

## **Report of the Director of Medical Services / British Guiana.**

### **Contributors**

British Guiana. Medical Department.

### **Publication/Creation**

Georgetown, Demerera : Govt. Printer, [1940]

### **Persistent URL**

<https://wellcomecollection.org/works/fmevegx8>

### **License and attribution**

You have permission to make copies of this work under a Creative Commons, Attribution license.

This licence permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited. See the Legal Code for further information.

Image source should be attributed as specified in the full catalogue record. If no source is given the image should be attributed to Wellcome Collection.



Wellcome Collection  
183 Euston Road  
London NW1 2BE UK  
T +44 (0)20 7611 8722  
E [library@wellcomecollection.org](mailto:library@wellcomecollection.org)  
<https://wellcomecollection.org>

R88/49  
5134

**The Royal Sanitary Institute  
Library.**

C.S.O. No. 71/4 iv



**British Guiana.**

---

**REPORT**  
  
OF THE  
  
**DIRECTOR OF MEDICAL SERVICES,**  
  
FOR THE YEAR  
  
**1940.**

---

Printed by the Authority of His Excellency the Governor.

---

GEORGETOWN, DEMERARA :

"THE ARGOSY" COMPANY, LIMITED, PRINTERS TO THE GOVERNMENT OF BRITISH GUIANA.

1941.

No. 17,454.

WELLCOME  
LIBRARY

+

Ann Rep

WA28

.666

B86

1940



22501468131

# CONTENTS.

	PAGE.	PARAGRAPH.
<b>I.—ADMINISTRATION—</b>		
A.—LEGISLATION ...	1	1
B.—FINANCIAL—		
Expenditure and Revenue ...	1- 2	2- 3
<b>II.—VITAL STATISTICS</b> ...	2- 4	4-12
<b>III.—PUBLIC HEALTH—</b>		
A.—GENERAL REMARKS ...	5	13-19
B.—GENERAL DISEASES—		
Nephritis ...	5	20
Respiratory Diseases ...	5	21
Bronchitis and Broncho-Pneumonia ...	5	22
Diseases of the Heart ...	6	23
Bowel Diseases (excluding the Enterics and Dysenteries) ...	6	24
Cancer and other Malignant Tumours ...	6	25-28
Diseases treated in Government Hospitals ...	6	29
Diseases responsible for highest number of deaths in Colony ...	7	30
C.—COMMUNICABLE DISEASES—		
Malaria ...	7- 8	31-35
Influenza ...	8	36
Tuberculosis (all forms) ...	8	37-38
Enteric Group ...	8	39
Chicken Pox ...	8	40
Diphtheria ...	8	41
Anthrax ...	8	42
Anterior Poliomyelitis ...	8	43
Puerperal Fever ...	8	44
Smallpox-Vaccinations ...	8	45-46
Trachoma ...	8	47
Tetanus ...	8	48
Yaws ...	8	49
Ankylostomiasis ...	9	50
Venereal Diseases ...	9-11	51-61
Leprosy ...	11-12	62-68
Filariasis ...	12	69
Erysipelas ...	13	70
Ophthalmia Neonatorum ...	13	71
Quarantinable Diseases ...	13	72
Measles ...	13	73
<b>IV.—HYGIENE AND SANITATION—</b>		
CENTRAL BOARD OF HEALTH :—		
Record of Activities and annual statement ...	13-14	74-82
Special Preventive Measures ...	14	83-87
<b>V.—PORT HEALTH WORK AND ADMINISTRATION</b> ...	14-16	88-103
<b>VI.—RURAL HEALTH CENTRES</b> ...	16	104-106
<b>VII.—INFANT WELFARE AND MATERNITY</b> ...	16-18	107-118
<b>VIII.—SCHOOL MEDICAL AND DENTAL SERVICES</b> ...	18	119-124
<b>IX.—NUTRITION</b> ...	18	125-126



	PAGE	PARAGRAPH.
<b>X.—HOSPITAL AND DISPENSARIES—</b>		
A.—HOSPITALS ...	18-22	127-140
Ophthalmic Department ...	23	141-148
Dental Department ...	23-24	149-153
X-Ray and Electrical Department ...	24-25	155-164
Table XXI. showing accommodation etc., for patients in public hospitals ...	21	
Table XXII. showing classification of in-patients and out-patients ...	22	
Table XXIII. Surgical Operations ...	22	
B.—THE MENTAL HOSPITAL ...	25-27	165-168
C.—PUBLIC DISPENSARIES ...	27	179-180
XI.—PRISONS ...	27-28	181-196
XII.—THE ALMS HOUSE ...	29	197-204
XIII.—INDUSTRIAL SCHOOL, ONDERNEEMING ...	29	205-209
XIV.—SUGAR ESTATES ...	30-31	210-218
XV.—MINING—		
A.—MAZARUNI DIAMOND FIELDS ...	31	219-227
B.—POTARO HOSPITAL AND DISPENSARY ...	31-32	228-230
C.—MACKENZIE HOSPITAL—		
Demerara Bauxite Company, Ltd.—Demerara River ...	32	231-236
D.—BRITISH GUIANA CONSOLIDATED GOLD FIELDS, POTARO ...	32-33	237-242
XVI.—HINTERLAND SETTLEMENTS ...	33	243-246
XVII.—METEOROLOGICAL ...	33	247-249

#### APPENDIX I.

Summary of the Annual Report of the Central Medical Laboratory, Georgetown.

#### APPENDIX II.

Summary from the Annual Report of the Malaria Research Unit.

MEDICAL DEPARTMENT,

GEORGETOWN, DEMERARA,

21st October, 1941.

SIR,

I have the honour to submit, for the information of His Excellency the Governor and the Legislative Council and for transmission to the Right Honourable the Secretary of State for the Colonies, the medical report on the health and sanitary conditions of British Guiana for the year 1940, together with the returns, etc., appended thereto. Many maps, tables, graphs, etc., have been omitted from this report, as a war economy measure, in accordance with instructions.

I have the honour to be,

Sir,

Your obedient servant,

NORMAN M. MACLENNAN,

Director of Medical Services.

The Honourable

THE COLONIAL SECRETARY.

BRITISH GUIANA.

ANNUAL MEDICAL REPORT FOR THE YEAR ENDING 31st  
DECEMBER, 1940.

I.—ADMINISTRATION.

A.—Legislation.

*Ordinances, Regulations, etc.*

1. The Health (Yellow Fever Control) Regulations, 1940, made under the Public Health Ordinance, No. 15 of 1934, were passed during the year. (See paragraph 79).

