Annual report of the Medical Department / Federation of Malaya.

FEDERATION OF MALAYA

Annual Report

of the

MEDICAL DEPARTMENT

for the year

1948

BY

R. B. MacGREGOR, C.M.G., M.B., M.R.C.P.,

Director, Medical Services.

KUALA LUMPUR:

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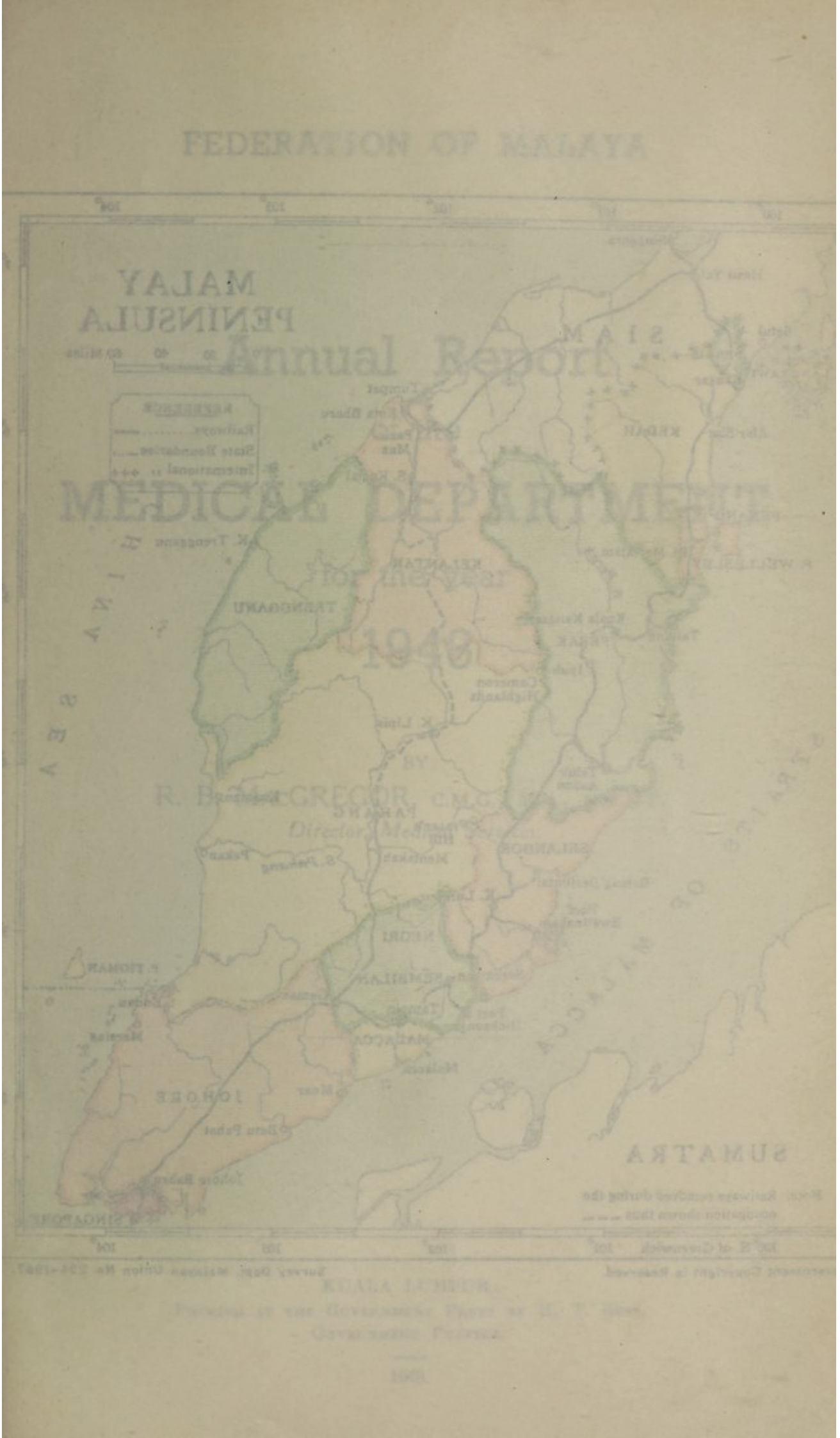
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MALAY PENINSULA
Annual Report
MEDICAL DEPARTMENT
1948
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Director of Medical Services
KUALA LUMPUR.
SUMATRA

Survey Dept. Malayan Union No. 224-1947.

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FOREWORD.

This report is the first to be issued under the constitution of the Federation of Malaya. Its form differs from previous reports in that the account of work which is appropriate to State institutions will be contained in the reports of the States and Settlements. This Federal report will deal with the general trends of public health, with developments which are of sufficient interest over the whole Federation, and with an account in greater detail of the work of the Federal institutions which include the Institute for Medical Research, institutions for leprosy and mental disease, a special tuberculosis hospital at Malacca and the quarantine services. It also includes the statistical table of diseases in in-patients and out-patients which is compiled from records submitted by the different States.

VITAL STATISTICS.

In spite of the fact that terrorists' activities have caused over 1,000 deaths, the year 1948 has been the most healthy ever recorded in Malaya, judged by vital statistics. There is a moderate reduction in the birth-rate, from 43.2 per 1,000 for all races in 1947 to 40.7 in 1948. The death-rate has fallen to 16.4 for all races, compared with 19.5 for the previous year. Infantile mortality has fallen from 102 to 89 per 1,000 for all races. Both the infantile mortality and the general death-rate are the lowest on record.

Possibly incomplete registration may account for part of the apparent improvement. Changes in the age distribution of the Chinese and Indian groups in the population have also to be taken into account, for in these groups there is now an abnormally high proportion of young adults, who are the least vulnerable section of the population.

These factors do not apply in the case of the Malay population. Any errors in recording are likely to be the same from year to year. For the Malays, the general death-rate is 19.8 per 1,000, compared with 24.6 per 1,000 in 1947, and the infantile death-rate is 111 per 1,000 live births, compared with 129 in 1947.

With the exception of Kelantan, where the figures are on the same level as in 1947, there has been an improvement in the rates for Malays, in all States and for all age groups. The natural increase of the Malay population, by the balance of births over deaths is 42,771, which is better than the natural increase for 1947 by 1,326, in spite of the fall in the birth-rate.

Many factors contribute to this improvement; the most important seems to be the continuing reduction in the incidence of malaria. The high mortality during the years of the Japanese occupation is still a factor. A proportion of the old and infirm, who would have been expected, under average conditions to die during the year under review, died during the war years; but this factor applied equally in 1947. There appears to be no doubt that the statistics for 1948 indicate a real improvement in the public health.

NEW DEVELOPMENTS.

Amongst the new developments which are mentioned in the report and of special interest are the dramatically successful results of the treatment of tropical typhus by Chloromycetin, reported in the section dealing with the Institute for Medical Research, and the very successful results from the use of Sulphetrone and Sulphone in the treatment of leprosy.

REPORT OF THE MEDICAL DEPARTMENT FOR THE YEAR 1948.

PART I.

(1)—CLIMATE, AREA AND POPULATION.

1. CLIMATE.—The climate of Malaya is a fairly healthy one, but it is monotonously warm with a high humidity. The average daily temperature is 80°-90°F. with a drop of 5°-20°F. at night. The average annual rainfall is approximately 100 inches.

AREA.—

Kedah	3,648	sq. miles
Perlis	310	,,
Penang	110	,,
Province Wellesley	290	,,
Perak	7,980	,,
Selangor	3,160	,,
Negri Sembilan	2,580	,,
Malacca	640	,,
Johore	7,878	,,
Kelantan	5,870	,,
Trengganu	5,000	,,
Pahang	13,820	,,
Total Federation of Malaya ...	51,286	,,

2. POPULATION.—The estimated population of the Federation at the end of 1948 was 5,003,728. This total is 126,050 above the "First Count" figures of the Census (4,877,678).

The estimated mid-year population was 4,956,993.

By States and Settlements, the 1948 population is as follows: (with "First Count" figures of the 1947 Census)—

States/Settlements.	Estimated population on 31-12-48.	Estimated mid-year 1948.	Census 1947.
Kedah	568,005 ...	561,411 ...	553,987
Perlis	72,195 ...	71,308 ...	70,538
Penang	457,926 ...	454,043 ...	446,422
Perak	971,753 ...	962,379 ...	944,725
Selangor	730,641 ...	723,094 ...	708,091
Negri Sembilan ...	275,699 ...	272,937 ...	267,281
Malacca	247,260 ...	244,582 ...	239,244
Johore	762,218 ...	753,891 ...	737,318
Kelantan	446,894 ...	444,743 ...	444,045
Trengganu	227,664 ...	227,058 ...	226,426
Pahang	243,473 ...	241,547 ...	237,681
Unlocated	— ...	— ...	1,920
The Federation ...	5,003,728 ...	4,956,993 ...	4,877,678

(2)—ADMINISTRATION.

3. Staff.—Shortage of medical officers, both European and Asian has been a serious handicap to the development and even maintenance of work during the past year. At the end of the year the position in the Federation was that out of a total establishment of 300 posts for medical officers 87 were unfilled and a further 37 were held by temporary officers. There appears to be no prospect of any improvement in this position in the near future.

Vacancies for Nursing Sisters were usually filled without difficulty, and recruitment for the local nursing staff is now becoming easier as the output of girls with an adequate English education from the schools is being resumed.

4. Legislation.—The only legislation affecting the Medical Department passed during the year was "The Registration of Dentists Ordinance".

5. New Federal Buildings.—Malacca Hospital was adapted for the treatment of patients suffering from tuberculosis.

PART II.

PUBLIC HEALTH—(1) VITAL STATISTICS.

6. Population.—The estimated population of the Federation at the end of 1948 was 5,003,728. Details are given earlier in the report.

The diagram from the report of the Registrar-General shows the general trend for the period 1940 to 1948.

7. Births.—The live births registered in 1948 were 201,712 (104,268 males and 97,444 females), compared with the figure of 210,815 in 1947. The number of births registered in 1947 was the highest ever recorded and may represent a post-war "boom" in births. This year there is a decrease in births for Malays and Indians, and a slight increase for Chinese.

The birth rate for all races was 40.7 per 1,000 population (43.2 for 1947). By races the birth rates were:

Malays	37.5	per 1,000
Chinese	43.9	,,
Indians	44.8	,,

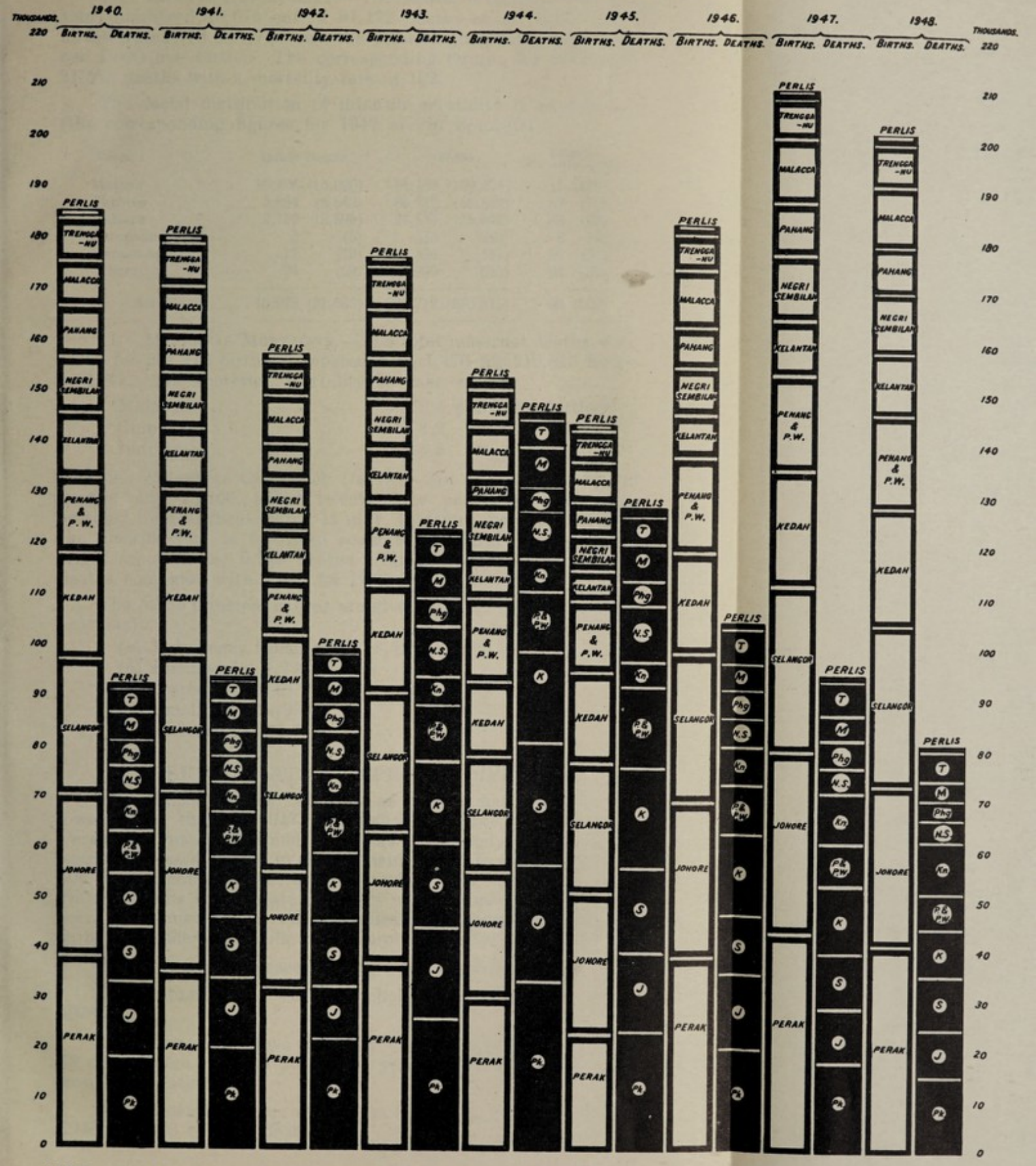
8. Deaths.—The deaths registered in 1948 were 81,172 which is 13,973 less than those recorded for 1947 (95,145). The death rate for all races, calculated on the mid-year population, was 16.4 per 1,000, the lowest ever recorded. The corresponding rate for 1947 was 19.5.

The death rates by races were:

Malays	19.8	per 1,000
Chinese	12.9	,,
Indians	12.8	,,

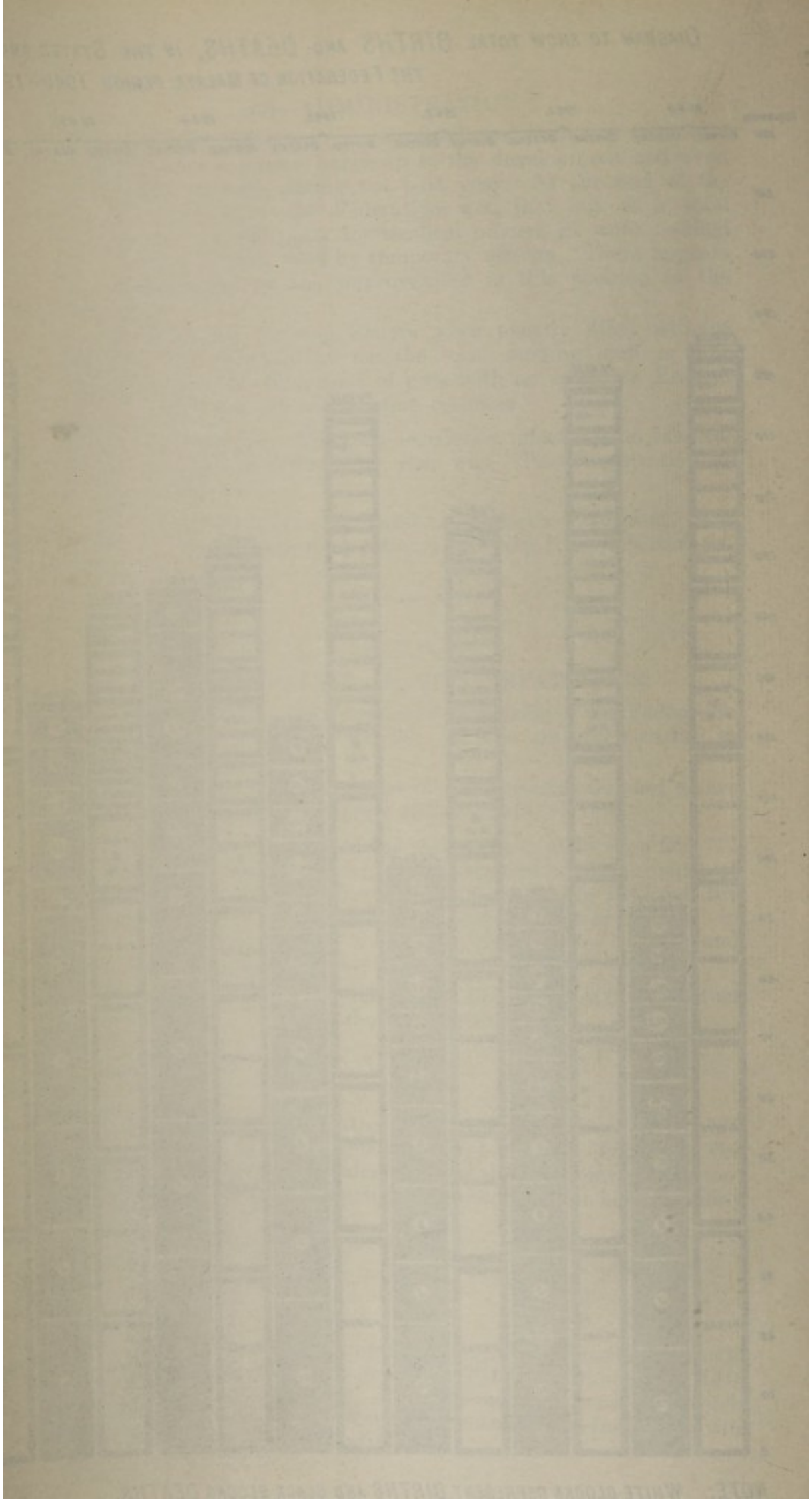
9. Natural Increase of Population.—The natural increase in the population from the census in 1947 until the end of 1948 is estimated to be 154,226. The loss on migrational balance is 28,176, which includes 19,696 Chinese and 7,809 Indians, giving an increase in population of 126,050.

DIAGRAM TO SHOW TOTAL BIRTHS AND DEATHS, IN THE STATES AND SETTLEMENTS NOW INCLUDED IN THE FEDERATION OF MALAYA: PERIOD 1940-1948.



NOTE: WHITE BLOCKS REPRESENT BIRTHS AND BLACK BLOCKS DEATHS.

SURVEY DEPT. FEDERATION OF MALAYA. NO. 98-1949.



10. Infantile Mortality.—The deaths of infants under one year numbered 18,073 out of 81,172 deaths at all ages. Live births numbered 201,712 and the infantile mortality rate is 89 per 1,000 live births. The corresponding figures for 1947 were 21,555 deaths with a mortality rate of 102.

The racial distribution of infantile mortality is as follows: (the corresponding figures for 1947 are in brackets).

Races.	Infant Deaths.	Births.	Infantile Mortality Rates.
Malays	10,126 (13,020)	91,165 (100,474)	111 (129)
Chinese	5,694 (5,848)	84,732 (82,862)	67 (70)
Indians	2,139 (2,596)	24,144 (26,044)	88 (99)
Europeans	3 (5)	336 (259)	8 (9)
Eurasians	17 (18)	336 (351)	50 (51)
Others	94 (68)	999 (825)	94 (82)
All Races ...	18,073 (21,555)	201,712 (210,815)	89 (102)

11. Maternal Mortality.—The total maternal deaths were 1,176 for 201,712 births, compared with 1,476 for 210,815 births in 1947. The maternal mortality by race was:

Malays	8.4	per 1,000 births
Chinese	3.2	,, ,,
Indians	5.5	,, ,,

12. Principal Causes of Death.—Out of a total of 81,172 deaths only 18,766, about twenty-three per cent. have been certified by a medical man. It may, therefore, be expected that the classification is far from accurate. "Fever" of unknown origin accounts for 9,943 deaths. Malaria accounted for 1,301 deaths compared with 2,169 for 1947.

The other principal causes are given below. (1947 figures in brackets):

(*a*) Pulmonary tuberculosis, 3,515 (3,818).
(*b*) Pneumonia, 1,738 (2,339).
(*c*) Premature birth, 1,973 (2,142).
(*d*) Smallpox, 72 (933).
(*e*) Violence, 2,204 (1,519).

PUBLIC HEALTH—(2) SPECIAL DISEASES.

13. Malaria.—The incidence of malaria has reached even lower levels than in 1947. In Pahang, Johore, Selangor and Perak the usual seasonal rise was completely absent. The number of cases treated in Government hospitals was 19,519 with 596 deaths compared with 26,174 with 1,041 deaths in 1947. How long this happy state of affairs will continue remains to be seen, and must not be taken to mean that malaria has ceased to be a considerable public health problem in Malaya.

14. Plague.—No cases of plague were reported during 1948.

15. Cholera.—No cases of cholera were reported during 1948.

16. Smallpox.—Five hundred and twenty-one cases with 72 deaths were reported during the year. This is the carry over from 1947 outbreak.

17. Tropical Typhus.—The number of cases reported in 1948 was 483 with 26 deaths.

18. Enteric Fever.—The number of cases reported was 918 with 184 deaths. The disease is endemic in Malaya. There was no outbreak in any particular area, but cases occurred sporadically throughout the country.

19. Dysentery and Diarrhoea.—These diseases are not notifiable. Hospital statistics show admissions as 6,513 with 746 deaths. There is nothing to indicate that these diseases were more prevalent than normally.

20. Diphtheria.—Six hundred and thirty-six cases of diphtheria occurred with 181 deaths.

21. Cerebro-Spinal Meningitis.—Twenty-two cases were reported with seven deaths. There was no epidemic of either diphtheria or cerebro-spinal meningitis; cases occurring sporadically.

22. Poliomyelitis.—One hundred and forty-eight cases with twenty deaths were reported.

23. Pulmonary Tuberculosis.—Hospital statistics give 7,328 admissions with 2,182 deaths.

Tuberculosis has now become the disease which attracts the greatest public interest. It is doubtful whether there has been any real increase in incidence compared with pre-war years but there is a general impression, which is not entirely supported by statistics, that there has been a noticeable increase particularly in the young adult population as a result of malnutrition during the Japanese occupation.

A new development in dealing with tuberculosis has been the establishment in Malacca Hospital of a modern special hospital for the treatment of tuberculosis with 270 beds devoted for this purpose. This work is carried on under the direction of Mr. A. L. Sheild, F.R.C.S., and emphasis is placed on active treatment, principally with pneumoperitoneum. Streptomycin has been used in a small proportion of cases and facilities for surgical treatment are being developed. It is intended that this specialized hospital will serve as a model for similar institutions elsewhere in the country, when funds and staff become available.

Active investigations are now being carried out into the possibility of using B.C.G. vaccination, first on selected groups such as nurses and hospital assistants. Investigation of the tuberculin reactions of school children has been repeated recently, and it has been found that, the number of positives among school children between the ages of five and twelve living in urban conditions is over 40 per cent.

24. Yaws.—One hundred and four thousand, seven hundred and two cases were treated during the year as compared with 74,133 in 1947. It is hoped to reduce the disease to the level of previous years.

PUBLIC HEALTH—(3) NUTRITION.

25. The State of Nutrition in the Country.—The following is a report by the Senior Nutrition Officer on the feeding of children in 1948.

Position in 1946 and 1947—

On the liberation of Malaya in September, 1945, a considerable degree of malnutrition was widespread amongst the population and was most noticeable amongst children of all races. In certain areas, principally in the

larger towns, supplementary foodstuffs were distributed to the vulnerable groups during the remainder of that year, and in the early months of 1946 by the military administration, Red Cross and other voluntary organisations.

(2) With the resumption of civil administration in April, 1946, steps were taken to continue the provision of relief foodstuffs, more particularly to school children. Funds were provided by the Malayan Union Government to enable State Authorities to purchase foodstuffs for distribution to school children. Soon after the appointment of a Senior Nutrition Officer and on his advice, it was decided to purchase milk and during the latter part of 1946 and in 1947, considerable quantities of dried milk were purchased by the Medical Department and distributed to schools with the co-operation of the State Education Authorities.

(3) During the latter part of 1947, plans were prepared for extending the scope of the scheme, but a number of difficulties were encountered, both in obtaining adequate supplies of suitable foodstuffs—particularly milk—which was in short supply throughout the world; and in the distribution of supplies throughout the country. But, in spite of these early difficulties, the scheme developed during 1947 and has been extended during 1948.

Extension of the scheme during 1948—

(4) While it was first intended to provide as many school children as possible in the country with a half-pint of milk daily, it was soon found that attention would also have to be paid to other groups of children, e.g., pre-school age children and children who do not attend school. It was evident that the value of expert care and advice provided for infants at Infant Welfare Centres would be greatly enhanced, if it were possible to continue this care of the growing child during the years before it was sufficiently old to attend school and was able to benefit from the milk supplied in schools. Many of the recent developments in the administration of the scheme have been designed to further these aims.

(5) During 1947 and in the first half of 1948 it had been the practice for the required supplies of milk to be purchased centrally by the Medical Department and to be distributed to the Education Authorities in each State or Settlement, who were responsible for its distribution to the individual schools. In order, however, to integrate the supplementary feeding of school children with the existing care of infants at Infant Welfare Centres by extending supplementary feeding to pre-school age children who do not attend school, arrangements were made in the middle of 1948, with the full co-operation and assistance of the Education Department and with the approval of the State Governments concerned to transfer the local administration of the scheme to the State Medical Authorities. This transfer was commenced in October, 1948, and was completed in all but four States by the end of the year. It is expected that the State Medical Authorities with the approval of the State Governments in the remaining four States—Selangor, Pahang, Kelantan and Trengganu—will take over responsibility for local administration from the Education Department early in 1949.

(6) Furthermore, with the proposed extension of the scheme, it was appreciated that, in order to secure co-ordination in development, adequate supervision was essential and in May, 1948, the post of Supervisor of School Feeding was created. Soon after her appointment to this post, Miss G. Calderwood was invited to visit all States and Settlements in the Federation and had visited each, at least once, before the end of the year. Her energy and the discussions held by her on the spot with the State and Settlement authorities have been of the greatest assistance in developing the extensions to the Scheme which are described below.

Use of milk for supplementary feeding of children—

(7) Experience in other countries has shown that the successful development of a country-wide scheme for the provision of free milk and/or free meals in schools is fraught with many difficulties. Particular difficulties are encountered in Malaya. Milk is not produced in any quantity in Malaya, and reliance must be placed on imported supplies of dried full cream milk or dried skim milk. The latter contains all the valuable nutrients of full cream milk, with the exception of fat and the fat-soluble vitamins. In the case of children over the age of 18 months, fat and the fat-soluble vitamins can be supplied from other sources and for these children, skim milk provides a valuable and reasonably economical source of protein and calcium, nutrients of which their normal diets are deficient.

