131 stillbirths giving a stillbirth rate of 50.5 as compared with 44.1 in 1934 and 52 in the year previous.

Expenditure.—Government spent Rs. 267,942.78 on this work while the local authorities contributed Rs. 26,202.49. The per capita cost is as follows:—

	Per Capita Cost.	
	On Government Expenditure.	Including Expenditure of Local Authorities.
	Rs. cts.	Rs. cts.
Kalutara totamune	·71	1·09
Weudawili hatpattu	·62	1·37
Matara Gravets, &c.	·61	·71
Paranakuru korale	·51	·53
Trincomalee	·72	1·53
Yatinuwara	·55	·63
Panadure totamune	·45	·95
Colombo Mudaliyar's division	·29½	1·37½

Health Education.—A tabulated statement of the work done during the last three years is shown—

	1933.	1934.	1935.
Lectures—			
With lantern	93	84	100
Without lantern	166	103	62
With cinema	27	29	30
Talks—			
School	1,676	1,761	1,588
Village	2,880	3,219	3,100
Clinic	1,166	1,599	1,978
Health weeks	4	3	3

It is estimated that a population of 262,342 or 51.8 per cent. of the population resident in the areas was reached in this way as compared with 51.5 per cent. in 1932, 53 per cent. in 1933, and 58 per cent. in 1934.

361 conferences were held with the staff and 11 with others. There was a fall in the number of conferences (407 in 1934) and lectures and talks owing to the staff being engaged in malaria work for the great part of the year. Training in health habits was carried out in 350 schools as compared with 187 in 1933 and 369 in 1934.

Health Survey.—A total of 1,244 premises was resurveyed in Kalutara and Panadure totamunes and within Matara Gravets, &c.

Communicable Diseases.—2,088 cases of communicable diseases were notified and investigated. This number is 1,213 less than in 1934. There is no reason to believe that this is due to a real diminution in the incidence of communicable diseases. Malaria caused all other acute diseases to pale into insignificance, non-notification and diagnosis of malaria during the epidemic in several febrile communicable diseases without typical signs and in some of the bowel diseases was responsible for this. Ayurvedic physicians notified 111 cases while in Paranakuru korale and again this year at Trincomalee no cases of communicable disease appear to have been brought to the notice of the authorities by them. Headmen of Panadure totamune and Dehiwala division have reported the most number of cases.

Of the communicable diseases chickenpox, dysentery, typhoid fever, pulmonary tuberculosis, and whooping cough lead with 663 cases, 424 cases, 291 cases, 155 cases, and 105 cases, respectively.

2,410 first and 1,807 second doses of anti-typhoid vaccine were administered as compared with 2,900 and 1,704 respectively in 1934.

9,755 primary and 29,336 secondary vaccinations against smallpox were done as compared with 12,514 and 12,103 respectively in 1934.

Hookworm treatment continued to receive special attention and 26,057 persons were treated as compared with 37.757 in 1934 and 36.764 in 1933. The diminution in the number treated was due to the personnel being diverted to work in connection with the malaria epidemic, and smaller number of the population seeking treatment for hookworm as the majority was debilitated by malaria.

23,795 laboratory examinations were carried out as compared with 19,749 in 1934 and 12,718 in 1933. Of this number 3,620 were done in Colombo and 20,175 at the local offices as compared with 7,375 and 12,374 in 1934.

155 notifications of cases of tuberculosis were received as compared with 126, 133, and 174 in 1934, 1933, and 1932, respectively. 633 home visits were made and a total of 201 patients and 463 contacts were kept under observation. The contacts received 793 examinations and 15 patients were placed in institutions.

Malaria attained an world-wide prominence during the year owing to an epidemic unprecedented in the history of the Island. This disease which had been a problem in three areas, the Weudawili hatpattu, Paranakuru korale, and Trincomalee District, assumed the role of the captain of death in these localities, especially in the two former levying a heavy toll on human life. Anti-malaria measures and prophylactic distribution of quinine were adopted with redoubled vigour and no less than 10,816 breeding places of anopheline larvae were surveyed and 10,337 such places were dealt with either permanently or temporarily. 147,656 three- and five-grain tablets of quinine were distributed to 45,417 persons as a prophylactic measure and 67,699 three- and five-grain tablets administered to 36,242 patients. Trincomalee, Panadure, and Kalutara totamunes, Colombo Mudaliyar's division and Matara Gravets and Wellaboda pattu did not suffer from this epidemic to any great extent.

Anti-Plague Measures.—3,146 commercial premises were inspected for rat holes as compared with 5,372 in 1934 and 8,265 in 1933. 1,523 premises had a total of 5,483 rat holes, of which 3,045 were dealt with. A hundred premises were radically improved. 18,170 rodents were destroyed.

Anti-Fly Measures.—5,946 breeding places of flies were dealt with as compared with 13,140 in 1934.

Hygiene, Maternity, Infant, and Pre-School.—The number of centres for child welfare work increased from 52 in 1934 to 56 in 1935. The number of clinics held at them was 3,015 as compared with 2,709 in 1934 and 1,855 and 1,595 in 1933 and 1932 respectively. The subjoined table shows the growth of the work at these centres within the last three years:—

	1933.	1934.	1935.
Number of expectant mothers attended..	1,473	2,822	3,554
Number of visits by the above ..	2,983	5,386	6,909
Number of infants attended ..	1,992	2,357	3,393
Number of visits by the above ..	14,142	14,523	26,546
Number of pre-school children attended..	1,828	2,072	2,628
Number of visits by the above ..	10,023	11,983	19,818

Seventy-eight trained midwives made 101,999 ante-natal home visits and conducted 7,719 deliveries as against 102,355 such visits and 7,970 deliveries in 1934. These midwives had paid 55,582 post-partum visits as against 53,821 in 1934. The percentage of births delivered by health unit midwives in each of the areas is as follows:—

	Per Cent.
Kalutara totamune	66·7
Weudawili hatpattu	39·0
Matara Gravets, &c.	57·9
Paranakuru korale	32·5
Trincomalee	30·4
Yatinuwara	50·5
Panadure totamune	51·8
Colombo Mudaliyar's division	61·8

School Hygiene.—6,629 were medically examined as against 7,183 in 1934 and 8,795 in 1933. 5,894 or 88.9 per cent. were found to be defective with a total of 14,310 defects or 2.4 defects per defective child. 2,822 or 19.7 per cent. of the defects were corrected.

Consultation at Office.—There have been 4,234 consultations at the offices of the Medical Officers of Health as against 3,055 in 1934. Of these 1,884 were by children and 2,350 by adults.

Periodic Health Education.—Eight of the 203 persons attached to these units received complete periodic physical examinations and advice during the year as compared with 7 in 1934 and 19 in 1933.

Latrine Construction.—There are 149 public latrines in these areas and to maintain them in a sanitary condition 5,076 inspections were paid; 106 of these were found to be defective. Four pit latrines were newly built.

84,283 private premises are provided with 40,682 latrines; on an average one per two dwellings.

3,334 latrines were newly built during the year as compared with 3,723 in 1934 and 2,424 in 1933. During the year 219 latrines were restored to sanitary type as against 453 in 1934. There were 1,059 bored-hole latrines that were effectively used. Eighty-six new such latrines were constructed in 1935.

350 schools in the various areas are provided with 794 latrine seats or 2.2 latrine seat per school as against 1.67 latrine seat per school in 1934. Thirty-seven new seats were constructed during the year.

Water Supply.—Eleven public wells were constructed during the year. The 226 existing public wells received 3,419 inspections during the year and 17 were partially and 5 radically improved.

Of the 22,139 private wells 19,357 were found defective, of which 235 were improved partially and 130 radically. In the year under review 148 new wells were constructed as compared with 270 in 1934.

504 springs and spouts used by the inhabitants as their source of water supply received 899 inspections.

Licensed Trades.—There were 197 bakeries, 9 aerated water manufactories, 172 dairies, 163 eating houses, 279 laundries, 16 lodging houses, 82 fish stalls, 68

meat stalls, 178 vegetable stalls, 1,352 tea and coffee boutiques, 3 soap manufactories, 128 cattle galas, 4 market fairs, 110 brick kilns, and 348 other trade premises in these areas. All these were inspected and while causing various improvements nuisances found were abated. In order to effect this 80,079 inspections were made. 33,090 defects were found, of which 17,460 were remedied, *i.e.*, 52.7 per cent., as against 53.8 per cent. in 1934 and 45 per cent. in 1933.

Food Sanitation.—7,538 heads of cattle were examined and 6,984 allowed to be slaughtered as against 6,802 and 6,298 respectively in 1934. Of the 5,391 goats examined 5,020 were passed as fit for slaughter as against 6,797 and 5,997 respectively in 1934.

171 samples of milk were examined as against 166 in 1934.

On 13 occasions food unfit for human consumption was seized and dealt with.

Housing.—199,988 inspections of private premises were made as against 230,644 in 1934, 216,267 in 1933, and 193,559 in 1932. The number of defects found at these inspections was 117,357 of which 63,051 were rectified, a percentage of 53.7 as against 41.1 in 1934.

The 642 public premises in the area received 12,115 inspections and 2.412 defects were detected of which 2,032 were remedied obtaining a percentage of 84.2 as against 81.6 in 1934.

144 insanitary dwellings were reported on and 7 voluntarily and 23 compulsorily were improved.

350 schools in the areas received 3,811 inspections in the course of which 1,802 defects were found and 1,162 of them were rectified.

1,595 applications to build were received during the year while 1,563 of these were reported on. There were 754 applications for making additions and alterations to existing buildings and 733 were dealt with. 593 buildings were reported on prior to granting certificates of conformity.

Estate Health Work.—Eighty-eight estates, of which 82 employing resident labour, came under the purview of the intensive health activity areas. Of these estates 68 were co-operative and received 101 inspections which resulted in the remedying of 35 defects out of the 45 noted. The work in the estate areas shows a diminution owing to the malaria epidemic during the year. The estate population did not suffer from the effects of this disease as much as the villager.

Maternity and Child Welfare work in the estates continued to be carried out. 117 expectant mothers and 55 infants were kept under care as against 188 and 148 respectively in 1934. 1,572 ante-natal visits were paid as against 1,459 in the previous year. The midwives attached to the different areas were responsible for 118 deliveries among the estate expectant mothers as against 155 in 1934.

In the Kalutara and Yatinuwara divisions the Public Health Nurses visited the estates.

Training of Health Personnel.—The Kalutara Totamune Health Unit continued to be the centre for training health personnel. Two batches of Public Health Nurses were trained during 1935—one batch commencing the course in January and completing it in June, the other commencing in July and completing in December. In all 9 nurses were trained in the earlier session and 4 in the latter. Five local Medical Officers of Health received training in health unit work and 1 spent some time studying certain phases of the health unit activities. One Medical Officer of Health from Madras spent a period of study in this unit and 1 from the Mysore State spent a few days looking into the manner and methods of health unit work.

8.—SANITARY ENGINEERING.

Malaria.—Throughout the year the Sanitary Engineering Division's attention has been concentrated upon the oiling of rivers within the zone most seriously affected by the epidemic, an area of approximately 1,100 square miles.

The organizing and training of temporary field units for this work was commenced early in January, when arrangements were also made for the regular supply and distribution of equipment and materials to the field.

The periodic oiling of rivers and tributaries, some 378 miles in length, was carried on by these field units weekly, except where local conditions, due to spasmodic rains, permitted a temporary suspension of the work over certain sections.

During September, it was decided to discontinue operations on the Kelani-ganga, the Maha-oya, and their tributary owing to improved conditions then indicated, the work was however extended from time to time in other areas where entomoligical data showed the necessity for such action. The rivers and streams under control included sections of the Mahaweli-ganga, Deduru-oya, Maha-oya, and the Kelani-ganga.

The oil consumption during the year on river work amounted to some 81,000 gallons and the total cost of labour, transport, and oil to Rs. 57,000.

The transport of oil to the rivers was found to be a matter presenting some considerable difficulty, owing to the large quantities which had to be transported to the oiling parties by labourers from the nearest accessible points on the roads.

Experimental work was undertaken on the Badulla-oya at Badulla with a view to ascertaining the most suitable methods to be employed in reducing pooling conditions in river beds, and of training and controlling the dry weather channels. Boulder and rock bottomed sections were dealt with by draining and sealing. Pools which could not be economically drained were filled and sealed to water line. Cement ceiling was found to be effective for withstanding heavy scour but cold asphalt emulsions were less effective, although found suitable for high level isolated pools and for large surfaces, where not subjected to severe scour.

The prevention of scour of sand bars and banks was dealt with by movable concrete protection blocks cast on the site from steel tetrahedron moulds, whilst the gradual deviation of dry weather channels was effected by spur dykes composed of hog wire fencing and rubble filling.

Additional surveys were made in order that the work might be extended and other methods tried out during 1936. It is clear from the present condition of the rivers that much clearing of trees and debris will have to be done before training works can be properly undertaken.

The Sanitary Engineer took the opportunity of discussing the Ceylon problem with the River Training Expert for Burma and of inspecting some of the very effective work carried out in that country.

Major drainage works were put in hand at Anuradhapura in connection with the realignment of waste water channels of the Divulgahakotuwa-ela, which deals with the drainage of the swampy area to the north of Basawakkulam. The work consists of improving gradients and widening channels for a length of 1½ miles and the filling of pools over an area of about 6 acres. The estimated cost is Rs. 12,500. This work is nearing completion. Similar works were undertaken on the outlet channels to the Nuwarawewa spill at an estimated cost of Rs. 4,250. This channel will complete the drainage of the Wan-ela area in the south-east section of the town.

A survey of the Isurumuniya Temple area was completed and a scheme drawn up for the drainage of 1½ miles of channel improvement and the reclamation of several acres of pools at an estimated cost of Rs. 7,500. The work will be put in hand immediately the consent of the owners is obtained.

At Trincomalee the drainage of the Uppuweli area was put in hand towards the end of the year. This work comprises the cutting of 1,900 feet of channel and the construction of a 200 feet sea outlet culvert through the sand bar. The greater part of the work has been completed but owing to floods work had to be temporarily closed down—estimated cost Rs. 3,500.

At Puttalam the drainage of the southern area was completed by the reconstruction of the connecting culvert which now permits the drainage of the upper 100 acres direct to the sea. The drainage of this 260-acre area has proved very effective, all extensive swamps having now been eliminated in Puttalam. Cattle bridges have been erected over all main channels and have greatly contributed to the preservation of the channels and bunds.

Water Supplies.—The chlorination of the distribution mains for the Galle Municipality was undertaken, the work being carried out at night, section by section, in order that possible interference with the towns supply might be reduced as far as possible. Instructions were drawn up regarding the proper examination of stand pipes and valves for leakage and the Municipality were requested to have the system overhauled and samples taken at various points on the system after completion as pollution had previously been shown to exist.

Proposals to install a complete filter and chlorination plant for the Ceylon Government Railway at Ratmalana were dealt with. Plans were prepared and estimates submitted and approved and the work will be commenced at an early date.

Inspections were made in connection with proposed augmentation schemes for Wattegama, Horana, Dehiwala-Mt. Lavinia, Gampaha, Kegalla, Anuradhapura, Kahawatta, and Kandekumbura and recommendations made.

Work was commenced at Nawalapitiya on the construction of a reservoir situated within the catchment reserve—the work being periodically visited by the Division's Officers.

Further investigations were made at Hanguranketa in order to ascertain the possibility of reducing the cost of the scheme by the elimination of a storage reservoir. Plans were prepared of the revised proposals.

Samples of water from various existing and proposed sources of supply were reported upon and recommendations made regarding pollution, prevention, and methods of treatment necessary.

Numerous hospital supplies were examined and recommendations made regarding improvements to these supplies. A soil survey was undertaken at Killinochchi where it was ascertained that a suitable site could be obtained for an additional well within the hospital premises, that suitable water at a shallower depth could be procured which at present does not ordinarily enter the present well owing to the nature of soil through which it is sunk. Investigations and borings carried out at Mantivu indicated that a suitable and independent supply could be obtained from the Urani area to overcome the shortage constantly experienced at the Leper Asylum.

The proposal for augmenting the supply to Passara Hospital was investigated where it was agreed that by better regulation of the existing supply by the installation of waste preventers in lieu of existing large sized taps the situation would be effectively dealt with at a minimum of expense.

Plans were drawn up for a rain water system for Buttala Hospital also for improving the Madulsima Hospital supply intake and both works have been put in hand. New wells were recommended for Medegama Hospital and Kandana Sanatorium and suitable sites were selected. Proposals for improving the quality of the water supply to Elpitiya Hospital by reducing its acidity were made and recommendations for improvements to the Norwood and Mulhalkelle filtered supplies were put forward.

Drainage.—A scheme was completed for the drainage of Panadure and the Council were advised regarding the order in which section should be taken up so as to relieve the periodical flooding experienced in the northern section of the town.

A detailed report was made upon the drainage of Ambalangoda within the Urban District Council area.

Inspections were made and a report submitted upon the flooding within the Dandegamuwa area. Sections of the Dambagalla-oya have been cleared by relief labour and a complete survey of the stream will be put in hand as soon as the lower section clearing has been completed.

The causes of periodic flooding in this area are mainly due to the construction of fishery weirs and to river obstructions which have been responsible for considerable deviations in the course of the stream. The river requires training and the course straightening.

A sewerage and sewage disposal scheme was prepared for the Ragama Anti-Tuberculosis Hospital comprising sedimentation tanks and aerobic filters at an estimated cost of Rs. 35,000.

A drainage scheme for the Peliagoda area to the north of Colombo was put in hand towards the end of the year.

Septic tank installations in the Nuwara Eliya area were inspected and reported upon.

During the year 599 plans were prepared. Anti-malaria equipment and larvicides were handled as hitherto.

B.—MEASURES TAKEN TO SPREAD THE KNOWLEDGE OF HYGIENE AND SANITATION.

Lantern lecture sets on 16 health subjects were classified and indexed and Medical Officers of Health were furnished with details to enable them to call these for local propaganda. A new set was added on the malaria epidemic.

A complete list of health education posters was prepared and circulated among Medical Officers of Health. Fifty sets of posters each containing 12 on the Cause and Prevention of Tuberculosis were obtained from the Indian Red Cross for distribution among Medical Officers of Health. 300 sets of posters turned by the local Survey Department and the Government Printer were prepared for the use of Sanitary Inspectors and Hookworm Dispensers.

Two leaflets on malaria and one on infantile convulsions in English, Sinhalese, and Tamil making a total of 34,000 copies were distributed through Provincial Surgeons and Medical Officers of Health. 20,000 copies of a leaflet on the Care of the Expectant Mother were printed at the Government Press for circulation through hospitals, health units, and child welfare clinics.

The Course on Health Education for Rural Scheme schools which was inaugurated in 1934 at the Mirigama Training School was continued during the year.

Training courses for teachers were concluded at Negombo, Matugama, and Matara where 48 earned certificates jointly issued by the Education and Medical Departments. The scheme adopted last year for training schools was not proceeded with and a more comprehensive scheme was under consideration.

Great keenness was shown by the elementary schools of all the four educational divisions in the Island in the competition for the Shield offered by the Society of Medical Officers of Health for the best health programme carried out during the year. The Shield was won by Kalawila school in the Southern Division.

The normal activities in health education were interrupted by the malaria epidemic which taxed the Medical Officers of Health who were responsible for the field work.

C.—TRAINING OF SANITARY PERSONNEL.

A training class for Sanitary Inspectors was held during the year. Nearly 1,200 applied for selection and of them 31 were selected from among those who had passed either the Cambridge Senior local or the London Matriculation Examinations. The training was for a period of six months commencing from April, and was carried out under the personal supervision of a Medical Officer of Health specially detailed for the work. The course was intensive and approved by the Local Board of Examiners of the Royal Sanitary Institute. It consisted daily of field work from 7 A.M. to 10 A.M. under a Sanitary Inspector: of a lecture from 11 A.M. to 12 noon; and of field exercises from 2 to 4 P.M. In addition there were held tutorial classes, seminars, and monthly tests. Everything possible was done to make the course as practical as possible. Of the 31 candidates selected only 27 presented themselves for the final examination for the certificate of the Royal Sanitary Institute which was held for the first time in Ceylon. Twenty-four passed and have been given appointments. The certificate of the Royal Sanitary Institute will be granted only after a satisfactory probationary period of one year.

The training of Public Health Nurses is carried out at the Kalutara Health Unit. Only qualified nurses are selected for training as Public Health Nurses and the source of supply is from the nurses who are in Government hospitals. The course is of six months' duration and those nurses who have not qualified in maternity nursing are subsequently given a course at the De Soysa Lying-in Home at

Colombo. During the year, two classes were held, one class commenced in January and was completed in June, the other commenced in July and was completed in December. In all 9 nurses were trained in the early class and 4 in the later and satisfactorily finished their training. There is a dearth of suitable candidates for training as Public Health Nurses outside the hospital service with the result that Urban District Councils are finding it impossible to recruit nurses for service under them. To meet this difficulty the question of seconding departmental Public Health Nurses for service under them on favourable terms is under consideration.