B.—Financial.

2. The following is a comparative statement of Revenue and Expenditure for the years 1938, 1939, and 1940.

(a) *Revenue—Medical Department.*

1938.	1939.	1940.
\$47,332.30 (includes \$2,222.86 for rent of quarters occupied by Medical Officers).	\$61,003.57 (includes \$3,033.43 for rent of quarters occupied by Medical Officers).	\$61,299.09 (includes \$2,093.70 for rent of quarters occupied by Medical Officers).



(b) *Expenditure—Medical Department, including Public Health Department*

1938.	1939.	1940.
\$621,778.14	\$669,530.80	\$799,416.09

3. The percentage of actual expenditure on Medical and Public Health Services to actual revenue of the Colony was :—

1938.	1939.	1940.
9.8%	10.7%	11.4%

## II.—VITAL STATISTICS.

4. The population on the 31st December, 1940, as estimated by the Registrar-General was 346,982 (males 173,381 ; females 173,601).

5. There were 12,033 births and 6,397 deaths. The natural increase of population was 5,636.

6. The number of immigrants (5,966) exceeded the number of emigrants (5,857) by 109.

7. The actual increase in the population for the year was 5,745 as compared with 3,716 in 1939.

8. *Births.*—12,033 births (6,184 males and 5,849 females) were registered. This is equivalent to a birthrate of 34.7 per 1,000 of the population as compared with 28.1 in 1939.

9. The number of still-births registered was 580 which was in proportion of 4.8 per 100 children born alive. The corresponding figure for 1939 was 5.2.

10. *Deaths.*—6,397 deaths (3,353 males ; 3,044 females) were registered giving a crude death rate of 18.4 per 1,000 of the population as compared with 19.7 in 1939.

11. *Infant Mortality.*—The number of deaths under 1 year of age was 1,254 which equalled a rate of 104 per 1,000 registered births as compared with 120 per 1,000 in 1939.

TABLE I.

CHIEF CAUSES OF INFANT MORTALITY.—WHOLE COLONY.

International List Number.	Causes of Death.	1939.		1940.	
		No.	%	No.	%
158	Congenital Debility	306	27	322	25
159	Premature Birth	212	18	236	19
38	Malaria and Unfebrile Fevers	192	17	189	14
33, 106-109	Respiratory Infections	169	15	183	15
27, 119-120	Intestinal Infections	108	9	153	13
	Other causes of death	162	14	180	14
Total Infant Deaths		1149	100	1254	100
Infant Mortality Rate per 1,000 births		120		104	

12. *Maternal Mortality.*—The maternal mortality rate was 8 per 1,000 births as compared with 12 in 1939.

TABLE II.  
CAUSES OF MATERNAL MORTALITY.—WHOLE COLONY.

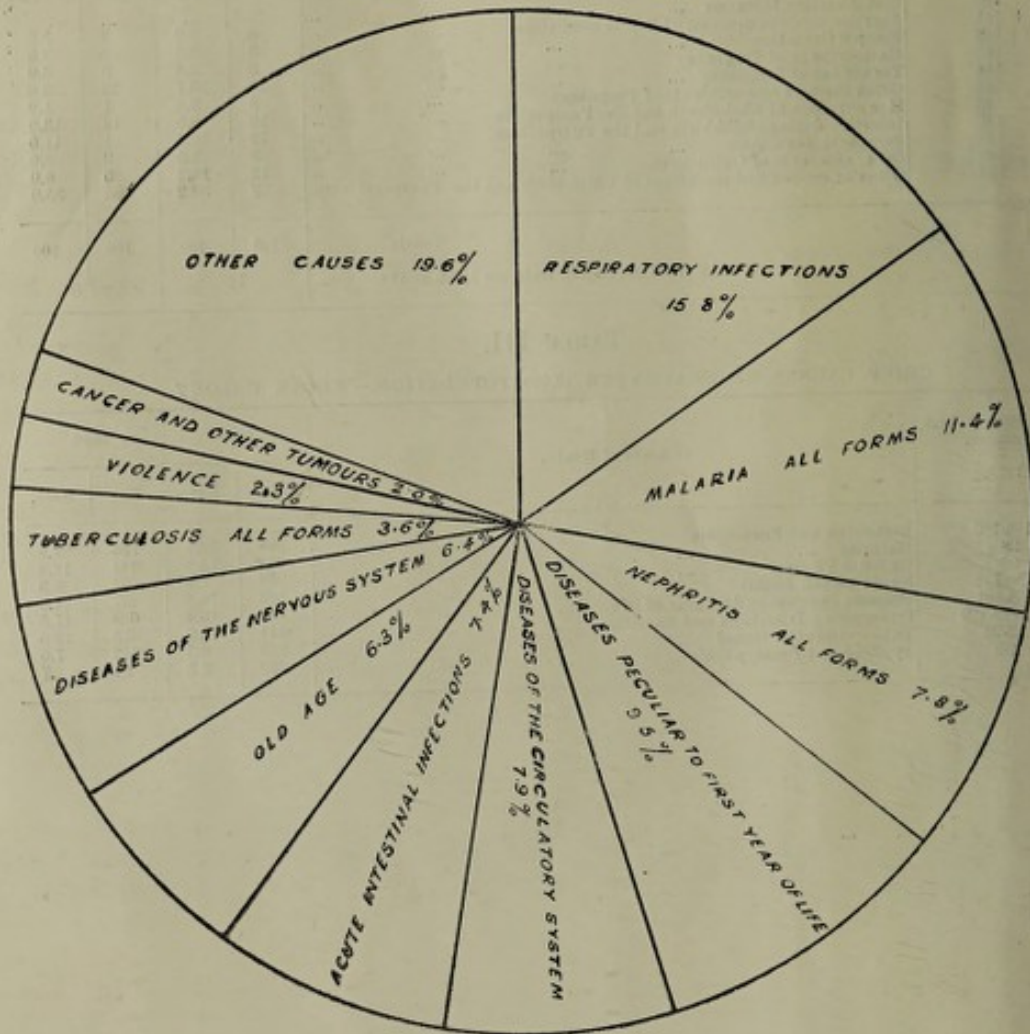
International List Number. 1938.	Causes of Death.	1939.		1940.	
		No.	%	No.	%
140	Post Abortive Infection ...	...	...	...	...
141	Abortion without mention of Septic conditions ...	6	5.2	3	3.0
142	Ectopic Gestation ...	3	2.5	2	2.0
143	Hæmorrhage of Pregnancy ...	3	2.5	5	5.0
144	Toxæmias of Pregnancy ...	28	23.7	22	22.0
145	Other diseases and accidents of Pregnancy ...	3	2.5	1	1.0
146	Hæmorrhage of Child-birth and the Puerperium ...	10	8.5	13	13.0
147	Infection during Child-birth and the Puerperium ...	12	10.2	11	11.0
148	Puerperal Toxæmias ...	3	2.5	2	2.0
149	Other accidents of Child-birth ...	12	10.2	6	6.0
150	Other or unspecified conditions of Child-birth and the Puerperal state ...	28	32.2	35	35.0
Totals ...		118	100	100	100
Maternal Mortality Rate per 1,000 births ...		12		8	

TABLE III.  
CHIEF CAUSES OF DEATHS PER 10,000 POPULATION.—WHOLE COLONY.