(8) In normal times, adequate supplies of skim milk are readily available, but post-war demands for relief in Europe and elsewhere have made it difficult to secure adequate quantities, particularly from sterling areas. Even when skim milk is available, it is not, by itself, very palatable or popular with children unless sweetened and flavoured; this is especially so with children who are not accustomed in their homes to milk as a food. To overcome this distaste, attempts have been made to develop the use of a sweetened milk with cocoa on the lines of National Milk Cocoa as used in England. This mixture has proved very popular and has been taken with avidity by all children to whom it has been supplied. Unfortunately, world stocks of cocoa are inadequate to meet demand and it has only been possible to obtain a fraction of the required quantities.

Semi-sweet food yeast biscuits—

(9) Investigations have shown that there is clinical evidence of a considerable degree of riboflavin deficiency amongst some groups of children. Riboflavin is a member of the B-group of vitamins and food-yeast is known to be a good source of this vitamin. Considerable supplies of food-yeast imported from the West Indies were available in Malaya but some difficulty was experienced in popularising its use. During 1948, it was decided to distribute food-yeast to school children in the form of semi-sweet biscuits containing ten per cent. of food-yeast. A contract for the production of these biscuits was awarded to a local firm and the experiment has proved very successful. While,

unfortunately, owing to shortage of staff it has not been able to secure any data on the clinical effect of the use of these biscuits, they have proved popular with the children and are comparatively easy to distribute, particularly to the remote and scattered schools in some parts of the country.

Full cream milk and baby food—

(10) In addition to the purchase and distribution of considerable amounts of skim milk powder, supplies of dried full cream milk and limited amounts of Baby Food have also been purchased. The former has been issued principally in the States of Kelantan and Trengganu, where the economic status of sections of the population is lower than in many of the districts on the west of the peninsula. The latter has been distributed to Infant Welfare Centres for use in special cases. Reports indicate that it has proved most popular and beneficial.

School kitchen and mid-morning meals—

(11) The dependance on external sources of supply of the supplementary foodstuffs which are being used in these schemes, e.g., milk and cocoa, and the difficulties experienced in obtaining adequate quantities, directed attention to the possibility and desirability of utilising suitable locally obtainable foodstuffs for the free supplementary feeding of school children. In England and other countries, many school children are provided with a free mid-day meal or in some cases, a mid-morning snack. Attempts are being made to introduce a similar system in Malaya.

(12) The Nutrition Committee of the Food and Agriculture Organisation which met at Baguio in February, 1948, recommended (Chapter III, page 14 of the Nutrition Committee Report) that a suitable type of free meal for school children should be based on the following formula:

	ozs.	grammes.
1. Cereals (cereals available, such as lightly milled rice, high extraction wheat, millets and other cereals)	2½ ...	70
2. A pulse	½ ...	14
3. Small fish of which the whole body is eaten (e.g., ikan bilis, etc.). (Such fish provide calcium) ...	¼ ...	7
4. Vegetable (green leafy vegetable preferred)	1 ...	28
5. Oil (preferably an oil containing carotene)	¼ ...	7
6. Salt	⅙ ...	5

Such a meal will provide about 400 calories and will contain all the essential nutrients.

(13) The preparation of such a mid-morning snack or meal involves the provision of some form of kitchen; the engagement of cooks; and the services of a supervisor or contractor to purchase the food and to supervise distribution. It was found that these requirements would be economically feasible only where a number of schools were conveniently grouped, so that the meals could be supplied from a central kitchen or centre. Since no previous schemes of this nature had been developed in the Federation, it was decided to establish at first, a few experimental feeding centres, which if successful would serve as models for others which it was hoped would be established in all parts of the country. In June, the first such centre was established at Sementa School, near Klang, to provide a hot cooked mid-morning "snack" to 210 school children attending two schools at Sementa and Kapar. The success attending the establishment of this centre has been entirely due to the great personal interest shown by Mr. M. C. ff. Sheppard, District Officer, Klang, who has been directly responsible for its administration. Early in November, this centre was extended to include a further 506 children attending other schools in the District and, by the end of the year, 912 children in six schools were receiving a free meal of the type indicated in para. (12) above on every school day.

(14) A similar centre was established in September in the Tampin area under the direct, personal supervision of Dr. Bearblock, State Medical and Health Officer, Negri Sembilan, whose great interest in its development has led to the striking results obtained. Designed at the beginning to supply 602 children in six schools in the Tampin-Gemencheh area with hot cooked meals, the central kitchens was, by the end of the year, supplying 1,751 children in twelve schools with hot meals. Several of the schools are situated nearly twenty miles from the central kitchen and the successful surmounting of the difficulties of distributing the food in a hot and hygienic condition over considerable distances will provide much valuable experience when establishing similar kitchens elsewhere.

(15) In the short time during which these meals have been provided, the children are reported already to show an improvement in condition. Reports have been received of greater alertness in school and an increase in average attendances. Plans were being considered, at the end of the year, for the establishment of a number of similar feeding centres in other districts in the Federation. However successful these feeding centres may prove to be, it is probable that it will be possible to establish them only in areas where a number of schools can be supplied from one central kitchen. In areas where schools are scattered or are situated in remote districts, difficult of access, it is probable that reliance for the supplementary feeding of the children will have to be placed on milk, cocoa and biscuits.

Pre-school age children—

(16) It has been possible, during the latter part of the year for a few selected groups of pre-school age children to receive some form of supplementary food in certain areas and it is hoped to extend this during 1949. At the end of the year, the following groups were being assisted in this way.

Negri Sembilan—

Groups of pre-school children in two selected areas are receiving milk-cocoa under the supervision of Health Sisters.

Perlis—

Full-cream milk has been supplied to the Medical Officer at the General Hospital, Kangar, for issue to under-nourished children attending the Child Welfare Clinic.

Malacca—

Full cream milk and food yeast biscuits have been supplied to the Lady Medical Officer, and two small feeding centres for pre-school age children who require extra nourishment are shortly to be organised at the Infant Welfare Centres in the Alor Gajah District.

Province Wellesley—

The Health Officer, Province Wellesley, is arranging for the establishment of feeding centres in two villages in the Province where pre-school age children will receive milk daily. If the centres prove successful, it is expected that similar centres will be established elsewhere.

Institutions, Homes and Orphanages—

(17) During the year, supplies of food-yeast have been provided to the Department of Social Welfare for use in Institutions, Homes and Orphanages, which have been established by that Department. The food-yeast is used in soups, stews and similar dishes and it is understood that its use in this manner has been both beneficial and popular. Towards the end of the year, limited supplies of dried milk have been issued to Convent Schools in Kuala Lumpur, and Ipoh, where its use was considered to be of benefit to the children.

26. Health on Estates.—Progress continues to be made in health measures for estate labourers. The general health of labourers has improved, the main feature particularly being the low incidence of malaria. The estate hospital position is not satisfactory. There is a tendency to close such hospitals. The effect of this is to throw an additional strain on the already much overworked and understaffed Government hospitals. The rationalisation of the hospitals position both Government and estate is overdue and will have to be considered as part of a larger plan for the improvement of rural health generally.

The following table is a summary of the provision for the treatment of sick labourers and their dependants on estates:

States/Settlements.	No. of estate hospitals.	No. of beds.	All Diseases.		Malaria.	
			Admissions.	Deaths.	Admissions.	Deaths.
Kedah	13	1,121	14,799	206	2,568	9
Perlis	—	—	—	—	—	—
Penang and Province Wellesley	4	214	1,892	27	9	1
Perak	34	1,179	13,378	295	769	10
Selangor	34	1,528	20,538	464	1,552	9
Negri Sembilan	23	1,145	10,584	287	564	8
Malacca	21	460	5,339	41	431	6
Johore	24	821	4,835	231	234	3
Kelantan	5	65	1,664	94	282	11
Trengganu	—	—	—	—	—	—
Pahang	4	104	829	18	132	3
Total	162	6,637	73,858	1,663	6,541	60

The following table is a summary of the statistics relating to mortality amongst labourers on estates:

	Population.	All Diseases.		Malaria.	
		Deaths.	Death rate per mille.	Deaths.	Death rate per mille.
Labourers and Dependants—					
All nationalities	420,064	2,788	6.6	108	0.3
Labourers only—					
All nationalities	285,609	983	3.4	44	0.2
Labourers and Dependants—					
Indians	235,578	2,105	8.9	54	0.2
Labourers only—					
Indians	152,595	749	4.9	31	0.2

The death-rate in all groups is lower than in 1947 and the death from malaria is about half for that in 1947.

27. Health on Mines.—Mines have no hospitals and labourers are sent to Government hospitals. The provision of adequate hospital accommodation for labourers on mines will also have to be considered in connection with a rational plan for a rural hospital service.

28. Railway Sanitation.—The health and medical work on the Malayan Railway is under the charge of a Medical Officer seconded from the Government Medical Service. His staff consists of 13 Hospital Assistants, 3 Health Inspectors, 18 Anti-Malaria Inspectors with a labour force of 120. The main activities of this officer and his staff are medical treatment of Railway staff and their dependants, general public health measures in Railway areas, and anti-malarial work on Railway property. The anti-malarial measures taken are oiling, D.D.T. barrier spraying and prophylaxis.

Nine Railway Dispensaries functioned during the year with three Dispensaries at major construction centres. Sixty-six thousand, nine hundred and seventy-six attendances of Railway staff and their dependants were recorded at all Dispensaries. First aid instruction based on the St. John Ambulance handbook were given during the year to 302 new staff. First aid boxes and stretchers are available on all passenger trains, workshops and at all stations.

29. Port Health Work.—Quarantine for the Federation of Malaya is now carried out at Penang. During the year, sixty-four ships from India, one hundred and five from China, six pilgrim ships from Jeddah and four hundred and thirty-five from other infected ports arrived, carrying a total of 71,858 saloon and deck passengers.

Outgoing Pilgrim Ships.—Six pilgrim ships carrying a total of 4,262 pilgrims left the port during the year.

The pilgrims ranged from infants in arms to very aged adults. None of them was rejected on the grounds of being afflicted with any contagious or infectious disease.

Incoming Pilgrim Ships.—Six pilgrim ships carrying a total of 4,271 pilgrims arrived during the year. A total of 31 deaths occurred on these ships, the majority of deaths being due to senile debility.

One case of chicken-pox was detected during the routine inspection on board. The case was sent to the Infectious Diseases Hospital, Perak Road, Penang.

Difficulty with passengers carrying invalid or in some cases forged vaccination certificates continues to arise. Thirteen thousand, eight hundred and fifty-five passengers were detained for quarantine examination.

Number of visits of inspection to ships.		Total Passengers.		Total Examined.		Passengers.		
		Cabin.	Deck.	Crew.	Passengers.	U.	Q.	R.
Port Swettenham ...	105	452	3,128	6,923	3,556	—	—	3,466
Penang	610	9,260	62,598	39,815	71,858	18	13,855	33,934
Total ...	715	9,712	65,726	46,738	75,414	18	13,855	37,400

U = Signed undertaking to report.
Q = Removed to Quarantine Station.
R = Remained in ship.

Aircraft.—During the year 304 planes were inspected at the Bayan Lepas Aerodrome.

A total of 1,478 crew and 2,397 passengers were examined but no case of infectious disease was detected among them.

MALARIA ADVISORY BOARD.

30. The constitution of the Board is as follows:

Six permanent members (Medical).

- The Director, Medical Services (*Chairman*).
- The Director, Institute for Medical Research (*Vice-Chairman*).
- The Senior Malaria Research Officer.
- The Entomologist, Institute for Medical Research.
- The Senior Medical Officer, Military Forces.
- The Principal Medical Officer, Royal Air Force.

Five permanent members representing Government Departments.	Representing: Railways, Public Works, Drainage and Irrigation, Education, Agriculture.

Members nominated by His Excellency the Governor:

Five Medical Officers in the Public Service appointed by name.	These include the Medical Officer of Health, Penang Municipality, the Deputy Director, Medical Services, and three State Heads of the Medical Department with experience of anti-malarial work.
Five Medical Practitioners not in the Public Service.	These are all Estate Medical Practitioners with anti-malarial experience.
Two representatives of planting interests nominated after consultation with the United Planting Association of Malaya.	One Asian and one European planters' representative.

One member nominated to represent Labour interests.

Four other nominated members. One is an Administrative Officer and three are medical men.

The Secretary of the Board who may or may not be a member is either the Entomologist or the Malaria Research Officer, Institute for Medical Research.

Nominated members are appointed to serve for two years and to be eligible for re-nomination. One-half of the nominated members to retire each year.

Permanent invitations to attend as guests were extended to the Royal Navy, the Director of Medical Services, Singapore, and the Municipal Health Officer, Singapore, and representatives from these services have attended most of the meetings of the Board in 1948.

Three meetings were held in 1948.

(2) *Review of Local Malaria.*—The incidence of malaria during the year was even lower than in 1947 and appears to be the lowest recorded for nearly sixty years. This situation was the subject of special discussion by the Board. Various opinions were expressed and it was shown that malaria in this country seems to have cyclical fluctuations in intensity with peaks at intervals of 8-10 years. The present low incidence appears to be the trough following on the very high peak of incidence that occurred during the Japanese occupation. Whilst it was agreed that these long-term fluctuations in malaria must be chiefly due to variations in the state of immunity of the population, and the intensity of vector breeding, opinions differed as to which of these two was the more important factor in the present situation.

Opinion was unanimous that the present situation will not last indefinitely, and that an increase in malaria must be expected and planned for.

(3) *Anti-malarial Oil.*—The earlier attempts to find a sample of pre-war anti-malarial oil which could be used as a standard with which to compare present blends, were not successful. As recorded in the Annual Report for 1947, the samples obtained were found to have lost much of their killing power. Eventually a sample was obtained from Penang which gave results similar to the best reported before the war (*see* table below), and this is now used as a standard with which to compare other oils.

COMPARISON BETWEEN POST-WAR AND PRE-WAR BLENDS OF ANTI-MALARIAL OIL.

100 mature larvæ of *A. vagus* per oil per test;
10 minutes exposure to a 7 u film.

Experiment.	Percentage kill after 24 hrs.		
	Post-war blend	Pre-war blend	
	Malarial D.F.	Penang.	Klang.
1	68	96	—
2	60	95	90
3	71	87	81
Average	66	92	85
Spreading pressure Dynes per cm.	18-21	21-25	21-25

The attempts to improve the present blends were continued by the oil Company. Blends containing gum damar to improve spreading pressure, and small amounts of DDT (0.05-0.2 per cent.) to improve killing power were submitted for test. The amount of DDT was calculated to give the usual dose of about four ounces per acre, with oiling at 10-15 chains per gallon (33-22 gallons per acre). It was found however on applying the usual test for toxicity that the DDT made no difference; the same blend without DDT gave the same kill. Investigation showed that what mattered was not so much the calculated dose of DDT per acre, but its concentration in the oil. The solutions were so dilute that calculation showed that even if both the main breathing tubes of a larva were filled with the oil solution, the amount of DDT carried in would be less than the probable minimum lethal dose. Any larva getting the breathing tubes full of oil will die anyway from the effects of the oil, so in order to improve the killing power of an oil by adding DDT, enough must be added to kill those larvæ which take in only a very small amount of oil, insufficient by itself to kill. Tests showed that this minimum concentration of DDT is about 1 per cent.

The addition of ½ per cent. of gum damar improved the spreading pressure of the oil, and towards the end of the year the Company introduced a new blend consisting of a light diesel oil with ½ per cent. of gum damar. The table below shows the results of comparing this blend with the former blend and the pre-war oil from Penang.

COMPARISON OF ANTI-MALARIAL OILS.

100 mature larvæ of *A. vagus* per oil per test;
10 minutes exposure to a 7 u film.

Number of larvae.	Percentage kill after 24 hours. New blend "Malarial" G.D. 99½% light diesel oil, ½% gum damar.	Old blend "Malarial" D.F. 70% diesel oil 30% gas oil.	Pre-war Penang.
100 ..	63 ...	60 ...	80
100 ...	68 ...	45 ...	83
Average	65 ...	52 ...	81
Spreading pressure	21-25 ...	18-21 ...	21-25

The new blend with gum damar seems somewhat better than the other though still much inferior to a good pre-war blend (the Penang sample). Pre-war blends contained special distillates made for the purpose which had high toxicity. Present blends are composed of straight commercial grades of oil. It has not yet been possible to prepare the special distillates, or where it has been tried—these have not had the requisite properties.

(4) *Paludrine*.—Two field experiments in the use of paludrine were reported to the Board during the course of the year. Dr. T. Wilson reported the results of giving paludrine in a Malay school in Province Wellesley where there was a high absentee rate due to fever. The drug was given to the children by the school teacher, with as little interference and supervision by the Medical staff as possible. The dosage was 50 mg. twice a week for children under nine years old, and an extra 50 mg. per week for those over nine. The parasite rate in the whole school in September, 1947, was 45 per cent. (78/173). Administration of paludrine to those with parasites in the blood was commenced in October, 1947 (the remainder of the children forming a control group); by January, 1948, the parasite rate among the former had dropped from 76 per cent. to 5 per cent., and the spleen rate from 39 per cent. to 15 per cent., whilst there was little change in the control group.

It was concluded from these preliminary results that suppressive paludrine administered by a Malay school teacher who is told what to do, and takes an interest in doing it, can produce a very marked reduction in the spleen and parasite rates of the children under his care.

The second report was on the effects of distributing paludrine on Tioman Island. This island, which lies off the east coast, has a history of hyperendemic malaria. Dr. McGarity, Health Officer, East Pahang, as a result of a visit early in 1947 which showed that malaria was still about as intense as ever, decided to distribute paludrine on the island. Distribution was commenced on 11th August, 1947, at a dosage of three tablets once weekly for adults and one tablet weekly for children. In April, 1948, Dr. Strahan, Acting Senior Malaria Research Officer, Institute for Medical Research, visited the island and made a survey. This showed that it was only in the school where the

administration of the drug had been supervised, that there was an undoubted improvement; the parasite rate was nil, and the spleen rate had been reduced from 95 per cent. to 43 per cent. Amongst the population as a whole there was little change, and it appears that they had taken the drug very irregularly.

(5) *DDT for house spraying.*—Much work is in progress to test the value of DDT for malaria control in this country, but there is little to report at present. Dr. Wallace of Kedah, who has been a pioneer in experimental malaria control in this country for so many years, has tried DDT and other insecticides as residual sprays in labourers' lines to control malaria. He has obtained much important and interesting preliminary information and has found that *A. maculatus* will enter and bite in DDT sprayed rooms, but is not found resting in such rooms in the early morning as it is in unsprayed rooms. There was not enough malaria this year to judge the effect of the DDT on the transmission of malaria.

The Entomological and Malaria Divisions of the Institute for Medical Research have commenced a considerable programme of field experiments to test the value of DDT and Gammexane house spraying in rural areas; parallel tests will be made with paludrine. Money to provide additional staff and equipment is being obtained from the Research allocation of the Colonial Development and Welfare Fund.

DDT as a larvicide.—Experiments by the Entomologist, Institute for Medical Research (Mr. J. A. Reid), on the use of DDT in oil as a larvicide, were continued until the middle of the year, but had to be dropped when the programme for investigating DDT as a residual spray against adult mosquitoes was started. The work is far from complete, but results to date indicate that DDT dissolved in an oil with a good spreading pressure, and applied as a 5 per cent. solution at the rate of half a gallon per acre, or half a cc per sq. yd. on still water, is quite an effective larvicide, and is very economical. But at the same dosage on flowing water against *A. maculatus*, with the methods of application available at present, it does not give satisfactory control.

DDT for approved experiments.—The Board has launched a scheme designed to stimulate the use of DDT residual spraying for experiments in malaria control. DDT has been made available at 50 cents a pound, which is about one-quarter of the prevailing market price, to approved persons, wishing to undertake experiments. The scheme is administered by the Scientific Subcommittee of the Board which has prepared a memorandum suggesting how experiments might be designed and carried out. The committee approved the issue of DDT and will receive reports of results. It is not to be expected that the scheme will bear much fruit so long as the emergency lasts.

(6) *Filariasis.*—Dr. T. Wilson gave an outline of his investigations on filariasis in Province Wellesley. In one kampong a survey showed a total infection rate of 34 per cent. (48/141);

6.4 per cent. showed elephantiasis, and 28 per cent. had microfilariae in the blood. As in all endemic areas of filariasis in Malaya the species of worm is *Wuchereria malayi*, not *W. bancrofti* which causes filariasis and elephantiasis in the Pacific. *W. malayi* is principally conveyed by mosquitoes of the genus *Mansonia; W. bancrofti* principally by species of *Culex* and *Aedes*. In the best known areas of filariasis in this country the vector is *Mansonia longipalpis*, which breeds in large areas of swampy jungle where control is extremely difficult or impracticable. But in this more limited area in Province Wellesley, dissection showed that *M. indiana*, breeding amongst water hyacinth in Nipah palm swamps near the coast, was the principal vector. The breeding grounds were limited and it seemed that control should be possible. The Drainage and Irrigation Department agreed to co-operate, and removal of the water hyacinth by hand or by spraying with the new weed killers was undertaken. Trapping and dissection are being continued to see what effect these measures have had on the vector mosquitoes. The mosquitoes are trapped by the Health Staff, Province Wellesley, and sent to the Institute for Medical Research for identification and dissection.

(7) *Present methods of malaria control on estates.*— Dr. R. S. Hardie communicated to the Board, the results of a questionnaire on this subject conducted by the Estate Medical Practitioners' Association. The results, which are given below, reveal large changes from pre-war practice; chemo-suppression is now widely used and anti-larval measures are much less extensive.

Replies to the questionnaire were received from 24 estate practitioners, three from Johore, four from Negri Sembilan, eight from Selangor, one from Pahang, three from Perak, one from Province Wellesley and four from Kedah. Of these, two were very incomplete and did not afford material for analysis for more than one or two of the questions asked.

1. What are the chief vectors in your area?

Maculatus	All States.
Barbirostris and Umbrosus	Johore, Negri Sembilan and Selangor.
Umbrosus	Perak.
Sundaicus	Perak and Selangor (coastal).

2. (*a*) Have you re-instituted larval control?

Yes, 15; No, 9. In most cases, the extent of larval control has been considerably reduced from pre-war standards. Natural shade is much more used. Financial restrictions have been important.

(*b*) Do you think larval control still has a place in estate practice?

Yes, 15; No, 4; Uncertain, 5.

3. (*a*) Have you made extensive use of chemo-suppression?
Yes, 17. A little, 3; No, 3.

(*b*) Have you used it alone, or with other methods?

Alone or with DDT, 5; with (limited) anti-larval measures, 13. Owing to faulty framing of the question, it is not clear whether replies mean that the two methods are used together simultaneously on estates, or whether they are used separately by the same practitioner on different estates in his practice.

(*c*) Indications for employment of chemo-suppression.

(i) Where anti-larval methods give poor results, are impracticable, or are too expensive (13).

(ii) For small temporary populations (16).

(iii) During periods of agricultural activity (2).

(iv) Where there are numerous new recruits with high spleen incidence (4).

(v) In proximity to danger areas on non-estate land (4).

(vi) Where there has been delay in institution of larval control (4).

(vii) Where economy is paramount (3).

4. (*a*) What method of chemo-suppression do you employ?

100 mgm. paludrine twice a week seven.

200 mgm. paludrine once a week five.

100 mgm. paludrine once a week two.

Mepacrine (amount, etc., not stated) seven.

Mepacrine (three tablets) and paludrine (two tablets) on alternate weeks one.

(*b*) Do you use it throughout the year, or only at danger periods?

At danger periods only, nine. Of these, two do not use anti-larval methods (except natural shade control).

5. Do you find serious disadvantages in chemo-suppression?

Of the 20 practitioners who use it, 16 find no serious disadvantages. The difficulty in achieving 100 per cent. distribution is stressed, especially among non-Indian labour. The dangers of the "break-through" with paludrine, and of the psychosis with atebrin, are mentioned.

6. Do you consider DDT spraying, or other anti-adult measures important?

Yes, 8; No, 11; Uncertain, 4. The majority opinion is that it is useful in abating a nuisance, but not of definite importance in reducing malaria. Its use has rarely been sufficiently systematic for an accurate estimate to be formed.

7. (*a*) Have your methods been dictated largely by financial considerations?

Yes, 15; (mostly *reduction* of anti-larval methods rather than abandonment). No, 7 [c.f. 2 (*a*).]

(*b*) Have modifications or new methods resulted in a loss of efficiency?

No affirmative replies.

(*c*) Do the new methods constitute a real advance?

Yes, 12; "Very useful", 9; Uncertain, 2.

8. (*a*) Have you the impression that the incidence of malaria has recently been abnormally low?

Yes, 19; No, 3; (Johore, Perak, Pahang).

(*b*) Have the newer methods been fully tested?

Yes, 11; No, 1; Not fully, 5.

(*c*) What factors do you consider responsible for low incidence?

(i) Reversionary overgrowth of water channels (discouraging A maculatus)—12.

(ii) Torrential rains more frequent (washing out)—3.

(iii) Increased immunity—extensive "salting" in Japanese interregnum, with elimination of weak re-actors—6.

(iv) Low transmission—an obscure cyclical process—3.

(v) Promptitude of mass measures after liberation—2.

9. General observations: Replies under this head have not brought up any important point not raised elsewhere.

Conclusions.—It is clear that a substantial majority still favours at least some reliance on anti-larval control. It has not been clear, however, in the replies whether the expression "anti-larval control" is meant to include, besides positive measures (cleaning and oiling, subsoiling, etc.), the more passive method of natural shade control. Apart from one or two individuals, all those who believe in anti-larval methods also use chemo-suppression extensively. The value of anti-adult measures has not been clearly determined.

It is fairly generally agreed that the malaria incidence has been low, and it appears therefore that the new methods, or the combination of new and old methods, have yet to be tried out against serious epidemic conditions.

More precise information as to the extent of the deliberate use, and as to the effectiveness, of natural shade control would clearly be of interest.

The Board considered that it was clear from Dr. Hardie's interesting summary that drug prophylaxis as a control method was assuming a major position in Malaya at the present time. It was agreed that the summary should be placed on record with a view to re-assessing the position a year from now.

TUBERCULOSIS ADVISORY BOARD.

31. The membership of the Board is:

(*a*) The Director of Medical Services (*Chairman*).

(*b*) Ten members, one from each State or Settlement, nominated by His Excellency the Governor on the recommendation of State and Settlement administrations.

(*c*) One member nominated by Rotary Clubs and one by the Central Welfare Council.

(*d*) Four medical members—

One nominated by the British Medical Association, Malaya Branch, one by the Alumni Association of the College of Medicine, one Medical Officer of Health of a Municipality or Town Board, and one Medical Officer nominated by the Director of Medical Services.

(*e*) Three Departmental Officials representing Education, Public Relations and Social Welfare.