Post-graduate training in health unit work, and maternity and child welfare work is given at the Kalutara Totamune Health Unit. During the year five local Medical Officers of Health received training in health unit work and one spent sometime studying certain phases of the health unit activities. One Medical Officer of Health from Madras spent a period of study in this unit, and 1 from Mysore State spent a few days looking into the manner and methods of health unit work.

The better training of midwives is receiving attention. The selection of candidates for training is now confined to a more educated type than in the past; only those who have passed the 5th Standard in their vernacular are considered, preference being given to those who have passed a higher standard. The training is only for a period of six months which is not considered long enough. The period should be increased to one year with an additional six months of field work in a health unit. During the year 102 women were admitted for training and 100 passed.

D.—RECOMMENDATIONS FOR FUTURE WORK.

Although there is in Ceylon a comparatively large health personnel, still, for the expansion of work on health unit lines, which is the only way in which effective health work can be done, more trained Medical Officers of Health, Sanitary Inspectors, Public Health Nurses, and better trained Midwives are needed.

There are large areas which are sparsely populated and in which the economic condition of the people is very poor. In them no health work has been attempted as no effective work can be done while the people are on the verge of starvation. The health needs of this population need attention and the method of dealing with them has to be worked out. Here the work has to be on the lines of rural uplift.

As more personnel becomes available the large areas now ineffectively looked after by District Medical Officers of Health should be divided up for intensive health work.

The maternity and child welfare work of Urban District Councils needs the assistance of Government in the provision of the services of trained departmental Public Health Nurses on terms similar to those under which departmental Sanitary Inspectors are seconded for service under them. The majority of Urban District Councils are willing to employ Public Health Nurses but they are unable to do so for two reasons, viz. (*a*) inadequacy of funds to pay at Government rates; (*b*) absence of suitable nurses.

School health work requires more School Medical Officers, more School Health Nurses, and more facilities for correction of defects, especially dental defects. The provision of a mid-day meal is an urgent need.

The control of plague in Colombo, although a very big problem, has received the attention of the authorities and steps should be taken to deal with it, not only for the sake of Colombo but also on account of the risk that the towns in the interior are exposed to.

Control of soil pollution is still an important feature of health work. With the standardization of latrine construction and its acceptance by everybody the work should be pushed on more rapidly. In areas where people are still conservative the authorities should give every assistance in the work.

The provision of more protected water supplies, the importance of which is appreciated, should be expedited. In rural areas they should be from protected wells and in urban areas they should be pipe borne.

IV.—PORT HEALTH WORK AND ADMINISTRATION.

Ceylon is guarded against the introduction of dangerous infectious disease from abroad by the health service at each of its ports and by the two Quarantine Camps at Mandapam and Tataparai, in Southern India. The chief sources of danger to the Island are (*a*) the grain traffic from Rangoon and other Burmese ports, in respect of plague—some 6,000,000 bags of rice are imported annually of which more than 4,500,000 come from Rangoon—and (*b*) the passenger and immigrant labour traffic between Southern India and Ceylon by the Dhanuskodi-Talaimannar and the Tuticorin-Colombo routes, in respect of cholera and smallpox. Usually more than 200,000 persons a year enter Ceylon by these two routes which are protected by the Quarantine Camps of Mandapam and Tataparai respectively. The number fell for some years since 1931 but in 1934 rose to 245,483, and in 1935 it fell again to 147,447.

The technical work of the Quarantine Department is performed by Medical Officers, apothecaries, and vaccinators of the Department of Medical and Sanitary Services. The port of Colombo has a whole-time staff of four Medical Officers, while at the fifteen minor ports the local Medical Officers give part of their time to the work. The surveillance of travellers after arrival at their destinations in Ceylon is also carried out by Medical Officers of the Department.

Colombo.—2,682 British and foreign vessels and 149 Indian sailing craft called at the port as against 2,626 and 170 respectively in 1934. Of these, 62 vessels arrived in Colombo with cases of infectious diseases on board, and of these one vessel arrived with a case of cholera on board. The vessel was kept in strict quarantine until control measures were carried out, viz., all personnel aboard were inoculated against cholera, the ship thoroughly disinfected, the water tanks emptied, disinfected, and refilled. The ship was then allowed to work in quarantine and at the expiration of the incubation period no further cases had developed. Another case of infectious disease, viz., smallpox, developed in a passenger the fourth day after arrival in Colombo from Bombay. He was removed to the Infectious Diseases Hospital. No further cases developed in the ship.

During 1935, 60 cases of human plague were recorded in Colombo as against 34 in previous year. Since rat plague is enzootic in certain parts of Colombo careful measures are taken in accordance with Article 13 of the International Sanitary Convention, 1926, to prevent infection reaching shipping in the harbour. All ships are moored away from the shore, unauthorized persons are not allowed on board, third class and deck passengers are medically inspected before embarkation and the harbour lighters are subjected to fortnightly deratization with sulphur dioxide. Clayton gas apparatus is available for the deratization of vessels up to 4,000 tons with empty holds, but the port does not possess the means of dealing with larger ships or of carrying out fully the provisions of Article 28 of the International Convention.

The harbour water boats were cleaned and cement-washed every quarter and inspected by one of the Port Health Officers before use.

A venereal diseases clinic for seamen has been maintained at the port since 1921, and an account of its work appears in Section VI. of this report.

Minor Ports.—632 steamers and 2,308 sailing vessels called at the fifteen minor ports. 365 of the steamer visits were at Talaimannar in connection with the ferry service to India. All passengers arriving at Talaimannar had passed through Mandapam Quarantine Camp or had been inspected by Medical Officers of the Camp. No passengers are permitted to land at the other small ports in the northern part of the Island and ships discharging cargo at these ports must be licensed. This is a necessary precaution since the shipping is mostly engaged in coastwise traffic with small ports in districts of Southern India where smallpox and cholera are more or less endemic, while a few boats bring rice from Burmese ports.

Mandapam Quarantine Camp.—Owing to the lack of demand for labour during 1935, there was a large decrease in the number of persons who passed through the Camp *en route* for Ceylon.

The following are the figures for the last six years :—

Year.	Estate Labourers.	Passengers.	Total.
1930	91,422 ..	62,162 ..	153,584
1931	68,337 ..	50,474 ..	118,811
1932	50,869 ..	45,972 ..	96,841
1933	32,898 ..	42,468 ..	75,366
1934	140,607 ..	48,530 ..	189,137
1935	43,018 ..	47,018 ..	90,036

All estate labourers remain five days in the Camp, where they are disinfected, vaccinated, treated for ankylostomiasis, and subjected to a careful medical inspection. First class and many second class passengers and their personal servants are medically inspected at the railway station and usually allowed to proceed but are vaccinated if necessary and are subjected to surveillance for twelve days after arrival in Ceylon. The majority of third class passengers pass through the Camp.

One hundred and three passengers and 98 estate labourers were rejected on account of leprosy, and 10 estate labourers were rejected for other diseases, viz., 3 smallpox convalescence, 1 whooping cough, 1 advanced pregnancy, 2 tuberculosis, 1 syphilis, and 2 insanity.

The general hospital of the Camp has accommodation for 20 patients. There were 445 admissions, of which 16 proved fatal.

The infectious diseases hospital has 12 beds for smallpox and 16 for cholera. There were 4 cases of smallpox, of which 1 proved fatal, and 2 cases of cholera, both proved fatal. There were 38 cases of other infectious diseases, viz., chickenpox 16, measles 18, and mumps 4, all of which recovered.

4,377 persons who paid 9,420 visits were treated at the outdoor dispensary of the Camp.

Treatment for ankylostomiasis was given to 36,623 labourers out of 42,746 examined.

35,665 passengers and 41,885 estate labourers were vaccinated against smallpox.

There is a school in the Camp and there are 192 day pupils and 32 night pupils on the roll at the end of 1935. A grant of Rs. 1,366.69 was received for the schools from the Madras Government.

The sanitary condition of the Camp was very good throughout the year. The Camp has its own water supply which is carefully protected and subjected to frequent laboratory examinations, its own electric lighting plant, and a water carriage system of drainage and sewage disposal. The food supply and kitchens were carefully supervised and remained satisfactory.

The work in the Bacteriological Laboratory for the year consisted of examination of water, scrapings for M.Leprae, and hospital specimens. Thirteen motions from patients who developed symptoms of cholera were examined and from 2 of them true cholera vibrios were isolated. A rectal swab from a patient also gave true cholera vibrios. The number of other specimens examined was 1,550; of these 115 were water samples and 810 were for leprosy—157 of the latter proved positive.

Tataparai Quarantine Camp.—57,411 passengers proceeding from India *viâ* Tuticorin to Colombo passed through the Camp as against 56,346 in 1934 and 45,885 in 1933. Most of the passengers were petty traders, bungalow and garden labourers, and rickshaw pullers, and the majority 41,550 came from the Tinnevelly district where cholera prevailed most of the year.

There were 124 rejections—93 for leprosy, 19 for recent smallpox, and chickenpox, 2 for syphilis, 2 for epilepsy, and 8 for other diseases.

57,786 passengers were vaccinated, 45,883 at the Camp and 11,903 at Tuticorin.

2,888 persons were treated at the Camp dispensary.

The Camp has an area of 39.68 acres. During the year a storeroom and a resthouse for passengers at the foreshore and the electric lighting plant installation in the Camp were completed.

Bore holes now fitted with windmills for the supply of water have been found to be satisfactory. This water can be used for most purposes but owing to its

high mineral content is slightly bitter and so does not make a good drinking water supply. Three rain water cisterns to provide drinking water and an overhead tank were built and completed.

There is a school in the Camp for children of the resident staff and there are 42 day scholars and 26 night scholars on the roll. The Madras Government paid a grant of Rs. 372.06 to both day and night schools.

Food of good quality and in sufficient quantity was served throughout the year. The catering was done departmentally.

The Camp was maintained in a clean condition and the health of its personnel was satisfactory.

Surveillance.—99.87 per cent. of the 43,761 persons from Southern India entering Ceylon under surveillance reported at their destinations and completed the twelve days' period of surveillance. Among these persons 1 case of smallpox and 6 of chickenpox were detected during their period of surveillance.

V.—MATERNITY AND CHILD WELFARE.

Infant Mortality.—The following statement gives in tabular form the figures relating to infant deaths and infant mortality rates for 1935, 1934, and the average for ten years 1925 to 1934:—

	Average, 1925–1934.	1934.	1935.
Infant Deaths.			
Whole Island	34,521	35,719	50,733
Urban areas	4,452	4,923	5,473
Rural areas	30,069	30,796	45,260
Infant Mortality Rates.			
Whole Island	169	173	263
Urban areas	194	192	210
Rural areas	165	170	272
Ceylonese	164	170	268
Indian immigrant ..	202	200	198
European	26	8	30

Of the 50,733 infant deaths convulsions have been responsible for 16,501 or 32.5 per cent. and debility for 8,462 or 16.7 per cent. As in previous years these conditions have been the two chief causes of deaths among infants.

The infant deaths and mortality rate for 1935 show an increase of 15,014 and 90 per 1,000 respectively, chiefly due to the malaria epidemic. There is an increase in the rates for the urban as well as rural areas.

Maternal Mortality.—The following table sets out the number of maternal deaths and maternal death rates for 1935, 1934, and the average for ten years 1925 to 1934:—

	Average, 1925–1934.	1934.	1935.
Maternal Deaths.			
Whole Island	3,962	4,155	5,165
Urban areas	706	871	971
Rural areas	3,255	3,284	4,194
Maternal Mortality Rates.			
Whole Island	19·4	20·1	21·1
Urban areas	30·1	34·0	37·2
Rural areas	18·0	18·2	25·1

The number of maternal deaths recorded for 1935 shows an increase of 1,010 and 1,283 deaths of mothers at childbirth as compared with the deaths for 1934 and 1933 respectively.

The maternal mortality rate for the year is 21.1, which shows an increase of 1.0 per 1,000 over the rate for 1934.

Puerperal sepsis and puerperal convulsions contribute 80.2 per cent. of the total deaths at childbirth as compared with 82.4 in 1934. Of the 4,145 deaths, 1,647 or 31.9 per cent. have been caused by puerperal sepsis and 2,498 or 48.3 per cent. by puerperal convulsions as compared with 35.5 per cent. and 46.9 per cent. respectively in 1934.

Stillbirths.—Stillbirths are registered only in urban areas. During 1935 there were 2,164 stillbirths as compared with 2,177 in 1934 and 1,852 in 1933 and 1,740 the average for the years 1925 to 1934.

The stillbirth rate for 1934 is 83 per 1,000 live births as compared with 85.0 in 1934, 76.9 in 1933, and 73.6 average for ten years 1925-1934.

Ante-natal, Post-natal, and Baby Clinics.—At the ante-natal clinics held at the De Soysa Lying-in Home 5,396 mothers paid 7,601 visits as against 4,074 mothers and 6,131 visits in 1934. At the post-natal clinics 388 mothers paid 485 visits.

In addition to these, 4,702 combined ante-natal and baby clinics were held in various parts of the Island at 86 centres as against 3,952 clinics at 78 centres in 1934. Visits paid to these clinics during the year as compared with those in 1934 are as follows:—

	1934.	1935.
Expectant mothers	8,033	10,350
Infants	28,324	28,028
Pre-school children	17,555	16,753

Midwifery.—141 trained midwives under supervision were provided by Government (73 at hospitals and 68 at health units) as against 120 in 1934; 126 by local authorities and 96 by estates as against 107 and 82 respectively in 1934; making a total of 363 midwives as against 309 in 1934. There are about an equal number of trained midwives doing private work.

The registration of midwives under Ordinance No. 26 of 1927 is at present compulsory only in the city of Colombo where the number registered amounts to 445 as against 391 in 1934. During 1935 the areas of the local authorities, Trincomalee and Nawalapitiya Urban District Councils, Hambantota, Beliatta, Talawakele, Dimbula, Lindula, Agrapatana, Tillicoultry, and Kotagala Sanitary Board towns were notified to be brought under the operations of section 57 of the Medical Ordinance, 1927,—the object being to prohibit practice by untrained and uncertificated midwives.

The examination of pupil midwives is controlled by the Ceylon Medical College Council. Training is carried out at the De Soysa Lying-in Home in Colombo, Galle Hospital, Green Hospital, Manipay, and the McLeod Mission Hospital at Inuvil. A training class was also started in September, 1935, at the Kegalla Hospital. During the year 102 women as compared with 100 in 1934 received instruction at the De Soysa Lying-in Home, 52 being Government stipend pupils and 28 non-stipend pupils and 22 trained nurses.

Maternity Beds in Hospitals.—At the De Soysa Lying-in Home in Colombo there were 97 beds. Of the remaining 106 Government hospitals with a total of 11,537 beds 76 had maternity wards with a total of 467 beds in 1934. The other hospitals, although not provided with maternity wards, take maternity cases into their general wards. During 1935 one new maternity ward was built at Nawalapitiya (12 beds) and 2 additional beds were provided at Karawanella, making a total of 14 beds.

Public Health Nursing.—At the end of 1934 there were 20 Public Health Nurses. During 1935, 3 more nurses were selected and given training at the Kalutara Totamune Health Unit thus bringing up the total of Public Health Nurses at the end of 1935 to 23. Ten new appointments were sanctioned from October, 1935, and these will be made in 1936.

Voluntary Associations and Child Welfare Work.—The assistance of voluntary associations continues to be received in connection with the carrying out of child welfare work. There are in the Island 45 such associations under the names of social service leagues, health leagues, child welfare leagues, &c., actively associated with the work as compared with 41 associations in 1934.

The total income of these societies as far as is known has been Rs. 24,629.98 during the year, of which Rs. 17,342.47 or 70 per cent. has been expended on child welfare work

Twenty-seven local authorities, viz., those of Panadure, Kurunegala, Beruwala, Matale, Mannar, Kalutara, Gampola, Wadduwa, Anuradhapura, Nawalapitiya, Moratuwa, Kegalla, Badulla, Dondra, Hambantota, Puttalam, Trincomalee, Nuwara Eliya, Matara, Dehiwala, Kotte, and Kolonnawa, contributed to the finances of these voluntary associations.

Work of Lady Doctors.—There were 4 lady doctors stationed at the following towns, viz., Beruwala, Batticaloa, Trincomalee, and Puttalam, for work among women and children chiefly of the Muslim population. They attend to sick women and children at the dispensary, visit in the homes, free of charge in the case of the poor, those who cannot attend at the dispensary, hold ante-natal and baby clinics and do a certain amount of educational work. The doctors at Beruwala and Trincomalee work in conjunction with the local health unit. The others work without adequate staff for effective work under difficulties.

The 4 doctors paid 5,265 home visits and attended to both in the home and at the dispensary, 169 mothers at childbirth, 572 puerperal cases, 1,178 sick expectant mothers, 1,828 sick infants, and 7,291 sick pre-school children. They have held 698 clinics at 11 centres at which 1,018 expectant mothers paid 2,514 visits; 566 infants paid 5,290 visits and 989 pre-school children paid 6,307 visits.

VI.—HOSPITALS, DISPENSARIES, AND VENEREAL DISEASES CLINICS.

HOSPITALS AND DISPENSARIES.

General Remarks.—All parts of the Island are generously provided by the State with hospitals and dispensaries. In and around Colombo are the General Hospital (939 beds), Lying-in Home (97 beds), Eye Hospital (56 beds), Women's Hospital (45 beds), Children's Hospital (82 beds), Female Venereal Diseases Hospital (29 beds), Police Hospital (32 beds), Tuberculosis Hospital (349 beds), Tuberculosis Sanatorium (72 beds), and Infectious Diseases Hospital (168 beds). Elsewhere there are 91 Government hospitals with 6,520 beds and a Tuberculosis Sanatorium with 44 beds. In addition there are the Prison Hospitals, Lunatic Asylum, and Leper Asylums mentioned in Section VII. with accommodation for more than 3,000 patients. The number of hospital beds provided by Government is approximately 2 per 1,000 of population.

The number of central and branch dispensaries and visiting stations maintained by Government was 632 in 1935 against 624 in 1934. In addition to these the following special institutions were maintained for the treatment of out-patients:—King Edward VII. Memorial Anti-Tuberculosis Institute, Colombo; Grenier Ear, Nose, and Throat Clinic, Colombo; Dental Institute, Colombo; and special ophthalmic clinics at the Kandy, Galle, Jaffna, Batticaloa, and Badulla hospitals.

During the year under review, the number of estate hospitals maintained by the proprietors of estates was 82 as against 84 in 1934, and the number of estate dispensaries was 727 against 726 in 1934.

395,116 in-patients with 26,673 deaths, giving a mortality rate of 6.75 per cent., were treated in the various Government hospitals. The figures for the previous year were 251,320, 16,287, and 6.48, respectively. In the Government dispensaries

and out-patient departments attached to Government hospitals 8,095,730 patients who paid 11,801,005 visits were treated as against 5,143,540 and 7,665,164 visits the previous year.

The diseases treated at hospital out-patient departments and dispensaries were as follows:—

I.—*Communicable Diseases.*

Enteric fever	199
Fevers of obscure causation	2,310
Malaria fever	5,052,528
Cerebral malaria	1,083
Malaria cachexia	244,552
Malarial cirrhosis	63
Measles	249
Whooping cough	1,481
Diphtheria	3
Influenza	159,379
Mumps	169
Dysentery (all forms)	39,818
Amoebic hepatitis and liver abscess	114
Leprosy	37
Erysipelas	68
Chickenpox	103
Dengue	—
Yaws	9,385
Hydrophobia	14
Tetanus	28
Pulmonary tuberculosis	2,263
Other tuberculous diseases	285
Syphilis (all varieties)	3,816
Soft chancres	173
Gonorrhoeal complications (arthritis, rheumatism, &c.)	2,313
Gonorrhoea (acute and chronic)	12,637
Filarial diseases	218
Acute rheumatic fever	342
Puerperal fever	2,134
Diarrhoea	424

II.—*General Diseases.*

Malignant tumours—carcinoma, sarcoma	61
Non-malignant tumours	599
Chronic rheumatism	281,491
Arthritis (acute and chronic)	7,642
Diabetes mellitus	702
Anaemias (of unknown causation)	38,873
Goitre	79
Leukaemias	682
Acute poisonings	128
Other general diseases	10,173

III.—*Local Diseases.*

Diseases of the nervous system	30,838
Diseases of the eye	81,359
Diseases of the ear	42,023
Diseases of the heart and blood vessels	5,808
Diseases of the lungs and pleura	221,350
Diseases of the gastro-intestinal tract	335,499
Diseases of the liver and gall bladder	4,221
Diseases of the urinary system	39,287
Diseases of the generative systems	50,274
Diseases of the spleen	8,557
Diseases of the lymphatic system	5,217
Diseases of the skin and cellular tissues	220,213
Diseases of the bones and joints	6,535
Ankylostomiasis	208,452
Other helminthic diseases	518,461
Ulcers	256,416
General injuries	18,065
Local injuries	119,885
Other local diseases	46,652

REPORT ON COLOMBO HOSPITALS.