International List Number. 1938.	Causes of Death.	1939.		1940.	
		No.	Rate.	No.	Rate.
106-109	Bronchitis and Pneumonia ...	978	28.7	796	22.9
28 a	Malarias ...	642	18.8	444	12.8
28 b	Undefined Fevers ...	269	7.9	288	8.3
130-132	Nephritis (all forms) ...	562	16.5	497	14.3
158-161	Diseases peculiar to first year of life ...	529	15.4	608	17.5
27, 119-120	Dysenteries, Diarrhoea and Enteritis ...	444	13.0	473	13.6
13-22	Tuberculosis (all forms) ...	215	6.3	242	7.0
1-2	Typhoid and Paratyphoids ...	80	2.3	94	2.7



GRAPH I.  
CHIEF CAUSES OF DEATH.  
BRITISH GUIANA.  
1940



### III.—PUBLIC HEALTH.

#### A.—General Remarks.

13. Dr. Porter J. Crawford, Regional Director of the Caribbean area of the Rockefeller Foundation, visited the Colony during February, 1940, with Dr. George Bevier, in connection with further organization of the Yellow Fever Service, and the Malaria Research Unit, inaugurated on 1st September and 1st July, 1939, respectively, with the assistance of the Colonial Development Fund, the Rockefeller Foundation, and the Sugar Producers' Association.

14. Dr. A. W. Burke, Local Representative of the Rockefeller Foundation, who was appointed Chief Officer of the Yellow Fever Service from its inception, left the Colony on 16th January, 1940, and was succeeded on 29th March, 1940, by Dr. George Bevier.

15. Consequent on the unavoidable absence since 11th June, 1940, of Dr. G. Giglioli, Director of the Malaria Research Unit, its direction was kindly undertaken by Dr. G. Bevier, in addition to his duties as Chief Officer of the Yellow Fever Service. Both services widened considerably the scope of their activities during the year under review, and further expansion is contemplated shortly.

16. Dr. C. W. Wells, also of the Rockefeller Foundation, was in the Colony from 19th October to 10th November, 1940, investigating Tuberculosis. He submitted a report to Government, and his recommendations are being gradually put into effect.

17. Dr. P. A. T. Sneath, Deputy Director of Medical Services, was granted six months full pay vacation leave to be spent in Canada. He left the Colony on 7th May, 1940, arrived in Canada on 20th May, and was seconded for duty with the Royal Canadian Army Medical Corps as from 8th July, 1940. Dr. O. M. Francis, Health Officer, Demerara, acted as Deputy Director of Medical Services *vice* Dr. Sneath to the end of the year.

18. Mr. J. R. Farnum, I.S.O., Chief Clerk of the Medical Department, retired on 31st October, 1940, on the ground of superannuation, after long and meritorious service and was succeeded by Mr. J. B. Sharples, Senior Clerk, Deeds Registry.

19. The three voluntary health agencies, namely, the British Empire Leprosy Relief Association, the Infant Welfare and Maternity League, and the British Guiana Society for the Prevention and Treatment of Tuberculosis continued their valuable work normally during the year.

#### B.—General Diseases.

20. *Nephritis*.—The total number of deaths was 497 which gave a rate of 1.4 per 1,000 in 1940, compared with an average of 558 deaths and a mean rate of 1.7 during the years 1930—1939.

21. *Respiratory Diseases*.—Pneumonia (lobar and undefined pneumonia) was responsible for 267 deaths throughout the Colony with a rate of 0.77 per 1,000 compared with 363 deaths with a rate of 1.06 per 1,000 in 1939 and 455 and 1.3 in 1938.

22. *Bronchitis and Broncho-Pneumonia* caused 529 deaths which is equivalent to a rate of 1.5 per 1,000. During the previous ten years the number of deaths averaged 614 with a mean rate of 1.9 per 1,000.



23. *Diseases of the Heart.*—There were 449 deaths registered in the Colony from all forms of heart disease (excluding diseases of the arterial, venous and lymphatic systems) as compared with 457 in 1939. 362 cases were treated in public hospitals with 133 deaths, as against 434 cases and 124 deaths in 1939.

24. *Bowel Diseases (excluding the Enterics and Dysenteries).*—The number of deaths registered in 1940 was 387 as compared with 331 in 1939. The average number of deaths during the previous ten years was 402. The mean rate per 1,000 for 1939 was 1.2, which remained the same for 1940.

25. *Cancer and other malignant tumors.*—The total number of deaths from cancer in the Colony during 1940 is given by the Registrar-General as 127 as against 123 in 1939. The number of deaths and the death-rate per 1,000 were 127 and 0.37 respectively as compared with 123 and 0.36 respectively, in 1939.

26. The average annual number of deaths during this decade was 122 representing a mean annual rate of 0.37 per 1,000 of the population.

27. 169 cases (new and old) of malignant diseases with 34 deaths were treated in public hospitals.

28. The following table gives the different forms of malignant growths (new cases) recorded in public hospitals together with the racial incidence :—

TABLE IV.

	Carcinoma.		Sarcoma.		Epithelioma.		Rodent Ulcer.		Endothelioma.		Unclassified.		TOTAL.	
	1939	1940	1939	1940	1939	1940	1939	1940	1939	1940	1939	1940	1939	1940
European (other than Portuguese)	1	1	...	...	1	...	...	...	...	...	...	...	2	1
European (Portuguese)	8	3	...	2	...	...	...	...	...	...	...	1	8	6
East Indian	22	23	1	2	...	4	...	...	...	...	3	2	26	33
African	60	59	6	4	1	2	...	...	...	...	8	6	75	71
Mixed	10	7	...	2	...	1	...	...	...	...	...	1	12	11
Chinese	3	2	...	...	1	...	...	...	...	...	...	...	4	2
Aboriginal Indian	2	...	...	...	...	...	...	1	...	...	...	...	2	1
Total	106	97	7	10	3	7	2	1	...	...	11	10	129	125

29. The following table furnishes a comparative statement of diseases treated, with deaths, in Government hospitals during the years 1939 and 1940 :—

TABLE V.