The Director, Medical Services, Singapore, is represented by a Medical Officer who attends as an observer.

The Board held two meetings during the year.

The following items were discussed by the Board:

(i) The necessity for the provision of increased staff for the treatment of tuberculous patients in the existing hospitals. The Board recognised the difficulties which exist in the way of recruiting staff.

(ii) The *domiciliary schemes*.—These schemes were extended and Government has agreed that provision for these schemes should be entered in the State estimates.

(iii) *Medical examination of school children*.—Progress has been made in this service but is much hampered by lack of staff.

(iv) *Assistance in connection with anti-tuberculosis work by private practitioners*.—The service of private practitioners is much appreciated and valuable assistance has been rendered particularly in connection with the out-door clinic at Malacca.

The Tuberculosis Advisory Board made recommendations to Government that a tuberculosis out-door clinic should be established in Malacca. This clinic was established during the year. The Board also recommended that a tuberculosis settlement should be established at Pulau Jerejak. This settlement is now in being.

Streptomycin.—The Board established a small sub-committee to receive applications from doctors who wished to use Streptomycin. This sub-committee was not a success only three applications being received. Voluntary control having proved a failure, this drug will be controlled when the Therapeutic Substance Act is passed. The Board considered that this was the best solution of a difficult problem.

The formation of the Tuberculosis Advisory Board has undoubtedly aroused great public interest in the subject of tuberculosis and in the methods of combating it. There is now in addition to the official body, an unofficial Malayan Association for the Prevention of Tuberculosis which has a branch or affiliated society in each State and Settlement.

Part III.

MATERNITY AND CHILD WELFARE.

32. This is a State service, particulars of which will be found in the reports of individual States and Settlements. Maternity Hospitals exist at Penang and Johore Bharu. In Kuala Lumpur the Chinese Maternity Hospital is still used by Government. Elsewhere there are maternity wards in all Government Hospitals.

The total number of women admitted to maternity wards in 1948 was 32,615. The total number of deaths was 273. This compares with 28,683 admissions with 340 deaths in 1947.

33. Child Welfare Centres.—This is also a State service. There are Infant Welfare Centres in all the main towns. Periodic visits are paid by the staff to the surrounding districts. The total number of attendances was 583,755 and 245,003 visits were paid to mothers and children in their homes.

Part IV.

HOSPITALS AND DISPENSARIES.

34. Hospitals and dispensaries are a State service, particulars of this service will be found in the Annual Reports of States and Settlements. The total number of beds available for patients was 13,177. The daily average number of in-patients was 10,188.

During the year 203,279 in-patients were treated. This does not include the inmates of the leper and mental institutions—894 and 1,844 respectively. The hospitals range from the large modern buildings in Penang, Malacca and Johore Bahru through the less modern pavilion type of hospitals such as those in Alor Star, Ipoh, Kuala Lumpur and Seremban, to the small district hospitals.

The equipment of the hospitals is now reasonably good in essentials, and most of the buildings have been restored to good condition, but there are still many deficiencies in special equipment, particularly X-ray apparatus.

35. The following statement shows the hospitals in use at the end of 1948:

State/Settlement.	Average daily No. of patients.	Total No. of patients admitted.	Total No. of deaths.	Death-rate per 100 admissions.
KEDAH.				
Alor Star Hospital ..	401	9,435	339	3.6
Sungei Patani Hospital	182	5,477	217	4.0
Kulim Hospital ..	188	4,357	198	4.5
Baling Hospital ..	11	634	20	3.2
Langkawi Hospital ..	39	560	16	2.9

STATEMENT OF GENERAL AND DISTRICT HOSPITALS FOR 1948—(*cont.*)

State.	Average daily No. of patients.	Total No. of patients admitted.	Total No. of deaths.	Death-rate per 100 admissions.
PERLIS.				
Kangar Hospital ..	102	2,738	106	3.9
PENANG AND PROVINCE WELLESLEY				
General Hospital ..	626	9,050	777	8.6
Maternity Hospital ..	65	3,329	19	0.6
Perak Road Hospital	102	219	90	41.1
Balik Pulau Hospital	20	244	2	0.8
Prison Hospital ..	16	322	2	0.6
Quarantine Station Hospital	2	43	1	2.3
Pulau Jerejak Hospital	108	118	71	60.2
Pulau Jerejak Detention Hospital ..	16	67	1	1.5
Butterworth Hospital	116	3,094	125	4.0
Bukit Mertajam Hospital	139	2,937	109	3.7
Sungei Bakap Hospital	95	3,298	127	3.9
PERAK.				
Parit Buntar Hospital	72	2,198	66	3.0
Taiping Hospital ..	403	8,124	501	6.2
Kuala Kangsar District Hospital	116	2,963	99	3.3
Kuala Kangsar, Women's Hospital ..	81	2,526	100	4.0
Ipoh Hospital.. ..	490	10,319	707	6.9
Batu Gajah Hospital	239	4,394	256	5.8
Kampar Hospital ..	206	3,459	187	5.4
Tapah Hospital ..	114	1,534	179	11.7
Tanjong Malim Hospital	40	3,997	40	1.0
Telok Anson Hospital	161	2,872	260	9.1
Lumut Hospital ..	139	576	153	26.6
Grik Hospital ..	20	1,921	21	1.1
SELANGOR.				
Bungsar Hospital	35	1,162	28	2.4
General Hospital ..	397	8,878	855	9.6
Tanglin Hospital ..	120	2,223	55	2.5
Pudu Road Hospital ..	123	6,207	169	2.7
Pahang Road Hospital	103	363	140	38.6
Sentul Convalescent Camp Hospital ..	421	151	67	44.4
Police Depot Hospital	14	510	—	—
Klang Hospital ..	196	5,579	334	6.0
Kajang Hospital ..	88	2,804	119	4.2
Kuala Kubu Bahru Hospital	55	1,582	62	3.9

STATEMENT OF GENERAL AND DISTRICT HOSPITALS FOR 1948—(*cont.*)

State.	Average daily No. of patients.	Total No. of patients admitted.	Total No. of deaths.	Death-rate per 100 admissions.
NEGRI SEMBILAN.				
General Hospital ..	402	8,580	525	6.1
Kuala Pilah Women's Hospital	107	2,444	108	4.4
Kuala Pilah District Hospital	203	3,203	101	3.2
Port Dickson Hospital	89	2,120	89	4.2
Tampin Hospital ..	86	2,343	82	3.5
Jelebu Hospital ..	79	1,585	72	4.5
Prison Hospital ..	7	166	—	—
MALACCA.				
General Hospital ..	494	8,038	582	7.2
Alor Gajah Hospital ..	52	33	7	21.2
Prison Hospital ..	1	32	—	—
Quarantine Camp Hospital	7	145	4	2.8
Detention Camp Hospital	1	14	—	—
JOHORE.				
General Hospital ..	644	8,743	695	7.9
3rd Mile Hospital ..	144	198	12	6.1
Pontian Hospital ..	61	1,325	65	4.9
Batu Pahat Hospital ..	139	3,367	187	5.6
Muar Hospital ..	174	4,723	272	5.8
Tangkak Hospital ..	87	1,133	73	6.4
Segamat Hospital ..	118	3,278	238	7.3
Kluang Hospital ..	157	3,623	221	6.1
Kota Tinggi Hospital	76	1,782	67	3.8
Mersing Hospital ..	33	1,353	50	3.7
KELANTAN.				
Kota Bahru Hospital	255	4,663	197	4.2
Kuala Krai Hospital ..	44	1,543	52	3.4
TRENGGANU.				
Kuala Trengganu Hospital	167	2,844	96	3.4
Dungun Hospital ..	25	652	15	2.3
Kemaman Hospital ..	49	704	43	6.1
PAHANG.				
Kuala Lipis Hospital..	120	3,064	152	5.0
Kuantan Hospital ..	159	2,914	157	5.4
Raub Hospital ..	78	2,995	116	3.9
Bentong Hospital ..	97	1,999	182	9.1
Mentakab Hospital ..	110	2,466	138	5.6
Pekan Hospital ..	62	1,043	26	2.5

36. Full details of the conditions treated in hospitals are given in Table 1 of the Appendix.

The following gives an indication of the commoner conditions treated:

Disease.	Admissions.	Deaths.	Mortality per cent.
Malaria	19,519	596	3.05
Pulmonary Tuberculosis ..	7,328	2,182	29.77
Dysentery	2,314	125	5.4
Diarrhœa and Enteritis ..	4,199	611	14.55
Pneumonia and Broncho-Pneumonia	4,451	965	21.68
Bronchitis	6,996	97	1.38
Beri-beri	510	58	11.37
Venereal Diseases	5,888	103	1.74
Enteric Fever	898	158	17.59
Injuries due to External Causes	19,400	543	2.79

37. The following statement gives an indication of the distribution of the common diseases in the three principal racial groups. This cannot be taken as a true indication of the racial distribution of disease. The proportion of Malays who are treated as in-patients in hospital is small in relation to the other races.

The number of Indians is disproportionately high, because more than members of any other race are employed by estates or other employers who insist on sending their employees to hospital when this is necessary.

RACIAL INCIDENCE OF COMMON DISEASES AMONGST HOSPITAL IN-PATIENTS.

Population.	Chinese. 1,927,309		Indians. 539,976		Malays. 2,432,076		Others. 57,632	
Disease.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.
Malaria	6,975	383	7,466	124	4,734	73	344	16
Dysentery and Enteritis	2,519	495	2,348	155	1,421	71	225	15
The Pneumonias ..	1,900	635	1,921	242	514	70	116	18
Pul. Tuberculosis ..	4,245	1,531	1,709	439	1,247	195	127	17
Beri-beri	275	44	120	8	104	5	11	1
Appendicitis	587	18	329	8	96	2	95	2

38. Malaria Cases in Hospitals.—The number of cases treated in Government Hospitals was 19,519, a reduction of 6,655 from 1947. The distribution of types of malaria, diagnosed microscopically was:

Subtertian	62	per cent.
Benign tertian	32	,,
Mixed	4	,,
Quartan	2	,,

The seasonal incidence of malaria followed the usual course, the rise beginning in April and reaching its peak in May and June. Details showing the malaria admissions reported monthly for each State are given in Table 2 of the Appendix.

39. Surgical Work.—Equipment for surgical work improved considerably during 1948.

A total of 28,926 surgical operations were performed. Details are given in Table 3 of the Appendix.

40. Ophthalmic Work.—32,260 patients were treated for diseases and injuries of the eye and 2,212 eye operations were performed. Details are given in Table 4 of the Appendix.

41. Radiological Work.—The equipment of the Radiology Department improved during the year but is still very defective. No facilities exist for deep X-ray therapy; radiological diagnosis is fairly satisfactory where equipment exists, but many of the fairly large hospitals have no X-ray equipment.

Forty thousand, seven hundred and thirty-five patients have been examined by X-rays and 959 patients treated in the X-ray and electro-therapeutic departments.

42. Out-patients.—All hospitals have Out-patient Departments. This is supplemented by small dispensaries situated in many of the smaller towns and by travelling motor dispensaries operating on the main roads. Hospital Assistants in charge of fixed dispensaries travel by bicycle throughout their area to deal with places which the travelling dispensary cannot reach. In Johore, Pahang, Trengganu and Kelantan, a certain amount of travelling is also done by river. The absence of suitable craft has prevented the resumption of the pre-war service to river kampongs.

The demand for the services of these dispensaries has increased greatly since the war. One million, nine hundred and seventy-five thousand and nine attendances were recorded in 1948. This figure does not include attendances at Infant Welfare Centres and Venereal Disease clinics. Six hundred and thirty-two thousand, nine hundred and twenty-nine of these attendances were at Travelling Dispensaries. Details are given in Tables 5, 6 and 7 of the Appendix.

43. Dental Surgery.—The total number of dental officers employed in the Federation of Malaya at the end of the year was 24. This figure shows an increase of four on 1947, but is eight below the establishment of 32. The output of dental officers from the College of Medicine is still below the requirements of the Service and the attractions of private practice make recruitment difficult.

Equipment.—The delivery of equipment throughout the year was slow but on the whole satisfactory. Most States have now been supplied with new dental chairs, electric dental engines and sterilizers. The supply of essential expendible drugs, instruments and materials was kept up to allow all States to function normally.

Training of Dental Public Health Nurses.—A scheme for the training of Dental Public Health Nurses is under consideration to augment the dental service to school children. It has long been realised that the number of qualified dentists to treat the school children adequately in the Federation is beyond the economic resources of this country. This system has proved very successful in New Zealand and its introduction in the Federation should go far to combat the high rate of dental caries. The ideal team in a Malayan clinic would be one Dental Surgeon and five Public Health Nurses (Dental). Training of nurses has commenced.

Return of work done.—The number of attendances has risen from 102,255 in 1947 to 111,165 in 1948. The operations performed show a similar satisfactory increase. The details of work done by the Dental Department are given in Table 8 of the Appendix.

Scientific investigations.—The investigation into the dental condition of the more remote aboriginal tribes was continued and a paper on the "Teeth of the Che Wong" was published in the British Dental Journal by the Chief Dental Officer.

Honour.—During the year the Royal College of Surgeons of England elected the Chief Dental Officer to a Fellowship in Dental Surgery in recognition of his services to dentistry in Malaya.

44. Venereal Disease.—Treatment centres are available at all hospitals and out-patient clinics. A number of special clinics function in the larger centres of population.

The following gives the number of cases treated :

Venereal Diseases.

Nationalities.	Syphilis.	Gonorrhoea.	Soft Sore.
Chinese	4,802	2,755	906
Indians	3,750	2,058	1,079
Malays	3,646	3,065	503
Others	188	268	48
Total ..	12,386	8,146	2,536
1947 figures ...	12,513	6,579	1,991

The number of cases of syphilis shows a slight decline compared with the figures for 1947. There is, however, a considerable increase in the number of cases of gonorrhoea treated and also for soft sore. The 1948 figures are still much below than for 1946. The increase in the figures for gonorrhoea and soft sore probably indicates a greater number seeking treatment with the realisation that treatment with the newer and more effective drugs such as penicillin is available.

45. Laboratory Work.—Much of the pathological work is done in the laboratories of the Institute for Medical Research, but the simpler routine examinations are carried out in the

hospitals. In these hospital laboratories 262,210 blood films were examined for malaria. The findings have been included in the section dealing with malaria. One hundred and ninety-seven thousand, five hundred and seventy examinations of stools were made and 38.9 per cent. of the specimens examined showed worm infestation. Round worms were commonest—21.3 per cent. and hook worm 10.1 per cent.

Two thousand, six hundred and thirty-two post-mortem examinations were performed. Details of these examinations are to be found in Tables 9, 10 and 11 of the Appendix.

PART V.

SPECIAL INSTITUTIONS.

INSTITUTE FOR MEDICAL RESEARCH.

The following is a synopsis of the Annual Report of the Institute for Medical Research.

46. The years 1947-1948 have witnessed a notable widening of the research activities of the Institute, paradoxical though this may seem in view of the difficulties experienced in the replacement of basic research equipment needed to make good the heavy losses of war and to adapt war-time advances in technique to the investigation of Malayan Medical problems.

The initiation of projected lines of research has been largely dictated by these difficulties of replacement; and it has been in the fact-finding field investigations, especially those concerned with malaria, entomology and nutrition, that progress has been most noteworthy amongst the various divisions of the Institute.

But a more than compensating feature has been the increasing extension of the activities of the Institute occasioned by the attraction to it of visiting research units, staffed by picked men, each unit concentrating on one particular set of problems; with the gratifying result that the role of the Institute assumes increasingly that of a medical research centre for the Far East.

Two main factors have contributed to this development.

Firstly, generous allocations of research grants from the Colonial Development and Welfare Fund (C.D.W.F.) have been made by the Colonial Medical Research Committee (C.M.R.C.) for schemes of investigation proposed by the staff, supplemented by the Committee's expert advice, where needed, based on experience gained elsewhere in the British Commonwealth. They have provided a most effective stimulus to research effort.

Secondly, the fruitful field that Malayan medical problems offer has attracted medical investigators engaged on similar problems in territories outside the Commonwealth; a development that is due in no small part to the pioneer work of our predecessors and to the sympathetic practical interest of the lay administrator that medical research has long enjoyed in this country.

Concerning the first factor, the C.M.R.C. has allocated research grants to the following projects, now in being at this Institute, and to be described in more detail later:

(i) the British Scrub Typhus Research Unit, wholly supported by the C.D.W. Fund;

(ii) the field trial of the anti-malarial drug, Paludrine, partially supported by the C.D.W. Fund;

(iii) a corresponding field trial of the role of the two insecticides, D.D.T. and Gammexane, partially supported by the C.D.W. Fund.

In addition, plans are in preparation for a joint field investigation by the nutrition worker and the economist.

The project has the interest of the C.M.R.C., and will, it is hoped, begin during 1949.

Concerning the second factor, the success of an American research unit of five picked men in demonstrating so decisively in infected areas in Malaya that the new drug chloromycetin will cure scrub typhus has proved a landmark in therapeutic studies, that has held the attention of the medical world. As the investigation unfolded, clear indications were obtained that the drug was markedly effective in typhoid fever also. These findings naturally have prompted new and divergent subsidiary lines of investigation, especially into the possibility of prophylaxis in scrub typhus.

To the staff of the Institute, the benefit that thereby has accrued has transcended the mere event, tremendous though that be; for them the interchange of ideas and techniques and the interweaving of certain aspects of the investigations, with their own, have had a most stimulating effect. As an example of this may be cited the fact that over a number of months the two entomologists of the American Unit and the three of the British Scrub Typhus Unit have been enabled to pursue complimentary studies of the many problems of the classification, culture and role of trombiculid mites in disease, a subject that has long been greatly in need of such co-ordinated effort. The profit of such joint studies cannot be rated too highly.

47. In the Division of Bacteriology the longevity of the activity crystalline penicillin at the room temperatures of Malaya has been assessed. Tests for the determination of penicillin-sensitivity have been introduced.

Study of the "Rhesus" or "Rh" Factor has been initiated. The discovery in 1937 by Landsteiner and Wiener that this new factor in blood-grouping existed in human blood has stimulated world-wide investigations of ever-increasing range and complexity. Its immediate practical application, viz., its occasional role in pregnancy and transfusion reactions, has become the concern of every general practitioner. It is probable from studies made in many countries that this importance will be limited in Malaya almost entirely to Europeans; but local demonstration of its distribution in the different races of Malaya is needed, and is being undertaken.

The spectacular success of penicillin in a diverse range of infections has caused investigators of the synthetic drugs such as the sulphonamides (M&B 693, etc.), to turn their attention

more to the discovery and testing of moulds similar to penicillin that might enlarge the number of infections vulnerable to these mould extracts (or antibiotics).

An investigation of local moulds found in soil is in progress. The success in Malayan diseases of chloromycetin (to be described later), derived from a mould from Venezuela, has narrowed the quest to one for kindred moulds, with early results of much interest.

In addition, the efficacy of the choloromycetin of Venezuelan origin has been assayed in vitro against a series of local pathogens, with a view to giving a lead to the clinician when ultimately this antibiotic becomes freely available.

48. The Division of Biochemistry, more than any other Division, has been handicapped by the difficulty in obtaining replacements of war losses, both of basic chemicals and precision apparatus, chemical and optical. Nevertheless, biochemical studies on rice have been initiated that have a practical bearing on Malaya's nutrition problems.

Liaison with the Divisions of Malaria Research and of Entomology included determinations of paludrine blood-levels and of D.D.T., both assays being integral parts of the research work of those Divisions.

As new synthetic drugs, antibiotics and chemical insecticides respectively supplant earlier ones, so will the role of the biochemist become increasingly important as a participant in research projects concerned therewith.

49. In the Division of Entomology, a welcome event has been the recruitment of a second highly-qualified entomologist, Mr. R. H. Wharton, B.SC., during 1948. As the report of 1947 stresses, the lack of senior staff due to a world scarcity of medical entomologists, had curtailed considerably the desired range and tempo of investigations; in contrast, the 1948 report indicates the impetus that this accession of strength has given.

The need to recruit the largest possible cadre of qualified medical entomologists for Malaya is an urgent one, for Malaya is a country of entomological arrears. The urgency is measured by the toll taken by malaria, mitigated though it be by the newer synthetic anti-malaria drugs; by the occurrence of filariasis, physically crippling, and menacing economically to at least one large rice growing scheme; by the widespread distribution of areas of land infested by mites carrying the causal agent of scrub typhus; and by the need to promote anti-mosquito measures against *Aedes aegypti*, the commonest vector species of yellow-fever, a disease from which the Far East is happily free, but against which swifter air travel enjoins unremitting vigilance. Many subsidiary problems such as those of dengue fever, sand-fly fever and perhaps Q-fever (possibly), could be added. That the influence of the medical entomologist on tropical medicine is wholly preventative further emphasizes the gain to Public Health that an increased cadre of entomologists would bring. The entomologist has devoted much effort to the formation of a branch laboratory at Tampin that will be complimentary to that formed by the Senior Malaria Research Officer,

as noted in the Annual Report for 1946. There his principal activities will be to give assistance in the entomological aspects of the field investigations of the newer chemoprophylactic and chemotherapeutic anti-malaria drugs, and in assessing in "maculatus" country the efficacy of the newer insecticides, D.D.T., Gammexane, and still later rivals to these that will doubtless appear. Preliminary tests have begun.

The adoption in Malaya of D.D.T. spraying of houses for malaria control awaits more knowledge of the resting habits of local carrier mosquitoes. D.D.T. spraying in the country is thus largely empirical. Controlled trials are planned, and have been submitted to the Colonial Medical Research Committee in London for its views. These are favourable and have received practical expression in the grant of financial aid from the Colonial Development and Welfare Fund. The trials will be made (in house and field) in selected Malay villages and valleys in Negri Sembilan; initial survey work has begun, while, in the laboratory, techniques are being perfected. The enquiry will include a comparative evaluation of Gammexane; and will be interwoven with the field studies of the chemotherapeutic value of the synthetic drug, "Paludrine", now progressing under the direction of the Senior Malaria Research Officer.

Despite the prior claims of malaria, filariasis has not been neglected. Working in collaboration with Dr. T. Wilson in Kedah, the Division has accumulated entomological data which will lead to more comprehensive studies that will be possible when the staff position is more favourable.

50. The Division of Malaria Research has continued the large-scale field experiments in chemoprophylaxis that were begun late in 1946 at the request of the Colonial Medical Research Committee and have been aided financially by the Colonial Development and Welfare Fund. On selected estate populations the efficacy and safety of suppressive anti-malaria treatment by paludrine, chloroquine, CAM/AQI, and mepacrine are being compared.

Paludrine has been shown to suppress malaria efficiently under the conditions of light transmission prevailing in Malaya during 1947 and the first half of 1948. Protection was not complete with any of the dosages used—100 mgm. to 300 mgm. once weekly—but "break through" was comparatively rare. The drug clearly has an important place in Malaya. Why paludrine should be a successful preventive drug in India and Malaya and disappointing in West Africa is not known. Attention is now directed to the possibility that parasites become "paludrine-resistant" or to possible differences of strain in West Africa and Malaya.

Chloroquine was also efficient, possibly even more active than paludrine. This drug, however, is too expensive for general use; and purchase is beset with exchange restrictions.

CAM/AQI, also American, was not efficient when given, as recommended, once a month. The possible utility of the drug in Malaya is not yet defined.

In the therapy of malaria, both paludrine and chloroquine are efficient, but the latter causes symptoms to disappear more quickly. The possibility of treating malaria with single doses of an active drug—a method of potential value in the kampongs—is being explored.

Early results of a comparative study of therapy by paludrine and mepacrine indicate that in paludrine therapy, while there is a quick clearance of the blood, the fever response is somewhat slower than in the mepacrine therapy.

51. The Division of Nutrition, formed in 1946, is now well launched. Already data of much value to the medical practitioner and economist alike have been secured by teams of investigators in the field. More such teams are being trained; there is no doubt that the effectiveness of this Division is increasing as its organisation grows and its activities ramify further afield.

Attention is drawn to the prominence of beri-beri as a factor in infantile mortality; and to anæmia and skin ulceration as an index of malnutrition.

Dietary and economic surveys have been made in three groups of the rural population that follow sharply contrasting occupations; the findings exemplify how integrated are the sciences of nutrition, economics and sociology.

The institution of a Nutritional Advisory Board, to broaden the basis of nutritional investigation by inter-departmental participation, has greatly stimulated interest and effort.

This Division has largely controlled the expenditure of the $3,000,000 vote for "Free Meals to School Children". Skim milk powder, army biscuits and food yeast have been made freely available.

52. The research activities of the Division of Pathology were largely merged with those of the U.S. Scrub Typhus Unit inasmuch as laboratory space, laboratory mice and two assistants were allocated to this Unit. With what profit these facilities were used will be clear from perusal of the Unit's summarized report, given below.

Two notable outbreaks of scrub typhus in the vicinity of Kuala Lumpur were investigated by the Senior Pathologist; one served as human material for the assay of chloromycetin, and indicated an infested area that later proved suitable for the chemotherapeutic studies of the U.S. Unit.

Notes are given of observations on the value of the cotton-rat lung vaccine extensively used during the closing months of the Japanese war. It would appear that batches of this vaccine, shown by mouse tests to possess capacity to protect mice, did not protect man. Dr. Joseph E. Smadel informs us that a vaccine made in his laboratory, and similarly promising in mice, likewise failed to yield any conclusive evidence of protective power in man.

The use of adjuvants as a possible method of enhancing whatever power for protection the rat-lung vaccine might have was the subject of experiment. No such enhancement could be demonstrated.

A series of experiments with penicillin and streptomycin in experimental rat-bite fever was undertaken.

53. The activities of the Division of Serology covered the usual range of laboratory examinations and products. The most responsible of the latter, the production of vaccine lymph, continued at a brisk pace, thus sufficient to vaccinate 4,500,000 persons was made in 1947, and 2,015,680 in 1948.

The claim that "lanolinated lymph" should be preferred to our usual glycerinated product, because of an alleged greater resistance to the imperfect refrigeration of transit conditions, was put to the test, and proved to be unfounded; for whereas the usual I.M.R. lymph retained a maximum potency for 31 days of storage at room temperature, the lanolinated lymph under similar conditions retained its maximum potency for only ten days.

54. The Ipoh Branch Laboratory.—Covering a very wide range of subjects, continued efficiently to serve the hospitals of Perak; and to that extent to further research activities of the parent laboratory at Kuala Lumpur.

Only one member of the Senior Staff was available—in contrast to the two of the pre-war period. When the recruiting position improves, the position will be restored, for this laboratory fulfils a most important function, and receives much routine work that may well offer opportunities for special investigations.