A brief summary of the work done in the chief Colombo hospitals is given below:—

General Hospital, Colombo.—The number of patients treated in the hospital during 1935 was 31,023 (1,105 paying and 29,918 non-paying patients) as compared with 24,646 (1,501 paying and 23,145 non-paying) in the previous year.

There were 3,152 deaths as against 2,799 in 1934 and the percentage of deaths to those treated was 10.1. The daily average sick in hospital was 1,359.19 as compared with 1,043.50 in 1934.

The maximum and minimum number of patients in hospital on any one day during the year was as under:—

	Maximum.	Minimum.
Paying section	89 on 15.5.35	60 on 2.9.35
Non-paying section	1,539 on 31.5.35	1,115 on 14.7.35

The number of operations performed was 4,180 of which 3,505 were performed in the hospital and 675 (minor operations) at the out-patients' department as against a total of 3,485 (3,059 in hospital and 426 on out-patients) in the previous year.

The total number of patients treated at the out-patients' department amounted to 79,250 as compared with 56,464 in 1934. The number of visits paid by patients was 295,403 with a daily average of 809 as against 217,020 in 1934 with a daily average of 693.

An out-patient clinic for diseases of women was started in October, 1934. The clinic is held on Tuesdays and Thursdays in the mornings. 875 cases were examined and treated during 1935.

Pathological Department.—The staff consists of a full-time Pathologist and two qualified assistants. The following number of specimens was examined and reported upon during 1935:—

Urines	17,842
Faeces	9,331
Gastric contents	654
Sputa	3,175
Bloods	32,797
Cerebro spinal fluids	1,296
Ascitic pleural and other fluids	217
Smears	929
Tissue Sections, General Hospital	731
Tissue Sections, Outstation Hospitals	337
Tissue Sections, Post-mortem room	1,031
	68,340

412 post-mortems were held during the year.

X'Ray Department.—7,116 patients in the non-paying section and 894 patients in the paying section, making a total of 8,010 patients, underwent X'ray examination as against a total of 6,235 in 1934. In the electro-therapeutic section 8,365 sittings were given to non-paying patients (including patients from the 2nd class paying wards from whom no charges are recovered) and 2,102 sittings to paying patients, making a total of 10,467, as compared with 10,783 the previous year.

167 cases had radium treatment for different diseases, chiefly cancer, as compared with 123 cases in 1934.

The Ear, Nose, and Throat Department.—The Grenier Ear, Nose, and Throat Clinic is held at the out-patient department, General Hospital, on three afternoons a week—Tuesdays, Thursdays, and Saturdays—from 1 to 4 P.M. and the Surgeon-in-charge is allotted ten beds in the wards of the hospital for cases requiring indoor treatment. 7,874 new out-patients were treated during the year. The total number of visits made by the new and old patients was 15,458.

In addition, there is the school children's clinic which is held on Tuesdays and Thursdays in the afternoons. 530 children attended the clinic and paid 868 visits.

The number of patients treated in the wards was 240 (males 150 and females 90).

563 operations—both major and minor—were performed on two days a week (Mondays and Fridays) at the Paying Section theatre commencing at 1 P.M.

Dental Institute, Colombo.—The professional staff consists of one qualified Dental Surgeon, two Apothecary Assistants, a Matron, and a Nurse.

27,973 new patients were treated during the year under review as against 19,684 in 1934. The total number of visits made by the new and old patients was 41,405.

The number of patients was made up as follows:—

Patients sent from hospital wards	293
Children attending the school clinic	2,917
Other patients	24,763
	27,973

The following treatments were given:—

Extractions	22,317
Cleaning and filling	9,139
Temporary relief	4,664
Dressing	3,936

Eighteen cases were operated on at this institute and 26 cases of fracture of the jaw were treated.

De Soysa Lying-in Home.—Although a small increase in the bed strength has been made, the urgency for increased accommodation to enable the work to be carried out under satisfactory conditions is once more emphasized.

The number of cases under treatment in 1935 was 6,731 as against 6,563 in the previous year and 6,476 in 1933. The daily average number of beds occupied was 146.25 and the mortality rate was 2.8 as compared with 138.09 and 2.7 respectively the previous year.

There were 189 maternal deaths and of these 46 were due to malaria, 15 to ankylostomiasis, 101 to puerperal causes, and 27 to non-puerperal causes. There were 170 miscarriages as against 172 in 1934.

The number of live births was 4,409. Of these infants, 4,042 left the hospital alive while 367 died after delivery as against 3,812 and 417 respectively in 1934. 406 obstetric operations were performed during the year, necessitating the use of forceps in 169 cases, craniotomy in 31 cases, version in 36 cases, evacuation of the uterus in 39 cases, manual removal of placenta in 59 cases, induction of labour in 20 cases, caesarean section in 3 cases, for complications of breech in 22 cases, and 27 minor operations. Labour was classified as normal in 3,943 cases. In 46 cases of placenta praevia, 18 infants were born alive and 22 were born dead: 39 mothers recovered and 7 died. In 59 cases of accidental haemorrhage 7 mothers died and 36 infants were stillborn. 242 cases of pre-eclampsia were treated with 2 deaths. Of the 97 cases of eclampsia treated during the year 83 mothers recovered and 14 died. There were 92 cases of twins and 3 cases of triplets.

With a view to limiting the number of admissions and lesssening the state of overcrowding in the wards, a start was made in 1933 to provide an external midwifery service in the area of Colombo round about the Lying-in Home. This service is gradually being extended and there were 95 cases against 65 in 1934 of confinement conducted by medical students under the supervision of a specialist officer of the staff of the Lying-in Home. This Medical Officer also attended 103 calls by midwives working in the town.

The institution continued to be the chief training school for midwives in the Island. The professional staff consisted of one Medical Superintendent, one Assistant Obstetrician, three qualified House Officers, and an Obstetric Registrar.

The Victoria Memorial Eye Hospital.—There are 7 beds and 1 cot in the paying section and 43 beds and 5 cots in the non-paying section of this hospital.

25,682 new out-patients were treated during the year as against 25,143 out-patients in 1934. The total number of visits made by the new and old patients were 68,730.

There were 123 in-patients remaining in hospital at the beginning of the year and 2,384 patients were admitted during the year as compared with 100 and 1,865 respectively in the previous year. 2,402 patients were discharged and 4 died. The daily average number of in-patients was 134.91.

The total number of ophthalmic operations performed on in-patients during the year was 650 and on out-patients 2,092, the corresponding figures for the previous year being 441 and 2,402 respectively.

The school clinics which are held on Tuesdays and Fridays at 3 P.M. continued to be well attended. 718 children (1,623 visits) received treatment. An ultra violet ray apparatus and a diathermy apparatus are in use.

The Lady Havelock Hospital for Women and Lady Ridgeway Hospital for Children.—The total number of patients admitted during the year was 5,037 and with 142 patients remaining from 1934, 5,179 patients (women 1,825, children 3,212) were treated as against 3,891, 144, and 4,035 patients respectively in 1934.

The daily average sick was 176.46 as against 132.08 in 1934 and 149.13 in 1933. The number of paying patients treated was 156 as against 149 in 1934.

The total number of deaths was 782; of these 99 were women and 683 were children, showing a mortality rate of 5.42 per cent. for women and 21.23 per cent. for children. The high death rate in the case of children was due to the fact that many children were brought to the hospital in a moribund condition and died within a few hours of admission.

The number of surgical operations performed was 661. Of these 463 were major and 198 minor operations. The operation mortality rate was 2.0 per cent. as against 2.1 in 1934.

In the training school for nurses there were 51 pupils of whom 23 were first-year pupils. The professional staff of this hospital consists of the Lady Doctor-in-charge and two Lady House Officers.

Female Venereal Diseases Hospital.—The total number of patients admitted during the year was 349 and with 13 patients remaining from 1934, 362 patients were treated in 1935, as against 354 in 1934. The daily average of patients was 17.96 as against 17.09 in 1934. There was one death during the year. The principal diseases treated were syphilis, 90 cases, and gonorrhoea, 164 cases.

Usually female cases of syphilis and gonorrhoea in the acute stage are treated in this hospital and when hospital treatment is not necessary they attend as out-patients (*vide* report under Venereal Diseases Clinic, page 80), for continuation of treatment.

There is an out-patient department at this hospital where general diseases among women and children are treated and during the year 29,307 patients who paid 54,582 visits were dealt with. Malaria, influenza, ankylostomiasis, venereal, digestive, and skin diseases were the most prevalent ailments treated.

The Infectious Diseases Hospital (Angoda), Colombo.—There remained 89 patients in hospital at the end of 1934 and 2,416 patients were admitted during the year, making the total treated 2,505, as against 2,115 during the previous year. Of these 196 cases proved fatal, giving a mortality rate of 7.8 per cent., as against 9.3 per cent. during the previous year.

The following are some of the infectious diseases treated and the number of deaths in 1935:—

	Number treated.	Deaths.
Influenza	49	1
Pneumonia	19	11
Dysentery	292	38
Smallpox	43	6
Enteric fever	97	21
Measles	91	2
Whooping cough	10	—
Diphtheria	54	12
Mumps	114	—
Plague	24	19
Chickenpox	1,246	4
Cholera	27	15

535 cholera contacts and 337 smallpox contacts were kept under observation. One of the smallpox contacts developed the disease.

REPORT ON OUTSTATION HOSPITALS.

Of the provincial hospitals those of Kandy and Galle are the largest and most important.

Kandy Hospital.—There are 276 beds and the medical staff consists of a Superintendent, Physician, Surgeon, Ophthalmic Surgeon, and 5 House Officers. The hospital is a nurses' training school and 46 pupils were under training during the year.

There were 22,425 admissions in 1935 as compared with 10,479 in 1934. Of these 19,286 were cured and discharged, 2,323 died; the corresponding figures for 1934 were 8,580 and 797 respectively. The daily average sick in hospital was 583.94 as against 376.09 in 1934; the percentage of deaths to total treated was 10.12 as against 7.39 in 1934.

The following table gives the principal diseases treated and the number of deaths:—

	Admissions.	Deaths.
Enteric fever	165	52
Malaria	12,980	949
Dysentery	52	2
Pulmonary tuberculosis	94	39
Ankylostomiasis	501	75
Pneumonia	445	271
Eye diseases	1,268	13

There were 474 operations performed, 360 major and 114 minor with 26 and 3 deaths respectively.

The Eye Institute has become very popular and the Eye Surgeon is kept fully occupied till 2 or 3 P.M. every day. Two wards are allotted for eye cases and are always overcrowded. The number of eye operations performed was 1,528, of which 255 were major operations and 1,273 minor operations.

A site for rebuilding the hospital was selected and it is hoped to erect the new hospital in the course of the next few years.

Galle Hospital.—This hospital is situated in Mahamodara, a suburb of Galle, and is near the sea. It has at present accommodation for 279 patients.

The staff consists of a Medical Superintendent, Visiting Physician, Visiting Surgeon, Eye Surgeon, and 3 House Officers. This hospital is also a training centre for nurses with a European Matron and two Nursing Sisters.

The total number of in-patients treated during the year was 11,005 with a daily average of 284.1. Out of these 722 died giving a percentage of 6.56 deaths.

The following were the chief diseases treated:—

Diseases.	Cases.	Deaths.
Dysentery	148	3
Pulmonary tuberculosis	176	36
Enteric fever	254	80
Malaria	1,530	47
Ankylostomiasis	405	21

There were 436 major and 180 minor surgical operations performed during 1935.

In the casualty room 980 cases were attended to and 738 injections were given for parangi and syphilis. In the laboratory 16,015 specimens were examined; of these 2,478 were blood, 372 sputa, 8,692 urine, and 4,245 faeces and 228 other specimens.

In the Eye Institute 10,696 cases (22,785 visits) were treated, and 1,056 minor and 291 major operations were carried out.

A new X'ray department was started from December. The working is in charge of a trained Technician.

Training of midwives was started in 1934 and 9 midwives were trained during 1935.

INSTITUTIONS FOR TUBERCULOSIS.

There are four special institutions for tuberculosis in Ceylon viz., The King Edward VII. Anti-Tuberculosis Institute, Colombo, the Ragama Hospital, the King Edward VII. Sanatorium at Kandana, and King Edward VII. Sanatorium at Kankesanturai.

The institute in Colombo and the two sanatoria were built and equipped from the King Edward VII. Memorial Anti-Tuberculosis Fund, but are maintained by Government.

The Anti-Tuberculosis Institute.—The institute is situated in a central part of Colombo and in addition to the usual clinic rooms has X'ray apparatus, a laboratory and artificial sunlight apparatus, and serves as a centre for expert diagnosis and treatment. There are no beds at the institute but patients requiring indoor treatment are sent to Kandana or Ragama as accommodation permits. The nurses make a number of visits to patients' homes and are expected to arrange for contacts to attend at the institute for medical examination. 3,674 out-patients who paid 7,316 visits were treated at the institute.

In order to popularize the institute patients suffering from lung conditions other than tuberculosis were treated and about one-third the attendances were by such patients. Now, however, that the institute is well established, an attempt is being made to restrict the work principally to tuberculosis.

The Ragama Anti-Tuberculosis Hospital.—The hospital for tuberculosis at Ragama is 12 miles away from Colombo and is easily accessible by rail and road. It contains 349 beds and is intended for the treatment of advanced or moderately advanced cases of pulmonary tuberculosis.

The number of patients remaining at the end of 1934 was 227 and the number of admissions during 1935 was 1,339 (of which 97 were readmissions). There were 354 deaths, of which 243 were within one month of admission and 111 within six months. 694 patients were discharged—272 left hospital relieved and 422 not improved. Out of those relieved, disease became arrested in 103 cases, of which 64 were transferred to Kandana Sanatorium.

The number remaining in hospital on December 31, 1935, was 341 which includes 10 patients remaining for over one year. The daily average number of patients in the hospital was 341.45.

The new admissions in 1934 and 1935 were from the following Provinces:—

Province.	1934.	1935.
Colombo City	204	299
Western	276	625
Central	45	68
Southern	98	141
Northern	4	10
Eastern	4	8
North-Western	36	75
North-Central	12	15
Uva	4	11
Sabaragamuwa	52	87
	735	1,339

Usually the cases admitted are in the 3rd stage of the disease (according to Turban-Gerhardt's classification) and only rarely are 2nd stage patients seen. The average case showed advanced bilateral involvement below the 4th rib, frequently with localized excavations. Unilateral cases were even below ½ per cent. of those admitted during the year.

Treatment is based on—

(1) Rest.
(2) Graduated exercise.
(3) Symptomatic treatment.
(4) (*a*) Artificial pneumothorax.
    (*b*) Artificial light.
(5) Education.

The staff is trained to maintain discipline among the patients with regard to rest and graduated exercises. The patients are given regular talks on the benefit of these methods of treatment. Besides regulated walks, patients have regular breathing exercises and odd light jobs in the wards and gardening.

Symptomatic treatment forms a large part of the work. Only about 20 per cent. of the patients are fit for outdoor exercises, the remaining 80 per cent. being on absolute rest or at the 1st and 2nd stages of graduated labour.

Forty-two patients received artificial pneumothorax treatment. Out of these, 3 patients died, 17 did not improve, 11 improved, and in 11 the disease became arrested. Those requiring operative treatment or artificial light treatment are sent to the General Hospital, Colombo.

Pneumoperitoneum, *i.e.*, introduction of oxygen into the peritoneal cavity, was tried in 2 cases of which one case improved and the other derived no benefit.

Patients are given regular talks on—

(1) How to take care of themselves.
(2) How to avoid spreading tuberculosis.
(3) How to avoid getting it.
(4) How to preserve children from it.
(5) The earliest signs and the importance of early diagnosis and treatment.
(6) How to live on returning home from hospital.
(7) Importance of rest, graduated exercises, and discipline.

The water supply was adequate except during the drought in January to May when the supply was restricted.

The King Edward VII. Sanatorium at Kandana.—This sanatorium is 14 miles from Colombo and has accommodation for 72 patients.

The number of patients remaining at the end of 1934 was 63 and the number admitted during 1935 was 159. There was no death. In 115 of the 162 patients discharged the disease was arrested, 13 patients were much improved, 6 were improved, 8 were in the same condition, 19 were transferred to Ragama Hospital being unsuitable for sanatorium treatment, and 1 sent for observation. The number remaining in the sanatorium on December 31, 1935, was 60 and the daily average number of patients was 58.39.

The usual principles of sanatorium regime are applied to patients, viz:—

(1) Rest—mental and physical,
(2) Graduated exercises,
(3) Routine, discipline, and education,
(4) Correct feeding,

supplemented by such therapeutic measures as are required.

The King Edward VII. Sanatorium at Kankesanturai.—This sanatorium on the coast of the Northern Province is a new building erected at the expense of the King Edward VII. Memorial Fund. It has accommodation for 44 patients. A fee of Rs. 2 per day is charged.

The number of patients remaining at the end of 1934 was 14 and the number admitted during the year was 56 (of which 12 were readmissions). Of the 58 patients discharged during the year, disease became arrested in 31 cases, 21 cases were much improved and 6 were not improved. There were no deaths. The number remaining in the sanatorium on December 31, 1935, was 12.

Drugs are not used as a routine, but injections of colloidal calcium with vitamin D and azotyl injections and gold treatment were given to a limited number of patients. Artificial pneumothorax treatment in unilateral cases were given with the best results.

VENEREAL DISEASES CLINICS.

There are three Venereal Diseases Clinics in Colombo, viz., at the General Hospital (out-patient), the Port Surgeon's Office (out-patient), and Female Branch Hospital (in-patient and out-patient). There is also a Clinic at Kandy Dispensary.

Venereal Diseases Clinic, General Hospital, Colombo,—This clinic takes place daily, except on Sundays, commencing at 2 P.M. On Mondays and Thursdays cases of syphilis, parangi, and gonorrhoea are treated; on Tuesdays, Wednesdays, and Saturdays cases of urethritis are microscopically examined and dark ground illumination of all venereal sera is done; on Fridays special treatments, such as prostatic massages, dilatation of strictures, and urethroscopic work, are carried out.

All cases requiring indoor treatment are admitted to a ward in the General Hospital.

The following table gives comparative figures of the cases treated at the clinic for the past three years:—

Cases	1933.	1934.	1935.
Syphilis	382	346	280
Soft sores	402	7	47
Gonorrhoea	812	572	392
Yaws	—	14	13
Other diseases	—	69	107
	1,596	1,008	839

Port Venereal Clinic for Seamen.—This is a clinic held in a special room at the Port Surgeon's office, established under the Brussels International Agreement, 1924.

Forty-nine persons were given treatment free during the year; of these 25 cases were syphilis which received salvarsan treatment, 8 were soft chancre and 16 were gonorrhoea. The fact that Colombo is not a terminal port, but merely a port of call where most ships spend only a few hours, accounts for the comparatively small number of sailors seeking treatment at the clinic.

Most of the cases are diagnosed by clinical examination only, since there is usally insufficient time to arrange for serological or bacteriological examination at the Bacteriological Institute.

Venereal Diseases Clinic at the Female Branch Hospital.—The number of persons treated in the clinic for the past three years were as follows:—

Cases.	1933.	1934.	1935.
Syphilis	349	363	178
Gonorrhoea	694	498	258
Yaws	11	1	4
Other diseases	125	370	596
	1,179	1,232	1,036

These 1,036 persons paid 3,067 visits during 1935. The clinic is held on two evenings a week—Tuesdays and Fridays. Most of the cases attending the clinic are married women and many of them are cases of chronic gonorrhoeal infection. The existence of the clinic is well known among the hospital class of patients, who have no objection to injections or other forms of treatment.

Venereal Diseases Clinic at the Kandy Dispensary.—This clinic is held on two evenings a week—Mondays and Saturdays. The cases treated during the year were as follows:—

Syphilis	71
Gonorrhoea	77
Yaws	6
Other diseases	14
	168

These 168 persons paid 445 visits during 1935.

Besides the particulars given in respect of the four clinics, 6,149 in-patients (with 98 deaths) in the various hospitals and 18,939 out-patients at dispensaries and out-patients' department of hospitals in the Island were treated for venereal diseases during the year as against 6,667, 88, and 26,160, respectively, in 1934.