	Hospital Returns.				Deaths Registered.	
	1939.		1940.		1939.	1940.
	Cases.	Deaths.	Cases.	Deaths.		
Malaria	1,749	101	1,598	91	911*	732*
Blackwater Fever	7	3	2	...	7	3
Dysentery	168	13	115	6	113	86
Enteric Fever (including Typhoid and Paratyphoid Fevers)	262	50	241	60	80	94
Diarrhoea and Enteritis and Colitis	301	59	269	49	331	387
Filaria (and Filarial Bubo)	315	19	320	19	43	44
Heart Diseases (all forms)	434	124	362	133	457	449
Nephritis (including Uraemia)	446	124	438	114	562	497
Pneumonia	239	72	305	60	363	267
Broncho-pneumonia	108	51	69	38	214	179
Bronchitis	709	63	549	43	401	350
Tuberculosis (including Phthisis)	437	128	428	134	215	242

\*Malaria and Undefined Fevers.



30. The diseases responsible for the highest number of deaths for the whole Colony during the years 1939 and 1940, arranged in quarterly periods, are shown in the following table :—

TABLE VI.

	March Quarter.		June Quarter.		September Quarter.		December Quarter.		Total.	
	1939.	1940.	1939.	1940.	1939.	1940.	1939.	1940.	1939.	1940.
Malaria ...	178	145	134	110	162	103	168	86	642	444
Undefined Fevers ...	88	71	55	58	48	72	78	87	269	288
Pneumonia and Bronchitis ...	202	274	220	172	198	172	253	178	978	796
Kidney Diseases ...	164	151	125	127	134	107	139	112	562	497
Diseases of Early Infancy (including Premature Birth, Infantile Debility, etc.) ...	153	160	108	131	131	162	187	155	559	608
Bowel Complaints (including Dysentery, Diarrhoea, Enteritis, &c.) ...	135	...	94	...	94	...	121	...	444	...
Dysentery, Diarrhoea, Enteritis ...	...	132	...	124	...	158	...	67	...	473
Phthisis & other forms of Tuberculosis ...	51	81	61	57	50	55	53	49	215	242
Diseases of the Circulatory System ...	144	133	157	154	118	120	133	117	532	504
Diseases of the Nervous and Sense Organs ...	98	106	76	96	91	104	86	104	356	410
Rainfall in Inches ...	21.20	5.89	23.58	22.37	15.69	20.63	5.24	20.40	64.71	69.29

#### C.—Communicable Diseases.

31. *Malaria*.—Epidemics of malaria broke out in the hinterland and forested areas of the Colony; whilst on the coastlands there was some increase in prevalence. The disease was widespread in the upper reaches of the Barima and Waini Rivers of the North West District where the epidemic occurred in July. An additional dispenser was despatched to assist the Government Medical Officer and medical staff of the district. He was equipped with medicines and visited the principal mining stations on the upper reaches of the Barima where he remained for about one month treating cases. Free supplies of quinine were distributed to the Missions operating in the Waini and Moruca Rivers. In October, the epidemic broke out in the Berbice River district. The Health Officer investigated, and as a result a temporary hospital which continued in operation for about one month was set up at Ituni under the charge of a special dispenser, who treated in and out-patients. Of the 161 patients treated, 154 suffered from malaria. Examination of blood films from both areas showed a preponderance of *Plasmodium Vivax* with a fair number of *Plasmodium Falciparum*. There was only one finding of *Plasmodium Malariae*.

32. The importance of this disease as a cause of death is borne out by the section on Vital Statistics. The number of admissions to the combined public hospitals indicates that malaria is the cause for which 7.6 per cent. of all in-patients are admitted. Of the 1,600 cases diagnosed in hospital, 2 cases of blackwater fever were included. 511 cases (31.9 per cent.) were classified as to parasite species; of these, 306 (59.8 per cent.) were benign tertian 196 (38.4 per cent.) subtertian, 9 (1.8 per cent.) quartan.

33. The Registrar-General reports 444 deaths from malaria throughout the Colony together with 288 deaths from undefined fevers. Prior to 1935 no differentiation was recorded. Taking these figures together, *i.e.*, 732, for the purposes of comparison with previous years, the average annual number of deaths from malaria for the past quinquennium (1936–1940) was 1,018 – 45 less than the figure for the previous five years (1931–1935) and the average annual population of the Colony for the two quinquennia was 335,383 and 339,135, respectively.

34. As a result of co-operation with Government on the part of the International Health Board of the Rockefeller Foundation and the British Guiana Sugar Producers' Association the Malaria Research Unit which was established on 1st July, 1939, continued its activities during the year under Dr. G. Giglioli to 10th June, 1940, and Dr. G. Bevier, local Representative of the Rockefeller Foundation, to 31st December, 1940.



35. As in previous years, large quantities of quinine products were issued to Government hospitals, dispensaries, departments, schools, and mission stations. In addition, large quantities of synthetic anti-malarial specifics were used in the public hospitals.

36. *Influenza*.—28 cases were treated in public hospitals with no deaths. The deaths registered as due to the same disease throughout the Colony was 26. There was no epidemic prevalence during the year.

37. *Tuberculosis (all forms)*.—Below is a table showing the cases notified and deaths registered in the City of Georgetown and the Colony as a whole for the years 1939 and 1940. The disease was made notifiable in 1912.

TABLE VII.

Year.	City of Georgetown.			Whole Colony.		
	Cases.	Deaths.	Death rate per 1000.	Cases.	Deaths.	Death rate per 1000.
1939 ...	92	54	0.83	296	242	0.63
1940 ...	117	75	1.14	293	242	0.70

38. The British Guiana Society for the Prevention and Treatment of Tuberculosis continued its activities as in previous years.

39. *Enteric Fever (including Typhoid and Paratyphoids)*.—There were 464 cases with 94 deaths as compared with 344 cases with 80 deaths in 1939.

40. *Chicken Pox*.—There were 221 cases as compared with 124 cases in 1939.

41. *Diphtheria*.—There were 35 cases with 5 deaths as compared with 40 cases and 7 deaths in 1939.

42. *Anthrax*.—No cases or deaths from anthrax were reported during the year.