55. The United States Army Scrub Typhus Research Unit.—The salient objectives and findings of the United States Scrub Typhus Research Unit have been contributed to the Annual Report by Dr. Joseph E. Smadel, the leader of the Unit, who is the Scientific Director of the Department of Rickettsial and Virus Diseases, Research and Graduate School, Army Medical Centre, Washington D.C., and one of the foremost virus investigators of the present time. He traces the progress made in the investigation of chloromycetin, which exceeded expectation. First came the demonstration of the curative efficiency of the drug in scrub typhus, remarkable in its speed and completeness. The next logical objective, having in mind the drug's military import, was a series of field-experiments designed to evaluate the drug's potentialities in chemoprophylaxis. For it was now possible to expose human subjects in scrub typhus infested areas, with the certainty of avoiding mortality, and with the prospect of many new avenues of study unfolding.

Thus, overnight as-it-were, a once severe and often mortal disease, centuries-old, much feared by planter and serving soldier alike, had become trivial in the presence of chloromycetin, a drug taken as simply as is aspirin, and the gap between animal and human experimentation bridged. In medical scientists throughout the world these dramatic results have aroused the liveliest interest.

But an even more resounding result has been the finding that in typhoid fever the drug is also effective; 18 cases have been treated without a failure, and more have since been cured in the United States. This additional success has, of course, much more than local interest. For typhoid is world-wide in its incidence, and hitherto no drug has had any specific effect on the infection.

Lastly, Dr. Smadel alludes to the successful synthesis of chloromycetin by the Research Division of Messrs. Parke Davis and Company on a scale that is unique in the study of anti-biotics and that should extend the benefits of this remarkable drug more widely throughout the community than would otherwise have been possible.

56. Colonial Office Scrub Typhus Research Unit.—Dr. J. R. Audy, the leader of the British Scrub Typhus Unit, sponsored by the Colonial Office, has contributed a concise account of the objectives and current work of his Unit. These are complimentary to those of the American Unit, in that they deal primarily with the origins of the disease in infested country-side rather than with the end result, the patient, infected or at risk.

The comprehensive nature of the investigations needed will at once strike the reader. Prior to the Japanese war our knowledge of this aspect of scrub typhus consisted largely of disjointed though valuable observations by isolated individual workers or small groups of workers. During the war the urgency of the problem brought many able investigators to its study, but these were soon to be dispersed by the ending of hostilities. It is therefore most gratifying that in Dr. Audy and his unit we in Malaya have been able to secure continuity with war-time investigations, and to initiate long-term planned studies, intensive yet unhurried.

LEPER SETTLEMENTS.

57. There are three Leper Settlements in the Federation, Sungei Buloh in Selangor, Pulau Jerejak in Penang and the Leper Hospital, Johore Bharu. Pulau Jerejak was re-opened in February this year with patients transferred from Sungei Buloh. Sixty patients were also transferred from Singapore.

58. Leper Settlement, Sungei Buloh.—During the year the number of patients in the settlement declined from 2,049 to 1,888. The distribution of population is given below:

	Men.	Women.	Boys.	Girls.	Total.
Chinese ...	915	409	84	50	1,458
Indians ...	195	36	9	3	243
Malays ...	126	39	7	3	175
Others ...	10	1	—	1	12
Total ...	1,246	485	100	57	1,888

59. Treatment.—Treatment with Sulphone drugs was begun at Sungei Buloh and with increasing supplies will be extended in 1949 to Pulau Jerejak and the Johore Settlement.

The most satisfactory results have been obtained by the use of 4:4 Diaminodiphyenyl Sulphone in oil 1 c.c. given by injection. It is well tolerated and no complications have arisen apart from a slight anemia. The response particularly in the heavier infected cases, is dramatic. Ulcers of the naso-pharynx often of years duration have healed after a few weeks on a total dosage of two grammes or less. The injections are prepared by the

Pharmaceutical Department and the cost of treatment is less than $4 per annum per patient. Sufficient data is not yet available to judge the end results of this treatment but it is probable that the use of Sulphone drugs will enable cures to be obtained within a period of two years, after six months treatment bacilli are less numerous in the lesions and fragmentation of the bacilli can be observed.

60. Hospital Treatment.—Three thousand, six hundred and seventy cases required hospital treatment. The main causes of death apart from the leprosy factor was pulmonary tuberculosis which accounted for 30 deaths out of a total of 72.

The introduction of Sulphone Therapy has had as might be expected a noticeable effect in morale. The patients now realise that a cure of their condition is possible. The possibility of permanent cure has brought in its train a large number of questions of a social rather than a medical character which in conjunction with the Social Welfare Department will require consideration.

61. Welfare.—Welfare work in all institutions was actively pursued during the year. The patients themselves taking an active part in entertainments, gardening and serving in varying capacities in the actual staffing and running of the institutions. Through the generosity of the Bar Councils of the Federation and Singapore free legal aid for inmates has been arranged. This aid has been of the utmost value to all patients who may have legal problems, and is much appreciated both by the department and the patients.

MENTAL HOSPITAL.

62. The Central Mental Hospital at Tanjong Rambutan deals with all cases of mental disease from the Federation of Malaya with the exception of 1st class male cases for whom there is no suitable accommodation. One ward was converted into three rooms for the accommodation of 1st class female patients. The Mental Hospital, Johore Bharu, is leased to the army.

63. Deep Insulin and Electric Convulsive Therapy continued to be used, with many dramatic recoveries. Of the former 106 cases were treated and of the latter 599, compared with 109 and 401 respectively in 1947.

64. Farms.—The situation in 1948 had eased considerably. The number of patients working on the farms increased to 204 as against 140 in 1947. But the acquisition of a second tractor with complementary equipment has proved a great boon, much clearing has been done, and there are now approximately 234 acres under cultivation as compared with 120 acres in 1947. Moreover, much clearing of lallang has been done. One farmstead was built with hospital labour to replace one rendered inactive by inclusion in the Police Depôt. The stock of pigs has been maintained, and the hospital is now self-contained in the supply of pork for diets, as it is in the supply of fruit and vegetables. In addition, more feeding stuffs are being produced for pig-feeding, and 59 acres are devoted to sweet potatoes.

65. The estimated value of farm produce, at market prices, was $81,852, as compared with approximately $35,000 in 1947. The main items produced were 11,112 katies of pork, 1,177 katies of beef, 8,000 katies of maize and 424,000 katies of vegetables.

66. Occupational Therapy.—Occupational Therapy was carried on as in the previous year.

MEDICAL STORES.

67. The store position is still rendered difficult by the necessity to use no fewer than six separate buildings in six widely scattered localities. Concentration at the port of entry would when it becomes practicable, undoubtedly reduce costs and greatly increase efficiency. The supply position has improved considerably during the year, but there is still considerable delay in placing orders by the Crown Agents and even when firm orders have been given the period between placing the order and the shipping of supplies is still far too long. Many indents sent in 1946 and 1947 are still not completed at the end of 1948. If supplies could be expedited uneconomic local purchases could be largely avoided and the stocks could be reduced with a consequent considerable saving to Government. The many problems which arose with the commencement of the new "Unallocated Stores" accounting system were gradually solved and the system should work smoothly in future years. The great shortage of textiles in the sterling area has caused great difficulties in the supplies of dressings, bedding, cloth for patients' clothes and staff uniforms.

PHARMACEUTICAL LABORATORY.

68. The accommodation and equipment are still limited and supplies of raw materials were slow in arriving, nevertheless, over 61,000 ampoules were made compared with 14,750 in 1947 and 52,100 lbs. of galenicals and other preparations, as compared with 27,300 lbs. in 1947. Tablets were made for the first time at Kuala Lumpur and over 140,000 produced.

CONCLUSION.

69. There has been a definite improvement in the general state of public health in Malaya during 1948. The contribution of the low incidence of malaria to this happy state of affairs must not be forgotten and should the incidence of this disease increase a very different story may have to be told in future years. Much remains to be done before the Federation can regard with complacence the general health of the community. Tuberculosis, the high infantile mortality rate, the improving but still relatively low standards of nutrition are only some of the problems which remain to be solved. On the other hand progress is being made with the introduction of Sulphone drugs for the treatment of leprosy and the discovery of chloromycetin as a powerful therapeutic agent in the treatment of tropical typhus has removed the dread of these diseases. There is an increasing demand for modern medical treatment among all classes of the community which can only be adequately met once the serious problem of staffing the Medical Department particularly with doctors has been solved.

Table 1.

IN-PATIENTS.

Return of Diseases and Deaths for the Year 1948.

Diseases.	*Remaining at end of Dec., 1947.	Yearly Total.		†Total cases treated.	‡Remaining at end of Dec., 1948.
		Admissions.	Deaths.		
I.—Infectious and Parasitic Diseases.					
1. Typhoid fever	66	898	158	964	71
2. Paratyphoid fever	..	17	1	17	1
3. Typhus—					
(1) Typhus exanthematicus	..	..	..	..	..
(2) Tropical typhus	15	483	23	498	17
(3) Japanese river fever	..	..	..	..	..
(4) Other rickettsia infections	..	33	6	33	..
4. Relapsing fever	..	..	..	..	..
5. Undulant fever	..	..	..	..	..
6. Small-pox	10	63	7	73	*a*
7. Measles	4	111	..	115	*a* 3
8. Scarlet fever	..	..	..	..	..
9. Whooping cough	1	69	1	70	..
10. Diphtheria	14	597	178	611	25
11. Influenza—					
(1) with pneumonia	1	104	4	105	1
(2) with other respiratory complications	2	438	6	440	7
(3) without respiratory complications	101	5,092	2	5,193	116
12. Cholera	..	..	..	..	..
13. Dysentery—					
(1) Amœbic	73	1,476	64	1,549	63
(2) Bacillary	7	320	27	327	10
(3) Mixed	..	5	..	5	..
(4) Undefined or due to other causes	13	513	34	526	21
14. Plague—					
(1) Bubonic	..	..	..	..	..
(2) Pneumonic	..	..	..	..	..
(3) Septicæmic	..	..	..	..	..
(4) Undefined	..	..	..	..	..
15. Erysipelas	2	72	1	74	5
16. Acute poliomyelitis—					
(1) Acute poliomyelitis	4	141	19	145	4
(2) Acute polioencephalitis	..	3	2	3	..
17. Encephalitis lethargica	1	..	..	1	1
18. Cerebro-spinal fever	1	21	10	22	..
19. Glanders	..	..	..	..	..
20. Anthrax	..	..	..	..	..
21. Rabies	..	8	2	8	1
22. Tetanus—					
(1) Tetanus of the newly born	3	194	165	197	1
(2) Other forms of tetanus	7	162	95	169	6
23. Tuberculosis of the respiratory system	1,616	7,328	2,182	8,944	1,915
24. Tuberculosis of the central nervous system	4	141	89	145	6
25. Tuberculosis of the intestines or peritoneum	3	68	23	71	5
26. Tuberculosis of the vertebral column	26	173	26	199	45
27. Tuberculosis of other bones and joints	35	199	9	234	61
28. Tuberculosis of the skin or subcutaneous tissue (lupus)	..	18	..	18	..
29. Tuberculosis of the lymphatic system (abdominal and bronchial glands excepted)	5	111	7	116	9
30. Tuberculosis of the genito-urinary system	..	9	2	9	..
31. Tuberculosis of other organs—					
(1) Adrenal	..	1	..	1	..
(2) Other sites	6	57	22	63	6
Carried forward	2,020	18,925	3,165	20,945	2,400

The form shows in the main the arrangement of diseases in the *International Nomenclature, 1931 Edition*. To save space the unimportant diseases of any class can be grouped in their places as "Other Diseases" of the class.

* i.e., the year previous to that for which the return is made. † "Total cases treated" will, of course, include those remaining in hospital at the end of the previous year. ‡ The figures in this column to be carried on to the next year's return.

a. This does not include cases not treated in hospitals.

TABLE 1—(*cont.*)

IN-PATIENTS—(*cont.*)

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1948—(*cont.*)

Diseases.	*Remaining at end of Dec., 1947.	YEARLY TOTAL.		†Total cases treated.	‡Remaining at end of Dec., 1948.
		Admissions.	Deaths.		
Brought forward ..	2,020	18,925	3,165	20,945	2,400
I.—INFECTIOUS AND PARASITIC DISEASES—(*cont.*)					
32. Tuberculosis disseminated—					
(1) Acute	..	1	1	1	..
(2) Chronic	..	..	..	..	..
(3) Not distinguished as acute or chronic ..	1	5	..	6	3
33. Leprosy	2,338	996	104	3,334	*a* 2,626
34. Syphilis—					
(1) Primary	26	528	1	554	14
(2) Secondary	89	1,476	4	1,565	92
(3) Tertiary	52	432	28	484	35
(4) Hereditary	20	171	51	191	4
(5) Period not indicated ..	23	397	17	420	23
35. Other venereal diseases—					
(1) Soft chancre	13	337	..	350	4
(2) Gonorrhœa and its complications ..	61	1,936	1	1,997	62
(3) Gonorrhœal ophthalmia	3	81	..	84	3
(4) Gonorrhœal arthritis ..	19	261	1	280	12
(5) Granuloma venereum ..	..	35	..	35	..
(6) Tropical bubo	6	234	..	240	8
36. Purulent infective septicæmia—					
(1) Septicæmia	3	121	101	124	1
(2) Pyæmia	2	36	15	38	1
(3) Gas gangrene	..	5	1	5	1
37. Yellow fever	..	..	..	..	..
38. Malaria—					
(1) Tertian (benign) ..	66	2,869	48	2,935	51
(2) Quartan	5	180	4	185	6
(3) Aestivo-autumnal (Subtertian) ..	104	5,491	272	5,595	111
(4) Mixed infections ..	13	379	28	392	8
(5) Unclassified	202	8,629	191	8,831	143
(6) Cachexia	87	1,971	53	2,058	54
(7) Blackwater fever ..	..	4	2	4	..
39. Other diseases due to Protozoa—					
(1) Yaws (framboesia) ..	179	1,629	2	1,808	125
(2) Spirochætosis icterohæmorrhagica	..	6	4	6	..
(3) Leishmaniasis (dermal)	..	..	..	..	..
(4) Kala azar	..	..	..	..	..
(5) Other diseases	..	8	..	8	..
40. Ankylostomiasis	68	1,845	9	1,913	47
41. Hydatid cysts	..	2	..	2	..
42. Other diseases due to helminths—					
Cestodes.					
(1) Tænia solium	..	5	..	5	..
(2) Tænia saginata	..	..	..	..	..
(3) Other cestodes	..	..	..	..	..
Nematodes.					
(4) Filaria	1	71	..	72	3
(5) Ascaris	74	3,418	13	3,492	58
(6) Trichuris trichiura ..	..	9	..	9	..
(7) Oxyuris vermicularis ..	..	3	..	3	..
(8) Dracunculus medinensis	..	..	..	..	..
Trematodes.					
(9) Schistosomum japonicum	..	..	..	..	..
(10) Clonorchis sinensis ..	..	1	..	1	..
(11) Other helminths ..	..	..	..	..	..
(12) Undefined	8	297	2	305	3
43. (1) Sprue	6	41	4	47	1
(2) Actinomycosis	..	8	..	8	1
(3) Other mycotic infections excluding purely dermal mycosis	2	4	..	6	..
Carried forward ..	5,491	52,847	4,122	58,338	5,900

The form shows in the main the arrangement of diseases in the *International Nomenclature, 1931 Edition*. To save space the unimportant diseases of any class can be grouped in their places as "Other Diseases" of the class.

* i.e., the year previous to that for which the return is made. † "Total cases treated" will, of course, include those remaining in hospital at the end of the previous year. ‡ The figures in this column to be carried on to the next year's return.

a. Admissions to Leper Settlements.

TABLE 1—(*cont.*)

IN-PATIENTS—(*cont.*)

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1948—(*cont.*)

Diseases.	*Remaining at end of Dec., 1947.	YEARLY TOTAL.		†Total cases treated.	‡Remaining at end of Dec., 1948.
		Admissions.	Deaths.		
Brought forward ..	5,491	52,847	4,122	58,338	5,900
I.—INFECTIOUS AND PARASITIC DISEASES—(*cont.*)					
44. Other infectious or parasitic diseases—					
(1) Vaccinia including post vaccinal encephalitis..	..	2	1	2	..
(2) Other sequelæ of vaccination	..	6	..	6	..
(3) Rubella	..	..	..	..	..
(4) Varicella (chicken-pox)	21	688	1	709	9
(5) Mumps and its complications	12	228	..	240	12
(6) Dengue	..	61	..	61	1
(7) Melioidosis	..	1	1	1	..
(8) Myiasis	..	..	..	..	..
(9) Glandular fever.. ..	..	1	..	1	..
10) Others	..	..	..	..	..
(11) Pyrexia of uncertain origin	7	98	1	105	..
II.—CANCER AND OTHER TUMOURS.					
45. Cancer or other malignant diseases of the buccal cavity, and pharynx	6	140	45	146	9
46. Cancer or other malignant tumours of the digestive organs and peritoneum—					
(1) Stomach	15	118	59	133	8
(2) Liver (primary).. ..	6	165	94	171	..
(3) Other digestive organs..	4	107	34	111	5
47. Cancer or other malignant tumours of the respiratory organs	2	46	26	48	3
48. Cancer or other malignant tumours of the uterus	6	133	22	139	2
49. Cancer or other malignant tumours of other female genital organs	3	125	25	128	5
50. Cancer or other malignant tumours of the breast	3	69	13	72	8
51. Cancer or other malignant tumours of the male genito-urinary organs	3	41	9	44	1
52. Cancer or other malignant tumours of the skin	4	53	11	57	3
53. Cancer or other malignant tumours of organs not specified ..	12	210	68	222	14
54. Tumours non-malignant—					
(1) Of female genital organs	6	76	5	82	2
(2) Of other sites	9	375	8	384	13
55. Tumours of undetermined nature—					
(1) Female genital organs ..	3	31	..	34	3
(2) Other sites	20	201	8	221	7
III.—RHEUMATISM, DISEASES OF NUTRITION AND OF ENDOCRINE GLANDS AND OTHER GENERAL DISEASES.					
56. Rheumatic fever—					
(1) With cardiac involvement	5	83	8	88	3
(2) Without cardiac involvement	19	214	1	233	13
57. Chronic rheumatism and osteoarthritis	36	896	2	932	32
58. Gout	1	10	..	11	1
59. Diabetes (not including diabetes insipidus)	34	464	30	498	33
60. Scurvy (including Barlow's disease)	1	21	..	22	..
Carried forward ..	5,729	57,510	4,594	63,239	6,087

The form shows in the main the arrangement of diseases in the *International Nomenclature, 1931 Edition*. To save space the unimportant diseases of any class can be grouped in their places as "Other Diseases" of the class.

* i.e., the year previous to that for which the return is made. † "Total cases treated" will, of course, include those remaining in hospital at the end of the previous year. ‡ The figures in this column to be carried on to the next year's return.

TABLE 1—(*cont.*)

IN-PATIENTS—(*cont.*)

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1948—(*cont.*)

Diseases.	•Remaining at end of Dec., 1947.	Yearly Total.		†Total cases treated.	‡Remaining at end of Dec., 1948.
		Admissions.	Deaths.		
Brought forward ..	5,729	57,510	4,594	63,239	6,087
III.—RHEUMATISM, DISEASES OF NUTRITION AND OF ENDOCRINE GLANDS AND OTHER GENERAL DISEASES—(*cont.*)					
61. (1) Beri-beri including epidemic dropsy	57	494	53	551	38
(2) Beri-beri associated with pregnancy or labour ..	..	16	5	16	..
62. Pellagra	2	16	1	18	1
63. Rickets	1	38	2	39	1
64. Osteomalacia	..	..	..	..	..
65. Diseases of the pituitary gland ..	..	5	..	5	3
66. Diseases of the thyroid and parathyroid glands—					
(1) Simple goitre	3	54	2	57	1
(2) Exophthalmic goitre ..	..	11	..	11	1
(3) Myxœdema, cretinism	..	6	..	6	..
(4) Tetany	..	5	2	5	..
(5) Other diseases of the thyroid glands ..	4	63	3	67	5
67. Diseases of the thymus	..	..	..	..	..
68. Diseases of the adrenal glands (excluding tuberculosis) ..	..	11	..	11	..
69. Other general diseases—					
(1) Acidosis	..	17	..	17	..
(2) Other diseases of metabolism	22	408	48	430	25
IV.—DISEASES OF THE BLOOD AND BLOOD FORMING ORGANS.					
70. Hæmorrhagic conditions—					
(1) Purpura	..	8	4	8	1
(2) Hæmophilia	..	4	..	4	..
71. Anæmia and chlorosis—					
(1) Pernicious anæmia ..	1	34	13	35	3
(2) Splenic anæmia ..	..	7	1	7	1
(3) Chlorosis	..	1	..	1	..
(4) Secondary anæmia ..	248	3,317	276	3,565	237
(5) Others	156	1,873	149	2,029	81
72. Leukæmia—					
(1) Leukæmia	..	19	14	19	..
(2) Hodgkin's disease ..	1	14	1	15	1
73. Diseases of the spleen—					
(1) Banti's disease	..	17	2	17	..
(2) Others (not including diseases of the spleen due to malaria or leukæmia)	..	45	4	45	1
74. Other diseases of the blood and blood forming organs	2	26	6	28	2
V.—CHRONIC POISONING.					
75. Alcoholism (acute or chronic) ..	1	289	..	290	2
76. Chronic poisoning by other organic substances—					
(1) Opium	9	473	2	482	14
(2) Morphia, cocaine ..	..	5	..	5	..
(3) Others	..	22	2	22	1
77. Chronic poisoning by mineral substances—					
(1) Lead poisoning	..	4	..	4	..
(2) Arsenical dermatitis ..	5	65	1	70	2
(3) Others	..	41	8	41	..
Carried forward ..	6,241	64,918	5,193	71,159	6,508

The form shows in the main the arrangement of diseases in the *International Nomenclature, 1931 Edition*. To save space the unimportant diseases of any class can be grouped in their places as "Other Diseases" of the class.

• i.e., the year previous to that for which the return is made. † "Total cases treated" will, of course, include those remaining in hospital at the end of the previous year. ‡ The figures in this column to be carried on to the next year's return.

TABLE 1—(*cont.*)

IN-PATIENTS—(*cont.*)

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1948—(*cont.*)

Diseases.	*Remaining at end of Dec., 1947.	YEARLY TOTAL.		†Total cases treated.	‡Remaining at end of Dec., 1948.
		Admissions.	Deaths.		
Brought forward ..	6,241	64,918	5,193	71,159	6,508
VI.—DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS.					
78. Encephalitis (not including encephalitis lethargica)—					
(1) Cerebral abscess ..	..	17	13	17	..
(2) Other forms of encephalitis..	1	39	25	40	1
79. Meningitis (not including tuberculous meningitis or cerebro-spinal meningitis)	5	170	121	175	..
80. Tabes dorsalis (Locomotor ataxia)	5	31	2	36	8
81. Other diseases of the spinal cord..	5	55	10	60	8
82. Apoplexy and paralysis—					
(1) Cerebral hæmorrhage ..	2	163	130	165	6
(2) Cerebral embolism ..	1	11	8	12	1
(3) Cerebral thrombosis ..	8	90	40	98	15
(4) Hemiplegia, cause not determined	67	324	24	391	73
(5) Other paralysis ..	20	190	13	210	29
83. General paralysis of the insane ..	1	8	1	9	..
84. Other forms of insanity—					
(1) Dementia præcox ..	..	4	..	4	..
(2) Others	1,645	1,896	187	3,541	*a* 2,151
85. Epilepsy	4	250	14	254	16
86. Infantile convulsions .. .. (age under 5 years)	2	161	86	163	1
87. Other diseases of the nervous system—					
(1) Chorea	1	5	..	6	1
(2) Neuritis and neuralgia..	43	1,213	1	1,256	45
(3) Paralysis agitans ..	4	21	..	25	6
(4) Disseminated sclerosis ..	3	10	2	13	3
(5) Neurasthenia	3	246	..	249	9
(6) Hysteria	..	77	..	77	1
(7) Others	20	350	4	370	13
88. Diseases of the eye—					
(1) Conjunctivitis	57	1,514	..	1,571	57
(2) Trachoma	9	201	..	210	20
(3) Corneal ulcer	12	332	..	344	13
(4) Other diseases of the eye	220	2,323	1	2,543	266
89. Diseases of the ear and or the mastoid sinus—					
(1) Otitis externa	2	136	..	138	5
(2) Otitis media	8	298	7	306	6
(3) Mastoiditis	3	82	4	85	8
(4) Others	4	131	..	135	1
VII.—DISEASES OF THE CIRCULATORY SYSTEM.					
90. Pericarditis	..	18	8	18	..
91. Acute endocarditis—					
(1) Malignant	..	5	3	5	..
(2) Others	1	43	8	44	1
92. Chronic endocarditis: valvular disease—					
(1) Aortic valve disease ..	2	50	16	52	8
(2) Mitral valve disease ..	8	264	70	272	19
(3) Aortic and mitral ..	3	22	8	25	..
(4) Others	9	135	32	144	6
93. Diseases of the myocardium—					
(1) Acute myocarditis ..	20	275	104	295	20
(2) Chronic myocardial degeneration	11	265	114	276	19
Carried forward ..	8,450	76,343	6,249	84,793	9,344

The form shows in the main the arrangement of diseases in the *International Nomenclature, 1931 Edition*. To save space the unimportant diseases of any class can be grouped in their places as "Other Diseases" of the class.

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a. Cases admitted to Mental Hospital.