MEDICAL INSTITUTIONS AIDED BY GOVERNMENT.

The following institutions received financial aid from Government during the year:—

(1) The Victoria Home for Incurables.
(2) Wiseman Hospital, Welimada.
(3) McLeod Hospital, Inuvil.
(4) Green Hospital, Manipay.
(5) Jevon's Dispensary, Puttur.
(6) The Wesleyan Medical Mission Hospital, Batticaloa.
(7) The Wesleyan Medical Mission Branch Dispensary at Kattankudi.
(8) The Denepitiya Medical Mission Hospital, Southern Province.

Numbers (1) and (8) are for males and females; numbers (2) to (7) are for females and children only.

HOSPITAL RETURNS, &c.

Charts and returns of hospital will be found at the end of this report.

VII.—PRISONS AND ASYLUMS.

PRISONS.

During the year 1935, 12 prisons were maintained by Government in the following places:—Central Prisons at Welikada and Hulftsdorp (Colombo), Bogambara (Kandy), Mahara (14 miles north-east of Colombo), and Jaffna; local prisons at Anuradhapura, Badulla, Batticaloa, Galle, and Negombo; remand prisons at Welikada (Colombo) and Kandy.

On December 31, 1934, there were in all the prisons a total of 3,395 convicted prisoners (3,353 males and 42 females). During the year under review 14,062 males and 389 females were admitted and 13,832 males and 370 females were discharged. Fifty-four male and 3 female prisoners died. On December 31, 1935, 3,529 male and 58 female convicted prisoners remained in all the prisons.

On the whole the health of the prisoners in all prisons was satisfactory. In Jaffna prison dysentery and colitis were once again the principal causes of illness and every effort is being made to eradicate dysentery from the jail. At Kandy there were 142 cases of acute catarrhal conjunctivitis and 391 cases of malaria. In Anuradhapura prison there were 105 cases of dysentery which occurred in an epidemic form during June, July, and August. At Mahara there were 2,316 cases of malaria. At Welikada there was a slight increase in the number of dysentery and enteritis cases, of which 855 cases were treated. Of these 59 were from Hulftsdorp and 115 were from Remand Jail. There were also 133 cases of chickenpox and 61 cases of measles. In Batticaloa and Badulla prisons there was little sickness but for malaria.

Almost all prisoners at Jaffna and Welikada were given anti-typhoid inoculations.

268 prisoners at Batticaloa and all admissions to Welikada received treatment for ankylostomiasis. Anti-malaria measures were adopted at Kandy and Anuradhapura.

At Mahara a new kitchen block and a block of well-ventilated cells have been built.

The number of hospitals maintained exclusively for prisoners remained unchanged at 9. At the Welikada Prison Hospital, 12 of the 192 beds are for females. Elsewhere hospital accommodation is provided only for male prisoners, females being sent to the local civil hospital.

Table.—Average number of prisoners and work of the Prison Hospitals:—

Name of Prison.	Daily Average in Prison.	Number of Hospital Beds.	Daily Average Sick in Hospital.	Total Number of In-patients treated.	Total Number of Out-patients treated.	Total Number of Deaths.	Death Rate per cent. of In-patients in Hospital.	Chief Diseases treated (for meaning of figures, please see Key* below).
Welikada	1,365·12	180	89·88	1,977	14,874	25	1·26	1, 3, 4, 5, 6, 7, 9, 12, and 16
Welikada Remand	278·88	—	—	—	8,283	—	—	
Huftsdorp	162·02	—	—	—	7,421	—	—	
Mahara	722·43	55	58·20	3,213	15,469	22	·72	1, 2, 3, 5, and 16
Bogambara	493·08	35	24·64	1,052	7,697	4	·38	1, 5, 8, 10, 15 and 16
Jaffna	308·42	20	9·10	377	1,264	3	·79	1 and 3
Negombo	120·90	16	2·89	47	2,624	3	6·38	1, 3, and 16
Galle	134·90	12	1·61	59	1,127	—	—	1,2, and 3
Anuradhapura	116·03	12	6·35	263	1,613	—	—	1, 3, and 8
Badulla	32·86	4	1·46	83	1,143	—	—	1 and 2
Batticaloa	54·01	5	1·01	47	—	—	—	1 and 3
	3,788·65	339	195.14	7,118	61,515	57	1·90	

*Key referred to:—

1. Malaria
2. Diarrhoea
3. Dysentery
4. Eye diseases
5. Influenza
6. Pneumonia
7. Enteritis
8. Conjunctivitis
9. Chickenpox
10. Skin diseases
11. Enteric
12. Mumps
13. Abscess
14. Pulmonary tuberculosis
15. Rheumatism
16. Other diseases

ASYLUMS.

(*a*) The Lunatic Asylum, Angoda.

The Government Lunatic Asylum is situated at Angoda, about 6 miles from Colombo, and was built to accommodate 1,830 patients.

During 1935 the average daily number of patients was 2,308—the largest number on any one day being 2,698 and the lowest number 1,932.

The following table shows the daily average number of patients in the Asylum for the last ten years:—

1926	..	1,480	1931	..	2,357
1927	..	1,717	1932	..	2,426
1928	..	2,017	1933	..	2,524
1929	..	2,267	1934	..	2,308
1930	..	2,350	1935	..	2,308

The main buildings consist of six three-storey blocks containing altogether 18 large wards each designed to hold 96 persons. There is also a block of 102 cells in which noisy patients can be locked up. There are no paying wards for better class patients and no facilities for modern treatment. In 1931 2 temporary wards to accommodate 300 quiet male patients were added.

Uncertified persons sent by the courts for medical observation to determine their mental state are placed in the same wards as certified patients and although it is the custom to speak of the "House of Observation" the term refers not to a building but to the legal state of such uncertified persons while they are in the Asylum.

Attention was drawn in the 1930 report to the serious overcrowding. From 1926 to 1930 the number of inmates of the Asylum had been increasing by nearly 200 a year so that a state of overcrowding had developed which was getting progressively worse. As a result, the death rate from diseases such as dysentery and tuberculosis had become alarmingly high and steps have been taken during the past few years to mitigate to some extent the unsatisfactory conditions under which the patients—in particular, the male patients—were living.

The statistics for 1935 are as follows:—

Asylum.

(Certified Lunatics.)

	Males.	Females.	Total.
Remaining at beginning of the year	1,553	802	2,355
Admitted	891	389	1,280
Total treated	2,444	1,191	3,635
Discharged	833	614	1,447
Died	363	244	607
Remaining at the end of the year	1,586	853	2,439

House of Observation.

(Uncertified persons under Observation.)

	Males.	Females.	Total.
Remaining at beginning of the year ..	147	72	219
Admitted	1,590	724	2,314
Total treated	1,737	796	2,533
Transferred to Asylum	831	381	1,212
Discharged	700	280	980
Died	77	38	115
Remaining at end of year ..	129	97	226

Court.—A court for the disposal of lunacy cases was established at the Asylum on January 16, 1930, and sits every Thursday. It has been a great benefit and convenience to the patients and to the staff and has resulted in a saving of Government money.

Deaths.—The following table gives an analysis of the deaths during the year:—

	House of Observation.	Lunatic Asylum.	Total.
Abscess of lung	1	1	2
Bronchitis	—	1	1
Cellulitis	5	10	15
Cerebral haemorrhage	2	—	2
Colitis	15	27	42
Dysentery	15	95	110
Enteritis	1	10	11
Epilepsy	1	3	4
General debility	43	88	131
Influenza	—	4	4
Malaria	5	6	11
Myocardial degeneration	2	7	9
Pulmonary tuberculosis	4	72	76
Pneumothorax	—	2	2
Pneumonia	6	7	13
Typhoid fever	2	11	13
Uraemia	—	2	2
Other diseases	13	17	30
Total ..	115	363	478

Infectious Diseases.—The following table shows the number of cases of infectious diseases occurring during 1934 and 1935:—

	Inmates.		Attendants.	
	1934.	1935.	1934.	1935.
Dysentery	543	339	—	6
Chickenpox	4	436	4	47
Pulmonary tuberculosis ..	96	79	1	—
Typhoid fever ..	4	4	4	4
Enteric fever ..	14	7	3	—
Leprosy	1	1	—	—
Erysipelas	4	19	1	—
Mumps	—	292	—	32

Dysentery and Pulmonary Tuberculosis.—Of the 478 deaths which occurred in the Asylum, 110 were due to dysentery and 76 to pulmonary tuberculosis. There were 345 cases of dysentery of whom 110 died and 79 cases of tuberculosis of whom 76 died. It is believed that the spread of dysentery is due probably to direct infection from inmate to inmate. The overcrowded dormitories afford opportunities for the dissemination of tubercle bacilli. Isolation of patients already affected is no doubt desirable but lack of accommodation prevents this course. Besides, the physical signs of tuberculosis in the insane, at least in the early stages, are apt to be obscure and detection difficult.

Accidents.—The number of cases of injury to patients by themselves was 78, by other patients 50, and by attendants nil.

Restraint and Seclusion.—There have been no cases of restraint and seclusion during the year under review.

Occupation and Amusements.—The male patients were employed mostly in industrial and agricultural work and in maintaining the Asylum grounds in good order. The female patients made uniforms for the staff and other articles for Asylum use.

Games and sports were carried on as usual. There are two tennis and two volley ball courts and a cricket ground which were largely used by the patients and attendants.

Newspapers.—Newspapers and magazines were supplied by Government for the staff and inmates.

Laboratory.—6,131 simple laboratory examinations of blood, sputum, faeces, and other clinical tests were made. All other examinations are done at the Bacteriological Institute.

(*b*) Leper Asylums.

There are two Leper Asylums in the Island, one at Hendala, 7 miles from Colombo, and the other on the Island of Mantivu, 3 miles from Batticaloa, in the Eastern Province.

Hendala Leper Asylum.—The staff consists of a Medical Superintendent, 2 Medical Officers, 2 Apothecaries, a Steward-Clerk, a Mother Superior and 12 Religious Sisters, 2 Overseers, 1 Instructor of games, 46 male attendants, 9 female attendants, an office peon, a gatekeeper, a dhoby, 4 cooks, and 40 labourers.

The statistics of the hospital are given below:—

	Ceylonese.		Indians.		
	Males.	Females.	Males.	Females.	Total.
Remaining on December 31, 1934	489	118	73	10	690
Admitted during 1935 ..	108	38	24	8	178
Discharged during 1935 ..	35	9	14	4	62
Died during 1935 ..	60	11	4	2	77
Remaining on December 31, 1935	502	136	79	12	729

Of the 178 admissions, 142 were new cases and 35 were readmissions. Amongst the new admissions, 146 were Ceylonese and 32 were Indian Immigrants. The admissions during the year represented the following types:—

N^2	— 6	N^3	— 37
N^1C^1	— 7	C^1N^3	— 13
N^1C^2	— 6	C^2N^3	— 5
N^2C^1	— 27	non-lepers	— 6
N^2C^2	— 56		
N^2C^3	— 15	Total	= 178

The new admissions were from the following Provinces:—

	Ceylonese.		Indians.		Total.		Grand Total.
	M.	F.	M.	F.	M.	F.	
Western ..	63	28	—	2	63	30	93
Southern ..	25	5	1	—	26	5	31
Sabaragamuwa ..	8	2	5	—	13	2	15
Central ..	11	2	11	5	22	7	29
Northern ..	2	—	—	—	2	—	2
North-Western ..	5	—	—	—	5	—	5
Eastern ..	—	1	—	—	—	1	1
Uva ..	1	1	—	—	1	1	2
	115	39	17	7	132	46	178

From the above admissions it will be seen that about 87 per cent. were Ceylonese and 13 per cent. Indian immigrants.

Of the 62 patients discharged, 5 were admitted on a wrong diagnosis, 51 were discharged as non-infective after 3 consecutive bacteriological examinations, 3 were repatriated to India, 1 absconded and later sought admission to Mantivu Leper Asylum, and 2 absconded.

The number of deaths during the year was 77, 64 males and 13 females. The percentage of deaths to total treated was 8.34.

There were 729 cases remaining and represent the following types:—

	N1.	N1C1.	N1C2.	N1C3.	N2.	N2C1.	N2C2.	N2C3.	C2N3.	C1N3.	N3.	Total.
Males ..	3..	56..	25..	5..	13..	96..	154..	30..	49..	54..	96..	581
Females ..	6..	12..	10..	3..	8..	14..	41..	10..	4..	10..	30..	148
Total ..	9	68	35	8	21	110	195	40	53	64	126	729

The School.—The school was established in 1920. The number on the roll is 79 with an average attendance of 47. English is taught up to the 5th standard, Tamil to the 4th, and Sinhalese to the 6th. During the year the school was examined by the Government Inspector of Schools and 95 per cent. of those presented for examination passed

The Scout Troop which was inaugurated in 1931 by the Chief Scout Commissioner for Ceylon for the boy-patients at the Asylum is making good progress. At present there are 20 scouts who form 3 patrols. Some of these scouts have been employed as labourers in wards and others have been given plots of ground to grow vegetables and flowers. The Scouts Association has its own funds, and each scout is in possession of a Savings Bank Book, and deposits part of his earnings, which he obtains by doing work for the Asylum, so that he is taught to be thrifty.

The General Condition of the Patients.—Special attention is given to exercise and good food, which are two of the most important adjuncts to treatment. Patients are encouraged to do manual work, such as pottery, carpentry, tailoring, sandal-making, mat-weaving, and rattaning; most of the articles made are sold and the patients derive some pecuniary benefit. Patients trained as barbers work among the patients and receive a small sum from the Government for work done for the Asylum. There are some who do vegetable gardening and others occupy their time in flower gardening. Unfortunately, the patients who work are only a minority when compared with the large number who lead a more or less idle life.

Special Treatment of Leprosy.—During 1935 the treatment consisted of (1) Routine course of treatment, (2) Experimental courses, and (3) Surgical treatment.

(1) *Routine Course of Treatment.*—This consisted of (*a*) Preliminary treatment, (*b*) Treatment with Hydnocarpus Oil or its Ethyl esters, *i.e.*, E.C.C.O., Teatment of Lepra reaction, and (*c*) Local treatment with Trichloracetic Acid.

(*a*) *Preliminary Treatment.*—Every patient admitted to the Asylum is examined for any concurrent diseases, viz., hookworm, malaria, syphilis, yaws, &c., and appropriate treatment given for a month. Nearly all the cases admitted had to be treated for hookworm or malaria or both.

(*b*) *Treatment with Hydnocarpus Oil or E.C.C.O.*—These drugs were administered in the form of subcutaneous and intramuscular injections to the majority of patients seeking treatment, the hydnocarpus oil for males and E.C.C.O. for females.

The idea of giving these two different preparations to the different sexes was to facilitate comparison of the effects of the two drugs. It was noticed that both drugs had similar effects, viz., producing a temporary reaction with malaise and fever followed in about six hours by the normal state. The E.C.C.O. was slightly more irritant than the pure oil with creosote. The effects of these drugs were very slow and the benefit derived was very slight but were more pronounced in early cases and in recent admissions than in the patients who had received this treatment in this institution for several years.

On fifty-four days oil injections were given to 338 male patients and E.C.C.O. injections to 155 female patients.

The results were as follows:—

Men.

Number of Injections.	Number receiving.	Number improved.	Stationary.
25–50 ..	95 ..	12 ..	83
10–25 ..	102 ..	54 ..	48
1–10 ..	141 ..	1 ..	140
	Women.		
25–50 ..	58 ..	7 ..	51
10–25 ..	39 ..	13 ..	26
1–10 ..	55 ..	2 ..	53

Intradermal injections were adopted in suitable cases where the lesions were localized. The drug used was the plain oil as E.C.C.O. was more irritant. This method seems to bring about a rapid and marked improvement of the lesions, its only drawback being that it is more painful as about six pricks with the needle are necessary to infiltrate a given area at each meeting. Twenty-one patients were treated by this method and all improved.

Inunctions of oil by rubbing the oil into the skin of the patients were started in this institution on a small scale in one ward but the results were so encouraging that this has become a very popular form of use.

Oral administration of oil was abandoned as the drug deranged the gastric mucous membrane causing nausea and loss of appetite but some patients who were used to this method were insistent on having it. Hence crude chaulmoogra oil which is less irritant is allowed to those who wish to take it orally.

It is difficult to say definitely whether Hydnocarpus oil derivatives have any specific effect on the disease or whether the temporary reaction set up by the injections act in a manner similar to protein shocks and thus cause benefit.

But the rapid and marked improvement of local lesions when treated intradermally or by inunctions of the oil while such injections of iodine or magnesium sulphate have little effect, tends to support the view that the oil has certain specific action in this condition. Many patients who have been treated by crude chaulmoogra oil even now swear by the improvements they have had and do not seem to be enthusiastic about the effects of the refined Hydnocarpus oil.

Treatment of Lepra Reaction.—Lepra reaction follows whenever a patient's resistance is lowered, *e.g.* after an attack of malaria, dysentery, scabies, influenza, &c., and also when the patient has had a large number of injections or has one large dose.

Lepra reaction is of 2 kinds, viz., Cutaneous and Neural. Cutaneous reaction is treated as an acute fever case, viz., rest in bed, purge, low diet, &c.

A mixture containing calcium chloride and sodii bicarb. is given t.d.s. by mouth and ephedrine by mouth or adrenaline injection has some beneficial effect. If the temperature is high or persists, an intravenous injection of antimony tartrate brings the fever down.

Neural Reaction cases are treated by local application of ichthyol and belladona ointment and fomentations. By mouth they are given a mixture containing potassium bromide. Eighty reaction cases were treated during the year. This high figure was due to the lowering of resistance last year as a result of several attacks of malaria and influenza.

(*c*) *Local Treatment with Trichloracetic Acid.*—Trichloracetic acid in a dilution of 1 in 3 was used as a local application for infiltrated patches and nodules. This results in the formation of a blister or burn followed by a shrivelling of the edges and a tendency for the patch to regain its normal appearances ultimately.

(2) *Experimental Courses.*—As there was no specific of any value in leprosy, attempt was made to find some that can do as well or better than the present drugs. The following have been tried:—

Milk.—2. c.c.-4 c.c. of sterilized milk was injected into the gluteal muscles of patients suffering from cutaneous reaction on the principle that the introduction

of foreign protein into the system caused a reaction and leucocytosis with subsequent benefit in skin affections and cases of chronic sepsis. The results have been encouraging in that several cases responded very well.

Fourteen cases were treated, out of which 7 improved, 1 was cured, and 6 remained stationary.

Whole Blood.—This was tried in cases of lepra reaction. 5.c.c. of blood drawn from the vein of a patient just recovered from reaction was injected intramuscularly into a patient just starting reaction in the belief that anti-bodies that may be present in the blood of the convalescent patient may bring about a quick response. The results were not as encouraging as expected. Six cases were treated out of which 2 improved and 4 were stationary.

Magnesium Sulphate.—2 c.c. to 5 c.c of a concentrated solution of magnesium sulphate were injected intravenously to patients with lepra reaction. The results have been good in some cases while in some it had little effect. The injections were also painful and were discontinued. 140 cases were treated out of which 24 improved and 116 were stationary. The same solution was injected in very small amounts directly into inflammatory patches, but the results were not satisfactory.

Brilliant green, Trypan blue have been tried but the results are very unsatisfactory.

(3) *Surgical Treatment.*—A good number of operations have been performed such as scraping of ulcers and sinuses of several years standing, sequestrotomies, and stretching of nerves. The results have been very gratifying and a large number of patients who were unable to get about for years owing to chronic sinuses and ulcers have now discarded their dressings.

The one great handicap as far as surgical work is concerned is the want of a central dressing station to enable better dressing and supervising facilities.

Mantivu Leper Asylum.—The institution which has been in existence only ten years is situated on an Island of about 160 acres, in a large lagoon near Batticaloa. Male patients are housed in twenty-four two-roomed cottages each with its own kitchen, and in a number of hospital wards. The female patients all live under hospital conditions in wards. There is accommodation for 180 patients. Although it was originally intended that the institution should be conducted as a leper colony, a large staff of attendants, garden labourers, &c., is maintained, but the Medical Officer-in-charge by encouraging the patients to engage in useful work and to become to some extent self-supporting, has been able to reduce his staff of attendants and labourers.

At the end of 1934 there were 204 lepers remaining in the Asylum. There were 39 admissions and 9 re-admissions during 1935 and 20 cases were discharged. There were 16 deaths and the percentage of deaths to total treated was 6.35. The daily average number of patients in 1935 was 200.9. There were 211 lepers remaining on December 31, 1935.