43. *Anterior Poliomyelitis*.—There were 7 cases as compared with 12 cases in 1939.

44. *Puerperal Fever*.—There were 15 cases notified during the year with 11 deaths.

45. *Small pox*.—No cases of small pox or alastrim occurred in the Colony during the year. No increased prevalence was reported in the neighbouring countries. The usual quarantine restrictions were maintained against non-convention countries.

46. The following table shows the number of vaccinations performed:—

TABLE VIII.

	1939.	1940.
Total Vaccinations ...	8,532	7,884
Total verified successful ...	7,203	6,838
Per cent. verified successful ...	84.4	86.7

47. *Trachoma*.—There were 14 cases as compared with 8 cases in 1939.

48. *Tetanus*.—41 cases were treated in public hospitals with 22 deaths, compared with 34 cases and 23 deaths in 1939.

49. *Yaws*.—14 cases were treated in public hospitals compared with 16 cases in 1939. There were no deaths. 22 cases were treated in the out-patient departments as against 33 in 1939.



50. *Ankylostomiasis*.—276 cases were treated in public hospitals with 8 deaths compared with 169 cases and 6 deaths in 1939. 223 cases were treated in out-patient departments as against 146 in 1939. The deaths registered as due to the same disease throughout the Colony were 11 as compared with 7 in 1939.

51. *Venereal Diseases*.—The following table gives the number of venereal diseases treated as in-patients in public hospitals for the last two years:—

TABLE IX.

Year.	SYPHILIS.					Soft Chancre.	Gonorrhoea and its Complications.	Granuloma Venereum.
	Primary.	Secondary.	Tertiary.	Hereditary.	Stage not Indicated.			
1939	119	22	579	38	15	41	568	104
1940	99	17	548	43	4	42	501	90

52. The number of Novarsenobillon and other injections given for syphilis at the public hospitals was 32,203 compared with 29,252 in 1939.

53. The table below furnishes a statement, classified in age-incidence periods, of in-patients treated for venereal diseases in public hospitals during 1940:—

TABLE X.\*

	SYPHILIS.												Acute Gonorrhoea.			Chronic Gonorrhoea.			Chancroid.			Granuloma Pudendi.			Lympho-Granuloma Inguinale.		
	Primary.			Secondary.			Tertiary.			Hereditary.																	
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Under 1 year	...	...	...	...	...	...	...	...	...	3	3	6	5	6	11	...	...	...	...	...	...	...	...	...	...	...	...
1—under 5 yrs.	...	...	...	...	...	...	...	...	...	3	2	5	2	5	7	...	...	...	...	...	...	...	...	...	...	...	...
5 " 10 "	1	...	1	...	...	...	...	...	...	3	2	5	4	9	13	...	...	...	...	...	...	...	...	...	...	...	...
10 " 20 "	10	9	19	2	2	4	15	27	42	8	16	24	25	39	64	5	8	13	10	5	15	5	4	9	1	1	1
20 " 30 "	36	12	48	6	2	8	81	58	139	3	2	5	123	47	170	51	35	86	22	6	28	20	12	32	8	11	19
30 " 40 "	13	3	16	2	1	3	97	57	154	...	...	...	76	23	99	44	12	56	6	1	7	7	8	15	7	7	14
40 " 60 "	14	...	14	2	...	...	2	166	52	218	...	...	41	6	47	61	6	67	5	1	6	11	1	12	4	2	6
60 years and over.	3	...	3	...	...	...	44	19	63	...	...	...	10	1	11	15	...	15	1	1	2	...	...	...	1	1	1
Total	77	24	101	12	5	17	403	213	616	20	26	46	286	136	422	176	61	237	44	14	58	43	25	68	19	22	41

\* NOTE.—The totals in this table differ from those in Table IX. in that cases of double infection are here included.

54. The table below furnishes a statement classified in age-incidence periods of out-patients treated for venereal diseases at public hospitals, Government dispensaries, and prisons during the year 1940:—

TABLE XI.

	SYPHILIS.												Acute Gonorrhoea.			Chronic Gonorrhoea.			Chancreoid.			Granuloma Pudendi.			Lympho- Granuloma. Inguinale.		
	Primary.			Secondary.			Tertiary.			Hereditary.																	
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Under 1 year	...	...	...	...	...	...	...	...	...	3	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1—under 5 yrs.	...	...	...	...	...	...	...	...	...	4	8	12	1	8	9	...	...	...	...	...	...	...	...	...	...	...	...
5 " 10 "	...	...	...	...	1	1	...	...	...	9	16	25	3	6	9	...	...	2	...	2	...	...	...	...	...	...	...
10 " 20 "	31	18	49	2	8	10	15	36	51	26	25	51	140	54	194	17	17	34	12	4	16	1	1	2	...	...	...
20 " 30 "	135	18	153	23	18	41	134	160	299	15	2	17	422	75	47	142	60	292	53	7	69	36	5	41	2	...	...
30 " 40 "	51	7	58	11	12	23	172	139	311	5	...	5	218	37	253	132	27	159	8	7	15	12	4	16	5	...	...
40 " 60 "	17	3	20	7	1	8	210	126	336	1	...	1	87	5	92	75	29	104	5	2	7	4	...	4	...	...	...
60 years and over.	...	1	...	...	...	...	39	28	67	...	...	...	8	...	8	26	12	38	2	...	2	...	...	...	...	...	...
Total	234	47	281	43	40	83	575	482	1064	69	54	114	879	183	1062	394	145	532	89	29	169	53	10	63	7	...	7



55. The following shows the number of cases of venereal diseases treated on sugar estates for the past two years :—

		1939.	1940.
Gonorrhœa	...	275	259
Chancroid	...	46	18
Syphilis (including tertiary)	...	201	201
Granuloma Venereum and Pudendi	...	1	5

*Venereal Diseases Clinic, Public Hospital, Georgetown.*

56. *Syphilis*.—851 new cases were admitted for treatment as compared with 1,241 in 1939.

57. *Gonorrhœa*.—There were 715 new admissions for gonorrhœa. The ratio of acute or recent syphilis to acute gonorrhœa was 1:3.

58. *Defaulting*.—There was a defaulting incidence of 27.1 per cent.

59. *Attendance*.—4,189 patients (males 2,175, females 2,014) attended the Clinic during the year. The total attendances were 33,238 (19,874 by males and 13,364 by females).

60. *Dismissals*.—330 patients were discharged, of whom 128 were cured, and 202 were diagnosed as non-venereal.