TABLE 1—(*cont.*)

IN-PATIENTS—(*cont.*)

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1948—(*cont.*)

Diseases.	*Remaining at end of Dec., 1947.	YEARLY TOTAL.		†Total cases treated.	‡Remaining at end of Dec., 1948.
		Admissions.	Deaths.		
Brought forward ..	8,450	76,343	6,249	84,793	9,344
VII.—DISEASES OF THE CIRCULATORY SYSTEM—(*cont.*)					
94. Diseases of the coronary arteries—					
(1) Angina pectoris	..	32	1	32	1
(2) Coronary thrombosis ..	1	32	14	33	1
(3) Coronary sclerosis ..	..	4	2	4	..
95. Other diseases of the heart—					
(1) Auricular fibrillation ..	2	92	18	94	8
(2) Heart block	..	7	3	7	..
(3) Others	16	283	117	299	19
96. Aneurysm—					
(1) Aneurysm of aorta ..	..	27	8	27	4
(2) Aneurysm of other arteries	..	12	2	12	..
97. Arterio-sclerosis	6	70	8	76	13
98. Gangrene	9	66	12	75	3
99. Other diseases of the arteries ..	..	14	3	14	..
100. Diseases of the veins—					
(1) Varicose veins	1	54	..	55	3
(2) Hæmorrhoids	44	749	..	793	33
(3) Phlebitis	1	43	..	44	2
(4) Thrombosis	2	32	7	34	..
(5) Others	3	55	2	58	1
101. Diseases of the lymphatic system—					
(1) Lymphangitis	1	119	..	120	7
(2) Lymphadenitis	12	479	1	491	20
(3) Bubo (non-specified) ..	8	227	..	235	9
102. Abnormalities of blood pressure—					
(1) High blood pressure ..	12	364	29	376	19
(2) Low blood pressure ..	..	..	..	..	..
103. Other diseases of the circulatory system—					
(1) Epistaxis	..	29	..	29	..
(2) Others	..	21	2	21	..
VIII.—DISEASES OF THE RESPIRATORY SYSTEM.					
104. Diseases of the nasal fossæ and its annexa— ..					
(1) Diseases of the nose ..	13	478	..	491	10
(2) Diseases of the accessory nasal sinuses	3	212	..	215	5
105. Diseases of the larynx—					
(1) Laryngismus stridulus ..	..	11	..	11	..
(2) Laryngitis	1	105	3	106	..
(3) Other diseases of the larynx	1	54	3	55	..
106. Bronchitis—					
(1) Acute	66	2,041	17	2,107	55
(2) Chronic	91	1,940	62	2,031	79
(3) Not defined as acute or chronic	91	3,015	18	3,106	67
107. Broncho-pneumonia	33	1,775	561	1,808	31
108. Lobar-pneumonia	79	1,744	225	1,823	40
109. Pneumonia (not otherwise defined)	39	932	179	971	27
110. Pleurisy—					
(1) Empyema	19	165	25	184	8
(2) Other pleurisy	36	514	23	550	27
111. Congestion and hæmorrhagic infarction of lung, etc.—					
(1) Hypostatic congestion of lung	..	8	4	8	..
(2) Massive collapse ..	..	1	1	1	..
(3) Pulmonary embolism ..	..	12	5	12	..
(4) Others	1	56	13	57	1
112. Asthma	145	3,038	39	3,183	127
113. Pulmonary emphysema	2	36	4	38	1
Carried forward ..	9,188	95,291	7,660	104,479	9,965

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TABLE 1—(*cont.*)

IN-PATIENTS—(*cont.*)

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1948—(*cont.*)

Diseases.	*Remaining at end of Dec., 1947.	YEARLY TOTAL.		†Total cases treated.	‡Remaining at end of Dec., 1948.
		Admissions.	Deaths.		
Brought forward ..	9,188	95,291	7,660	104,479	9,965
VIII.—DISEASES OF THE RESPIRATORY SYSTEM—(*cont.*)					
114. Other diseases of the respiratory system—					
(1) Chronic interstitial pneumonia (including occupational diseases of the lung)	..	4	2	4	..
(2) Gangrene of the lung ..	..	3	1	3	..
(3) Abscess of the lung ..	7	48	16	55	2
(4) Bronchiectasis	6	133	17	139	10
(5) Others	6	230	16	236	5
IX.—DISEASES OF THE DIGESTIVE SYSTEM.					
115. Diseases of the buccal cavity, pharynx, etc.—					
(1) Pyorrhœa	7	179	1	186	6
(2) Dental caries	4	469	..	473	10
(3) Stomatitis	2	142	2	144	2
(4) Ludwig's angina ..	16	38	1	54	1
(5) Diseases of the tonsils ..	20	880	2	900	13
(6) Others	2	719	6	721	10
116. Diseases of the œsophagus ..	..	41	9	41	1
117. Ulcer of the stomach or duodenum—					
(1) Ulcer of the stomach ..	32	555	49	587	49
(2) Ulcer of the duodenum ..	7	176	9	183	20
118. Other diseases of the stomach—					
(1) Gastritis	54	1,655	6	1,709	49
(2) Others	24	696	11	720	18
119. Diarrhœa and enteritis— (under 2 years)	15	1,296	457	1,311	25
120. Diarrhœa and enteritis— (2 years and over)					
(1) Colitis	12	647	24	659	9
(2) Otherwise defined ..	57	2,256	130	2,313	56
121. Appendicitis	54	1,107	30	1,161	31
122. Hernia, Intestinal obstruction—					
(1) Hernia	39	843	3	882	43
(2) Strangulated hernia ..	9	114	22	123	4
(3) Intestinal obstruction (including intussusception) ..	5	139	70	144	5
123. Other diseases of the intestines—					
(1) Constipation, intestinal stasis	5	335	3	340	5
(2) Diverticulitis	..	7	..	7	1
(3) Others	13	815	14	828	9
124. Cirrhosis of liver— (non-syphilitic)					
(1) Alcoholic	1	14	3	15	1
(2) Not returned as alcoholic	25	306	101	331	28
125. Other diseases of the liver—					
(1) Acute yellow atrophy ..	..	41	8	41	1
(2) Toxic hepatitis	8	219	21	227	8
(3) Amœbic abscess and hepatitis	33	758	54	791	33
(4) Others	17	373	28	390	14
126. Biliary calculi—					
(1) With cholecystitis ..	..	24	3	24	1
(2) Without mention of cholecystitis	1	17	1	18	2
Carried forward ..	9,669	110,570	8,780	120,239	10,437

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TABLE 1—(*cont.*)

IN-PATIENTS—(*cont.*)

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1948—(*cont.*)

Diseases.	* Remaining at end of Dec., 1947.	YEARLY TOTAL. Admissions.	YEARLY TOTAL. Deaths.	† Total cases treated.	‡ Remaining at end of Dec., 1948.
Brought forward ..	9,669	110,570	8,780	120,239	10,437
IX.—DISEASES OF THE DIGESTIVE SYSTEM—(*cont.*)					
127. Other diseases of the gall bladder and ducts—					
(1) Cholecystitis without record of calculi ..	3	129	6	132	1
(2) Others	6	145	16	151	8
128. Diseases of the pancreas (excluding diabetes mellitus) ..	1	16	6	17	..
129. Peritonitis, without stated cause	..	153	80	153	9
X.—DISEASES OF THE GENITO-URINARY SYSTEM (NON-VENEREAL).					
130. Acute nephritis	17	355	57	372	23
131. Chronic nephritis	35	396	87	431	29
132. Nephritis (undefined as acute or chronic)..	42	615	78	657	44
133. Other diseases of the kidney and annexa—					
(1) Pyelitis	15	436	9	451	12
(2) Others	8	273	16	281	12
134. Calculi of the urinary passages—					
(1) Calculi of the kidney and ureter	5	130	3	135	3
(2) Calculi of the bladder ..	2	118	1	120	5
(3) Calculi of unstated site..	..	27	..	27	2
135. Diseases of the Bladder—					
(1) Cystitis	11	310	8	321	7
(2) Others	2	130	..	132	3
136. Diseases of the urethra—					
(1) Stricture..	11	290	..	301	19
(2) Others	11	351	1	362	3
137. Diseases of the prostate	3	112	8	115	7
138. Diseases of the male genital organs—					
(1) Epididymitis	1	69	..	70	..
(2) Orchitis	1	192	..	193	8
(3) Hydrocele	4	299	..	303	11
(4) Others	17	314	..	331	6
139. Diseases of the female genital organs—					
(1) Diseases of the ovary ..	4	135	4	139	3
(2) Diseases of the fallopian tube	9	254	3	263	3
(3) Diseases of the parametrium	..	45	..	45	..
(4) Diseases of the uterus ..	29	725	8	754	20
(5) Diseases of the breast ..	2	195	..	197	6
(6) Other diseases of the female genital organs	16	651	2	667	15
XI.—CONDITIONS ARISING IN PREGNANCY, CHILDBIRTH AND THE PUERPERAL STATE.					
140. Post abortive sepsis—					
(1) Septic abortion ..	1	44	7	45	2
141. Abortion not returned as septic—					
(1) Hæmorrhage following abortion	5	347	2	352	9
(2) Abortion without record of hæmorrhage	24	1,069	1	1,093	27
142. Ectopic gestation	7	127	8	134	1
143. Other accidents of pregnancy ..	44	1,061	7	1,105	55
Carried forward ..	10,005	120,083	9,198	130,088	10,790

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TABLE 1—(*cont.*)

IN-PATIENTS—(*cont.*)

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1948—(*cont.*)

Diseases.	* Remaining at end of Dec., 1947.	YEARLY TOTAL. Admissions.	YEARLY TOTAL. Deaths.	† Total cases treated.	‡ Remaining at end of Dec., 1948.
Brought forward ..	10,005	120,083	9,198	130,088	10,790
XI.—CONDITIONS ARISING IN PREGNANCY, CHILDBIRTH AND THE PUERPERAL STATE—(*cont.*)					
144. Puerperal hæmorrhage—					
(1) Placenta prævia ..	1	141	32	142	3
(2) other puerperal hæmorrhage	3	230	62	233	4
145. Puerperal sepsis—					
(1) Puerperal septicæmia ..	..	42	10	42	..
(2) Puerperal sepsis, not including septicæmia..	3	170	5	173	3
146. Puerperal albuminuria and convulsions—					
(1) Ante-partum eclampsia	2	110	30	112	5
(2) Intra-partum eclampsia	..	10	..	10	..
(3) Post-partum eclampsia	..	35	10	35	3
(4) Albuminuria of pregnancy	1	156	4	157	3
(5) Pyelitis of pregnancy ..	..	18	..	18	..
(6) Otherwise defined ..	4	107	7	111	
147. Other Toxæmias of pregnancy—					
(1) Hyperemesis gravidarum	1	86	..	87	..
(2) Others	3	179	26	182	4
148. Puerperal phlegmasia, embolism—					
(1) Puerperal phlegmasia ..	..	5	..	5	..
(2) Puerperal embolism ..	..	..	..	..	..
149. Conditions associated with Labour—					
(1) Normal labour	476	25,239	..	25,715	520
(2) Abnormal labour ..	28	1,798	29	1,826	35
(3) Labour complicated with intercurrent disease ..	13	1,346	14	1,359	7
(4) Accidents of childbirth..	14	229	16	243	10
150. Other or unspecified conditions of the puerperal state—					
(1) Puerperal insanity ..	..	12	..	12	1
(2) Puerperal disease of the breast	..	7	..	7	..
(3) Others	6	77	3	83	
XII.—DISEASES OF THE SKIN AND CELLULAR TISSUES.					
151. Carbuncle, boil	22	632	1	654	24
152. Cellulitis, acute abscess—					
(1) Cellulitis	78	1,660	41	1,738	61
(2) Acute abscess	129	3,799	16	3,928	172
(3) Otherwise defined ..	25	579	3	604	8
153. Other diseases of the skin and its annexa—					
(1) Ulcers	527	6,503	13	7,030	425
(2) Dermal mycoses ..	23	455	..	478	14
(3) Herpes	2	208	..	210	10
(4) Scabies	104	2,200	1	2,304	85
(5) Others	143	4,116	5	4,259	169
XIII.—DISEASES OF THE BONES AND ORGANS OF LOCOMOTION.					
154. Acute infective osteomyelitis and periostitis	17	268	7	285	22
155. Other diseases of the bones ..	41	534	3	575	37
156. Diseases of the joints and other organs of locomotion—					
(1) Diseases of the joints ..	58	990	2	1,048	70
(2) Diseases of the other organs of locomotion	21	874	..	895	26
Carried forward ..	11,750	172,898	9,538	184,648	12,511

The form shows in the main the arrangement of diseases in the *International Nomenclature, 1931 Edition*. To save space the unimportant diseases of any class can be grouped in their places as "Other Diseases" of the class.

* i.e., the year previous to that for which the return is made. † "Total cases treated" will, of course, include those remaining in hospital at the end of the previous year. ‡ The figures in this column to be carried on to the next year's return.

TABLE 1—(*cont.*)

IN-PATIENTS—(*cont.*)

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1948—(*cont.*)

Diseases.	*Remaining at end of Dec., 1947.	YEARLY TOTAL.		†Total cases treated.	‡Remaining at end of Dec., 1948.
		Admissions.	Deaths.		
Brought forward ..	11,750	172,898	9,538	184,648	12,511
XIV.—CONGENITAL MALFORMATIONS.					
157. Congenital malformations—					
(1) Congenital hydrocephalus	1	32	16	33	2
(2) Spina bifida and meningocele	..	10	4	10	2
(3) Congenital malformation of the heart	..	26	12	26	1
(4) Monstrosities	..	1	1	1	..
(5) Congenital hypertrophic pyloric stenosis ..	..	4	..	4	..
(6) Cleft palate, harelip ..	4	104	1	108	1
(7) Imperforate anus ..	..	37	18	37	1
(8) Other congenital malformations ..	2	102	24	104	7
XV.—DISEASES OF EARLY INFANCY.					
158. Congenital debility	1	172	62	173	3
159. Premature birth	9	1,055	602	1,064	18
160. Injury at birth	..	35	23	35	..
161. Other diseases peculiar to early infancy—					
(1) Atelectasis	..	78	59	78	..
(2) Icterus neonatorum ..	..	54	31	54	..
(3) Affections of the umbilicus	..	61	17	61	..
(4) Pemphigus neonatorum	..	9	2	9	..
(5) Others	12	473	152	485	4
XVI.—CONDITIONS ASSOCIATED WITH OLD AGE.					
162. (1) Senile dementia	5	85	10	90	12
(2) Other forms of senile decay..	518	1,131	293	1,649	524
XVII.—AFFECTIONS PRODUCED BY EXTERNAL CAUSES.					
163. Suicide, or attempted suicide, by poisoning (including corrosive poisoning)	1	73	33	74	2
164. Suicide, or attempted suicide, by gas poisoning	..	..	..	..	..
165. Suicide, or attempted suicide, by hanging or strangulation ..	..	18	9	18	1
166. Suicide, or attempted suicide, by drowning	..	7	..	7	..
167. Suicide, or attempted suicide, by firearms..	..	3	1	3	1
168. Suicide, or attempted suicide, by cutting or piercing instruments	2	34	6	36	3
169. Suicide, or attempted suicide, by jumping from a height ..	..	9	5	9	1
170. Suicide, or attempted suicide, by crushing	..	..	..	..	..
171. Suicide, or attempted suicide, by other means	..	11	4	11	..
172. Infanticide	..	..	..	..	..
173. Assault or homicide, by firearms	2	470	70	472	50
174. Assault or homicide, by cutting or piercing instruments	10	373	22	383	19
175. Assault or homicide, by other means	29	1,286	9	1,315	16
176. Attacks by venomous animals—					
(1) Snake bite	6	230	6	236	4
(2) Insect bite	1	110	1	111	2
(3) Others	6	175	1	181	6
Carried forward ..	12,359	179,166	11,032	191,525	13,191

The form shows in the main the arrangement of diseases in the *International Nomenclature, 1931 Edition*. To save space the unimportant diseases of any class can be grouped in their places as "Other Diseases" of the class.

* i.e., the year previous to that for which the return is made. † "Total cases treated" will, of course, include those remaining in hospital at the end of the previous year. ‡ The figures in this column to be carried on to the next year's return.

TABLE 1—(*cont.*)

IN-PATIENTS—(*cont.*)

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1948—(*cont.*)

Diseases.	*Remaining at end of Dec., 1947.	YEARLY TOTAL.		†Total cases treated.	‡Remaining at end of Dec., 1948.
		Admissions.	Deaths.		
Brought forward ..	12,359	179,166	11,032	191,525	13,191
XVII.—AFFECTIONS PRODUCED BY EXTERNAL CAUSES—(*cont.*)					
177. Food poisoning	..	66	2	66	..
178. Accidental absorption of irrespirable or poisonous gas	..	3	..	3	..
179. Other acute accidental poisoning	1	162	14	163	8
180. Injuries due to conflagration ..	..	1	..	1	..
181. Accidental burns—					
(Conflagration excepted)					
(1) Burns by fire	24	473	46	497	18
(2) Scalds	14	490	20	504	26
(3) Burns by corrosive substances	2	50	2	52	1
(4) Dermatitis due to exposure to sun ..	1	101	..	102	6
(5) Dermatitis due to exposure to other forms of radiation ..	..	12	..	12	..
182. Accidental mechanical suffocation	..	1	1	1	..
183. Accidental immersion or drowning	..	6	..	6	..
184. Accidental injury by firearms ..	2	175	22	177	15
185. Accidental injury by cutting or piercing instruments	43	1,714	4	1,757	37
186. Accidental injury by fall, crushing, etc.—					
(1) By fall	189	4,896	74	5,085	233
(2) By machinery	17	289	5	306	6
(3) By motor vehicles ..	55	1,673	112	1,728	70
(4) By railway vehicles ..	7	68	2	75	5
(5) By other means ..	245	5,562	58	5,807	147
187. Cataclysm— (tidal waves, cyclones, etc.)					
188. Injury by animals .. .. (except poisoning by venomous animals)	30	616	4	646	13
189. Hunger or thirst	..	3	3	3	..
190. Excessive cold	..	1	..	1	..
191. Excessive heat	..	9	..	9	..
192. Lightning	..	6	..	6	..
193. Electricity	..	10	..	10	..
194. Other unstated forms of violence—					
(1) Inattention at birth ..	..	7	1	7	..
(2) Others	2	136	3	138	6
195. Violence of an unstated nature (i.e., suicidal, homicidal, or accidental)	..	70	3	70	1
196. Wounds of war	..	1	..	1	..
197. Execution of civilians by belligerent armies..	..	..	..	..	..
198. Execution	..	..	..	..	..
XVIII.—ILL-DEFINED CONDITIONS.					
199. Sudden death (cause unknown)..	..	1	1	1	..
200. Cause of death unstated or ill-defined	..	107	107	107	..
201. Diseases not included in this classification which have caused no deaths	125	3,853	..	3,978	166
202. Malingering	2	39	..	41	1
203. Cases admitted to hospital for observation as to mental condition	103	928	2	1,031	120
204. Cases admitted for observation (not mental)	351	5,322	3	5,673	390
Total ..	13,572	206,017	11,521	219,589	14,460
205. Persons accompanying patients..	212	9,098	..	9,310	189
GRAND TOTAL ..	13,784	215,115	11,521	228,899	14,649

The form shows in the main the arrangement of diseases in the *International Nomenclature, 1931 Edition*. To save space the unimportant diseases of any class can be grouped in their places as "Other Diseases" of the class.

* i.e., the year previous to that for which the return is made. † "Total cases treated" will, of course, include those remaining in hospital at the end of the previous year. ‡ The figures in this column to be carried on to the next year's return.

TABLE 1—(*cont.*)

IN-PATIENTS—(*cont.*)

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1948—(*cont.*)

Nationalities.	Remaining at end of Dec., 1947.	Yearly Total.		Total cases treated.	Remaining at end of Dec., 1948.
		Admissions.	Deaths.		
Europeans	70	2,380	41	2,450	61
Eurasians	59	1,178	35	1,237	65
Chinese	7,623	86,385	7,625	94,008	8,291
Indians	3,403	72,013	2,644	75,416	3,153
Malays	2,281	41,890	1,046	44,171	2,747
Javanese	111	1,406	96	1,517	95
Japanese	..	13	1	13	..
Others	25	752	33	777	48
TOTAL ..	13,572	206,017	11,521	219,589	14,460
Persons accompanying patients	212	9,098	..	9,310	189

SUMMARY ACCORDING TO MEN, WOMEN AND CHILDREN.

	Remaining at end of Dec., 1947.	Yearly Total.		Total cases treated.	Remaining at end of Dec., 1948.
		Admissions.	Deaths.		
Men	9,063	111,898	5,776	120,961	9,534
Women	3,632	71,344	2,154	74,976	4,034
Children (1 to 10 years)	659	13,331	1,196	13,990	695
Infants (under 1 year)	218	9,444	2,395	9,662	197
TOTAL ..	13,572	206,017	11,521	219,589	14,460

SUMMARY ACCORDING TO HOSPITALS AND AVERAGE DAILY NUMBER OF PATIENTS.

Hospitals.	Remaining at end of Dec., 1947.	Yearly Total.		Total cases treated.	Remaining at end of Dec., 1948.	Average Daily No. of Patients.	No. of Beds.
		Admissions.	Deaths.				
1. Kedah	859	20,463	790	21,322	761	821	1,120
2. Perlis	109	2,738	106	2,847	81	102	150
3. Penang and Province Wellesley	1,225	23,160	1,331	24,385	1,619	1,701	1,583
4. Perak	1,990	44,883	2,569	46,873	1,833	2,081	2,886
5. Selangor	1,486	29,459	1,829	30,945	1,481	1,552	1,804
6. Negri Sembilan ..	839	20,441	977	21,280	1,005	974	1,123
7. Malacca	551	8,262	593	8,813	516	554	593
8. Johore	1,713	29,492	1,897	31,205	1,966	1,942	2,741
9. Kelantan	308	6,206	249	6,514	333	299	428
10. Trengganu	253	4,200	154	4,453	222	241	301
11. Pahang	566	14,481	771	15,047	616	626	817
12. Sungei Buloh Settlement	2,049	388	72	2,437	1,888	1,859	2,300
13. C. M. H., Tanjong Rambutan ..	1,624	1,844	183	3,468	2,139	1,846	3,000
TOTAL ..	13,572	206,017	11,521	219,589	14,460	14,598	18,846

TABLE 2.

MALARIA ADMISSIONS BY STATES AND MONTHS FOR 1948.

State or Settlement.	Jan.	Feb.	March.	April.	May.	June.	July.	August.	Sept.	October.	Nov.	Dec.
Kedah	185	200	196	262	365	336	247	179	180	140	146	136
Perlis	29	43	20	24	38	34	17	22	17	17	36	33
Penang and P. Wellesley	92	81	124	136	201	199	191	192	139	143	160	142
Perak	372	367	430	424	501	504	449	487	452	386	412	343
Selangor	100	100	81	106	119	105	75	60	71	64	78	69
Negri Sembilan	176	165	171	195	310	214	131	167	155	147	178	208
Malacca	34	40	47	57	59	67	66	60	62	39	60	44
Johore	188	163	152	193	223	179	218	195	221	233	216	207
Kelantan	63	63	58	68	68	88	69	74	45	68	69	76
Trengganu..	29	21	18	27	37	40	21	27	30	34	29	48
Pahang	177	149	213	199	261	275	181	178	172	164	161	122
Total ..	1,445	1,392	1,510	1,691	2,182	2,041	1,665	1,641	1,544	1,435	1,545	1,428

Table 3.

SURGICAL OPERATIONS FOR 1948.

State or Settlement.	Operations.	Deaths.
Kedah	1,571 ...	13
Perlis	396 ...	1
Penang and Province Wellesley ...	1,901 ...	50
Perak	9,851 ...	71
Selangor	4,468 ...	42
Negri Sembilan	1,864 ...	9
Malacca	941 ...	14
Johore	5,988 ...	40
Kelantan	817 ...	14
Trengganu	262 ...	—
Pahang	867 ...	10
Total ...	28,926 ...	264

Table 4.

OPHTHALMIC PATIENTS FOR 1948.

State or Settlement.	Eye diseases proper.	Eye injuries.	Refraction.	General diseases affecting eyes.	Disorganised eyes.	Total.	Operations.
Kedah	2,841	131	283	46	42	3,343	382
Perlis	82	..	..	..	..	82	..
Penang and Province Wellesley	1,955	192	410	576	29	3,162	195
Perak	8,057	402	1,083	85	46	9,673	702
Selangor	4,422	431	743	375	47	6,018	560
Negri Sembilan	2,041	17	307	..	8	2,373	70
Malacca	134	33	377	8	10	562	13
Johore	1,602	63	2,007	152	1	3,825	286
Kelantan	1,091	2	50	..	..	1,143	4
Trengganu	1,841	..	..	..	..	1,841	..
Pahang	91	2	115	30	..	238	..
Total ..	24,157	1,273	5,375	1,272	183	32,260	2,212

TABLE 5.

SUMMARY OF OUT-PATIENTS TREATED IN EACH STATE AND SETTLEMENT FOR 1948.

(Excluding those who were treated at Infant Welfare Centres, School Inspections and Special Clinics.)

Hospitals and Dispensaries.	Adult Males.	Adult Females.	Children under 10 years.	Total.
KEDAH.				
At Hospitals and Dispensaries ..	78,801	44,727	47,182	170,710
By Travelling Dispensaries ..	12,815	4,880	5,497	23,192
Total ..	91,616	49,607	52,679	193,902
PERLIS.				
At Hospitals and Dispensaries ..	11,990	5,842	7,642	25,474
By Travelling Dispensaries ..	1,910	800	1,560	4,270
Total ..	13,900	6,642	9,202	29,744
PENANG AND P. WELLESLEY.				
At Hospitals and Dispensaries ..	45,315	29,829	26,751	101,895
By Travelling Dispensaries ..	21,357	9,924	27,944	59,225
Total ..	66,672	39,753	54,695	161,120
PERAK.				
At Hospitals and Dispensaries ..	135,963	66,889	65,006	267,858
By Travelling Dispensaries :				
1. Road	47,561	21,485	24,081	93,127
2. River	554	333	370	1,257
Total ..	184,078	88,707	89,457	362,242

TABLE 5—(*cont.*)

SUMMARY OF OUT-PATIENTS TREATED IN EACH STATE AND SETTLEMENT FOR 1948—(*cont.*)

(*Excluding those who were treated at Infant Welfare Centres, School Inspections and Special Clinics*)—(*cont.*)

Hospitals and Dispensaries.	Adult Males.	Adult Females.	Children under 10 years.	Total.
SELANGOR.				
At Hospitals and Dispensaries ..	96,786	50,687	48,567	196,040
By Travelling Dispensaries ..	20,555	9,585	9,753	39,893
Total ..	117,341	60,272	58,320	235,933
NEGRI SEMBILAN.				
At Hospitals and Dispensaries ..	52,388	25,287	24,992	102,667
By Travelling Dispensaries ..	25,076	15,584	16,506	57,166
Total ..	77,464	40,871	41,498	159,833
MALACCA.				
At Hospitals and Dispensaries ..	20,965	9,938	10,550	41,453
By Travelling Dispensaries ..	9,560	7,817	10,867	28,244
Total ..	30,525	17,755	21,417	69,697
JOHORE.				
At Hospitals and Dispensaries ..	62,150	17,666	23,034	102,850
By Travelling Dispensaries :				
1. Road	27,855	14,664	32,806	75,325
2. River	7,204	2,806	2,994	13,004
Total ..	97,209	35,136	58,834	191,179

TABLE 5—(*cont.*)

SUMMARY OF OUT-PATIENTS TREATED IN EACH STATE AND SETTLEMENT FOR 1948—(*cont.*)

(*Excluding those who were treated at Infant Welfare Centres, School Inspections and Special Clinics*)—(*cont.*)

Hospitals and Dispensaries.	Adult Males.	Adult Females.	Children under 10 years.	Total.
KELANTAN.				
At Hospitals and Dispensaries ..	59,968	30,342	31,215	121,525
By Travelling Dispensaries:				
1. Road	33,972	23,973	54,001	111,946
2. River	1,277	764	809	2,850
Total ..	95,217	55,079	86,025	236,321
TRENGGANU.				
At Hospitals and Dispensaries ..	40,449	15,351	24,229	80,029
By Travelling Dispensaries ..	30,152	15,746	25,011	70,909
Total ..	70,601	31,097	49,240	150,938
PAHANG.				
At Hospitals and Dispensaries ..	60,976	31,843	38,760	131,579
By Travelling Dispensaries:				
1. Road	20,897	11,212	18,428	50,537
2. River	1,062	710	212	1,984
Total ..	82,935	43,765	57,400	184,100

Table 6.

OUT-PATIENTS.