Specific Treatment.—Hydnocarpus oil was given orally in doses of 3 to 10 minims to all the patients but ten, and E.C.C.O. injections were given to 38 patients on 68 days. The total number of injections given was 982 in doses of ½ to 5 c.c. and in specially selected cases 10 c.c. The results were very poor. Magnesium sulphate injections were given to 173 patients in doses of ½ to 6 c.c. of the concentrated solution—10,111 injections were given intra-dermally, intramuscularly, intra-venously, and sub-cutaneously during the year. The results were very encouraging.

VIII.—METEOROLOGY.

The following report was prepared by the Superintendent, Colombo Observatory:—

Rainfall.—The rainfall for the year 1935 was below normal over the greater part of Ceylon, excess being mainly confined to the Northern Province, the

Trincomalee District, the country immediately to the west and south of Colombo, and the greater part of the Southern Province. The Jaffna Peninsula showed the greatest excess, half the stations there reporting over 20 inches above the average. Deficits were greatest on the western slopes of the hills, where a large number of stations were more than 20 inches, and a few were more than 30 inches, below their average.

The incidence of the rainfall may be roughly summarized by saying that the deficiencies of the first nine months or so were to some extent made up by excess during the last quarter of the year.

Temperature.—The low-country stations with the highest and lowest mean shade temperatures for 1935 were Trincomalee, with 82.2°F, and Galle, with 79.6°F. The figures for Colombo and Kandy were 80.2°F and 77.2°F, respectively, while Nuwara Eliya, at an elevation of over 6,000 ft. had a mean shade temperature of 59.6°F. The highest shade temperature recorded during the year was 100.7°F at Batticaloa, on June 2. The lowest shade temperature this year at low-country stations was 57.3°F, at Anuradhapura, on March 1. The lowest shade temperature recorded during the year at Nuwara Eliya was 33.1°F, on February 8. The highest shade temperature in Colombo in 1935 was 93.2°F, on March 12, and the lowest, 67.1°F, on January 4. The mean daily range for 1935 (the difference between the mean of the maxima and the mean of the minima) was greatest at Nuwara Eliya and Badulla 18.2°F, and lowest at Galle, 8.3°F, and Jaffna, 8.6°F. The absolute range for the year (the difference between the highest and the lowest readings recorded at any one station) was greatest at Nuwara Eliya, 44.5°F, and lowest at Galle, 21.1°F.

Returns.—Meteorological returns for the towns of Colombo and Nuwara Eliya are given below:—

Colombo.

Month.	Temperature.					Rainfall.			Winds.		
	Mean Solar Maximum.	Mean Minimum on Grass.	Mean Shade Maximum.	Mean Shade Minimum.	Mean Temperature.	Amount in Inches.	Degree of Humidity.		General Directions.		Average Daily Mileage.
	°	°	°	°	°		Day.	Night.	A.M.	P.M.	
January	146·5	67·3	86·8	72·1	79·4	0·69	68	90	NE	NE	129
February	143·3	68·0	86·8	72·1	79·4	2·78	71	90	ENE	WNW	109
March	143·6	69·7	87·9	73·8	80·8	3·76	70	90	Var.	W	110
April	143·1	73·1	88·0	76·0	82·0	3·69	74	91	SSW	W	110
May	137·2	75·3	87·1	78·1	82·6	14·18	78	89	SW	SW	148
June	138·3	74·3	84·8	76·4	80·6	11·39	81	88	SW	SW	132
July	138·0	72·5	84·0	76·2	80·1	2·81	79	91	WSW	SW	129
August	137·9	73.2	84·1	76·0	80·0	7·87	76	86	WSW	WSW	147
September	141·9	72·6	84·6	75·9	80·2	3·80	76	86	SW	WSW	142
October	141·3	72·4	84·4	74·6	79·5	23·65	78	90	WSW	WSW	121
November	143·6	71·1	85·0	73·5	79·2	11·93	76	93	Var.	WNW	117
December	143·8	70·7	85·1	73·3	79·2	9·93	74	90	NE	NE	122

Nuwara Eliya.

Month.	Temperature.					Rainfall.			Winds.		
	Mean Solar Maximum.	Mean Minimum on Grass.	Mean Shade Maximum.	Mean Shade Minimum.	Mean Temperature.	Amount in Inches.	Degree of Humidity.		General Directions.		Average.
	°	°	°	°	°		Day.	Night.	A.M.	P.M.	
Januray	—	45·4	68·3	48·3	58·3	4·25	72	90	—	—	—
February	—	38·6	69·6	44·0	56·8	1·35	59	85	—	—	—
March	—	42·7	70·7	47·4	59·0	4·61	68	87	—	—	—
April	—	42·5	72·9	46·3	59·6	2·64	60	93	—	—	—
May	—	48·1	72·2	52·2	62·2	1·54	69	94	—	—	—
June	—	53.6	67·8	56·3	62·0	6·50	84	91	—	—	—
July	—	52·0	65·7	54·5	60·1	9·36	79	88	—	—	—
August	—	51·5	66·3	53·6	60·0	6·81	85	94	—	—	—
September	—	48·9	67·5	51·4	59·4	4·48	78	94	—	—	—
October	—	49·3	67·3	51·8	59·6	10·14	79	94	—	—	—
November	—	47·8	67·9	50·6	59·2	10·12	77	93	—	—	—
December	—	47·4	67·6	49·6	58·6	13·44	79	93	—	—	—

IX.—SCIENTIFIC.

(1) BACTERIOLOGICAL INSTITUTE.

The examinations carried out at the Bacteriological Institute for the year were:—

Nature of Specimens.	Official.	Private.	Total.	Positive.	Negative
Blood for typhoid agglutination	3,825	15	3,840	1,558	2,282
Blood for paratyphoid A agglutination	2,398	9	2,407	27	2,380
Blood for paratyphoid B agglutination	2,954	6	2,960	27	2,933
Blood for Wassermann test	7,213	158	7,371	1,175	5,489
Blood for Khan test	—	2	2	—	2
Blood for malarial parasites	4,968	113	5,081	1,669	3,412
Human material for *B. pestis*	54	—	54	24	30
Rats for *B. pestis*	48	—	48	—	48
Sputa for tubercle bacilli	585	28	613	113	500
Sputa for pneumococci	8	—	8	4	4
Urine for bacteriological examination	564	11	575	—	—
Urine for chemical examination	485	31	516	—	—
Secretions for gonococci	591	8	599	114	485
Secretions for diphtheria bacilli	752	23	775	170	605
Faeces for *B. dysenteriae*	2,689	5	2,694	316	2,378
Faeces for *E. histolytica*	67	94	161	21	140
Faeces for ova of intestinal parasites	200	42	242	127	115
Secretions for *B. leprae*	22	1	23	1	22
Evacuations for cholera vibrio	627	—	627	31	596
Scrapings for spirochaetes	8	23	31	6	25
Faeces and urine for *B. typhosus*	12	—	12	—	12
Cerebro-spinal fluid for meningococcus	13	—	13	9	4
Miscellaneous specimens	884	18	902	—	—
Water for bacteriological examination	61	38	99	—	—
	29,028	625	29,653	—	—

The doses of vaccines prepared and issued were—

Nature of Vaccine.	Official.	Private.	Total.
Autogenous vaccines	85	26	111
T. A. B. vaccines (doses)	34,350	205	34,555
Gonococcal vaccines (doses)	12,664	179	12,843
Staphylococcal vaccines (doses)	216	—	216
B. coli vaccines (doses)	135	—	135
Cholera vaccines (doses)	4,977	332	5,309
Plague vaccines (doses)	12	—	12
Streptococcal vaccine (doses)	6	3	9
	52,445	745	53,190

The following table shows the specimens of faeces received from four institutions for the examination for *E. histolytica* and *B. dysenteriae*:—

Name of Institution.	No. of Specimens.	*E. histolytica.*	*B. dysenteriae.*	Mucus.	Blood and Mucus.	Giardia Flagellates, &c.	Percentage in which *E. histolytica* or *B. dysenteriae* were found when Blood and Mucus present.
General Hospital	304	9	36	264	233	13	19·31
Mahara Jail, Ragama	343	4	39	248	219	26	19·6
Prison Hospital	687	21	52	557	456	49	16·01
Lunatic Asylum, Angoda	745	76	117	665	630	64	30·6
	2,079	110	244	1,734	1,538	152	

A sum of Rs. 7,410 was received as fees for examination during 1935.

(2) PASTEUR INSTITUTE.

The number of persons who received preventive inoculation against rabies and treatment of the wound was 1,875, of these 971 were in-patients. Those actually bitten were 1,474, *i.e.*, 78.61 per cent. of the total. The rest either were licked by or handled animals proved or suspected to be rabid.

Table I. gives the Provinces from which the persons came who received treatment:—

TABLE I.

Western Province	956
Central Province	286
Southern Province	362
Northern Province	110
North-Western Province	66
North-Central Province	1
Province of Uva	23
Province of Sabaragamuwa	71
	1,875

The number of brains from dogs and other animals examined during the year was 513.

Table II. gives the Provinces from which the heads were received with the results of examination:—

TABLE II.

Province.	Positive.	Negative.	Unfit.	Total.
Western Province ..	113	90	29	232
Central Province	64	52	17	133
Southern Province ..	31	14	16	61
Northern Province ..	5	2	7	14
Eastern Province ..	—	1	—	1
North-Western Province ..	17	9	5	31
North-Central Province ..	3	1	1	5
Province of Uva	2	3	1	6
Province of Sabaragamuwa ..	14	12	4	30
	249	184	80	513

The statistics of failures of the preventive inoculation against rabies for 1934 are now complete; they are as follows:—

Number of persons treated	1,161
Number of fatal cases	4
Percentage of failures	0·344

(3) OUTSTATION LABORATORIES.

The following table gives the number of examinations reported from the laboratories attached to the Victoria Memorial Eye Hospital and the Lying-in Home, Colombo, and to outstation hospitals:—

Name of Institution.	Urine.	Faeces Positive for Hookworm.	Faeces Negative for Hookworm.	Blood Positive for Malaria.	Blood Negative for Malaria.	Other Examinations.	Total.
Victoria Memorial Eye Hospital ..	1,324	24	2	48	147	5,635	7,180
Lying-in Home ..	3,336	148	55	301	1,412	784	6,036
Outstation.							
Anuradhapura ..	6,212	5,325	798	1,471	2,852	2,403	19,061
Badulla ..	5,467	2,989	2,005	1,480	2,835	390	15,166
Batticaloa ..	1,267	597	316	85	138	1,017	3,420
Galle	8,682	2,810	1,205	658	1,435	1,215	16,015
Jaffna	3,134	1,386	865	165	555	313	6,418
Kandy	14,868	6,355	1,577	9,266	8,904	5,799	46.769
Kurunegala ..	4,203	2,774	701	1,678	2,910	2,616	14,882
Ratnapura ..	3,414	2,609	285	1,045	1,165	923	9,441
Mandapam Camp ..	281	48	113	49	65	1,007	1,563

Research Work.—The principal research work carried out in 1935 in or from this laboratory refers to nutritional matters.

The study of the heights and weights of children of the various races and classes in Ceylon and the weights of infants at birth has been continued. The seasonal prevalence of clinical conditions attributable to dietary deficiencies has been studied.

The botanical names of the millets, pulses, fruits, and vegetables have been obtained and listed with the local names.

The State Council voted Rs. 30,000 to defray the cost of analyses and biological assays of Ceylon foodstuffs. Professor Burn of the Pharmaceutical Laboratory of London has undertaken the chemical analyses for proteins, fats, carbohydrates and minerals, and the biological assays for vitamin A and B (complex) of fifty Ceylon foodstuffs. Samples of the following have been forwarded for these analyses:—

(1) Brinjal—Solanum Molongena L.
(2) Unripe plantain as used in curries—Musa paradisiaca L.
(3) Red pumpkin—Cucurbita maxima. Duch.
(4) Ash pumpkin—Benicasa hispida. Cogu.
(5) Water pumpkin—Lagenaria leucantha. Rusby.
(6) Snake Gourd—Trichosanthes anguina. L.
(7) Drumsticks—Moringa oleifera. Lamk.
(8) Breadfruit—Artocarpus incisa. L.
(9) Jak fruit—Artocarpus integra. Meri.
(10) Bandakka—Hibiscus esculentus. L.
(11) Sweet potatoes—Ipomaea batatua. Lam.
(12) Red dal—Lens esculenta, Moeuch.
(13) Yellow dal—Cajanues cajan. Millap.
(14) Rough gram—Cicer arietinum. L.
(15) Green gram—Phaseolus aurcus. Roxb.
(16) Black gram—Phaseolus mungo. L.
(17) Tampala—Amarantus viridis. L.
(18) Kankun—Ipomoea aquatica—Forsk.
(19) Niviti—Talinum patons—Weld.
(20) Cowpea—Vigna unguiculata. Walp.

The analyses of grasses used as fodder for cattle in Ceylon have shown that the constituents of a species of grass may vary considerably according to the nature of the soil in which it has grown; the variations in the mineral contents may be especially marked. Calcium is markedly low and has a low ratio to phosphorus in many fodders. In view of this it was considered desirable to obtain the chemical analyses of a number of vegetables grown in different parts of Ceylon, such as samples of the same species grown in the soil overlying the miocene limestone of Jaffna, and in soil overlying laterite in other areas. The assistance of the Imperial Institute was obtained, and 50 samples have been forwarded and the analyses completed.

The results of all analyses and biological assays will be published when the work undertaken at the Pharmaceutical Laboratory is completed.

References are given in part (6) " Publications " of this section to the papers published on nutritional subjects.

(4) GOVERNMENT VACCINE ESTABLISHMENT.

The number of calves received on hire from the contractor amounted to 629.

During the twelve months 622 calves were used for vaccination and the same number was returned to the contractor after the collection of lymph.

" Seed lymph " for the vaccination of calves was obtained at intervals from the Lister Institute of Preventive Medicine, London. About half the calves were vaccinated with this seed lymph and the rest of the calves with seed lymph prepared in this establishment. Human vaccination with the lymph pooled from the two sources appears to give better vesiculation than when either of them is used separately.

The glycerinated calf lymph was issued to vaccinators in sealed glass capillary tubes. Where a large number of vaccinations were carried out daily the lymph was issued in collapsible metal tubes of varying capacity.

The total number of tubes of calf lymph issued during the year amounted to 172,120, *i.e.*, sufficient for the vaccination of approximately 516,360 persons. Of this total 597 tubes were sold realizing a sum of Rs. 549; 32,400 were issued to Mandapam Camp; 24,050 to Tataparai Camp, Tuticorin.

The weekly returns of vaccinators received at this establishment show that a successful case percentage of 98.1 (primary vaccination) was obtained with the lymph issued during the year.

(5) MEDICAL ENTOMOLOGY.

The activities of this division during the year were concerned mainly with malaria research and control, with particular reference to the great epidemic of 1934-35. During the first six months they were largely devoted to investigation and control work over a wide area involving the most severely affected districts; but later, when conditions were less severe, they were restricted to selected centres. Twenty-five of these centres—termed Malaria Observation Stations—are situated in the main epidemic zone, and one of the chief objects of their establishment is to provide accurate information upon variations in malaria conditions, and to enable any such changes as may tend to produce increased malaria prevalence or malaria epidemics to be detected early. The work at these stations has occupied much of the energies of the staff since its inception in July; it will be continued for at least three years when, if successful, it will probably become a permanent feature of the division. In addition to such work relating to the epidemic, the normal investigation and routine work associated with the malaria campaign centres was resumed at the earliest opportunity, and the division also undertook the identification of plague and other rat-fleas collected by Medical Officers of Health from surveys in various parts of the Island.

Since the onset of the epidemic the work of the division has greatly increased. The scope and area of malaria field investigations have been extended and have included, *inter alia*, the formation of many observation stations—some of which are referred to above. This extension of work has thrown a considerable strain upon the staff—particularly the laboratory staff—for several months past; and although an attempt was made to cope with the rapid increase by engaging temporary assistants, the result was unsatisfactory. Laboratory and field assistants require a long period of intensive training before their services become of value, and most of the temporary assistants obtained other and more attractive appointments before this period was completed. Extension of the staff is now urgently required—not only to enable the existing programme of work to be maintained, but to allow for further development of research and for compliance with the many requests for assistance made by local and other authorities, Government departments, and Health Officers.

Malaria Epidemic.—Early in the year the field staff was concentrated in the main epidemic zone, and was engaged upon investigatory work. This included research into the distribution, relative prevalence, and breeding habits of the local anopheline mosquitoes; and into the transmission by them of malaria. Later, when extended mosquito control was undertaken by the Sanitary Engineer, the assistants also acted as intelligence officers searching and examining the river and stream beds and reporting the results of their work direct to the officers in charge of control operations.

An account of the work done from January to May under this head has already been published in a report on "The Ceylon Malaria Epidemic, 1934-35" (Sessional Paper XXII., 1935, pp. 22-26) by the Director of Medical and Sanitary Services.

Malaria Observation Stations.—In June the work of the field staff in relation to the epidemic—then waning—was reorganized. The important part played by the rivers and larger streams in the more intensely affected areas was indisputable; and it was considered essential that endeavour be made to maintain regular observations upon malaria conditions in their vicinity. As stated above, one of the chief objects of the work was to provide data which would allow detection

of the approach of conditions liable to cause increased malaria prevalence or malaria epidemics. The observations to be undertaken were of a comprehensive nature, and were not restricted to entomological work. They included also the study and collection of meteorological data and vital statistics, and epidemiological investigations involving the determination of spleen and parasite rates, gametocyte rates, seasonal variations in these rates in different classes of the communities and in the prevalence of the various species of malaria parasites.

With these objects in view a series of " key-stations ", most of which were intimately associated with the larger rivers, were selected and arrangements made to commence work at an early date. At present work is proceeding at thirty-three stations; twenty-five of these are situated in areas which were severely or very severely affected by the epidemic, and eight in areas which were slightly or not at all affected. The areas represented by the former group of stations include the northern part of the " wet " zone, the " intermediate " climatic zone, and the southern part of the " dry " zone with elevations ranging from sea level to approximately 1,600 feet. The latter group—which was selected as a control—includes two areas in the middle and southern portions of the " wet " zone with elevations ranging from sea level to approximately 500 feet.

The Malaria Observation Stations and their relation to the river systems are as follows:—

Northern Stations (25).—

(1) *Deduru-oya*, upper catchment: Wegama, Ridigama, Hiripitiya, Mallawapitiya; lower catchment: Chilaw.
(2) *Maha-oya*, upper catchment: Aranayaka, Mawanella, Rambukkana, Kegalla; lower catchment: Alawwa, Giriulla, Warakapola.
(3) *Mahaweli-ganga*, western catchment: Katugastota, Peradeniya, Teldeniya, Haragama.
(4) *Attanagala-oya*, Attanagala.
(5) *Kelani-ganga*, upper catchment: Kitulgala, Yatiyantota, Bulathkohupitiya, Pindeniya, Deraniyagala; lower catchment: Avissawella, Hanwella, Pugoda.

Southern Stations (8).—

(6) *Kalu-ganga*, Tebuwana, Mahagama, Matugama, Badureliya.
(7) *Gin-ganga*, Baddegama, Labuduwa, Nagoda, Udugama.

The entomological research at each of these stations at present includes the determination of—

(*a*) The anopheline fauna and variations in the relative prevalence of the adults and larvae of the different species present.
(*b*) The bionomics of the more important or abundant anophelines with special reference to their feeding and breeding habits.
(*c*) The relation of river and stream beds, and of the changes in the conditions therein, to the breeding and prevalence of the malaria carrying species.
(*d*) The mosquito carrier or carriers, seasonal periodicity of their infections with the malaria parasites, and correllation of the results with meteorological and other factors.

Later, when additional staff becomes available, the scope of the investigations at these stations will be extended.

The field work is carried out by the senior and more experienced field officers (Entomological Assistants) of the division, all of whom work to detailed programmes. The stations are grouped in series of four with a field officer in charge of each series; one week each month is spent at each station. The routine field work includes:—

(*a*) Catching and trapping of adult anophelines: examination of village houses and labourers' lines each morning, and trapping in the evenings (from 6 P.M. to 8.30 P.M.) using human and cattle baits. Also collecting from cattle sheds when available.

(*b*) Examination of a selected portion (½ mile) of the river bed. This involves a thorough search for anopheline larvae in all potential breeding places within the bed—the river itself and all pools, both in sand and rocks. Gauges have been attached to bridges at or in the vicinity of the stations, and detailed records on the conditions existing in the river beds are kept.

(*c*) Examination of representative samples of potential breeding places of anophelines (other than the river) in and around the stations. This includes the examination of various types of situations such as paddy fields, wells, pits of all kinds, trenches, drains, streams, and channels.