61. *Propaganda*.—Leaflets were distributed at the clinics and talks were given to individual new cases.

TABLE XII.

NEW CASES ADMITTED DURING 1940 COMPARED WITH 1939.

	Sy. (1.)	Sy. (2)	Sy. (3.)	Sy. (H.)	Acute Gonorrhœa.	Chronic Gonorrhœa.	Chancroid.	Granuloma P.	Un- diagnosed.	N.V.D.	
1940	...	123	34	622	72	530	185	41	13	639	264
1939	...	254	36	837	91	782	241	54	39	668	212

TABLE XIII.

CASES (NEW AND OLD)—MALE AND FEMALE—TOTAL 4,577.

	New Cases.			Old Cases.		
	M.	F.	Total.	M.	F.	Total.
Syphilis 1	100	23	123	152	38	190
Syphilis 2	27	7	34	27	17	44
Syphilis 3	289	342	622	371	440	811
Syphilis H.	30	42	72	27	39	66
Acute Gonorrhœa	418	112	530	321	109	430
Chronic Gonorrhœa	113	72	185	129	83	212
Chancroid	28	13	41	42	18	60
Granuloma Pudendi	12	1	13	29	18	47
Lympho Granuloma	8	1	9	5	7	12
Non V.D.	119	145	264	20	31	51
Undiagnosed	155	484	639	10	112	122
Total	1,290	1,242	2,532	1,133	912	2,045

TABLE XIV.

TOTAL NUMBER OF CASES: 4,577.

	New.		Old.		Total.
	M.	F.	M.	F.	
No. of cases with V.D.	1,016	613	1,103	769	3,501
Do. Non V.D.	119	145	20	31	315
Do. undiagnosed	115	484	10	112	761
Total Male Cases	1,290	...	1,133	...	2,423
Total Female Cases	...	1,242	...	912	2,154
Total Cases	2,532		2,045		4,577

TABLE XV.

DISMISSALS FROM CLINIC: 330.

## A. CURED.

Diseases.	Male.	Female.	Total.
Syphilis ...	14	3	17
Chaneroid ...	15	7	22
Gonorrhoea ...	81	5	86
Granuloma Pedes di	1	1	2
Lympho-Granuloma	1	...	1
Total ...	112	16	128

## B. NON-VENEREAL DISEASE.

Males ...	129
Females ...	73
Total ...	202

62. *Leprosy*.—The number of new admissions to the Leprosy Hospital was 23 (16 males and 7 females). There were 23 deaths (17 males and 6 females) a death rate of 4.3 per cent. of the total number of inmates.

63. At the end of 1940 there were 24 boys and 9 girls in the Bishop Galton Home and 12 boys and 14 girls in the Lady Denham Home making a total of 59 children in both homes.

64. Treatment consists mainly of the intradermal and subcutaneous injection of the esters of hydnocarpus oil, pure and iodized. In addition use is made of external applications, *e.g.*, trichloroacetic acid and solid carbon dioxide in selected cases.

65. 49 operations were performed.

66. 304 sessions were held in the electro-therapeutic department and 3,306 treatments were administered to 22 male and 42 female patients.

67. The following laboratory investigations were made:—

Examination of smears from nasal mucosa for M.L.	...	271
" " from skin	...	110
" of urine	...	95
" of faeces for ankylostoma ova	...	15
" of sputum for tuberculosis	...	27
" of blood for malaria parasites	...	113
Blood Counts	...	145
Examination of smears for K.L.B.	...	6
Red and White Cell Counts	...	2

68. 230 clinics were held in the three counties at which 894 patients were treated.

TABLE XVI.

SHOWING NUMBER OF PATIENTS TREATED AND PERCENTAGE MORTALITY, 1940.

	M.	F.	T.
Number of patients on 31st December, 1939	268	154	422
* New admissions during 1940	20	10	30
Re-admitted once in 1940	33	30	63
Re-admitted twice in 1940	2	4	6
Re-admitted thrice in 1940	1	...	1
Births	2	5	7
Total number treated during 1940	326	203	529
Died in Leprosy Hospital during 1940	17	6	23
Daily average number treated	269.0	159.7	428.7
Death rate	5.2	2.9	4.3
Highest number of patients, 1940	275	168	443
Lowest number of patients, 1940	261	152	413

\* Of these 30 cases, 7 were previously treated as out-patients, but were re-admitted owing to lack of progress.



TABLE XVII.

SHOWING CLASSIFICATION OF PATIENTS ACCORDING TO DISTRICT, FORM OF LEPROSY, AND OCCUPATION.

County of Demerara.	M.	F.	T.	County of Berbice.	M.	F.	T.	County of Essequibo.	M.	F.	T.	Form of Leprosy.	M.	F.	T.
Georgetown ...	90	42	132	New Amsterdam ...	6	4	10	North Essequibo ...	8	5	13	Cutaneous ...	114	78	192
East Coast, Demerara ...	42	36	78	Corentyne, Berbice ...	26	10	36	South Essequibo ...	5	3	8	Neural ...	132	67	199
West Coast, Demerara ...	17	10	27	East Bank, Berbice ...	9	4	13	Pomeroon ...	12	1	13	Mixed ...	21	10	31
East Bank, Demerara ...	15	18	33	West Bank, Berbice ...	2	...	2	Sartica ...	4	1	5	Minor Tuberculoïd ...	1	3	4
West Bank Demerara ...	7	5	12	West Coast, Berbice ...	5	3	8	North-West District ...	1	1	2	Major Tuberculoïd ...	2	1	3
Demerara River ...	9	6	15	Canje Berbice River ...	4	3	7	Nickerie, D. Guiana ...	1	...	1				
Total ...	180	117	297	Total ...	59	31	90	Total ...	31	11	42	Total ...	270	159	429

Occupation.	M.	F.	Total.
Labourers ...	126	40	166
School children ...	66	39	105
Domestic servants ...	...	33	33
Seamstresses ...	...	9	9
Unemployed ...	31	9	40
Teachers ...	4	1	5
Housewives ...	...	17	17
Hucksters ...	...	1	1
Farmers ...	7	5	12
Shop-assistants ...	4	1	5
Washers ...	...	2	2
Basket Maker ...	...	1	1
Estate Hospital Nurse ...	...	1	1
Shoemakers ...	3	...	3
Cartman ...	1	...	1
Chauffeurs ...	3	...	3
Cook ...	1	...	1
Printer ...	1	...	1
Electrician ...	2	...	2
Tailors ...	3	...	3
Woodcutter ...	1	...	1
Baker ...	1	...	1
Porters ...	3	...	3
Carpenters ...	4	...	4
Mechanic ...	1	...	1
Clerk ...	1	...	1
Milk-vendors ...	2	...	2
Fisherman ...	1	...	1
Messenger ...	1	...	1
Sailor ...	1	...	1
Bookbinders ...	2	...	2
Total ...	270	159	429

TABLE XVIII.