Return of Diseases for the Year 1948.

Diseases.	New Cases. All Nationalities (including Europeans).				New Cases. Europeans only.			
	Adult Males.	Adult Females.	Children under 10 years.	Total.	Adult Males.	Adult Females.	Children under 10 years.	Total.
I.—Infectious and Parasitic Diseases.								
1. Typhoid fever	18	2	1	21	..	..	..	..
2. Paratyphoid fever	..	7	..	7	..	..	..	..
3. Typhus—								
(1) Typhus exanthematicus	..	..	..	..	..	..	..	..
(2) Tropical typhus	3	..	1	4	1	..	1	2
(3) Japanese river fever	..	..	..		..	..	..	..
(4) Other rickettsia infections	..	..	..	..	..	..	..	..
4. Relapsing fever	..	..	..	..	..	..	..	..
5. Undulant fever	..	..	..	..	..	..	..	..
6. Small-pox	28	30	60	118	..	..	..	..
7. Measles	55	10	100	165	..	..	1	1
8. Scarlet fever	..	..	..	..	..	..	..	..
9. Whooping cough	11	17	1,210	1,238	..	..	..	..
10. Diphtheria		3	23	26	..	..	..	..
11. Influenza—								
(1) with pneumonia	228	78	218	524	3	..	..	3
(2) with other respiratory complications	4,400	2,551	3,172	10,123	11	4	2	17
(3) without respiratory complications	40,432	14,785	18,579	73,796	360	121	96	577
12. Cholera	..	..	..	..	..	..	..	..
13. Dysentery—								
(1) Amœbic	688	217	204	1,109	4	2	..	6
(2) Bacillary	487	257	259	1,003	4	1	..	5
(3) Mixed	..	..	..	..	..	..	..	..
(4) Undefined or due to other causes	1,712	870	939	3,521	16	2	3	21
14. Plague—								
(1) Bubonic	..	..	..	..	..	..	..	..
(2) Pneumonic	..	..	..	..	..	..	..	..
(3) Septicæmic	..	..	..	..	..	..	..	..
(4) Undefined	..	..	..	..	..	..	..	..
15. Erysipelas	25	14	18	57	..	..	..	..
16. Acute poliomyelitis—								
(1) Acute poliomyelitis	..	..	3	3	..	..	1	1
(2) Acute polioencephalitis	..	..	..	..	..	..	..	..
17. Encephalitis lethargica	..	..	..	..	..	..	..	..
18. Cerebro-spinal fever	..	..	..	..	..	..	..	..
19. Glanders	..	..	..	..	..	..	..	..
20. Anthrax	..	..	..	..	..	..	..	..
21. Rabies	1	..	..	1	..	..	..	..
22. Tetanus—								
(1) Tetanus of the newly born	..	..	5	5	..	..	..	..
(2) Other forms of tetanus	..	1	4	5	..	..	..	..
23. Tuberculosis of the respiratory system	3,045	937	33	4,015	1	1	..	2
24. Tuberculosis of the central nervous system	..	..	..	..	..	..	..	..
25. Tuberculosis of the intestines or peritoneum	5	3	2	10	..	..	..	..
26. Tuberculosis of the vertebral column	2	5	14	21	..	..	..	..
27. Tuberculosis of other bones and joints	4	3	19	26	..	..	..	..
28. Tuberculosis of the skin or subcutaneous tissue (lupus)	8	4	..	12	..	..	..	..
29. Tuberculosis of the lymphatic system (abdominal and bronchial glands excepted)	41	22	8	71	..	..	..	..
30. Tuberculosis of the genito-urinary system	..	..	..	..	..	..	..	..
31. Tuberculosis of other organs—								
(1) Adrenal	..	..	..	..	..	..	..	..
(2) Other sites	25	9	4	38	..	..	..	..
Carried forward ..	51,218	19,825	24,876	95,919	400	131	104	635

The form shows in the main the arrangement of diseases in the *International Nomenclature, 1931 Edition.* To save space the unimportant diseases of any class can be grouped in their places as "Other Diseases" of the class.

TABLE 6—(*cont.*)

OUT-PATIENTS—(*cont.*)

RETURN OF DISEASES FOR THE YEAR 1948—(*cont.*)

Diseases.	New Cases. All Nationalities (including Europeans).				New Cases. Europeans only.			
	Adult Males.	Adult Females.	Children under 10 years.	Total.	Adult Males.	Adult Females.	Children under 10 years.	Total.
Brought forward ..	51,218	19,825	24,876	95,919	400	131	104	635
I.—INFECTIOUS AND PARASITIC DISEASES—(*cont.*)								
32. Tuberculosis disseminated—								
(1) Acute	11	1	..	12	..	..	..	..
(2) Chronic	..	..	..	..	..	..	..	..
(3) Not distinguished as acute or chronic ..	..	..	..	..	..	..	..	..
33. Leprosy	44	13	1	58	..	..	..	..
34. Syphilis—								
(1) Primary	1,545	352	..	1,897	11	..	..	11
(2) Secondary	3,676	1,281	..	4,957	7	..	..	7
(3) Tertiary	991	462	..	1,453	2	..	..	2
(4) Hereditary	..	..	261	261	..	..	..	..
(5) Period not indicated ..	258	132	..	390	..	..	..	..
35. Other venereal diseases—								
(1) Soft chancre	917	38	..	955	10	..	..	10
(2) Gonorrhœa and its complications ..	4,254	918	..	5,172	66	2	..	68
(3) Gonorrhœal ophthalmia	117	63	4	184	..	..	..	..
(4) Gonorrhœal arthritis ..	786	284	..	1,070	1	..	..	1
(5) Granuloma venereum ..	12	..	..	12	..	..	..	..
(6) Tropical bubo	259	..	..	259	3	..	..	3
36. Purulent infective septicæmia—								
(1) Septicæmia	103	36	25	164	5	2	..	7
(2) Pyæmia	1	2	3	6	..	..	..	..
(3) Gas gangrene	..	..	..	..	..	..	..	..
37. Yellow fever	..	..	..	..	..	..	..	..
38. Malaria—								
(1) Tertian (benign) ..	3,913	1,559	1,438	6,910	12	3	1	16
(2) Quartan	181	67	63	311	..	..	..	..
(3) Aestivo-autumnal (Subtertian) ..	3,692	1,459	1,468	6,619	10	3	..	13
(4) Mixed infections ..	165	47	42	254	..	..	..	..
(5) Unclassified	67,316	28,748	29,499	125,563	95	24	8	127
(6) Cachexia	6,477	3,426	2,567	12,470	7	3	..	10
(7) Blackwater fever ..	1	..	..	1	..	..	..	..
39. Other diseases due to protozoa—								
(1) Yaws (framboesia) ..	27,078	19,410	15,490	61,978	..	..	..	..
(2) Spirochætosis icterohæmorrhagica	..	..	..	..	..	..	..	..
(3) Leishmaniasis (dermal)	..	..	..	..	..	..	..	..
(4) Kala azar	..	..	..	..	..	..	..	..
(5) Other diseases	27	22	1	50	1	..	..	1
40. Ankylostomiasis	4,588	2,520	3,167	10,275	28	12	7	47
41. Hydatid cysts	6	2	..	8	..	..	..	..
42. Other diseases due to helminths—								
Cestodes.								
(1) Tænia solium	55	20	2	77	1	..	..	1
(2) Tænia saginata ..	1	..	..	1	..	..	..	..
(3) Other cestodes	24	12	..	36	..	..	..	..
Nematodes.								
(4) Filaria	83	31	..	114	..	..	..	..
(5) Ascaris	11,785	9,994	42,374	64,153	48	44	116	208
(6) Trichuris trichiura ..	11	61	115	187	..	..	..	..
(7) Oxyuris vermicularis ..	64	222	426	712	..	2	3	5
(8) Dracunculus medinensis	8	4	82	94	..	..	..	..
Trematodes.								
(9) Schistosomumjaponicum	..	..	..	..	..	..	..	..
(10) Clonorchis sinensis ..	..	2	..	2	..	..	..	..
(11) Other helminths ..	..	..	..	..	..	..	..	..
(12) Undefined	1,111	904	4,764	6,779	12	7	1	20
43. (1) Sprue	48	81	..	129	..	..	..	..
(2) Actinomycosis	..	2	2	4	..	..	..	..
(3) Other mycotic infections excluding purely dermal mycosis	20	14	4	38	1	..	..	1
Carried forward ..	190,846	92,014	126,674	409,534	720	233	240	1,193

TABLE 6—(*cont.*)

OUT-PATIENTS—(*cont.*)

RETURN OF DISEASES FOR THE YEAR 1948—(*cont.*)

Diseases.	New Cases. All Nationalities (including Europeans).				New Cases. Europeans only.			
	Adult Males.	Adult Females.	Children under 10 years.	Total.	Adult Males.	Adult Females.	Children under 10 years.	Total.
Brought forward ..	190,846	92,014	126,674	409,534	720	233	240	1,193
I.—INFECTIOUS AND PARASITIC DISEASES—(*cont.*)								
44. Other infectious or parasitic diseases—								
(1) Vaccinia including post vaccinal encephalitis..	..	..	..	..	..	..	..	..
(2) Other sequelæ of vaccination	31	14	941	986	..	1	13	14
(3) Rubella	..	..	..	..	..	..	..	..
(4) Varicella (chicken-pox)	236	96	503	835	..	..	7	7
(5) Mumps and its complications	469	111	323	903	1	..	6	7
(6) Dengue	22	4	5	31	3	..	1	4
(7) Melioidosis	..	..	..	..	..	..	..	..
(8) Myiasis	..	..	..	..	..	..	..	..
(9) Glandular fever ..	..	..	..	..	..	..	..	..
(10) Others	..	..	..	..	..	..	..	..
(11) Pyrexia of unknown origin	293	155	407	855	2	..	26	28
II.—CANCER AND OTHER TUMOURS.								
45. Cancer or other malignant diseases of the buccal cavity and pharynx	14	11	..	25	..	..	..	..
46. Cancer or other malignant tumours of the digestive organs and peritoneum—								
(1) Stomach	25	5	..	30	..	..	..	..
(2) Liver (primary) ..	14	5	..	19	1	..	..	1
(3) Other digestive organs	41	21	..	62	1	..	..	1
47. Cancer or other malignant tumours of the respiratory organs	3	3	..	6	..	..	..	..
48. Cancer or other malignant tumours of the uterus ..	..	26	..	26	..	..	..	..
49. Cancer or other malignant tumours of other female genital organs	..	44	..	44	..	..	..	..
50. Cancer or other malignant tumours of the breast ..	..	30	..	30	..	..	..	..
51. Cancer or other malignant tumours of the male genito-urinary organs	5	..	..	5	..	..	..	..
52. Cancer or other malignant tumours of the skin ..	5	5	..	10	..	..	..	..
53. Cancer or other malignant tumours of organs not specified	33	17	..	50	..	..	..	..
54. Tumours non-malignant—								
(1) Of female genital organs	..	6	..	6	..	..	..	..
(2) Of other sites	145	95	20	260	5	..	..	5
55. Tumours of undetermined nature—								
(1) Female genital organs ..	..	11	..	11	..	..	..	..
(2) Other sites	41	14	3	58	1	..	..	1
III.—RHEUMATISM, DISEASES OF NUTRITION AND OF ENDOCRINE GLANDS AND OTHER GENERAL DISEASES.								
56. Rheumatic fever—								
(1) With cardiac involvement	..	..	..	..	..	..	..	..
(2) Without cardiac involvement	..	..	..	..	..	..	..	..
57. Chronic rheumatism and osteoarthritis	8,735	4,715	..	13,450	39	10	..	49
58. Gout	14	7	..	21	2	..	..	2
Carried forward ..	200,972	97,409	128,876	427,257	775	244	293	1,312

TABLE 6—(*cont.*)

OUT-PATIENTS—(*cont.*)

RETURN OF DISEASES FOR THE YEAR 1948—(*cont.*)

Diseases.	New Cases. All Nationalities (including Europeans).				New Cases. Europeans only.			
	Adult Males.	Adult Females.	Children under 10 years.	Total.	Adult Males.	Adult Females.	Children under 10 years.	Total.
Brought forward ..	200,972	97,409	128,876	427,257	775	244	293	1,312
III.—RHEUMATISM, DISEASES OF NUTRITION AND OF ENDOCRINE GLANDS AND OTHER GENERAL DISEASES—(*cont.*)								
59. Diabetes (not including diabetes insipidus)	341	130	..	471	..	..	..	..
60. Scurvy (including Barlow's disease)	..	..	..	..	..	..	..	..
61. (1) Beri-beri including epidemic dropsy	2,487	1,659	218	4,364	..	2	..	2
(2) Beri-beri associated with pregnancy or labour ..	..	379	..	379	..	..	..	..
62. Pellagra	3	1	..	4	..	..	..	..
63. Rickets	..	..	162	162	..	..	..	..
64. Osteomalacia	..	..	..	..	..	..	..	..
65. Diseases of the pituitary gland	..	..	..	..	..	..	..	..
66. Diseases of the thyroid and parathyroid glands—								
(1) Simple goitre	44	109	3	156	..	1	..	1
(2) Exophthalmic goitre ..	2	18	1	21	..		..	..
(3) Myxœdema, cretinism	8	1	..	9	..	..	..	..
(4) Tetany	3	2	1	6	..	..	..	..
(5) Other diseases of the thyroid glands ..	26	57	7	90	..	2	1	3
67. Diseases of the thymus ..	1	1	..	2	..	..	..	..
68. Diseases of the adrenal glands (excluding tuberculosis) ..	5	3	2	10	..	..	..	..
69. Other general diseases—								
(1) Acidosis	..	..	..	..	..	..	..	..
(2) Other diseases of metabolism	2,466	1,997	1,267	5,730	13	23	18	54
IV.—DISEASES OF THE BLOOD AND BLOOD FORMING ORGANS.								
70. Hæmorrhagic conditions—								
(1) Purpura	..	..	1	1	..	..	1	1
(2) Hæmophilia	9	12	4	25	..	..	..	..
71. Anæmia and chlorosis—								
(1) Pernicious anæmia ..	..	..	..	..	..	..	..	..
(2) Splenic anæmia ..	..	..	..	..	..	..	..	..
(3) Chlorosis	..	..	..	..	..	..	..	..
(4) Secondary anæmia ..	14,130	18,565	5,290	37,985	39	92	12	143
(5) Others	7,823	10,114	2,827	20,764	33	59	7	99
72. Leukæmia—								
(1) Leukæmia	1	1	..	2	..	..	..	..
(2) Hodgkin's disease ..	2	1	..	3	..	..	..	..
73. Diseases of the spleen—								
(1) Banti's disease	..	..	..	..	..	..	..	..
(2) Others (not including diseases of the spleen due to malaria or leukæmia)	33	1	5	39	..	..	..	..
74. Other diseases of the blood and blood forming organs ..	1	..	2	3	..	..	..	..
V.—CHRONIC POISONING.								
75. Alcoholism (acute or chronic)..	224	1	..	225	8	..	..	8
76. Chronic poisoning by other organic substances—								
(1) Opium	213	9	..	222	..	..	..	..
(2) Morphia, cocaine ..	..	..	..	..	..	..	..	..
(3) Others	9	2	..	11	..	..	..	..
77. Chronic poisoning by mineral substances—								
(1) Lead poisoning	..	..	..	..	..	..	..	..
(2) Arsenical dermatitis ..	11	1	..	12	..	..	..	..
(3) Others	6	5	6	17	..	..	..	..
Carried forward ..	228,820	130,478	138,672	497,970	868	423	332	1,623

TABLE 6—(*cont.*)

OUT-PATIENTS—(*cont.*)

RETURN OF DISEASES FOR THE YEAR 1948—(*cont.*)

Diseases.	New Cases. All Nationalities (including Europeans).				New Cases. Europeans only.			
	Adult Males.	Adult Females.	Children under 10 years.	Total.	Adult Males.	Adult Females.	Children under 10 years.	Total.
Brought forward ..	228,820	130,478	138,672	497,970	868	423	332	1,623
VI.—DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS.								
78. Encephalitis (not including encephalitis lethargica)—								
(1) Cerebral abscess ..	..	..	..	..	..	..	..	..
(2) Other forms of encephalitis	..	..	..	..	..	..	..	..
79. Meningitis (not including tuberculous meningitis or cerebro-spinal meningitis) ..	..	..	2	2	..	..	..	..
80. Tabes dorsalis (Locomotor ataxia)	2	5	..	7	..	..	..	..
81. Other diseases of the spinal cord	14	4	..	18	..	..	..	..
82. Apoplexy and paralysis—								
(1) Cerebral hæmorrhage ..	4	2	..	6	..	..	..	..
(2) Cerebral embolism ..	..	..	..	..	..	..	..	..
(3) Cerebral thrombosis ..	8	..	..	8	..	..	..	..
(4) Hemiplegia, cause not determined	181	51	..	232	..	..	..	..
(5) Other paralysis ..	98	23	9	130	1	..	..	1
83. General paralysis of the insane	..	..	..	..	..	..	..	..
84. Other forms of insanity—								
(1) Dementia præcox ..	..	..	..	..	..	..	..	..
(2) Others	15	12	..	27	..	..	..	..
85. Epilepsy	204	84	41	329	2	..	..	2
86. Infantile convulsions .. .. (age under 5 years)	..	..	108	108	..	..	..	..
87. Other diseases of the nervous system—								
(1) Chorea	..	..	..	..	..	..	..	..
(2) Neuritis and neuralgia	21,947	10,999	1,056	34,002	245	167	4	416
(3) Paralysis agitans ..	3	..	..	3	..	..	..	..
(4) Disseminated sclerosis ..	2	..	..	2	..	..	..	..
(5) Neurasthenia	588	286	..	874	25	11	..	36
(6) Hysteria	..	63	..	63	..	1	..	1
(7) Others	2,282	1,154	138	3,574	50	31	1	82
88. Diseases of the eye—								
(1) Conjunctivitis	17,920	9,187	11,572	38,679	69	22	24	115
(2) Trachoma	346	441	55	842	1	..	..	1
(3) Corneal ulcer	342	158	73	573	1	..	..	1
(4) Other diseases of the eye	5,626	2,526	1,399	9,551	53	30	6	89
89. Diseases of the ear and or the mastoid sinus—								
(1) Otitis externa	3,451	1,435	2,948	7,834	82	32	8	122
(2) Otitis media	2,723	1,218	2,884	6,825	69	12	6	87
(3) Mastoiditis	45	16	43	104	..	..	..	..
(4) Others	2,533	1,122	2,396	6,051	101	23	6	130
VII.—DISEASES OF THE CIRCULATORY SYSTEM.								
90. Pericarditis	16	5	..	21	..	..	..	..
91. Acute endocarditis—								
(1) Malignant	2	2	..	4	..	..	..	..
(2) Others	13	4	2	19	..	..	..	..
92. Chronic endocarditis: valvular disease—								
(1) Aortic valve disease ..	24	5	..	29	..	..	..	..
(2) Mitral valve disease ..	49	52	4	105	1	..	..	1
(3) Aortic and mitral ..	4	..	..	4	..	..	..	..
(4) Others	110	66	5	181	..	1	..	1
93. Diseases of the myocardium—								
(1) Acute myocarditis ..	116	53	2	171	..	..	..	..
(2) Chronic myocardial degeneration	188	81	..	269	..	1	..	1
Carried forward ..	287,676	159,532	161,409	608,617	1,568	754	387	2,709

TABLE 6—(*cont.*)

OUT-PATIENTS—(*cont.*)

RETURN OF DISEASES FOR THE YEAR 1948—(*cont.*)

Diseases.	New Cases. All Nationalities (including Europeans).				New Cases. Europeans only.			
	Adult Males.	Adult Females.	Children under 10 years.	Total.	Adult Males.	Adult Females.	Children under 10 years.	Total.
Brought forward ..	287,676	159,532	161,409	608,617	1,568	754	387	2,709
VII.—DISEASES OF THE CIRCULATORY SYSTEM—(*cont.*)								
94. Diseases of the coronary arteries—								
(1) Angina pectoris ..	24	2	..	26	1	..	..	1
(2) Coronary thrombosis ..	5	..	..	5	..	..	..	..
(3) Coronary sclerosis ..	..	2	..	2	..	..	..	..
95. Other diseases of the heart—								
(1) Auricular fibrillation ..	8	66	..	74	..	..	..	..
(2) Heart block	5	8	..	13	..	..	..	..
(3) Others	235	255	7	497	2	7	..	9
96. Aneurysm—								
(1) Aneurysm of aorta ..	2	..	..	2	..	..	..	..
(2) Aneurysm of other arteries	4	1	..	5	..	..	..	..
97. Arterio-sclerosis	77	17	..	94	..	..	..	..
98. Gangrene	10	..	..	10	..	..	..	..
99. Other diseases of the arteries..	2	..	4	6	..	..	..	..
100. Diseases of the veins—								
(1) Varicose veins	117	39	..	156	5	3	..	8
(2) Hæmorrhoids	1,484	460	..	1,944	32	13	..	45
(3) Phlebitis..	43	13	..	56	4	1	..	5
(4) Thrombosis	12	1	..	13	..	..	..	..
(5) Others	49	21	19	89	..	..	..	..
101. Diseases of the lymphatic system—								
(1) Lymphangitis	190	52	19	261	4	..	..	4
(2) Lymphadenitis	814	301	257	1,372	1	1	3	5
(3) Bubo (non-specified) ..	192	2	3	197	..	..	..	..
102. Abnormalities of blood pressure—								
(1) High blood pressure ..	265	111	..	376	5	1	..	6
(2) Low blood pressure ..	2	..	..	2	..	..	..	..
103. Other diseases of the circulatory system—								
(1) Epistaxis	125	28	67	220	..	..	..	..
(2) Others	19	11	47	77	..	2	..	2
VIII.—DISEASES OF THE RESPIRATORY SYSTEM.								
104. Diseases of the nasal fossæ and its annexa—								
(1) Diseases of the nose ..	1,379	598	622	2,599	22	9	2	33
(2) Diseases of the accessory nasal sinuses	866	431	561	1,858	20	5	4	29
105. Diseases of the larynx—								
(1) Laryngismus stridulus..	..	..	..	..	..	..	..	..
(2) Laryngitis	1,456	586	410	2,452	37	19	24	80
(3) Other diseases of the larynx	225	52	40	317	5	1	..	6
106. Bronchitis—								
(1) Acute	19,896	8,356	16,214	44,466	59	51	37	147
(2) Chronic	6,617	3,005	2,075	11,697	13	2	..	15
(3) Not defined as acute or chronic	37,389	19,576	32,466	89,431	159	80	70	309
107. Broncho-pneumonia	245	114	2,008	2,367	..	..	2	2
108. Lobar-pneumonia	319	101	123	543	1	..	..	1
109. Pneumonia (not otherwise defined)	317	113	256	686	..	1	2	3
110. Pleurisy—								
(1) Empyema	25	4	..	29	..	1	..	1
(2) Other pleurisy	359	121	6	486	..	..	..	..
111. Congestion and hæmorrhagic infarction of lung, etc.—								
(1) Hypostatic congestion of lung	..	..	..	..	..	..	..	..
(2) Massive collapse ..	..	..	..	..	..	..	..	..
(3) Pulmonary embolism ..	..	..	..	..	..	..	..	..
(4) Others	70	27	13	110	1	..	1	2
Carried forward ..	360,523	194,006	216,626	771,155	1,939	951	532	3,422

TABLE 6—(*cont.*)

OUT-PATIENTS—(*cont.*)

RETURN OF DISEASES FOR THE YEAR 1948—(*cont.*)

Diseases.	New Cases. All Nationalities (including Europeans).				New Cases. Europeans only.			
	Adult Males.	Adult Females.	Children under 10 years.	Total.	Adult Males.	Adult Females.	Children under 10 years.	Total.
Brought forward ..	360,523	194,006	216,626	771,155	1,939	951	532	3,422
VIII.—DISEASES OF THE RESPIRATORY SYSTEM—(*cont.*)								
112. Asthma	9,012	4,813	4,278	18,103	12	16	1	29
113. Pulmonary emphysema ..	20	8	..	28	..	..	..	..
114. Other diseases of the respiratory system—								
(1) Chronic interstitial pneumonia (including occupational diseases of the lung)	..	..	..	..	..	..	..	..
(2) Gangrene of the lung ..	4	..	..	4	..	..	..	..
(3) Abscess of the lung ..	7	2	..	9	..	..	..	..
(4) Bronchiectasis	91	29	76	196	..	1	1	2
(5) Others	201	65	87	353	1	1	..	2
IX.—DISEASES OF THE DIGESTIVE SYSTEM.								
115. Diseases of the buccal cavity, pharynx, etc.—								
(1) Pyorrhœa	1,090	531	108	1,729	5	1	..	6
(2) Dental caries	6,104	2,376	2,797	11,277	34	9	4	47
(3) Stomatitis	1,860	1,144	2,928	5,932	10	2	5	17
(4) Ludwig's angina ..	16	3	5	24	..	..	..	..
(5) Diseases of the tonsils ..	3,942	2,072	3,058	9,072	88	42	25	155
(6) Others	3,018	1,482	1,705	6,205	36	24	14	74
116. Diseases of the œsophagus ..	7	1	..	8	..	..	..	..
117. Ulcer of the stomach or duodenum—								
(1) Ulcer of the stomach ..	551	162	..	713	4	..	..	4
(2) Ulcer of the duodenum	126	39	..	165	2	..	..	2
118. Other diseases of the stomach—								
(1) Gastritis	10,358	5,326	1,498	17,182	105	63	7	175
(2) Others	10,950	8,436	3,901	23,287	94	55	32	181
119. Diarrhœa and enteritis— (under 2 years)	..	..	7,803	7,803	..	..	17	17
120. Diarrhœa and enteritis— (2 years and over)								
(1) Colitis	2,048	765	996	3,809	48	14	7	69
(2) Otherwise defined ..	7,966	4,014	4,324	16,304	127	67	39	233
121. Appendicitis	116	47	8	171	10	6	2	18
122. Hernia, Intestinal obstruction—								
(1) Hernia	220	..	..	220	4	..	..	4
(2) Strangulated hernia ..	7	..	..	7	..	..	..	..
(3) Intestinal obstruction .. (including intussusception)	6	..	..	6	..	..	..	..
123. Other diseases of the intestines—								
(1) Constipation, intestinal stasis	27,900	12,969	8,973	49,842	135	68	23	226
(2) Diverticulitis	12	11	8	31	..	..	..	..
(3) Others	2,860	2,178	1,043	6,081	14	11	6	31
124. Cirrhosis of liver— (non-syphilitic)								
(1) Alcoholic	3	..	..	3	..	..	..	..
(2) Not returned as alcoholic	110	30	2	142	..	..	..	..
125. Other diseases of the liver—								
(1) Acute yellow atrophy ..	13	4	1	18	..	..	..	..
(2) Toxic hepatitis	74	16	9	99	..	..	..	..
(3) Amœbic abscess and hepatitis	291	100	13	404	1	..	..	1
(4) Others	495	206	102	803	2	..	1	3
126. Biliary calculi—								
(1) With cholecystitis ..	5	2	..	7	..	..	..	..
(2) Without mention of cholecystitis	20	7	..	27	..	..	..	..
Carried forward ..	450,026	240,844	260,349	951,219	2,671	1,331	716	4,718