The field officers carry out the work with the aid of large scale (4-chain) maps. On the completion of the work at each station each month, all material obtained is forwarded, together with a detailed report, to Colombo. The examination of the material (adult anophelines are sent alive for dissection purposes), the maintenance and analysis of the records, and the interpretation and charting of the results is done in the Colombo laboratory. Brief summaries of the findings and of the position in respect of malaria conditions are sent each month to the Senior Medical Officers and Medical Officers of Health in the districts concerned. These investigations are being continued, a complete analysis of the findings and a detailed report will be issued at the end of the first year of work.

Malaria Campaigns.—The Malaria Committee (Departmental) consisting of the Deputy Director of Medical and Sanitary Services, Medical Entomologist, Sanitary Engineer, and Superintendent, Anti-malaria Campaigns, continued to function during the year as the body responsible for the control and administration of the various malaria campaigns. Considerable time was given to the business of the Committee, and several tours of inspection were made to the campaign centres. Entomological field work at these centres was continued on the same lines as described in previous reports. It was, however, interrupted during the months of January to July owing to the need for concentration of the Field Assistants in the epidemic zone. Nevertheless considerable assistance was afforded the officers in charge of the control measures and the entomological field staff not only carried out specific investigations and mosquito surveys, but also took over the work of checking the efficiency of control operations, and the measures adopted to prevent the breeding of anopheline mosquitoes in wells. In all the low-country campaign centres the efficient control of wells has proved an important and difficult problem. Upwards of 3,000 wells of various types exist at these centres and at present there seems little possibility of the early introduction of any method of control which will enable them to be dealt with satisfactorily and permanently. The present method of control by means of larvivorous fish was adopted when it was found that other methods of treatment (systematic oiling, petrolizing, or Paris green applications) were seriously resented by the towns people. Experience proved, however, that the use of larvivorous fish only gave satisfactory results when done intensively and under the most careful supervision; and that if this could not be maintained the breeding of anophelines rapidly increased. Moreover, during periods of severe drought, such as occurred prior to and during the epidemic, the water in many of the wells was reduced so greatly that the fish died and oiling or petrolizing became essential. While, therefore, under normal conditions and by the development of a precise system of work a definite measure of control can be obtained, the method cannot be regarded as one of general application. From the point of view of malaria prevention alone, the provision of piped water supplies and the subsequent elimination of the wells is a matter of considerable urgency in towns where the disease is prevalent.

At Trincomalee, following a mosquito survey (an account of which is given in my report for 1934), control measures were extended to the naval and military areas at Ostenberg. These measures were continued throughout the year, and were confined largely to the low-lying lands in the vicinity of the coast. The military area, however, included an extensive tract of hilly, jungle-clad country containing numerous ravines and small streams; it had not been completely explored and comparatively little was known of its potentialities in regard to the

breeding of anopheline mosquitoes. It was, therefore, not possible to draw up a definite scheme of work with estimates of the costs for this area until further investigations—extending over the rainy season—had been made. These investigations were commenced in November and will be continued until the end of March; they involve thorough exploration of the area, and detection and examination of all streams and other collections of ground water twice each month. At the end of December most of the streams in the ravines were flowing and many pools were present in their beds; water was also present in borrow-pits, quarries, and wells. A total of 108 potential breeding places of anophelines was under observation, but at this time only three breeding places of *A. culicifacies* had been detected. These were immediately treated with oil. On completion of this work, a scheme for the control of the area will be prepared

Mosquito Prevalence in Hospitals.—With a view to obtaining data upon the prevalence of anopheline mosquitoes, and particularly *A. culicifacies*, in hospital wards during the north-east monsoon period collections were made daily in a large number of hospitals by the Medical Officers in charge and the material forwarded to the laboratory for examination. This work was undertaken in connection with Col. C. A. Gill's recommendation (Report on the Malaria Epidemic in Ceylon in 1934-35—Sessional Paper XXIII. of 1935, p. 27) that " in all hospitals in malarious tracts the wards should either be wired or that mosquito nets should be provided for each bed ".

The results for the months of November and December are summarized below :—

Mosquito Prevalence in Hospital Wards.

Province.	Number of Hospitals represented.	Number of Collections received.	Number of Mosquitoes examined.	Number of Anopheles present.	*Anophe'ines* as per Cent. of Total Catch.	*A. culicifacies* as per Cent. of Anopheline Catch.
Western ..	17	438	9,652	433	4·5	0·5
Southern ..	10	289	6,702	1,833	27·3	1·9
Sabaragamuwa	12	266	6,059	345	5·7	5·2
North-Western	10	397	14,096	4,360	30·9	24·7
North-Central ..	2	98	3,684	982	26·6	6·3
Northern ..	7	199	3,855	340	8·8	1·8
Eastern ..	5	141	3,484	177	5·1	1·7
Central ..	19	494	9,159	571	6·2	7·0
Uva ..	11	340	5,690	356	6·3	25·2
Total ..	93	2,662	62,381	9,397	15·1	14·2

Catches of 1,000 mosquitoes or over were received from 23 hospitals, and catches of 100 or more *anophelines* from 15 hospitals. Of 53 hospitals from which collections of over 300 mosquitoes were made, Anophelines formed 10 per cent. or more of the catch in the following :—

Tissamaharama (92.5 per cent. of catch), Nikaweratiya (83.5 per cent.), Ridigama (67.7 per cent.), Deniyaya (64.5 per cent.), Dambulla (47 per cent.), Ramboda (45.5 per cent.); Walasmulla, Anuradhapura, Hambantota (from 25 per cent. to 28 per cent.); Moneragala, Police Hospital, Borella, Talaimannar (from 11 per cent. to 16 per cent.).

Relatively high catches of anophelines were also made in 3 hospitals from which less than 300 mosquitoes were received; these hospitals were Embilipitiya (44.5 per cent.), Mahaoya (31.6 per cent.) and Kaltota (30 per cent.).

Fourteen species of anophelines were included in the collections forwarded, the most numerous being *A. subpictus* (forming 62.8 per cent. of all anopheles collected), *A. culicifacies* (14.4 per cent.), *A. hyrcanus* (10.9 per cent.), *A. karwari* (4.5 per cent.). The majority of the specimens of the last named species were obtained from the hospital at Deniyaya (Southern Province, altitude 1,400 feet). *A. culicifacies* was sent from 18 hospitals in November, and from 22 in December. It was also more numerous in the collections made in December when it formed 17.7 per cent. of the anophelines caught, against 7.4 per cent. in November. This increase, however, was mainly due to the large numbers of this mosquito

received from the hospitals at Nikaweratiya and Ridigama (North-Western Province) during December. These two hospitals, in fact, provided most (81 per cent.) of the specimens (1,335) of this mosquito received during the two months. *A. culicifacies* also occurred with some frequency in the collections sent from the hospitals at Moneragala (Province of Uva) and Dambulla (Central Province).

Rat-Fleas.—During the year rat-flea surveys were carried out in collaboration with Medical Officers of Health at Dodanduwa and Hikkaduwa in the Southern Province, Peliyagoda, Veyangoda, and Kochchikade in the Western Province, and Diyatalawa in the Province of Uva. The rat-flea surveys instituted at Anuradhapura (North-Central Province) in 1932 (see reports for 1933 and 1934) were terminated in June, 1935.

The gross results obtained from these surveys are given in tabular form below:—

Dodanduwa and Hikkaduwa—August, 1935.

	No. of Premises yielding Rat Fleas.	No. of Rats trapped.	No. of Fleas.	General Flea Index.	No. of *X. astia.*	No. of *X. cheopis.*	Per Cent. *X. cheopis.*	*X. astia* Index.	*X. cheopis* Index.
C.*	8	20	32	1·60	30	—	—	1·60	—
R.	42	96	224	2·34	221	—	—	2·30	—
T.	50	116	256†	2·20	251	—	—	2·16	—

* C.—Commercial premises. R.—Residential premises. T.—Total premises.
† 5 specimens damaged—unidentifiable.

No examples of the plague flea (*X. cheopis*) were present in the collections received from Dodanduwa and Hikkaduwa.

Peliyagoda—August, 1935.

	No. of Premises yielding Rat Fleas.	No. of Rats trapped.	No. of Fleas.	General Flea Index.	No. of *X. astia.*	No. of *X. cheopis.*	Per Cent. *X. cheopis.*	*X. astia* Index.	*X. cheopis* Index.
C.	22	114	445	3·95	443	1	0·23	3·89	0·01
R.	34	170	301*	1·77	297	2	0·67	1·75	0·01
T.	56	284	746†	2·63	740	3	0·40	2·61	0·01

* Including 1 Ct. canis ♀.
† 2 specimens damaged, species unidentified.

The general flea index (3.95) for rats trapped in the commercial premises was relatively high, but *X. cheopis* was extremely scanty.

Veyangoda—September, 1935.

	No. of Premises yielding Rat Fleas.	No. of Rats trapped.	No. of Fleas.	General Flea Index.	No. of *X. astia.*	No. of *X. cheopis.*	Per Cent. *X. cheopis.*	*X. astia* Index.	*X. cheopis* Index.
C.	26	66	307	4·65	305	—	—	4·62	—
R.	15	42	103	2·45	102	1	0·98	2·43	0·02
T.	41	108	410*	3·80	407	1	0·24	3·77	0·01

* 2 specimens damaged, species unidentified.

General flea index and *X. astia* index in commercial premises high; a single specimen of *X. cheopsis* present in collections from residential premises.

Kochchikade—September, 1935.

	No. of Premises yielding Rat Fleas.	No. of Rats trapped	No. of Fleas.	General Flea Index.	No. of *X. astia.*	No. of *X. cheopis.*	Per Cent. *X. cheopis.*	*X. astia* Index.	*X. cheopis* Index.
C. ..	10 ..	29 ..	63 ..	2·17 ..	55 ..	8 ..	12·7 ..	1·90 ..	0·28
R. ..	7 ..	15 ..	38 ..	2·53 ..	38 ..	— ..	— ..	2·53 ..	—
T. ..	17	44	101	2·30	93	8	7·9	2·11	0·18

More material is required from this town.

Diyatalawa—December, 1935.

	No. of Premises yielding Rat Fleas.	No. of Rats trapped.	No. of Fleas.	General Flea Index.	No. of *X. cheopis.*	Per Cent. *X. cheopis.*	*X. cheopis* Index.
T*	19 ..	19 ..	90 ..	1·53 ..	56 ..	62·3 ..	0·95

* Premises mainly residential.

X. cheopis and *Leptopsylla segnis* (31 specimens) were the commonest fleas found on rats at Diyatalawa during the survey; but *X. astia* (2 specimens) and *Stivalius phoberus* (1 specimen) also occurred. The *X. cheopis* index was definitely lower than that obtained by Hirst (Ceylon Journal Science, III., 1933, p. 85) for any town, except Nuwara Eliya, in the higher montane zone of Ceylon *X. astia* was not represented.

Anuradhapura—December, 1934-June, 1935.

	No. of Premises yielding Rat Fleas.	No. of Rats trapped.	No. of Fleas.	General Flea Index.	No. of *X. astia.*	No. of *X. cheopis.*	Per Cent. *X. cheopis.*	*X. astia* Index.	*X. cheopis* Index.
C. ..	89 ..	312 ..	761 ..	2·44 ..	249 ..	506 ..	67·0 ..	0·80 ..	1·62
R. ..	19 ..	54 ..	147 ..	2·72 ..	55 ..	91 ..	62·3 ..	1·02 ..	1·68
T. ..	108	366	908*	2·48	304	597	66·3	0·83	1·63

* specimens damaged, species unidentifiable.

The mean general flea index and the mean specific index for *X. astia* were definitely lower than those obtained during the period January to November, 1934. The *X. cheopis* index was similar to that found in the previous year but still remained higher than that (0.41-1.37) given by Hirst for the plague endemic area in Colombo. *X. cheopis* formed 66.3 per cent. of the fleas identified as compared with 56.0 per cent. in 1934, 48.3 per cent. in 1933, and 47.4 per cent. (Hirst) in 1931.

Teaching.—A series of lectures and demonstrations (in the field and laboratory) on Medical Entomology with special reference to Ceylon conditions was given to a training class for Sanitary Inspectors in July.

(6) PUBLICATIONS.

The following papers were published during the year:—

Nicholls, Lucius: (1) The inspectional value of phrynoderma and "Sore Mouth". *Ind. Med. Gaz.* LXX. (1), 14; (2) Nerve and Cord degenaration attributable to vitamin A deficiency, *Ibid.* LXX. (10), 550; (3) Sprue, *Ceylon J. Sci.* (D) III., 3,173.

Wijerama, E. M., and Fernando, P. B., Notes on a case of Atebrin Mussonate poisoning. *Lancet*, Nov., 1935, p. 1056.

Fernando, P. B., and Sandrasegera, A. P.: A clinical study of 647 patients treated for malaria, *Ceylon J. Sci.* (D), III., 4.

Fernando, P. B.: Coronary occlusion in a patient aged 24 years. *Brit. Med. J.* May, 1935, p. 976.

The following publications by officers of the Department appeared in the Journal of the Ceylon Branch of the British Medical Association for 1935:—

Alles, E. C.: The early diagnosis of an acute abdomen.
Attygalle, N.: A commentary on treatment of Placenta of Praevia.
Attygalle, N., and Misso, C. J. L.: Notes on two cases of endometrioma.
Department of Medical and Sanitary Services: Note on Atebrin Mussonate.
Fernando, Simeon: A case of Parenteric Fever due to B. Colombensis.
Gunewardene, H. C. P.: An unusual position of the Appendix due to partial transposition of the large bowel.
Gunewardene, H. O.: Sub-acute Infective Endocarditis.
Hoole, C. G.: (1) Solubility of camphor in coconut oil, (2) A symptom of vitamin deficiency.
Jayasuriya, J. H. F.: The Surgery of the spleen.
Ramanathan, S.: Foreign body in abdominal wall due to misadventure.
Wickramasuriya, G. A. W.: Transplacental foetal infection with malaria.
Wijerama, E. M.: A laboratory survey of the malarial epidemic.

X.—MISCELLANEOUS.

(1) MEDICAL EDUCATION.

The Ceylon Medical College was established in 1870. In 1888 recognition was granted by the General Medical Council of the United Kingdom and the diploma became registrable in Great Britain and all parts of the Empire.

In 1924 the complete extended curriculum of one year's pre-medical study (chemistry, physics, botany, and zoology) which is spent at the University College, and a five years' course in the Medical College was adopted. At the end of the course, the diploma in Medicine, Surgery, and Midwifery is conferred under the designation of L.M.S. (Ceylon).

The College also provides a two years' course of instruction for apothecary students.

The following extracts from the report of the Registrar, Ceylon Medical College, for the year 1935 are given:—

During the year 1935, the reorganization of the Medical College in accordance with the recommendations of the General Medical Council of the United Kingdom continued to progress.

Dr. M. L. Corera, who had been Acting Lecturer in Physiology in place of the late Dr. S. S. Selladurai, left for England in order to obtain some special training in Physiology.

Dr. S. F. Jayawardena, the Demonstrator in Physiology, also left for England for study leave and to obtain special training in Pharmacology.

The College Council decided that the Lecturer in Pharmacology, who should be appointed in succession to Dr. Joseph de Silva, should be attached to the Physiology Department and work under the Professor of Physiology, while a physician on the staff of the General Hospital should give a short course of lectures on therapeutics to fifth year students.

The College lost, by death, the services of Dr. E. T. Samuel, the Demonstrator in Physiology.

Provision for the following new appointments were made at the beginning of the year:—

Lecturer in Pathology—Dr. E. M. Wijerama.
Lecturer in Anatomy—Dr. V. Kathirgamatamby.
Lecturer in Therapeutics—Dr. E. C. Spaar.
Lecturers in Elementary Clinical Pathology and Bacteriology in connection with the pre-clinical class.
Tutorials in Obstetrics—Dr. G. A. W. Wickramasuriya.
Assistant Lecturer in Anatomy—Dr. G. S. Sinnatamby.
Two Assistant Lecturers in Public Health—Dr. S. F. Chellappah, Dr. B. C. Das Gupta.

Three Demonstrators in Parasitology—Dr. E. M. Wijerama, Dr. D. J. T. Liyanage, Dr. S. A. Gunawardena.

Two Demonstrators in Bacteriology—Dr. D. L. J. Kahawita, Dr. D. J. T. Liyanage.

During the absence on leave of Dr. A. M. de Silva and Dr. R. L. Spittel the lectures on Dermatology were given by Dr. M. A. Paul. Dr. R. L. Spittel and Dr. E. C. Spaar resumed their duties on returning from leave in November.

Dr. V. P. de Zoysa was appointed Clinical Instructor (Medical) to Out-patients' Department and Dr. G. S. Sinnatamby resumed duties as Clinical Instructor (Surgical) to Out-patients' Department on return of Dr. Spittel from leave.

Professor W. C. O. Hill resumed duties as Professor of Anatomy in December on returning from leave.

During the absence of Dr. A. M. de Silva on leave Dr. G. S. Sinnatamby acted as Lecturer in Senior Ward Class Surgery and Dr. M. A. Paul as O.P.D. Instructor in Surgery, Operative Surgery, and Assistant Lecturer in Anatomy and Dr. J. H. F. Jayasuriya as Lecturer in Systematic Surgery.

Dr. N. Attygalle was appointed Lecturer in Gynaecology.

The number of students in the college continues to decline somewhat, as a result, among other causes, of the reduction of free training and the continuance of financial stringency in the Island.

The following figures showing the year's work in the College are given:—

Number of students qualified for L.M.S.	27
Number of students admitted who have passed the pre-medical	16
Total number of students on the rolls on October 1, 1934	148
Total number of students on the rolls on January 1, 1935	139
Total number of students on the rolls on May 1, 1935	127

Results of Examination.—Medical.

	1934 December.		1935. March.		1935. June.		1935. July.		1935. September.		Total.	
	Sat.	Passed.	Sat.	Passed.	Sat.	Passed.	Sat.	Passed.	Sat.	Passed.	Sat.	Passed.
Pre-medical	—	—	—	—	34	11	—	—	19	5	53	16
1st Professional	—	—	27	8	—	—	—	—	23	9	50	17
2nd Professionai, Parts I. and II.	—	—	46	25	—	—	27	20	—	—	73	45
Final	8	6	16	10	—	—	20	11	—	—	44	27

Apothecaries.

Number on the rolls in October, 1934	62
Number on the rolls in May, 1935	47
Number admitted during 1935	12

Results of Examinations.

	1934. December.		1935. March.		1935. July.		Total.	
	Sat.	Passed.	Sat.	Passed.	Sat.	Passed.	Sat.	Passed.
1st Apothecaries	—	—	13	12	14	9	27	21
2nd Apothecaries	10	5	13	3	25	12	48	20
Pharmacists	17	7	—	—	—	—	17	7

Results of Midwives' Examinations.

	1934. December.		1935. March.		1935. June.		1935. September.		Total.	
	Sat.	Passed.	Sat.	Passed.	Sat.	Passed.	Sat.	Passed.	Sat.	Passed.
Class I.	4	2	15	10	7	6	7	7	33	25
Class II.	29	28	25	23	24	21	26	19	104	91

Revenue and Expenditure.

	Rs.
Revenue for the financial year	53,405
Expenditure	153,140

(2) KING EDWARD VII. (MEMORIAL) ANTI-TUBERCULOSIS FUND.

The Anti-Tuberculosis Institute in Colombo, the Kandana Sanatorium, and the Kankesanturai Sanatorium were built and equipped from the fund. The balance of the fund—a sum of some Rs. 20,000—has been earmarked for building a children's ward at Kandana, but until Government is in a position to maintain such a ward the money has been placed in fixed deposit at the bank.

It was decided not to close the fund until this ward was erected.

(3) CIVIL MEDICAL STORES.

The folowing extracts from the report of the Superintendent, Civil Medical Stores, are given:—

The beginning of the year was marked by the peak of the malaria epidemic, the effects of which were felt in the working of the stores throughout the year. The extraordinary demand for drugs was unprecedented, but owing to the fact that many products were prepared in the manufacturing section all demands were satisfied.

The premises, congested even at normal times, were not capable of dealing with the greatly increased output and even the outer verandah and yard had to be utilized. Eventually the adjoining premises were taken over and had to be used before they were actually ready. Finally, the bungalow, Temple Villa, was rented as additional premises for the estate section.

The enormous quantities of quinine called for were met by establishing a special section with the result that all requisitions were dealt with on the same day on which they were received. On many occasions the consignments had to be sent to the General Post Office as the local Post Office could not accept the large quantities.

The Instrument Section was transferred to the additional premises. Hospitals were graded into classes by a Committee and scales of surgical instruments and equipment were drawn up with the object of standardization. This should simplify the work of issues to institutions and the keeping of inventories at each hospital.