SHOWING CLASSIFICATION OF PATIENTS ACCORDING TO AGE, RACE, AND SEX.

	EUROPEANS.				EAST INDIANS.				Chinese.		Aboriginal Indians.		Mixed.		Blacks.		Total.		Grand Total.
	Other than Portuguese.		Portuguese.		Immigrants.		B.G. East Indians.												
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.			
1 to 5 years	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6 to 10	...	...	1	...	...	...	...	...	...	...	...	...	...	...	3	5	4	5	9
11 to 20	...	...	1	1	...	...	14	5	2	1	1	...	6	9	26	13	50	29	79
21 to 30	...	1	...	5	1	...	16	3	...	...	...	...	10	8	35	16	67	28	95
31 to 40	...	...	1	4	1	...	10	4	1	...	...	...	...	8	34	15	57	29	86
41 to 50	...	...	...	3	...	...	7	7	2	1	...	...	...	4	3	13	14	35	59
51 to 60	...	...	...	...	1	14	7	5	2	...	1	...	...	2	2	10	10	31	54
61 to 70	...	1	...	...	1	7	8	...	...	1	...	...	...	1	...	11	5	20	35
71 to 80	...	...	...	...	4	1	...	...	...	...	...	...	...	1	1	3	5	5	10
81 to 90	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	1	2
Total	2	1	14	5	32	21	82	16	4	3	1	...	31	31	134	82	270	159	429

69. *Filariasis*.—44 deaths (19 males and 25 females) were registered from this disease. 652 cases were treated in the out-patient departments of the public hospitals.



70. *Erysipelas*.—1 case was notified as compared with 5 in 1939.
71. *Ophthalmia neonatorum*.—54 cases were reported as compared with 52 in the previous year.
72. *Quarantinable Diseases*.—No cases of the quarantinable diseases occurred during the year.
73. *Measles*.—This disease which had been made notifiable during 1939 on account of its occurrence in epidemic proportions was removed from the list of notifiable infectious diseases within the meaning of Part III of the Public Health Ordinance, 1934, by Resolution of the Central Board of Health on 24th July, 1940, the epidemic having subsided. There were 102 cases with 2 deaths during the year.

#### IV.—HYGIENE AND SANITATION.

74. The Central Board of Health held eleven meetings during the year. The Board dealt with 693 building applications, approved of 101 plans for the lay-out of land for building purposes under Section 135 (1), Public Health Ordinance, 1934, and issued 121 certificates under Section 135 (4).

75. The plans mentioned above included twelve new schemes for building developments on sugar estates. The type of building to be erected on the estates was, in the majority of instances, the new four-family dwelling in replacement of the old ten-roomed range. A proportion of two-family and single-family houses was also provided for. A number of these dwellings was completed during the year.

76. A survey and re-partition of the frontlands of Lot No. 65 and Lot No. 70, Corentyne, Berbice, was carried out by the Government Land Surveyor seconded to the Health Section of the Medical Department.

77. Under section 95 of the Ordinance, 28 coconut-oil factories, 1 tannery, and 1 soap-making establishment were approved; 10 coconut-oil factories and 1 soap-making establishment were not approved. The Board also issued certificates of approval to 193 rice factories (under the Rice Factories Ordinance No. 26 of 1933), and granted permission for the establishment of three burial grounds (Section 64 (1), Public Health Ordinance, 1934), and one school (Section 60 (1), Public Health Ordinance, 1934). Extensions to or rebuilding of 7 other schools were also approved. In addition, a number of miscellaneous matters was dealt with.

78. In pursuance of Section 19 of the Public Health Ordinance, the Board on 24th July, by resolution, removed Measles from the list of notifiable infectious diseases within the meaning of Part III. of the Ordinance, the epidemic wave of this disease having subsided.

79. The Health (Yellow Fever Control) Regulations made by the Board in December of the previous year were approved by the Governor in Council on 29th March. These regulations were made applicable, by Order in Council published in the *Official Gazette* of 27th July, to all parts of the Colony with the exception of:—

- (i) The Mineral and Forest Licensing Area established by Order in Council dated 11th January, 1933.
- (ii) The Upper Mazuruni Mining District as re-defined by Order in Council dated 5th August, 1931.

80. Draft Spirit Shops (Sanitation) Regulations and Draft Rice Factories (Sanitation) Regulations were considered by the Board on 17th April, and on 17th July and 18th September, respectively, and were forwarded to Government for revision by the Honourable Attorney-General before being finally made under the authority of Section 145 of the Public Health Ordinance, 1934.



81. The Board in exercise of its statutory power, undertook 13 prosecutions for violation of the Public Health Ordinance, 1934, in default of action by the Local Sanitary Authorities who either delayed in taking the requisite action or definitely expressed unwillingness to do so.

82. The Sub-Committee of the Board which was appointed in August, 1939, to consider and report on the working of Part XII, of the Public Health Ordinance, 1934—Housing and District Planning—continued its deliberations during the year and reported on the 7th October. The Committee in its report which was adopted by the Board and forwarded to Government, recommended certain amendments to this Part of the Ordinance, and the immediate framing of building regulations on modern lines. It is anticipated that new legislation on the lines recommended will maintain a standard of sanitary progress and at the same time reduce the hardships formerly complained of. Opportunity will be taken to include in the amending Bill amendments to such other parts of the Ordinance as have been found by experience to be necessary.

#### *Special Preventive Measures.*

83. During the year the Department continued the bonification of Thomas Lands in Georgetown and assisted in similar work at the compound of the Best Tuberculosis Hospital on the west coast of the Demerara River.

84. Continued assistance was given in the erection of new latrines for schools, and various small bonification works were undertaken in connection with Government compounds in rural areas.

85. An anopheline survey of the town of New Amsterdam, and its environs was made by the Malaria Research Unit, and as a result the Department gave financial assistance to the Municipality of New Amsterdam for cleaning the savannah road trench and the bonification of the lands north of the Lochaber Road. The Malaria Research Unit, apart from the routine survey (see Appendix II) carried out special investigations in the Potaro District, and at Wismar and Mackenzie.