TABLE 6—(*cont.*)

OUT-PATIENTS—(*cont.*)

RETURN OF DISEASES FOR THE YEAR 1948—(*cont.*)

Diseases.	New Cases. All Nationalities (including Europeans).				New Cases. Europeans only.			
	Adult Males.	Adult Females.	Children under 10 years.	Total.	Adult Males.	Adult Females.	Children under 10 years.	Total.
Brought forward ..	450,026	240,844	260,349	951,219	2,671	1,331	716	4,718
IX.—DISEASES OF THE DIGESTIVE SYSTEM—(*cont.*)								
127. Other diseases of the gall bladder and ducts—								
(1) Cholecystitis without record of calculi ..	67	25	..	92	..	..	..	..
(2) Others	145	50	26	221	2	1	..	3
128. Diseases of the pancreas (excluding diabetes mellitus) ..	..	..	..	..	..	..	..	..
129. Peritonitis, without stated cause	6	1	..	7	..	..	..	..
X.—DISEASES OF THE GENITO-URINARY SYSTEM (NON-VENEREAL).								
130. Acute nephritis	191	132	89	412	..	1	..	1
131. Chronic nephritis	306	139	28	473	..	..	..	..
132. Nephritis (undefined as acute or chronic)	1,042	542	245	1,829	3	..	..	3
133. Other diseases of the kidney and annexa—								
(1) Pyelitis	371	367	15	753	15	16	3	34
(2) Others	238	137	8	383	..	..	..	..
134. Calculi of the urinary passages—								
(1) Calculi of the kidney and ureter	72	14	..	86	1	..	..	1
(2) Calculi of the bladder ..	17	..	..	17	..	..	..	..
(3) Calculi of unstated site	20	..	..	20	..	..	..	..
135. Diseases of the Bladder—								
(1) Cystitis	901	661	..	1,562	17	17	..	34
(2) Others	295	116	96	507	19	7	7	33
136. Diseases of the urethra—								
(1) Stricture	237	7	..	244	..	..	..	..
(2) Others	1,020	240	27	1,287	16	..	..	16
137. Diseases of the prostate ..	12	..	..	12	..	..	..	..
138. Diseases of the male genital organs—								
(1) Epididymitis	151	..	..	151	1	..	..	1
(2) Orchitis	389	..	..	389	1	..	..	1
(3) Hydrocele	115	..	..	115	..	..	..	..
(4) Others	274	..	34	308	..	..	3	3
139. Diseases of the female genital organs—								
(1) Diseases of the ovary ..	..	578	..	578	..	5	..	5
(2) Diseases of the fallopian tube	..	141	..	141	..	2	..	2
(3) Diseases of the parametrium	..	51	..	51	..	..	..	..
(4) Diseases of the uterus ..	..	2,976	..	2,976	..	52	..	52
(5) Diseases of the breast ..	..	495	..	495	..	3	..	3
(6) Other diseases of the female genital organs	..	2,289	39	2,328	..	33	2	35
XI.—CONDITIONS ARISING IN PREGNANCY, CHILDBIRTH AND THE PUERPERAL STATE.								
140. Post abortive sepsis—								
(1) Septic abortion ..	..	40	..	40	..	..	..	..
141. Abortion not returned as septic—								
(1) Hæmorrhage following abortion	..	114	..	114	..	5	..	5
(2) Abortion without record of hæmorrhage ..	..	577	..	577	..	..	..	..
Carried forward ..	455,895	250,536	260,956	967,387	2,746	1,473	731	4,950

TABLE 6—(*cont.*)

OUT-PATIENTS—(*cont.*)

RETURN OF DISEASES FOR THE YEAR 1948—(*cont.*)

Diseases.	New Cases. All Nationalities (including Europeans).				New Cases. Europeans only.			
	Adult Males.	Adult Females.	Children under 10 years.	Total.	Adult Males.	Adult Females.	Children under 10 years.	Total.
Brought forward ..	455,895	250,536	260,956	967,387	2,746	1,473	731	4,950
XI.—CONDITIONS ARISING IN PREGNANCY, CHILDBIRTH AND THE PUERPERAL STATE—(*cont.*)								
142. Ectopic gestation	..	14	..	14	..	..	..	..
143. Other accidents of pregnancy..	..	120	..	120	..	3	..	3
144. Puerperal hæmorrhage—								
(1) Placenta prævia ..	..	2	..	2	..	..	..	..
(2) Other puerperal hæmorrhage	..	29	..	29	..	..	..	..
145. Puerperal sepsis—								
(1) Puerperal septicæmia ..	..	5	..	5	..	..	..	..
(2) Puerperal sepsis, not including septicæmia..	..	20	..	20	..	..	..	..
146. Puerperal albuminuria and convulsions—								
(1) Ante-partum eclampsia	..	2	..	2	..	..	..	..
(2) Intra-partum eclampsia	..	..	..	..	..	..	..	..
(3) Post-partum eclampsia	..	1	..	1	..	..	..	..
(4) Albuminuria of pregnancy	..	136	..	136	..	..	..	..
(5) Pyelitis of pregnancy ..	..	53	..	53	..	1	..	1
(6) Otherwise defined ..	..	44	..	44	..	..	..	..
147. Other Toxæmias of pregnancy—								
(1) Hyperemesis gravidarum	..	97	..	97	..	..	..	..
(2) Others	..	473	..	473	..	6	..	6
148. Puerperal Phlegmasia, embolism—								
(1) Puerperal phlegmasia ..	..	..	..	..	..	..	..	..
(2) Puerperal embolism ..	..	..	..	..	..	..	..	..
149. Conditions associated with labour—								
(1) Normal labour	..	4,559	..	4,559	..	71	..	71
(2) Abnormal labour ..	..	28	..	28	..	..	..	..
(3) Labour complicated with intercurrent disease..	..	14	..	14	..	..	..	..
(4) Accidents of childbirth	..	4	..	4	..	..	..	..
150. Other or unspecified conditions of the puerperal state—								
(1) Puerperal insanity ..	..	..	..	..	..	..	..	..
(2) Puerperal disease of the breast	..	1	..	1	..	..	..	..
(3) Others	..	1,147	..	1,147	..	375	..	375
XII.—DISEASES OF THE SKIN AND CELLULAR TISSUES.								
151. Carbuncle, boil	4,679	1,261	2,394	8,334	61	14	8	83
152. Cellulitis, acute abscess—								
(1) Cellulitis	2,754	835	612	4,201	21	6	5	32
(2) Acute abscess	6,642	2,079	2,579	11,300	70	20	5	95
(3) Otherwise defined ..	1,370	390	501	2,261	26	7	4	37
153. Other diseases of the skin and its annexa—								
(1) Ulcers	56,053	17,126	21,336	94,515	83	25	8	116
(2) Dermal mycoses ..	5,996	2,482	2,180	10,658	79	39	7	125
(3) Herpes	791	230	161	1,182	7	2	2	11
(4) Scabies	37,392	13,475	25,602	76,469	35	10	2	47
(5) Others	26,839	10,297	11,217	48,353	511	205	102	818
XIII.—DISEASES OF THE BONES AND ORGANS OF LOCOMOTION.								
154. Acute infective osteomyelitis and periostitis	35	13	10	58	1	..	..	1
155. Other diseases of the bones ..	299	242	34	575	..	..	..	..
Carried forward ..	598,745	305,715	327,582	1,232,042	3,640	2,257	874	6,771

TABLE 6—(*cont.*)

OUT-PATIENTS—(*cont.*)

RETURN OF DISEASES FOR THE YEAR 1948—(*cont.*)

Diseases.	New Cases. All Nationalities (including Europeans).				New Cases. Europeans only.			
	Adult Males.	Adult Females.	Children under 10 years.	Total.	Adult Males.	Adult Females.	Children under 10 years.	Total.
Brought forward ..	598,745	305,715	327,582	1,232,042	3,640	2,257	874	6,771
XIII.—DISEASES OF THE BONES AND ORGANS OF LOCOMOTION—(*cont.*)								
156. Diseases of the joints and other organs of locomotion—								
(1) Diseases of the joints ..	2,855	1,372	174	4,401	26	6	2	34
(2) Diseases of the other organs of locomotion..	4,649	1,996	311	6,956	38	18	5	61
XIV.—CONGENITAL MALFORMATIONS.								
157. Congenital malformations—								
(1) Congenital hydrocephalus	..	..	..	..	..	..	..	..
(2) Spina bifida and meningocele	..	..	..	..	..	..	..	..
(3) Congenital malformation of the heart	..	2	..	2	..	..	..	..
(4) Monstrosities	..	..	..	..	..	..	..	..
(5) Congenital hypertrophic pyloric stenosis ..	..	..	..	..	..	..	..	..
(6) Cleft palate, harelip ..	5	4	32	41	..	..	..	..
(7) Imperforate anus ..	..	..	1	1	..	..	..	..
(8) Other congenital malformations	14	18	23	55	..	..	..	..
XV.—DISEASES OF EARLY INFANCY.								
158. Congenital debility	..	..	239	239	..	..	..	..
159. Premature birth	..	..	2	2	..	..	..	..
160. Injury at birth	..	..	1	1	..	..	..	..
161. Other diseases peculiar to early infancy—								
(1) Atelectasis	..	..	..	..	..	..	..	..
(2) Icterus neonatorum ..	..	..	6	6	..	..	..	..
(3) Affections of the umbilicus	..	..	158	158	..	..	1	1
(4) Pemphigus neonatorum	..	..	9	9	..	..	..	..
(5) Others	..	..	142	142	..	..	3	3
XVI.—CONDITIONS ASSOCIATED WITH OLD AGE.								
162. (1) Senile dementia	25	14	..	39	..	..	..	..
(2) Other forms of senile decay	2,005	1,632	..	3,637	1	4	..	5
XVII.—AFFECTIONS PRODUCED BY EXTERNAL CAUSES.								
163. Suicide, or attempted suicide, by poisoning (including corrosive poisoning) ..	..	2	..	2	..	..	..	..
164. Suicide, or attempted suicide, by gas poisoning	..	..	..	..	..	..	..	..
165. Suicide, or attempted suicide, by hanging or strangulation	1	..	..	1	..	..	..	..
166. Suicide, or attempted suicide, by drowning	1	..	..	1	..	..	..	..
167. Suicide, or attempted suicide, by firearms	..	..	..	..	..	..	..	..
168. Suicide, or attempted suicide, by cutting or piercing instruments	..	..	..	..	..	..	..	..
169. Suicide, or attempted suicide, by jumping from a height ..	1	..	..	1	..	..	..	..
170. Suicide, or attempted suicide, by crushing	..	..	..	..	..	..	..	..
Carried forward ..	608,301	310,755	328,680	1,247,736	3,705	2,285	885	6,875

TABLE 6—(*cont.*)

OUT-PATIENTS—(*cont.*)

RETURN OF DISEASES FOR THE YEAR 1948—(*cont.*)

Diseases.	New Cases. All Nationalities (including Europeans).				New Cases. Europeans only.			
	Adult Males.	Adult Females.	Children under 10 years.	Total.	Adult Males.	Adult Females.	Children under 10 years	Total.
Brought forward ..	608,301	310,755	328,680	1,247,736	3,705	2,285	885	6,875
XVII.—AFFECTIONS PRODUCED BY EXTERNAL CAUSES—(*cont.*)								
171. Suicide, or attempted suicide, by other means	4	1	..	5	..	..	..	..
172. Infanticide	..	..	..	..	..	..	..	..
173. Assault or homicide, by firearms	92	3	..	95	16	1	..	17
174. Assault or homicide, by cutting or piercing instruments ..	480	139	28	647	..	..	..	..
175. Assault or homicide, by other means	1,408	473	43	1,924	5	..	..	5
176. Attacks by venomous animals—								
(1) Snake bite	64	35	12	111	2	..	..	2
(2) Insect bite	648	210	229	1,087	23	12	5	40
(3) Others	564	172	214	950	6	..	4	10
177. Food poisoning	35	11	8	54	..	1	..	1
178. Accidental absorption of irrespirable or poisonous gas ..	..	..	..	..	..	..	..	..
179. Other acute accidental poisoning	10	3	4	17	..	..	..	..
180. Injuries due to conflagration ..	8	..	1	9	..	..	..	..
181. Accidental burns— (Conflagration excepted)								
(1) Burns by fire	1,133	394	642	2,169	13	2	2	17
(2) Scalds	826	458	807	2,091	3	4	3	10
(3) Burns by corrosive substances	49	12	15	76	1	..	..	1
(4) Dermatitis due to exposure to sun ..	495	176	189	860	7	2	..	9
(5) Dermatitis due to exposure to other forms of radiation	..	..	..	..	..	..	..	..
182. Accidental mechanical suffocation	..	..	..	..	..	..	..	..
183. Accidental immersion or drowning	1	..	2	3	..	..	..	..
184. Accidental injury by firearms..	30	2	1	33	1	..	..	1
185. Accidental injury by cutting or piercing instruments ..	8,517	1,748	2,542	12,807	52	4	8	64
186. Accidental injury by fall, crushing, etc.—								
(1) By fall	14,584	3,189	5,442	23,215	221	70	66	357
(2) By machinery	505	70	66	641	2	..	..	2
(3) By motor vehicles ..	772	149	161	1,082	36	4	2	42
(4) By railway vehicles ..	38	..	2	40	1	..	..	1
(5) By other means.. ..	15,419	3,532	3,505	22,456	190	38	19	247
187. Cataclysm (tidal waves, cyclones, etc.)	..	..	..	..	..	..	..	..
188. Injury by animals (except poisoning by venomous animals)	1,108	398	484	1,990	6	1	2	9
189. Hunger or thirst	1	1	1	3	..	..	..	..
190. Excessive cold	..	..	..	..	..	..	..	..
191. Excessive heat	3	4	1	8	..	..	..	..
192. Lightning	1	1	..	2	..	..	..	..
193. Electricity	3	1	..	4	..	..	..	..
194. Other unstated forms of violence—								
(1) Inattention at birth ..	..	..	..	..	..	..	..	..
(2) Others	39	21	40	100	1	1	..	2
195. Violence of an unstated nature (i.e., suicidal, homicidal, or accidental)	49	3	1	53	..	..	..	..
196. Wounds of war	..	..	..	..	..	..	..	..
197. Execution of civilians by belligerent armies	..	..	..	..	..	..	..	..
198. Execution	..	..	..	..	..	..	..	..
Carried forward ..	655,187	321,961	343,120	1,320,268	4,291	2,425	996	7,712

TABLE 6—(*cont.*)

OUT-PATIENTS—(*cont.*)

RETURN OF DISEASES FOR THE YEAR 1948—(*cont.*)

Diseases.	New Cases. All Nationalities (including Europeans).				New Cases. Europeans only.			
	Adult Males.	Adult Females.	Children under 10 years.	Total.	Adult Males.	Adult Females.	Children under 10 years.	Total.
Brought forward ..	655,187	321,961	343,120	1,320,268	4,291	2,425	996	7,712
XVIII.—ILL-DEFINED CONDITIONS.								
199. Sudden death (cause unknown)	..	..	..	..	..	..	..	..
200. Causes of death unstated or ill-defined	..	..	..	..	..	..	..	..
201. Diseases not included in this classification which have caused no deaths	10,545	6,434	4,808	21,787	70	46	20	136
202. Malingering	17	6	..	23	..	..	..	..
203. Cases admitted to hospital for observation as to mental condition	2	..	..	2	..	..	..	..
204. Cases admitted for observation (not mental)	..	..	..	..	..	..	..	..
205. Persons accompanying patients	..	..	..	..	..	..	..	..
Total ..	665,751	328,401	347,928	1,342,080	4,361	2,471	1,016	7,848

TABLE 6—(*cont.*)

OUT-PATIENTS—(*cont.*)

RETURN OF DISEASES FOR THE YEAR 1948—(*cont.*)

Nationalities.	New Cases. All Nationalities (including Europeans).			
	Adult Males.	Adult Females.	Children under 10 years.	Total. (A)
Europeans	4,361	2,471	1,016	7,848
Eurasians	4,218	2,525	1,987	8,730
Chinese	221,356	128,899	142,135	492,390
Indians	153,882	68,329	67,603	289,814
Malays	261,485	120,458	129,157	511,100
Javanese	14,503	2,634	3,058	20,195
Japanese	58	4	2	64
Others	5,888	3,081	2,970	11,939
TOTAL ..	665,751	328,401	347,928	1,342,080

Table 7.

TRAVELLING DISPENSARIES OUT-PATIENTS.

Return of Diseases for the Year 1948.

Diseases.	New Cases. All Nationalities (including Europeans).			
	Adult Males.	Adult Females.	Children under 10 years.	Total.
I.—Infectious and Parasitic Diseases.				
1. Typhoid fever	..	..	..	..
2. Paratyphoid fever	..	..	..	..
3. Typhus—				
(1) Typhus exanthematicus	..	..	..	..
(2) Tropical typhus	..	..	..	..
(3) Japanese river fever	..	..	..	..
(4) Other rickettsia infections	..	..	..	..
4. Relapsing fever	..	..	..	..
5. Undulant fever	..	..	..	..
6. Small-pox	..	..	..	..
7. Measles	4	6	1	11
8. Scarlet fever	..	..	..	..
9. Whooping cough	6	4	141	151
10. Diphtheria	..	..	..	..
11. Influenza—				
(1) with pneumonia	17	9	38	64
(2) with other respiratory complications	622	371	1,073	2,066
(3) without respiratory complications	5,388	2,353	3,419	11,160
12. Cholera	..	..	..	..
13. Dysentery—				
(1) Amœbic	61	30	27	118
(2) Bacillary	26	9	6	41
(3) Mixed	20	7	3	30
(4) Undefined or due to other causes	1,136	729	810	2,675
14. Plague—				
(1) Bubonic	..	..	..	..
(2) Pneumonic	..	..	..	..
(3) Septicæcmic	..	..	..	..
(4) Undefined	..	..	..	..
15. Erysipelas	..	..	..	..
16. Acute poliomyelitis—				
(1) Acute poliomyelitis	..	..	1	1
(2) Acute polioencephalitis	..	..	..	..
17. Encephalitis lethargica	..	..	..	..
18. Cerebro-spinal fever	..	..	..	..
19. Glanders	..	..	..	..
20. Anthrax	..	..	..	..
21. Rabies	..	..	..	..
22. Tetanus—				
(1) Tetanus of the newly born	..	..	..	..
(2) Other forms of tetanus	1	..	..	1
23. Tuberculosis of the respiratory system	279	89	1	369
24. Tuberculosis of the central nervous system	..	..	..	..
25. Tuberculosis of the intestines or peritoneum	..	..	..	..
26. Tuberculosis of the vertebral column	..	..	..	..
27. Tuberculosis of other bones and joints	..	..	..	..
28. Tuberculosis of the skin or subcutaneous tissue (lupus)	..	..	..	..
29. Tuberculosis of the lymphatic system (abdominal and bronchial glands excepted)	..	..	..	..
30. Tuberculosis of the genito-urinary system	..	..	..	..
31. Tuberculosis of other organs—				
(1) Adrenal	..	..	..	..
(2) Other sites	..	..	..	..
32. Tuberculosis disseminated—				
(1) Acute	..	..	..	..
(2) Chronic	..	..	..	..
(3) Not distinguished as acute or chronic	..	..	..	..
33. Leprosy	..	..	..	..
34. Syphilis—				
(1) Primary	52	1	..	53
(2) Secondary	185	55	..	240
(3) Tertiary	78	37	..	115
(4) Hereditary	..	..	5	5
(5) Period not indicated	16	12	..	28
Carried forward ..	7,891	3,712	5,525	17,128

TABLE 7—(*cont.*)

TRAVELLING DISPENSARIES OUT-PATIENTS—(*cont.*)

RETURN OF DISEASES FOR THE YEAR 1948—(*cont.*)

Diseases.	New Cases. All Nationalities (including Europeans).			
	Adult Males.	Adult Females.	Children under 10 years.	Total.
Brought forward ..	7,891	3,712	5,525	17,128
I.—INFECTIOUS AND PARASITIC DISEASES—(*cont.*)				
35. Other venereal diseases—				
(1) Soft chancre	32	..	..	32
(2) Gonorrhœa and its complications	314	60	..	374
(3) Gonorrhœal ophthalmia	..	..	..	..
(4) Gonorrhœal arthritis	503	126	..	629
(5) Granuloma venereum	..	..	..	..
(6) Tropical bubo	13	..	..	13
36. Purulent infective septicæmia—				
(1) Septicæmia	1	..	..	1
(2) Pyæmia	6	5	7	18
(3) Gas gangrene	..	..	..	..
37. Yellow fever	..	..	..	..
38. Malaria—				
(1) Tertian (benign)	104	28	131	263
(2) Quartan	7	3	25	35
(3) Aestivo-autumnal (Subtertian)	244	83	162	489
(4) Mixed infections	426	147	82	655
(5) Unclassified	51,014	24,527	24,973	100,514
(6) Cachexia	5,407	2,525	2,988	10,920
(7) Blackwater fever	..	..	..	..
39. Other diseases due to protozoa—				
(1) Yaws (framboesia)	12,150	8,863	20,499	41,512
(2) Spirochætosis icterohæmorrhagica	..	..	..	..
(3) Leishmaniasis (dermal)	..	..	..	..
(4) Kala azar	..	..	..	..
(5) Other diseases	..	..	..	..
40. Ankylostomiasis	1,610	1,062	1,864	4,536
41. Hydatid cysts	..	..	..	..
42. Other diseases due to helminths—				
Cestodes.				
(1) Tænia solium	..	..	..	..
(2) Tænia saginata	..	..	..	..
(3) Other cestodes	47	14	41	102
Nematodes.				
(4) Filaria	45	19	19	83
(5) Ascaris	4,328	3,283	28,605	36,216
(6) Trichuris trichiura	..	..	..	..
(7) Oxyuris vermicularis	146	133	186	465
(8) Dracunculus medinensis	..	..	..	..
Trematodes.				
(9) Schistosomum japonicum ..	..	..	..	..
(10) Clonorchis sinensis	..	..	..	..
(11) Other helminths	..	..	..	..
(12) Undefined	1,050	799	6,221	8,070
43. (1) Sprue	..	1	..	1
(2) Actinomycosis	..	..	..	..
(3) Other mycotic infections excluding purely dermal mycosis ..	..	..	..	..
44. Other infectious or parasitic diseases—				
(1) Vaccinia including post vaccinal encephalitis	..	..	..	..
(2) Other sequelæ of vaccination ..	6	4	197	207
(3) Rubella	..	..	..	..
(4) Varicella (chicken-pox)	9	3	113	125
(5) Mumps and its complications ..	22	16	93	131
(6) Dengue	..	..	..	..
(7) Melioidosis	..	..	..	..
(8) Myiasis	..	..	..	..
(9) Glandular fever	..	..	..	..
(10) Others		..	..	..
Carried forward ..	85,375	45,413	91,731	222,519

TABLE 7—(*cont.*)

TRAVELLING DISPENSARIES OUT-PATIENTS—(*cont.*)

RETURN OF DISEASES FOR THE YEAR 1948—(*cont.*)

Diseases.	New Cases. All Nationalities (including Europeans).			
	Adult Males.	Adult Females.	Children under 10 years.	Total.
Brought forward ..	85,375	45,413	91,731	222,519
II.—CANCER AND OTHER TUMOURS.				
45. Cancer or other malignant diseases of the buccal cavity, and pharynx	1	..	..	1
46. Cancer or other malignant tumours of the digestive organs and peritoneum—				
(1) Stomach	2	..	..	2
(2) Liver (primary)	..	..	..	..
(3) Other digestive organs	..	..	..	..
47. Cancer or other malignant tumours of the respiratory organs	..	..	..	..
48. Cancer or other malignant tumours of the uterus	..	..	..	..
49. Cancer or other malignant tumours of other female genital organs	..	..	..	..
50. Cancer or other malignant tumours of the breast	..	..	..	..
51. Cancer or other malignant tumours of the male genito-urinary organs ..	..	..	..	..
52. Cancer or other malignant tumours of the skin..	1	..	..	1
53. Cancer or other malignant tumours of organs not specified	..	..	..	..
54. Tumours non-malignant—				
(1) Of female genital organs ..	..	..	..	..
(2) Of other sites	..	..	..	..
55. Tumours of undetermined nature—				
(1) Female genital organs	..	..	..	..
(2) Other sites	..	..	..	..
III.—RHEUMATISM, DISEASES OF NUTRITION AND OF ENDOCRINE GLANDS AND OTHER GENERAL DISEASES.				
56. Rheumatic fever—				
(1) With cardiac involvement ..	..	..	..	..
(2) Without cardiac involvement ..	..	..	..	..
57. Chronic rheumatism and osteoarthritis..	4,601	2,589	86	7,276
58. Gout	..	..	..	..
59. Diabetes (not including diabetes insipidus)	3	..	..	3
60. Scurvy (including Barlow's disease) ..	..	..	..	..
61. (1) Beri-beri including epidemic dropsy	1,177	873	79	2,129
(2) Beri-beri associated with pregnancy or labour	..	150	..	150
62. Pellagra	..	..	..	..
63. Rickets	..	..	113	113
64. Osteomalacia	..	..	..	..
65. Diseases of the pituitary gland	..	..	..	..
66. Diseases of the thyroid and parathyroid glands—				
(1) Simple goitre	..	..	..	..
(2) Exophthalmic goitre	..	..	..	..
(3) Myxœdema, cretinism	..	..	..	..
(4) Tetany	..	..	..	..
(5) Other diseases of the thyroid glands	..	..	..	..
67. Diseases of the thymus	..	..	..	..
68. Diseases of the adrenal glands (excluding tuberculosis)	..	..	..	..
69. Other general diseases—				
(1) Acidosis	..	..	..	..
(2) Other diseases of metabolism ..	354	362	1,007	1,723
Carried forward ..	91,514	49,387	93,016	233,917

TABLE 7—(*cont.*)

TRAVELLING DISPENSARIES OUT-PATIENTS—(*cont.*)

RETURN OF DISEASES FOR THE YEAR 1948—(*cont.*)