Owing to the congestion in the Despatch Room, the bungalow, Temple Villa, was rented and all estate work was transferred there. While this has eased the congestion in the Despatch Section the arrangement is very unsatisfactory as the premises are unsuitable causing additional unnecessary labour and requiring additional staff.

The Manufacturing Section has been expanded and the output considerably increased. This was possible as an extra room was taken over and adopted for this purpose.

The congestion in the Despatch Section was eased by the transfer of the Estate Section, but much unnecessary work is caused by unsuitable arrangements of the buildings generally. This is particularly noticeable when carts are loaded.

The system of allocations for each institution for the expenditure of drugs and dressings was introduced in October, in order to deal with the problem of unlimited demands on the stores but it is too early yet to observe the results.

The following statistics which are for the financial year, October, 1934, to September, 1935, are of interest:—

Expenditure: Drugs, dressings, &c., Rs. 394,487; quinine, Rs. 1,278,661; instruments, Rs. 60,395; local purchases, Rs. 67,752; opium, Rs. 42,280; stationery, Rs. 10,042; printed forms, Rs. 29,622; transport of drugs, Rs. 2,157.

The number of requisitions received was—

Civil—drugs, 13,889; instruments, 2,260; stationery and forms, 4,355.

Estate—drugs, 3,588; stationery and forms, 1,454. Total, 25,546.

Quinine.—47,177 pounds of quinine and 4,301,400 tablets were issued costing Rs. 1,014,340.

(4) SALE OF OPIUM TO REGISTERED CONSUMERS AND VEDARALAS.

No depots were closed during 1935. There are now 48 depots in existence. No new consumers were registered during the year.

The total number of registered consumers served from the depots in the Island during the year was 2,601 as against 3,114 in 1934 and 7,792 in 1925.

2,295 consumers obtained eating opium and 306 obtained smoking opium as against 2,797 and 317 respectively in 1934 and 7,170 and 622 respectively in 1925.

There were 3,419 registered vedaralas entitled to buy opium for medicinal puposes as compared with 3,532 in 1934 and 3,464 in 1933.

657 pounds of eating opium were sold to registered consumers and 215 pounds to vedaralas, which realized a total of Rs. 91,656.51 as against 846; 236; and Rs. 113,420.95 in 1934 respectively.

114 pounds of smoking opium were sold to consumers during the year which realized Rs. 15,687.92, as compared with 140 pounds in 1934 which realized Rs. 19,537.88.

The total amount realized by the sale of eating and smoking opium was Rs. 107,344.43 as against Rs. 132,958.83 in 1934. The decrease in the sales is due to the 5 per cent. annual reduction in the opium allowed to consumers and to deaths among opium consumers.

The selling price of opium—eating opium 1½ cents per grain and smoking opium 2 cents per grain—remain unchanged.

The above figures show clearly that the number of consumers and the quantity consumed are decreasing year by year.

(5) BUILDING REQUIREMENTS.

It is disappointing again to record the very slight progress made with the Department's building programme. During the past five or six years small extensions and improvements to existing hospitals have been made, but no new buildings of importance have been undertaken except the Home for Pupil Midwives at the De Soysa Lying-in Home, the Nurses' Home at the General Hospital, and the Bacteriological Institute. These new buildings are all in Colombo and the first of them was completed towards the end of 1935, while the other two should be finished in 1937. A small Technical Committee appointed by the Executive Committee of Health made recommendations for the acquisition of land in the neighbourhood of the chief medical institutions in Colombo—the General Hospital, the Eye Hospital, the Dental Institute, the Lying-in Home, the Medical College, the Medical Stores, &c.—so that careful planning for the layout of the future expansion and remodelling of these institutions may be undertaken.

Suitable new sites on which to rebuild the hospitals at Kandy, Kalutara, Panadure, Ratnapura, Balapitiya, and Hambantota have been found, but the process of acquisition is slow and it will probably be several years before any of these old hospitals, some of which date back 80 or 90 years, are rebuilt. In the meantime the state of gross overcrowding with all its attendant evils is likely to continue at most of these hospitals. Other important hospitals, particularly those of Kurunegala, Jaffna, Badulla, Galle, Matara, Tangalla, and Negombo, require much remodelling and extension before they will meet the needs of their districts, and much attention was given during the year to the preparation of plans.

(6) GENERAL REMARKS.

Owing to the great epidemic of malaria, 1935 stands out as the most unhealthy year that Ceylon has experienced during the period for which vital statistics are available. Brief reference to the epidemic is made in Section III. A 1 and a full account of it up to the end of April, 1935, was published as a special Departmental Report last September (Sessional Paper XXII.—1935). The effect on the

birth and death rates is shown in Section II. B. Throughout the whole year the amount of sickness remained at an abnormally high level and most hospitals were seriously overcrowded and dispensaries heavily attended, and they are likely to continue so during the greater part of 1936. It was not until March, 1936, that the last temporary hospitals and malaria treatment centres were closed.

In no previous year has so great and continuous a strain been placed on the staff of the Department. Week after week and month after month they continued to work at high pressure for long hours each day, without respite even on Sundays or public holidays. Ordinary leave was cancelled and many officers and employees themselves suffering from the effects of malaria could not be granted sick leave since replacements were not to be found.

The inherent soundness of the Department's organization was shown by the rapidity with which it was able to expand to meet an altogether unprecedented situation. In spite of the absorption of very large numbers of temporary and inexperienced personnel no serious breakdown in organization occurred anywhere and the only normal activities which were temporarily suspended were the hookworm campaign and the school medical work in the epidemic area.

The epidemic also tested and demonstrated the usefulness of the changes started in 1932 which placed each Provincial Surgeon in charge of all the department's activities—health as well as medical—in his Province and gave him the authority to act on his own initiative and mobilize promptly the medical resources of his Province to meet a sudden emergency.

From April to September the Department had the benefit of the presence and help of Colonel C. A. Gill, I.M.S., who visited Ceylon in the capacity of Expert Adviser on Malaria. His valuable report (Sessional Paper XXIII.—1935) has received the most careful study and the State Council has already accepted a number of the recommendations made by him. It is generally realized that much investigation and experimental work must be done in Ceylon before economical and practical measures to control malaria can be formulated. The proposal to set up a Malaria Institute for research and investigation into local malaria problems is therefore important and such an institute will be the first step in any serious attempt to deal with the disease which more than any other has so great an adverse influence on the health and prosperity of the larger part of the Island.

One practical procedure resulting from the epidemic is that each Provincial Surgeon two days after the end of the week has the week's dispensary attendances for malaria and other diseases charted in his office, so that any rise is immediately apparent and energetic measures can be set in motion by him without delay. Similar figures and charts for each district in Ceylon are also maintained in the Head Office of the Department and afford a useful index of the state of the health of the Island week by week.

The necessity for giving a sound training to officers appointed to the technical branches of the Department has been stressed in this report on several occasions in recent years. The improvements which have taken place in the Medical College since Colonel Sir Richard Needham's inspection in 1932 on behalf of the General Medical Council have done much to put the training of future Medical Officers of the Department on a satisfactory footing. The apothecaries' course however still remains inadequate; two years is too short a period for an apothecary student to acquire a detailed knowledge of pharmacy and a working knowledge of minor medicine and surgery, and far reaching changes are needed to make his instruction more comprehensive and practical. The building of the Nurses' Home at the General Hospital will, in a few years' time, enable the training of nurses to be placed on a much sounder basis than at present, while the completion of the Home for Pupil Midwives and the starting of the extensions to the Lying-in Home will soon lead to a higher standard of instruction for midwives. The question of raising the standard of general education of pupil midwives and extending their period of training is under consideration. In Section III. C mention is made of the course of instruction given to sanitary inspector candidates. This course which extended from May to November was the first to be held for seven years; 30 very suitable candidates were selected from some 1,200 applicants and the arrangements for and level of instruction both in the lecture room and in the field

were much superior to those for any similar course held previously. It is satisfactory to note that the syllabus of training was recognized by the Royal Sanitary Institute and that the candidates were permitted to take the examination for the certificate of that institute.

Very extensive investigations into the subject of diets and nutritional deficiencies of the local population were started nearly three years ago by the Director, Bacteriological Institute (Section IX.). These investigations are still proceeding. Samples of Ceylon vegetables and other foodstuffs have been sent to the Pharmaceutical Laboratory in London for chemical analysis and biological assays for vitamins A and B (complex). The reports of the results of these examinations will be of great interest and importance.

The overcrowding of hospitals in Ceylon is a matter that needs serious and early consideration. During the malaria epidemic it was inevitable that many hospitals should be grossly overcrowded, but in normal times a hospital should not be required to accommodate a number of patients greater than that for which it is planned, equipped, and staffed. To overfill a hospital is fair neither to the patients nor to the staff. In England it is usual to refuse to take in patients in excess of the number of beds in the wards, except when the admission of a patient is urgently necessary. In Ceylon, however, the principle followed has been to admit every patient who seeks admission in spite of the overcrowding which may result therefrom. To refuse admission even to patients with merely trivial illnesses or injuries or to those who only require food and rest leads to petitions and complaints. The adoption of a stricter standard of admission to overfilled hospitals and the refusal of in-patient treatment in such hospitals to persons who in the opinion of the medical officer can be treated as out-patients would help to relieve the situation and would not prejudice the public health, although the change would be unpopular with the public. But in many districts the hospital accommodation is frankly insufficient and the excuse of lack of funds should no longer be allowed to interfere with the carrying out of the hospital building programme in towns such as Colombo, Kandy, Kalutara, Ratnapura, and Panadure. To permit, therefore, of reasonable standards of care and treatment in Government hospitals gross overcrowding should cease to be allowed. In each hospital when overcrowding normally exists stricter conditions of admission should be adopted however unpopular they may prove, and in districts where the hospital accommodation is admittedly inadequate the building programme should be expedited.

In institutions such as a lunatic asylum where patients remain not merely for a few days a week but months or years a high death rate among the inmates follows and is an index of the evil results of overcrowding.

During the past ten years the number of patients maintained by Government in the Asylum has increased from 1,300 to 2,600. Year after year the gross state of overcrowding in the Lunatic Asylum has been referred to in this report. The number is likely to go on increasing if the present system with regard to the admission and discharge of patients is to continue, and money must be found to provide accommodation not only for the 800 or 900 patients who are already in excess of the 1,830 for whom the present Asylum buildings were designed but for the yearly increase of nearly 200 patients. If further accommodation is to be provided, the present institution should not be extended but new institutions built, since an asylum cannot be efficiently managed when the number of patients exceeds about 1,000. The other alternative would be to restrict admissions and limit the number of inmates to what the Asylum can accommodate with a reasonable degree of decency. To do so would require radical alteration of the Lunacy Ordinance so as to give powers to the medical authorities to determine which patients might reasonably be cared for at home by their relatives. The extent to which Government should accept responsibility for feeble-minded and mentally defective persons as opposed to dangerous lunatics needs to be defined.

A new X'ray installation was obtained for the Galle Hospital. One for Jaffna Hospital will be installed soon.

The number of opium consumers have steadily decreased from 24,205 in 1910 to 2,601 in 1935. The quantity of Government opium sold to consumers and

vedaralas has also decreased from 10,886 lb. in 1911 to 872 lb. in 1935. As stated in the 1934 report, Ceylon has rigidly carried out its obligations under the Hague and Geneva Conventions.

As stated in the 1934 report the subject of tuberculosis in Ceylon is receiving careful consideration. Steps have been taken to take over the late Mr. Hawkes' bungalow and estate at Bandarawela to be used as a sanatorium for paying patients suffering from early pulmonary tuberculosis. Plans have been prepared to build an annexe to accommodate 18 patients and for quarters for resident staff. It is expected that provision will be included in the next year's budget for these buildings. Provision of a special tuberculosis section in the Hambantota Hospital for non-paying patients from the Southern Province and its neighbourhood has been postponed for the next year. The building of a children's section at the Kandana Sanatorium out of money still remaining from the King Edward VII. Memorial Fund will be started in 1936.

The precautions taken to prevent the disease of cerebro-spinal meningitis which occurred in epidemic form in Northern India coming to Ceylon have proved successful. As usual only 4 sporadic cases of this disease occurred in Ceylon in 1935.

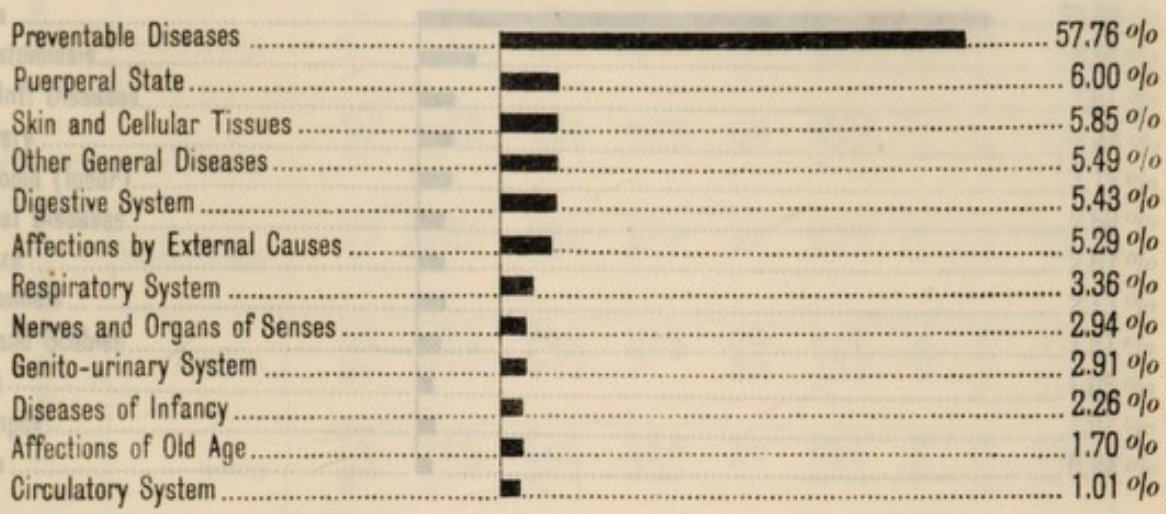
The leprosy problem in Ceylon was very thoroughly investigated by Dr. R. G. Cochrane, lately Secretary of the Empire Leprosy Relief Association, in his visit early in 1933. As the result of his investigations and advice a new policy has been adopted since 1933 and is being continued. As a result of a second visit of one month by Dr. Cochrane in November, 1935, the leprosy question has received a further exhaustive review. During this visit Dr. Cochrane has (*a*) examined the measures adopted since his first report was issued with a view to determining whether the recommendations then made are justified in the light of further knowledge and experience, (*b*) studied further the development or retrogression of lesions seen in children in 1933 and made a further field study of childhood lerprosy, (*c*) reviewed work already done and visited Southern and Western Provinces, and (*d*) suggested (1) lines along which an anti-leprosy campaign can be organized and (2) a system which in the course of the next decade would give further light on the epidemiology and control of leprosy. His valuable advice and suggestions will be of great importance to the control of leprosy in Ceylon.

S. T. GUNASEKARA,
Acting Director of Medical and Sanitary Services.

Colombo, June 25, 1936.

A--Chart showing the General Systemic and Preventable Diseases treated at the Government Hospitals during the year 1935.

Total Cases 395,116.



B--Chart showing deaths from General Systemic and Preventable Diseases treated at the Government Hospitals during the year 1935.

Total Deaths 26,673.

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C--Chart showing cases of Infectious Diseases treated at the Government Hospitals during the year 1935.

Total Cases 228,212.

D--Chart showing deaths from Infectious Diseases at the Government Hospitals during the year 1935.

Total Cases 14,311.

I.—Hospital Returns.

Province and District.	No. of hospitals.	No. of beds.	No. of patients remaining in hospital at the beginning of the year 1935.	No. of patients admitted during the year 1935.	Daily average No. of patients in hospital during the year 1935.	Attendants.					Patients discharged.			No. of patients who died in 1935.	Average stay of patients, who			Specify the longest period for which any one inmate has stayed.
						Nurses doing no other work.		Servants partially or not at all employed as nurses.							Died in 1935.	Were discharged in 1935.	Were remaining in 1935.	
						Day nurses.	Night nurses.	Not nurses.	Partial day nurses.	Partial night nurses.	Cured.	Relieved.	Not improved.					
Western Province.																		
Colombo ..	19	4,819	3,507	86,452	6,128·82	490	97	530	237	72	29,239	39,887	8,192	7,400	100·44	48·52	84·92	4031
Kalutara ..	5	464	488	19,339	498·60	10	—	28	15	2	6,869	11,182	341	1,114	7·49	8·81	10·22	127
Central Province.																		
Kandy ..	13	1,131	1,262	65,576	1,475·98	78	13	72	36	20	39,579	19,979	1,606	4,447	8·65	10·31	10·39	357
Matale ..	2	239	277	9,565	248·62	4	—	16	5	5	291	8,336	124	838	9·07	9·99	10·55	94
Nuwara Eliya ..	8	389	335	16,418	312·74	11	1	36	—	2	9,192	6,322	141	700	8·91	9·03	11·65	837
Southern Province.																		
Galle ..	5	491	373	16,423	444·84	28	4	60	—	1	6,642	8,063	676	991	13·56	14·71	8·30	148
Matara ..	2	177	224	9,996	234·23	4	—	14	—	3	6,127	3,167	252	519	9·58	8·25	8·51	114
Hambantota ..	4	185	179	7,599	208·33	2	—	21	—	—	2,610	4,343	138	484	8·22	10·14	9·98	93
Northern Province.																		
Jaffna ..	6	327	226	9,866	280·54	12	4	44	—	4	2,407	6,635	357	367	9·64	23·51	27·25	365
Mannar ..	3	130	79	3,230	79·20	2	—	24	—	—	2,298	681	53	177	4·94	11·81	5·57	90
Mullaittivu ..	2	62	53	1,898	46·18	—	—	6	7	—	1,059	697	22	107	6·71	8·81	7·56	77
Eastern Province.																		
Batticaloa ..	5	347	317	4,137	342·92	13	3	21	—	—	767	3,051	137	231	453·28	217·96	96·79	5146
Trincomalee ..	1	57	62	2,532	65·05	3	—	9	—	—	521	1,816	81	113	11·29	8·76	7·82	197
North-Western Province.																		
Kurunegala ..	5	672	763	25,105	681·12	1	—	23	9	—	7,083	15,812	277	2,809	5·19	6·85	4·52	354
Puttalam ..	2	82	80	2,423	72·91	6	1	10	—	—	367	1,804	40	217	7·51	11·32	12·07	96
Chilaw ..	2	167	149	6,477	173·09	2	—	3	14	2	4,116	1,625	52	633	9·13	9·59	10·63	98
North-Central Province.																		
Anuradhapura ..	3	196	229	8,491	223·93	4	1	34	—	—	3,553	4,020	273	665	11·72	10·42	11·37	149
Province of Uva.																		
Badulla ..	12	710	633	28,729	622·55	14	2	37	30	7	10,584	16,679	511	1,215	8·31	8·47	8·24	253
Province of Sabaragamuwa.																		
Ratnapura ..	7	512	620	23,416	590·36	15	—	50	—	4	11,327	10,183	417	1,452	8·19	11·07	12·07	231
Kegalla ..	6	736	632	36,956	617·92	11	—	24	31	7	6,622	27,596	762	2,194	5·87	7·04	6·52	139
Total ..	112	11,893	10,488	384,628	13,347·93	710	126	1,062	384	129	151,253	191,878	14,452	26,673	40·84	21·71	17·14	5146

II.—Cases treated according to Diseases.

Diseases.	Remaining in Hospital at end of 1934.	Admissions in 1935.	Deaths in 1935.	Total Cases treated in 1935.	Remaining in Hospital at end of 1935.
I.—Epidemic, Endemic, and Infectious Diseases.					
Enteric Group—					
(a) Typhoid Fever	89	2,023	487	2,112	171
(b) Paratyphoid A	8	21	10	29	—
(c) Paratyphoid B	5	11	2	16	—
(d) Type not defined	22	208	44	230	8
Relapsing Fever	—	19	3	19	—
Undulant Fever	3	20	5	23	2
Malaria—					
(a) Tertian	3,199	139,482	3,315	142,681	1,916
(b) Quartan	23	2,131	65	2,154	15
(c) Aestivo-autumnal	66	2,173	33	2,239	96
(e) Cerebral Malaria	22	1,377	940	1,399	9
(e) Cachexia	76	12,754	979	12,830	316
(f) Blackwater	—	20	15	20	10
Smallpox	5	61	9	66	—
Measles	10	260	8	270	12
Whooping Cough	11	161	6	172	5
Diphtheria	3	81	23	84	4
Influenza	66	6,037	157	6,103	156
Mumps	8	999	1	1,007	38
Cholera	—	40	25	40	—
Dysentery—					
(a) Amoebic	198	4,289	803	4,487	126
(b) Bacillary	101	1,566	282	1,667	39
(c) Undefined or due to other causes	79	1,625	344	1,704	26
Plague—					
(a) Bubonic	1	34	25	35	1
(b) Pneumonic	—	1	1	1	—
(c) Septicaemic	—	10	10	10	—
(d) Undefined	—	1	1	1	—
Leprosy	895	366	97	1,261	952
Erysipelas	8	260	27	268	12
Acute Poliomyelitis	—	2	—	2	—
Encephalitis Lethargica	—	7	5	7	1
Epidemic Cerebro-spinal Fever	—	4	2	4	—
Other Epidemic Diseases—					
(a) Rubeola (German Measles)	—	1	—	1	—
(b) Varicella (Chickenpox)	44	2,251	5	2,295	74
(c) Kala-azar	—	1	1	1	—
(d) Dengue	—	1	—	1	—
(e) Yaws	11	975	3	986	26
Rabies	—	52	40	52	—
Tetanus	11	322	144	333	9
Tuberculosis, Pulmonary and Laryngeal	486	4,365	1,382	4,851	593
Tuberculosis of the Meninges or Central Nervous System	—	60	30	60	1
Tuberculosis of the Intestines or Peritoneum	10	88	33	98	9
Tuberculosis of the Vertebral Column	1	34	—	35	—
Tuberculosis of Bones and Joints	2	42	3	44	2
Tuberculosis of other organs—					
(a) Skin or Subcutaneous Tissue (Lupus)	5	58	6	63	—
(b) Bones	1	21	1	22	2
(c) Lymphatic System	8	184	10	192	3
(d) Genito-urinary	—	12	—	12	14
(e) Other organs	1	21	2	22	1

II.—Cases treated according to Diseases—*contd.*

Diseases.	Remaining in Hospital at end of 1934.	Admissions in 1935.	Deaths in 1935.	Total Cases treated in 1935.	Remaining in Hospital at end of 1935.
I.—EPIDEMIC, ENDEMIC, AND INFECTIOUS DISEASES—*contd.*					
Tuberculosis disseminated—					
(*a*) Acute	—	34	5	34	4
(*b*) Chronic	1	62	22	63	2
Syphilis—					
(*a*) Primary	30	975	5	1,005	28
(*b*) Secondary	20	612	4	632	19
(*c*) Tertiary	—	189	6	189	3
(*d*) Hereditary	4	101	47	105	2
(*e*) Period not indicated	5	166	2	171	6
Soft Chancre	8	157	—	165	8
A.—Gonorrhoea and its complications	70	3,061	21	3,131	105
B.—Gonorrhoeal Ophthalmia	1	15	—	16	—
C.—Gonorrhoeal Arthritis	12	691	13	703	27
D.—Granuloma Venereum	1	31	—	32	—
Septicaemia	1	112	70	113	—
Filarial Diseases	—	41	1	41	1
Acute Rheumatic Fever	2	144	7	146	5
Other Infectious Diseases	6	109	5	115	2
II.—GENERAL DISEASES NOT MENTIONED ABOVE.					
Cancer or other malignant Tumours of the Buccal Cavity	11	398	34	409	20
Cancer or other malignant Tumours of the Stomach or Liver	1	58	15	59	—
Cancer or other malignant Tumours of the Peritoneum, Intestines, Rectum	1	32	9	33	1
Cancer or other malignant Tumours of the Female Genital Organs	7	298	27	305	17
Cancer or other malignant Tumours of the Breast	5	58	8	63	5
Cancer or other malignant Tumours of the Skin	2	61	24	63	1
Cancer or other malignant Tumours of Organs not specified	26	321	20	347	19
Tumours non-malignant	16	710	20	726	23
Chronic Rheumatism	51	3,592	14	3,643	86
Scurvy (including Barlow's Disease)	—	1	—	1	—
Pellagra	—	—	—	—	—
Rickets	1	237	72	238	26
Diabetes (not including Insipidus)	28	389	73	417	9
Beri-Beri	—	1	1	1	—
Anaemia—					
(*a*) Pernicious	9	377	61	386	4
(*b*) Other Anaemias and Chlorosis	20	1,020	85	1,040	21
Diseases of the Pituitary Body	4	1	—	5	—
Diseases of the Thyroid Gland—					
(*a*) Exophthalmic Goitre	—	13	1	13	—
(*b*) Other diseases of the Thyroid Gland, Myxoedema	2	51	2	53	1
Diseases of the Para-Thyroid Glands	1	3	—	4	—
Diseases of the Thymus	—	—	—	—	—
Diseases of the Supra-Renal Glands	—	2	—	2	—
Diseases of the Spleen	—	53	3	53	2

II.—Cases treated according to Diseases—*contd.*

Diseases.	Remaining in Hospital at end of 1934.	Admissions in 1935.	Deaths in 1935.	Total Cases treated in 1935.	Remaining in Hospital at end of 1935.
II.—General Diseases not mentioned above—*contd.*					
Leukaemia—					
(*a*) Leukaemia	—	10	4	10	—
(*b*) Hodgkin's Disease	—	10	2	10	—
Alcoholism	—	31	—	31	—
Corrosive Acids	1	45	9	46	1
Metallic Poisons	—	5	—	5	—
Vegetable Alkaloids	—	45	1	45	—
Ptomaine Poisoning	—	10	1	10	—
Other Acute Poisonings	—	50	2	50	—
Other General Diseases—					
Auto-intoxication	8	255	23	263	—
Purpura Haemorrhagica	—	3	1	3	—
Haemophilia	—	3	—	3	—
Diabetes Insipidus	—	34	4	34	—
Undefined	29	1,102	7	1,131	—
III.—Affections of the Nervous System and Organs of the Senses.					
Encephalitis (not including Encephalitis Lethargica)	1	26	10	27	2
Meningitis (not including Tuberculous Meningitis or Cerebro-spinal Meningitis)	2	81	55	83	4
Locomotor Ataxia	1	202	17	203	5
Other affections of the Spinal Cord	3	100	9	103	5
Apoplexy—					
(*a*) Haemorrhage	—	105	67	105	2
(*b*) Embolism	—	25	12	25	3
(*c*) Thrombosis	3	111	43	114	7
Paralysis—					
(*a*) Hemiplegia	24	338	70	362	20
(*b*) Other Paralysis	15	220	30	235	13
General Paralysis of the Insane	—	9	1	9	1
Other forms of Mental Alienation	5	155	4	160	5
Epilepsy	7	310	23	317	10
Eclampsia, Convulsions (non-puerperal) 5 years or over	2	61	10	63	2
Infantile Convulsions	7	508	208	515	4
Chorea	—	11	1	11	—
A.—Hysteria	7	276	1	283	6
B.—Neuritis	3	445	2	448	16
C.—Neurasthenia	2	236	3	238	2
Cerebral Softening	1	15	6	16	—
Other affections of the Nervous System, such as Paralysis Agitans	15	309	12	324	14
Affections of the Organs of Vision—					
(*a*) Diseases of the Eye	107	1,689	14	1,796	102
(*b*) Conjunctivitis	45	2,167	4	2,212	23
(*c*) Trachoma	—	22	—	22	—
(*d*) Tumours of the Eye	1	80	—	81	11
(*e*) Other affections of the Eye	144	2,962	10	3,106	118
Affections of the Ear or Mastoid Sinus	12	715	24	727	29

II.—Cases treated according to Diseases—*contd.*

Diseases.	Remaining in Hospital at end of 1934.	Admissions in 1935.	Deaths in 1935.	Total Cases treated in 1935.	Remaining in Hospital at end of 1935.
IV.—AFFECTIONS OF THE CIRCULATORY SYSTEM.					
Pericarditis	1	53	24	54	—
Acute Endocarditis or Myocarditis	2	121	40	123	3
Angina Pectoris	2	28	2	30	2
Other Diseases of the Heart	—	47	1	47	—
(*a*) Valvular—Mitral	28	885	258	913	24
Aortic	—	55	25	55	2
Tricuspid	—	—	—	—	—
Pulmonary	—	40	6	40	3
(*b*) Myocarditis	14	826	314	840	20
Diseases of the Arteries—					
(*a*) Aneurism	1	6	2	7	—
(*b*) Arterio-Sclerosis	1	65	6	66	5
(*c*) Other diseases	—	18	2	18	1
Embolism or Thrombosis (non-cerebral)	—	28	14	28	—
Diseases of the Veins—					
Haemorrhoids	14	707	12	721	21
Varicose Veins	—	24	—	24	—
Phlebitis	3	50	7	53	4
Diseases of the Lymphatic System—					
Lymphangitis	5	109	—	114	7
Lymphadenitis, Bubo (non-specific)	7	307	—	314	5
Other	—	—	—	—	—
Haemorrhage of undetermined cause	—	68	19	68	1
Other affections of the Circulatory System	6	440	108	446	7
V.—AFFECTIONS OF THE RESPIRATORY SYSTEM.					
Diseases of the Nasal Passages—					
Adenoids	1	140	1	141	3
Polypus	1	53	—	54	—
Rhinitis	3	145	2	148	3
Coryza	—	29	—	29	—
Affections of the Larynx-Laryngitis	1	89	15	90	1
Bronchitis—(*a*) Acute	54	3,260	154	3,314	98
(*b*) Chronic	63	2,863	182	2,926	81
Broncho-Pneumonia	38	2,733	1,026	2,771	60
Pneumonia—(*a*) Lobar	92	7,087	2,894	7,179	165
(*b*) Unclassified	20	736	285	756	17
Pleurisy, Empyema	28	793	128	821	34
Congestion of the Lungs	—	16	5	16	—
Gangrene of the Lungs	—	38	18	38	1
Asthma	27	2,017	52	2,044	58
Pulmonary Emphysema	1	18	—	19	—
Pneumothorax	1	12	4	13	1
Other affections of the Lungs—Pulmonary Spirochaetosis	2	104	18	106	—
VI.—DISEASES OF THE DIGESTIVE SYSTEM.					
A.—Diseases of Teeth or Gums—					
Caries, Pyorrhoea, &c.	9	785	7	794	10
B.—Other affections of the Mouth—					
Stomatitis	2	392	13	394	8
Glossitis, &c.	—	37	5	37	—

II.—Cases treated according to Diseases—*contd.*

Diseases.	Remaining in Hospital at end of 1934.	Admissions in 1935.	Deaths in 1935.	Total Cases treated in 1935.	Remaining in Hospital at end of 1935.
VI.—Diseases of the Digestive System—*contd.*					
Affections of the Pharynx or Tonsils—					
Tonsillitis	7	677	15	684	8
Pharyngitis	—	206	22	206	2
Affections of the Oesophagus	—	33	2	33	2
A.—Ulcer of the Stomach	3	127	18	130	1
B.—Ulcer of the Duodenum	1	32	6	33	1
Other affections of the Stomach—					
Gastritis	19	1,082	17	1,101	18
Dyspepsia, &c.	10	1,176	6	1,186	20
Diarrhoea and Enteritis—					
Under two years	23	1,335	329	1,358	42
Diarrhoea and Enteritis—					
Two years and over	165	6,122	1,380	6,287	95
Colitis	108	2,868	448	2,976	112
Ulceration	2	16	6	18	—
Sprue	1	25	—	26	3
Ankylostomiasis	422	14,674	1,061	15,096	374
Diseases due to Intestinal Parasites—					
(*a*) Cestoda (Taenia)	—	32	—	32	1
(*b*) Trematoda (Flukes)	—	—	—	—	—
(*c*) Nematoda (other than Ankylostoma)—					
Ascaris	36	2,117	214	2,153	52
Trichocephalus Dispar	—	—	—	—	—
Trichina	—	—	—	—	—
Dracunculus	—	6	2	6	—
Oxyuris	—	4	—	4	—
(*d*) Coccidia	—	—	—	—	—
(*e*) Other parasites	3	292	57	295	7
(*f*) Unclassified	1	97	8	98	9
Appendicitis	21	714	30	735	27
Hernia	29	768	25	797	35
A.—Affections of the Anus Fistula, &c.	17	693	8	710	14
B.—Other affections of the Intestines	3	27	5	30	1
Enteroptosis	—	67	23	67	—
Constipation	10	1,221	1	1,231	21
Acute Yellow Atrophy of the Liver	—	9	4	9	—
Hydatid of the Liver	—	8	4	8	—
Cirrhosis of the Liver—					
(*a*) Alcoholic	10	262	87	272	9
(*b*) Other forms	4	290	77	294	11
Biliary Calculus	—	38	13	38	1
Other affections of the Liver—					
Abscess	2	219	22	221	2
Hepatitis	2	339	14	341	12
Cholecystitis	5	85	7	90	4
Jaundice	3	247	38	250	4
Diseases of the Pancreas	1	12	1	13	—
Peritonitis (of unknown origin)	2	162	56	164	—
Other affections of the Digestive System	20	1,780	67	1,800	26

II.—Cases treated according to Diseases—*contd.*

Diseases.	Remaining in Hospital at end of 1934.	Admissions in 1935.	Deaths in 1935.	Total Cases treated in 1935.	Remaining in Hospital at end of 1935.
VII.—DISEASES OF THE GENITO-URINARY SYSTEM (non-venereal).					
Acute Nephritis	101	2,097	417	2,198	55
Chronic Nephritis	62	2,035	430	2,097	97
A.—Chyluria	—	6	—	6	1
B.—Schistosomiasis	—	9	2	9	—
Other affections of the Kidneys, Pyelitis, &c.	13	775	68	788	20
Urinary Calculus	4	241	6	245	4
Diseases of the Bladder-Cystitis	10	570	27	580	14
Diseases of the Urethra—					
(*a*) Stricture	11	445	15	456	6
(*b*) Other	18	816	4	834	21
Diseases of the Prostate—					
Hypertrophy	5	98	1	103	7
Prostatitis	1	83	3	84	—
Diseases (non-venereal) of the Genital Organs of Man—					
Epididymitis	5	121	—	126	3
Orchitis	6	303	2	309	13
Hydrocele	17	347	—	364	3
Ulcer of Penis	4	178	—	182	15
Other	3	213	—	216	1
Cysts or other non-malignant Tumours of the Ovaries	—	351	9	351	2
Salpingitis	1	117	1	118	3
Abscess of the Pelvis	3	115	5	118	2
Uterine Tumours (non-malignant)	3	63	—	66	1
Uterine Haemorrhage (non-puerperal)	4	126	1	130	3
A.—Metritis	3	98	—	101	1
B.—Other affections of the Female Genital Organs—					
Displacement of Uterus	11	675	3	686	30
Amenorrhoea	1	186	—	187	4
Dysmenorrhoea	—	141	1	141	2
Leucorrhoea	4	358	1	362	6
Other undefined	9	426	1	435	5
Diseases of the Breast (non-puerperal)—					
Mastitis	—	62	1	62	—
Abscess of Breast	9	190	3	199	15
VIII.—PUERPERAL STATE.					
A.—Normal Labour	480	15,382	141	15,862	462
B.—Accidents of Pregnancy—					
(*a*) Abortion	15	1,060	16	1,075	14
(*b*) Ectopic Gestation	3	50	4	53	1
(*c*) Other accidents of Pregnancy	78	2,274	159	2,352	65
Puerperal Haemorrhage	3	61	25	64	—
Other accidents of Parturition	4	387	86	391	7
Puerperal Septicaemia	55	1,299	370	1,354	42
Phlegmasia Dolens	—	35	7	35	1
Puerperal Eclampsia	13	356	78	369	9
Sequelae of Labour	18	606	29	624	27
Puerperal affections of the Breast	—	25	—	25	2
Pregnancy (ante-natal)	44	2,456	111	2,500	19

II.—Cases treated according to Diseases—*contd.*

Diseases.	Remaining in Hospital at end of 1934.	Admissions in 1935.	Deaths in 1935.	Total Cases treated in 1935.	Remaining in Hospital at end of 1935.
IX.—Affections of the Skin and Cellular Tissues.					
Gangrene	30	347	111	377	29
Boil	3	27	3	30	1
Carbuncle	10	329	9	339	14
Abscess	16	150	1	166	6
Whitlow	81	2,669	37	2,750	83
Cellulitis	145	5,743	490	5,888	350
A.—Tinea	34	82	—	116	2
B.—Scabies	49	3,974	6	4,023	159
Ulcer	224	6,430	50	6,654	235
Other Diseases of the Skin—					
Brythema	3	278	6	281	5
Urticaria	1	164	1	165	5
Eczema	30	1,918	1	1,948	49
Herpes	—	93	—	93	8
Psoriasis	4	151	2	155	1
Elephantiasis	4	59	4	63	2
Myiasis	—	6	3	6	27
Chigoes	6	307	—	313	15
Cutaneous Leishmaniasis	36	930	12	966	41
Other undefined	47	2,737	15	2,784	93
X.—Diseases of Bones and Organs of Locomotion (other than Tuberculous).					
Diseases of Bones—Osteitis	27	271	8	298	24
Diseases of Joints—Arthritis	29	1,008	14	1,037	48
Synovitis	4	153	—	157	6
Other Diseases of Bones or Organs of Locomotion	5	160	10	165	9
XI.—Malformations.					
Malformations—Hydrocephalus	—	13	2	13	1
Hypospadias	2	2	—	4	—
Spina Bifida, &c.	—	7	2	7	1
XII.—Diseases of Infancy.					
Congenital Debility	149	7,220	878	7,369	127
Premature Birth	4	450	313	454	1
Other affections of Infancy	22	766	250	788	15
Infant neglect (infants of three months or over)	2	287	49	289	3
XIII.—Affections of Old Age.					
Senility—Senile Dementia	137	6,785	1,086	6,922	140
XIV.—Affections produced by External Causes.					
Suicide by Poisoning	—	4	2	4	—
Corrosive Poisoning (intentional)	—	20	7	20	1
Suicide by hanging or strangulation	—	5	3	5	—
Suicide by drowning	—	1	—	1	—
Suicide by firearms	—	—	—	—	—
Suicide by cutting or stabbing instruments	—	6	5	6	—
Suicide by jumping from a height	—	—	—	—	—
Suicide by crushing	—	1	1	1	—
Other Suicides	—	1	—	1	—
Food Poisoning—Botulism	—	76	1	76	1

II.—Cases treated according to Diseases—*contd.*

Diseases.	Remaining in Hospital at end of 1934.	Admissions in 1935.	Deaths in 1935.	Total Cases treated in 1935.	Remaining in Hospital at end of 1935.
XIV.—AFFECTIONS PRODUCED BY EXTERNAL CAUSES—*contd.*					
Attacks of Poisonous Animals—					
Snake Bite	—	32	4	32	1
Insect Bite	—	16	—	16	—
Other accidental Poisonings	1	129	17	130	1
Burns (by Fire)	49	920	163	969	63
Burns (other than by Fire)	12	230	17	242	8
Suffocation (accidental)	—	5	1	5	—
Poisoning by Gas (accidental)	—	3	—	3	—
Drowning (accidental)	—	12	1	12	—
Wounds (by Firearms)	10	205	17	215	14
Wounds (by cutting or stabbing instruments)	79	3,387	52	3,466	109
Wounds (by Fall)	92	4,146	52	4,238	130
Wounds (in Mines or Quarries)	4	237	5	241	—
Wounds (by machinery)	14	308	5	322	12
Wounds (crushing, *e.g.*, Railway accidents, &c.)	12	1,402	35	1,414	29
Injuries inflicted by Animals, Bites, Kicks, &c.	20	1,375	15	1,395	39
A.—Over fatigue	—	1	—	1	—
B.—Hunger or Thirst	—	17	1	17	—
Exposure to Heat—					
Heatstroke	—	—	—	—	—
Sunstroke	—	2	—	2	—
Lightning Stroke	—	1	—	1	—
Electric Shock	—	4	—	4	—
Murder by Firearms	—	2	2	2	—
Murder by cutting or stabbing instruments	—	10	10	10	—
Murder by other means	—	2	1	2	—
Infanticide (murder of an infant under 1 year)	—	—	—	—	—
A.—Dislocation	5	224	3	229	4
B.—Sprain	2	233	1	235	7
C.—Fracture	101	2,349	172	2,450	117
Other external Injuries	98	4,848	16	4,946	125
Deaths by violence of unknown cause	13	61	—	74	8
XV.—ILL-DEFINED DISEASES.					
Sudden deaths (cause unknown)	—	—	—	—	—
A.—Diseases not already specified or ill-defined—					
Ascites	11	183	36	194	11
Oedema	4	191	10	195	5
Asthenia	50	3,980	69	4,030	79
Shock	1	63	20	64	1
Hyperpyrexia	—	15	—	15	—
Other	101	2,313	79	2,414	196
B.—Malingering	23	1,076	—	1,099	79