Diseases.	New Cases. All Nationalities (including Europeans).			
	Adult Males.	Adult Females.	Children under 10 years.	Total.
Brought forward ..	91,514	49,387	93,016	233,917
IV.—DISEASES OF THE BLOOD AND BLOOD FORMING ORGANS.				
70. Hæmorrhagic conditions—				
(1) Purpura	..	..	..	..
(2) Hæmophilia	..	..	..	..
71. Anæmia and chlorosis—				
(1) Pernicious anæmia	..	..	..	..
(2) Splenic anæmia	..	..	..	..
(3) Chlorosis	..	..	..	..
(4) Secondary anæmia	5,942	6,450	3,833	16,225
(5) Others	2,660	2,539	1,777	6,976
72. Leukæmia—				
(1) Leukæmia	..	..	..	..
(2) Hodgkin's disease	..	..	..	..
73. Diseases of the spleen—				
(1) Banti's disease	..	..	..	..
(2) Others (not including diseases of the spleen due to malaria or leukæmia)	..	..	..	..
74. Other diseases of the blood and blood forming organs	..	..	..	..
V.—CHRONIC POISONING.				
75. Alcoholism (acute or chronic)	..	..	..	..
76. Chronic poisoning by other organic substances—				
(1) Opium	..	..	..	..
(2) Morphia, cocaine	..	..	..	..
(3) Others	..	..	..	..
77. Chronic poisoning by mineral substances—				
(1) Lead poisoning	..	..	..	..
(2) Arsenical dermatitis	..	..	..	..
(3) Others	18	7	4	29
VI.—DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS.				
78. Encephalitis (not including encephalitis lethargica)—				
(1) Cerebral abscess	..	..	..	..
(2) Other forms of encephalitis ..	..	..	..	..
79. Meningitis (not including tuberculous meningitis or cerebro-spinal meningitis)	..	..	..	..
80. Tabes dorsalis (Locomotor ataxia) ..	..	..	..	..
81. Other diseases of the spinal cord ..	13	7	..	20
82. Apoplexy and paralysis—				
(1) Cerebral hæmorrhage	..	..	..	..
(2) Cerebral embolism	..	..	..	..
(3) Cerebral thrombosis	..	..	..	..
(4) Hemiplegia, cause not determined	13	7	..	20
(5) Other paralysis	4	2	..	6
83. General paralysis of the insane	..	..	..	..
84. Other forms of insanity—				
(1) Dementia præcox	..	..	..	..
(2) Others	..	..	..	..
85. Epilepsy	4	1	..	5
86. Infantile convulsions (age under 5 years)	..	..	3	3
87. Other diseases of the nervous system—				
(1) Chorea	..	..	..	..
(2) Neuritis and neuralgia	17,830	10,689	2,391	30,910
(3) Paralysis agitans	..	..	..	..
(4) Disseminated sclerosis	..	..	..	..
(5) Neurasthenia	144	131	..	275
(6) Hysteria	..	..	..	..
(7) Others	2,253	1,540	1,630	5,423
Carried forward ..	120,395	70,760	102,654	293,809

TABLE 7—(*cont.*)

TRAVELLING DISPENSARIES OUT-PATIENTS—(*cont.*)

RETURN OF DISEASES FOR THE YEAR 1948—(*cont.*)

Diseases.	New Cases. All Nationalities (including Europeans).			
	Adult Males.	Adult Females.	Children under 10 years.	Total.
Brought forward ..	120,395	70,760	102,654	293,809
VI.—DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS—(*cont.*)				
88. Diseases of the eye—				
(1) Conjunctivitis	5,211	3,710	6,053	14,974
(2) Trachoma	1	6	4	11
(3) Corneal ulcer	13	9	2	24
(4) Other diseases of the eye ..	524	486	263	1,273
89. Diseases of the ear and or the mastoid sinus—				
(1) Otitis externa	369	230	831	1,430
(2) Otitis media	361	247	1,114	1,722
(3) Mastoiditis	5	2	9	16
(4) Others	599	338	2,082	3,019
VII.—DISEASES OF THE CIRCULATORY SYSTEM.				
90. Pericarditis	..	..	..	..
91. Acute endocarditis—				
(1) Malignant	..	..	..	..
(2) Others	..	..	..	..
92. Chronic endocarditis: valvular disease—				
(1) Aortic valve disease	..	..	..	..
(2) Mitral valve disease	..	..	..	..
(3) Aortic and mitral	..	..	..	..
(4) Others	..	..	..	..
93. Diseases of the myocardium—				
(1) Acute myocarditis	..	..	..	..
(2) Chronic myocardial degeneration	..	..	..	..
94. Diseases of the coronary arteries—				
(1) Angina pectoris	..	..	..	..
(2) Coronary thrombosis	..	..	..	..
(3) Coronary sclerosis..	..	..	..	..
95. Other diseases of the heart—				
(1) Auricular fibrillation	..	..	..	..
(2) Heart block	..	..	..	..
(3) Others	5	1	5	11
96. Aneurysm—				
(1) Aneurysm of aorta	..	..	..	..
(2) Aneurysm of other arteries ..	..	..	..	..
97. Arterio-sclerosis	..	..	..	..
98. Gangrene	..	..	..	..
99. Other diseases of the arteries	..	..	..	..
100. Diseases of the veins—				
(1) Varicose veins	3	..	..	3
(2) Hæmorrhoids	24	10	..	34
(3) Phlebitis	..	..	..	..
(4) Thrombosis	..	..	..	..
(5) Others	..	..	..	..
101. Diseases of the lymphatic system—				
(1) Lymphangitis	..	..	..	..
(2) Lymphadenitis	22	6	13	41
(3) Bubo (non-specified)	16	2	2	20
102. Abnormalities of blood pressure—				
(1) High blood pressure	..	..	..	..
(2) Low blood pressure	..	..	..	..
103. Other diseases of the circulatory system—				
(1) Epistaxis	2	..	18	20
(2) Others	6	2	7	15
VIII.—DISEASES OF THE RESPIRATORY SYSTEM.				
104. Diseases of the nasal fossæ and its annexa—				
(1) Diseases of the nose	35	15	27	77
(2) Diseases of the accessory nasal sinuses	421	188	179	788
Carried forward ..	128,012	76,012	113,263	317,287

TABLE 7—(*cont.*)

TRAVELLING DISPENSARIES OUT-PATIENTS—(*cont.*)

RETURN OF DISEASES FOR THE YEAR 1948—(*cont.*)

Diseases.	New Cases. All Nationalities (including Europeans).			
	Adult Males.	Adult Females.	Children under 10 years.	Total.
Brought forward ..	128,012	76,012	113,263	317,287
VIII.—DISEASES OF THE RESPIRATORY SYSTEM—(*cont.*)				
105. Diseases of the larynx—				
(1) Laryngismus stridulus	..	..	..	..
(2) Laryngitis	68	26	34	128
(3) Other diseases of the larynx ..	5	1	2	8
106. Bronchitis—				
(1) Acute	3,880	2,227	3,487	9,594
(2) Chronic	2,370	1,466	1,151	4,987
(3) Not defined as acute or chronic..	14,639	7,760	14,893	37,292
107. Broncho-pneumonia	33	10	89	132
108. Lobar-pneumonia..	15	4	7	26
109. Pneumonia (not otherwise defined) ..	13	1	14	28
110. Pleurisy—				
(1) Empyema	1	..	..	1
(2) Other pleurisy	10	2	..	12
111. Congestion and hæmorrhagic infraction of lung, etc.—				
(1) Hypostatic congestion of lung ..	..	..	..	..
(2) Massive collapse	..	..	..	..
(3) Pulmonary embolism	..	..	..	..
(4) Others	..	..	..	..
112. Asthma	1,743	962	1,015	3,720
113. Pulmonary emphysema	..	..	..	..
114. Other diseases of the respiratory system—				
(1) Chronic interstitial pneumonia (including occupational diseases of the lung)	..	..	..	..
(2) Gangrene of the lung	..	..	..	..
(3) Abscess of the lung	..	..	..	..
(4) Bronchiectasis	..	..	..	..
(5) Others	284	143	34	461
IX.—DISEASES OF THE DIGESTIVE SYSTEM.				
115. Diseases of the buccal cavity, pharynx, etc.—				
(1) Pyorrhœa	195	119	31	345
(2) Dental caries	1,281	687	1,515	3,483
(3) Stomatitis	158	159	601	918
(4) Ludwig's angina	..	..	1	1
(5) Diseases of the tonsils	123	70	194	387
(6) Others	262	119	221	602
116. Diseases of the œsophagus	..	..	..	..
117. Ulcer of the stomach or duodenum—				
(1) Ulcer of the stomach	7	1	..	8
(2) Ulcer of the duodenum	2	1	..	3
118. Other diseases of the stomach—				
(1) Gastritis	3,348	2,173	849	6,370
(2) Others	3,684	2,674	3,312	9,670
119. Diarrhœa and enteritis— (under 2 years)	..	..	1,300	1,300
120. Diarrhœa and enteritis— (2 years and over)				
(1) Colitis	676	210	292	1,178
(2) Otherwise defined	1,321	705	1,139	3,165
121. Appendicitis	1	..	..	1
122. Hernia, Intestinal obstruction—				
(1) Hernia	6	..	2	8
(2) Strangulated hernia	..	..	..	..
(3) Intestinal obstruction (including intussusception)	..	..	..	..
123. Other diseases of the intestines—				
(1) Constipation, intestinal stasis ..	15,191	7,499	5,579	28,269
(2) Diverticulitis	..	..	..	..
(3) Others	493	332	643	1,468
124. Cirrhosis of liver— (non-syphilitic)				
(1) Alcoholic	..	..	..	..
(2) Not returned as alcoholic ..	2	..	..	2
Carried forward ..	177,823	103,363	149,668	430,854

TABLE 7—(*cont.*)

TRAVELLING DISPENSARIES OUT-PATIENTS—(*cont.*)

RETURN OF DISEASES FOR THE YEAR 1948—(*cont.*)

Diseases.	New Cases. All Nationalities (including Europeans).			
	Adult Males.	Adult Females.	Children under 10 years.	Total.
Brought forward ..	177,823	103,363	149,668	430,854
IX.—DISEASES OF THE DIGESTIVE SYSTEM—(*cont.*)				
125. Other diseases of the liver—				
(1) Acute yellow atrophy	1	..	..	1
(2) Toxic hepatitis	3		..	3
(3) Amœbic abscess and hepatitis ..	1	2	1	4
(4) Others	5	3	2	10
126. Biliary calculi—				
(1) With cholecystitis	..	..	..	..
(2) Without mention of cholecystitis	..	..	..	..
127. Other diseases of the gall bladder and ducts—				
(1) Cholecystitis without record of calculi	..	..	..	..
(2) Others	6	6	17	29
128. Diseases of the pancreas (excluding diabetes mellitus)	..	..	..	..
129. Peritonitis, without stated cause ..	..	..	..	..
X.—DISEASES OF THE GENITO-URINARY SYSTEM (NON-VENEREAL).				
130. Acute nephritis	47	18	2	67
131. Chronic nephritis	24	8	2	34
132. Nephritis (undefined as acute or chronic)	145	75	47	267
133. Other diseases of the kidney and annexa—				
(1) Pyelitis	21	10	..	31
(2) Others	25	26	..	51
134. Calculi of the urinary passages—				
(1) Calculi of the kidney and ureter	..	1	..	1
(2) Calculi of the bladder	..	..	..	..
(3) Calculi of unstated site	..	..	..	..
135. Diseases of the bladder—				
(1) Cystitis	18	4	..	22
(2) Others	4	5	..	9
136. Diseases of the urethra—				
(1) Stricture	2	..	..	2
(2) Others	49	27	1	77
137. Diseases of the prostate	..	..	..	..
138. Diseases of the male genital organs—				
(1) Epididymitis	2	..	..	2
(2) Orchitis	19	..	3	22
(3) Hydrocele	..	..	..	..
(4) Others	9	..	7	16
139. Diseases of the female genital organs—				
(1) Diseases of the ovary	..	..	..	..
(2) Diseases of the fallopian tube ..	..	..	..	..
(3) Diseases of the parametrium ..	..	..	..	..
(4) Diseases of the uterus	..	13	..	13
(5) Diseases of the breast	..	11	..	11
(6) Other diseases of the female genital organs	..	95	..	95
XI.—CONDITIONS ARISING IN PREGNANCY, CHILDBIRTH AND THE PUERPRAL STATE.				
140. Post abortive sepsis—				
(1) Septic abortion	..	..	..	..
141. Abortion not returned as septic—				
(1) Hæmorrhage following abortion	..	..	..	..
(2) Abortion without record of hæmorrhage	..	10	..	10
142. Ectopic gestation	..	..	..	..
143. Other accidents of pregnancy	..	8	..	8
144. Puerperal hæmorrhage—				
(1) Placenta prævia	..	..	..	..
(2) Other puerperal hæmorrhage ..	..	..	..	..
Carried forward ..	178,204	103,685	149,750	431,639

TABLE 7—(*cont.*)

TRAVELLING DISPENSARIES OUT-PATIENTS—(*cont.*)

RETURN OF DISEASES FOR THE YEAR 1948—(*cont.*)

Diseases.	New Cases. All Nationalities (including Europeans).			
	Adult Males.	Adult Females.	Children under 10 years.	Total.
Brought forward ..	178,204	103,685	149,750	431,639
XI.—CONDITIONS ARISING IN PREGNANCY, CHILDBIRTH AND THE PUERPERAL STATE—(*cont.*)				
145. Puerperal sepsis—				
(1) Puerperal septicæmia	..	1	..	1
(2) Puerperal sepsis, not including septicæmia	..	..	..	..
146. Puerperal albuminuria and convulsions—				
(1) Ante-partum eclampsia	..	..	..	..
(2) Intra-partum eclampsia	..	..	..	..
(3) Post-partum eclampsia	..	..	..	..
(4) Albuminuria of pregnancy ..	..	..	..	..
(5) Pyelitis of pregnancy	..	..	..	..
(6) Otherwise defined	..	2	..	2
147. Other Toxæmias of pregnancy—				
(1) Hyperemesis gravidarum ..	..	..	..	..
(2) Others	..	24	..	24
148. Puerperal phlegmasia, embolism—				
(1) Puerperal phlegmasia	..	..	..	..
(2) Puerperal embolism	..	..	..	..
149. Conditions associated with labour—				
(1) Normal labour	..	113	..	113
(2) Abnormal labour	..	..	..	..
(3) Labour complicated with intercurrent disease	..	..	..	..
(4) Accidents of childbirth	..	..	..	..
150. Other or unspecified conditions of the puerperal State—				
(1) Puerperal insanity	..	..	..	..
(2) Puerperal disease of the breast ..	..	..	..	..
(3) Others	..	1	..	1
XII.—DISEASES OF THE SKIN AND CELLULAR TISSUES.				
151. Carbuncle, boil	553	197	722	1,472
152. Cellulitis, acute abscess—				
(1) Cellulitis	191	81	64	336
(2) Acute abscess	498	227	302	1,027
(3) Otherwise defined	211	101	132	444
153. Other diseases of the skin and its annexa—				
(1) Ulcers	29,837	13,425	26,443	69,705
(2) Dermal mycoses	3,267	1,427	2,939	7,633
(3) Herpes	34	12	5	51
(4) Scabies	28,438	11,471	36,024	75,933
(5) Others	8,586	3,960	7,779	20,325
XIII.—DISEASES OF THE BONES AND ORGANS OF LOCOMOTION.				
154. Acute infective osteomyelitis and periostitis	..	..	..	..
155. Other diseases of the bones	56	32	22	110
156. Diseases of the joints and other organs of locomotion—				
(1) Diseases of the joints	578	290	65	933
(2) Diseases of the other organs of locomotion	689	348	34	1,071
XIV.—CONGENITAL MALFORMATIONS.				
157. Congenital malformations—				
(1) Congenital hydrocephalus ..	..	..	..	..
(2) Spina bifida and meningocele ..	..	..	..	..
(3) Congenital malformation of the heart	..	..	..	..
Carried forward ..	251,142	135,397	224,281	610,820

TABLE 7—(*cont.*)

TRAVELLING DISPENSARIES OUT-PATIENTS—(*cont.*)

RETURN OF DISEASES FOR THE YEAR 1948—(*cont.*)

Diseases.	New Cases, All Nationalities (including Europeans).			
	Adult Males.	Adult Females.	Children under 10 years.	Total.
Brought forward ..	251,142	135,397	224,281	610,820
XIV.—CONGENITAL MALFORMATIONS—(*cont.*)				
157. Congenital malformations—(*cont.*)				
(4) Monstrosities	..	..	..	..
(5) Congenital hypertrophic pyloric stenosis	..	..	..	..
(6) Cleft palate, harelip	..	..	..	..
(7) Imperforate anus	..	..	..	..
(8) Other congenital malformations	4	..	20	24
XV.—DISEASES OF EARLY INFANCY.				
158. Congenital debility	..	..	1	1
159. Premature birth	..	..	..	..
160. Injury at birth	..	..	..	..
161. Other diseases peculiar to early infancy—				
(1) Atelectasis	..	..	..	..
(2) Icterus neonatorum	..	..	..	..
(3) Affections of the umbilicus	..	..	1	1
(4) Pemphigus neonatorum	..	..	..	..
(5) Others	..	..	2	2
XVI.—CONDITIONS ASSOCIATED WITH OLD AGE.				
162. (1) Senile dementia	..	..	..	..
(2) Other forms of senile decay	1,073	761	..	1,834
XVII.—AFFECTIONS PRODUCED BY EXTERNAL CAUSES.				
163. Suicide, or attempted suicide, by poisoning (including corrosive poisoning)	..	..	..	..
164. Suicide, or attempted suicide, by gas poisoning	..	..	..	..
165. Suicide, or attempted suicide, by hanging or strangulation	..	..	..	..
166. Suicide, or attempted suicide, by drowning	..	..	..	..
167. Suicide, or attempted suicide, by firearms	..	..	..	..
168. Suicide, or attempted suicide, by cutting or piercing instruments	..	..	..	..
169. Suicide, or attempted suicide, by jumping from a height	..	..	..	..
170. Suicide, or attempted suicide, by crushing	..	..	..	..
171. Suicide, or attempted suicide, by other means	..	..	..	..
172. Infanticide	..	..	..	..
173. Assault or homicide, by firearms	..	..	..	..
174. Assault or homicide, by cutting or piercing instruments	75	37	157	269
175. Assault or homicide, by other means	2	2	..	4
176. Attacks by venomous animals—				
(1) Snake bite	1	1	1	3
(2) Insect bite	45	31	39	115
(3) Others	27	13	18	58
177. Food poisoning	..	..	..	..
178. Accidental absorption of irrespirable or poisonous gas	..	..	..	..
179. Other acute accidental poisoning	..	..	..	..
180. Injuries due to conflagration	1	..	66	67
181. Accidental burns— (Conflagration excepted)				
(1) Burns by fire	149	62	174	385
(2) Scalds	106	113	195	414
(3) Burns by corrosive substances	2	..	3	5
(4) Dermatitis due to exposure to sun	296	122	261	679
(5) Dermatitis due to exposure to other forms of radiation	..	..	..	..
Carried forward ..	252,923	136,539	225,219	614,681

TABLE 7—(*cont.*)

TRAVELLING DISPENSARIES OUT-PATIENTS—(*cont.*)

RETURN OF DISEASES FOR THE YEAR 1948—(*cont.*)

Diseases.	New Cases. All Nationalities (including Europeans).			
	Adult Males.	Adult Females.	Children under 10 years.	Total.
Brought forward ..	252,923	136,539	225,219	614,681
XVII.—AFFECTIONS PRODUCED BY EXTERNAL CAUSES—(*cont.*)				
182. Accidental mechanical suffocation ..	..	..	..	..
183. Accidental immersion or drowning ..	3	2	1	6
184. Accidental injury by firearms	..	..	..	..
185. Accidental injury by cutting or piercing instruments	1,798	677	989	3,464
186. Accidental injury by fall, crushing, etc.—				
(1) By fall	2,750	908	1,731	5,389
(2) By machinery	12	3	5	20
(3) By motor vehicles	19	1	..	20
(4) By railway vehicles	..	..	..	..
(5) By other means	2,301	793	1,113	4,207
187. Cataclysm— (tidal waves, cyclones, etc.)	..	..	..	..
188. Injury by animals .. .. .. (except poisoning by venomous animals)	11	3	4	18
189. Hunger or thirst	..	..	..	..
190. Excessive cold	..	..	..	..
191. Excessive heat	..	..	..	..
192. Lightning	..	..	..	..
193. Electricity	..	..	..	..
194. Other unstated forms of violence—				
(1) Inattention at birth	..	..	..	..
(2) Others	..	..	..	..
195. Violence of an unstated nature .. (i.e., suicidal, homicidal, or accidental)	..	..	..	..
196. Wounds of war	..	..	..	..
197. Execution of civilians by belligerent armies	..	..	..	..
198. Execution	..	..	..	..
XVIII.—ILL-DEFINED CONDITIONS.				
199. Sudden death (cause unknown) ..	..	..	..	..
200. Cause of death unstated or ill-defined ..	..	..	..	..
201. Diseases not included in this classification which have caused no deaths ..	1,990	1,357	1,777	5,124
202. Malingering	..	..	..	..
203. Cases admitted to hospital for observation as to mental condition	..	..	..	..
204. Cases admitted for observation (not mental) ..	..	..	..	..
205. Persons accompanying patients.. ..	..	..	..	..
Total ..	261,807	140,283	230,839	632,929

TABLE 7—(*cont.*)

TRAVELLING DISPENSARIES OUT-PATIENTS—(*cont.*)

RETURN OF DISEASES FOR THE YEAR 1948—(*cont.*)

Nationalities.	New Cases. All Nationalities (including Europeans).			
	Adult Males.	Adult Females.	Children under 10 years.	Total.
Europeans	11	4	45	60
Eurasians	96	68	56	220
Chinese	66,867	38,878	57,267	163,012
Indians	26,017	13,407	16,077	55,501
Malays	156,593	80,832	148,016	385,441
Javanese	7,115	3,563	5,513	16,191
Japanese	..	..	..	..
Others	5,108	3,531	3,865	12,504
TOTAL ..	261,807	140,283	230,839	632,929

Table 8.

DENTAL—SUMMARY OF WORK DONE. FOR THE YEAR 1948.

State or Settlement.	Attendance.	Extractions.		Fillings.	Scalings.	Dentures.
		Temporary teeth.	Permanent teeth.			
Kedah	7,586	722	3,210	1,704	278	17
Penang & Province Wellesley ..	12,808	2,477	5,963	1,941	1,265	114
Perak	19,871	2,581	6,544	5,737	1,416	—
Selangor	16,458	5,588	7,324	5,159	320	155
Negri Sembilan ..	11,567	4,048	5,598	3,986	764	65
Malacca	6,738	1,520	4,227	2,190	233	102
Johore	16,146	2,975	6,594	8,722	731	—
Kelantan	3,585	830	2,035	2,232	298	—
Trengganu	3,929	1,005	3,202	1,969	141	—
Pahang	12,477	4,584	3,695	6,773	683	—
Total ..	111,165	26,330	48,392	40,413	6,129	453

Table 9.

MICROSCOPICAL EXAMINATION OF BLOOD FILMS FOR THE YEAR 1948.

State or Settlement.	Number of patients examined.	Number Positive for Malarial Parasites.				Total number of examinations of blood films.
		S.T.	B.T.	Quartan.	Mixed infection.	
Kedah	11,989	1,452	853	41	25	13,400
Perlis	5,764	224	233	75	5	6,479
Penang & Province Wellesley ..	20,866	1,057	845	16	34	22,300
Perak	48,532	2,367	1,204	36	51	73,601
Selangor	18,878	323	504	30	44	35,700
Negri Sembilan ..	20,148	754	423	58	18	22,795
Malacca	10,032	355	117	13	—	11,032
Johore	22,228	464	602	40	225	23,482
Kelantan	10,513	653	482	15	20	11,542
Trengganu	3,264	120	221	24	24	3,264
Pahang	23,141	1,659	988	62	33	38,615
Total ..	195,355	9,428	6,472	410	479	262,210

Table 10.

MICROSCOPICAL EXAMINATION OF FAECES FOR WORM INFESTATIONS FOR THE YEAR 1948.

State or Settlement.	Number of patients examined.	Number positive for entamoeba histolytica.	Number Positive for Ova.			Total number of examinations.
			Ascaris lumbricoides.	Ankylostoma duodenale.	Mixed infection.	
Kedah	9,505	178	3,183	1,986	830	9,725
Perlis	2,325	14	1,357	111	106	2,448
Penang & Province Wellesley ..	15,703	367	4,882	4,837	1,176	22,058
Perak	33,008	369	8,853	2,673	1,273	46,064
Selangor	17,103	125	5,830	1,564	824	28,796
Negri Sembilan ..	18,225	77	4,069	1,384	356	21,582
Malacca	9,564	37	1,563	2,503	1,949	10,564
Johore	21,139	224	6,923	3,860	2,732	26,279
Kelantan	9,306	213	1,809	365	2,396	9,306
Trengganu	1,671	120	291	60	402	1,671
Pahang	14,424	79	3,310	619	881	19,077
Total ..	151,973	1,803	42,070	19,962	12,925	197,570

TABLE 11.

POST MORTEM EXAMINATIONS, 1948.

State or Settlement.	Medico-legal.	Clinical.
Kedah	166 ...	3
Perlis	30 ...	9
Penang and Province Wellesley	195 ...	40
Perak	572 ..	68
Selangor	383 ...	16
Negri Sembilan	158 ...	33
Malacca	92 ..	12
Johore	515 ...	98
Kelantan	50 ...	3
Trengganu	22 ...	6
Pahang	146 ...	15
Total ...	2,329 ...	303

TABLE 12.

ESTABLISHMENT—MEDICAL DEPARTMENT, 1948.

Director, Medical Services	1
Deputy Director, Medical Services	1
Director, Institute for Medical Research	1
Administrative Officers:	
Grade "A"—	
(State Surgeon, Kedah; Chief Medical Officer, Penang; Principal Medical Officer, Johore; State Medical and Health Officers, Perak—Selangor—Negri Sembilan—and Pahang) ...	7
Grade "B"—	
(Deputy State Medical and Health Officers, Perak and Selangor, Chief Medical Officer, Malacca and Kelantan, Senior Health Officer, Penang, Deputy State Surgeon, Kedah, and Deputy Principal Medical Officer, Johore) ...	7
Specialist Officers—Grade "B"	21
Physician, Johore.	
,, Penang.	
Surgeon, Johore.	
,, Penang.	
,, Perak.	
,, Selangor.	
,, Negri Sembilan.	

Administrative Officers—

Chief Dental Officer.

Ophthalmologist.

Venereal Disease Specialist.

Radiologist.

Child Health Specialist.

Tuberculosis Specialist.

Medical Superintendent, Central Mental Hospital.

Medical Superintendent, Leper Settlement.

Senior Bacteriologist, Institute for Medical Research.

Chief Chemist, Institute for Medical Research.

Senior Malaria Research Officer.

Senior Pathologist, Institute for Medical Research.

Pathologist, Penang.

Senior Nutrition Officer.

Medical Officers including Health Officers (Malayan Establishment)	83
Medical Officers (Locally-recruited)	166
Dental Surgeons (Malayan Establishment) ...	4
,, ,, (Locally-recruited)	27
Biochemists	2
Entomologists	2
Pharmaceutical Chemists	3
Principal Matron	1
Matrons, Grade I	7
,, ,, II	11
Health Sisters, Sister Tutors, Almoners, Dietitians, Radiographers, Physiotherapists, etc.	36
Nursing Sisters	81

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