86. The Yellow Fever Service extended its activities rapidly during the year. In January anti-aedes aegypti work was confined to only one district (Kitty Village) and by the end of the year six more districts covering Newtown, Campbellville, Lodge, the City of Georgetown, La Penitence and Plantation Ruimveldt were under control.

87. *Precautions against Jungle Fever.*—659 persons were immunized against Yellow Fever as compared with 371 in 1939. Travellers were advised to be immunized before proceeding to the interior in view of the Jungle Fever hazard, and arrivals from the interior were requested to report to headquarters for medical inspection.

#### V.—PORT HEALTH WORK AND ADMINISTRATION.

88. During the year the visiting of vessels and seaplanes and granting of pratique were carried out by the Deputy Port Health and Assistant Port Health Officers.

89. Quarantine was permanently maintained during the year against all South American, Central American and West Indian ports (except British, French, and Dutch) for yellow fever, plague, small pox, cholera, and typhus fever, and the ports of New Orleans, Mobile, and Tampa (U.S.A.) for typhus fever. Ships coming from St. Thomas, St. Croix, Puerto Rico, and Santo Domingo were exempted, arrangements having been made to ensure the notification of any quarantinable diseases in those ports.



90. 107 vessels and 74 seaplanes tabulated as under with fees chargeable in each case were visited by the Port Health Officers under the Quarantine Ordinance :—

Month.	Gratis.	\$4.00	\$6.50	\$9.00	\$5.00 Fumigation.	\$2.00 Revisit.
January	...	17	...	...	...	...
February	...	14	3	...	...	...
March	...	13	1	1	...	...
April	...	11	1	...	...	...
May	...	13	...	...	...	...
June	...	14	...	2	...	...
July	...	12	...	...	...	...
August	...	23	1	...	...	...
September	...	9	...	...	...	...
October	1	16	1	...	...	...
November	...	12	...	1	...	...
December	...	13	1	1	...	...
Total	...	\$ 668 00	\$ 52 00	\$ 45 00	...	...

91. 24 passengers from ships, mainly from Venezuela, and 10 seaplane passengers—all from Para—were placed under surveillance for smallpox.

92. Vessels with crews consigned to the Demerara Bauxite Company, Mackenzie, Demerara River, were placed under surveillance by the Port Health Officer, and were allowed to proceed to their destination. In each case the Medical Officer of the Bauxite Company was entrusted to keep all members of the crew of each vessel under surveillance until the quarantine period had expired, and to report at the expiration of the period.

93. 1,189 vessels were visited by the Port Sanitary Inspector as under :—

Steamers.		Sailing Vessels.	
Ocean Steamers	... 253	Schooners	... 217
Coasting Steamers	... 42	Other Craft	... 677
Total	... 295	Total	... 894

94. 1,873 visits which included routine inspection of Government steamers were paid to vessels as follows :—

Steamers.		Sailing Vessels.	
Ocean Steamers	... 365	Schooners	... 359
Coasting Steamers	... 313	Other Craft	... 836
Total	... 678	Total	... 1,195

95. No notices were served by the Port Sanitary Inspector on Masters of vessels lying in port. Nuisances occurring on board vessels were abated on issue of verbal instructions.

96. 139 sick merchant seamen from ocean-going vessels were sent to the Public Hospital, Georgetown, for treatment.

97. One vessel was fumigated for cockroaches. The cabins, sanitary conveniences and articles used by sick seamen on two ships were disinfected with formalin—one for a case of diphtheria and the other for a case of bacillary dysentery.

98. The Clayton Fumigator, kept at the Public Hospital, Georgetown, the Washington Lyons Steam disinfecter, and the Clayton Rat-gassing machine, kept at the Quarantine Station, Best, West Coast, Demerara, were subjected to quarterly tests and gave satisfaction on each occasion.



99. The rat-catcher employed by the Department trapped on wharves 2,962 rats—1,439 *R. norvegicus*, 721 *R. rattus*, and 802 *Mus musculus*—2,491 of which were examined for plague infection and found to be negative.

100. Regular attention was directed to the keeping of the Quarantine Station Compound at Best, West Coast, Demerara in a satisfactory condition including the weeding of grass, bushing, and maintenance of proper drainage.

101. Cablegrams giving notice of passengers under surveillance on board vessels about to sail were interchanged as heretofore between the Health Officers of this port and other Convention ports.

102. The total amount of revenue accrued to Government from sanitary measures in the port of Georgetown was \$765 (see paragraph 90).

103. No shrimping was carried out in the prohibited area of the Port of Georgetown.

#### VI.—RURAL HEALTH CENTRES

104. During the year Government erected four buildings at Buxton and Den Amstel in Demerara, at Rose Hall Village in Berbice, and at Anna Regina in Essequibo to be used as Health Centres. These are two-storey buildings, and are designed for the holding of Infant Welfare Clinics on the upper floors whilst the lower ones are to be used as offices by the district sanitary inspectors.

105. They supply a long-felt want as the places now used for Infant Welfare Clinics, for example, village offices, schools, etc., are in most cases unsuitable for the purpose, and district sanitary inspectors have no offices of their own; in some districts, they are accommodated in the offices of the Local Sanitary Authorities which they serve.

106. Provision is made for the appointment by Government of full time health visitors for these centres, who will collaborate with the staff of the Infant Welfare and Maternity League. Government propose to add to the number of these centres gradually.

#### VII.—INFANT WELFARE AND MATERNITY WORK.

107. Infant Welfare and Maternity work operated under the control of the Infant Welfare and Maternity League, and during the year, the twenty-seventh anniversary of the League in the Colony, marked progress was made. The field staff consisted of two Inspectors of Midwives who were responsible for the work in the three counties, 8 health visitors—4 in Demerara, 3 in Berbice, and 1 in Essequibo—and 39 subsidized midwives distributed as follows:—12 in Demerara, 16 in Berbice, 10 in Essequibo, and 1 in the North West District.

108. Except in the case of necessitous persons, attendants at the clinics are expected to become members of the League upon payment of one shilling. Membership consists of expectant mothers and infants born to them as well as other infants whose mothers have failed to take advantage of the available pre-natal facilities. The League is financed from an annual subvention by Government, and in addition, membership fees, of which one-half is paid into general funds and the remainder is utilised to assist in the provision of milk and other necessary relief for needy mothers and infants. The amount contributed by Government for 1940 was \$14,808.84, as compared with \$13,324 in 1939. The increase provided (i) \$500 to permit of the grant of two weeks full pay leave each year to employees, who hitherto were required to pay their own substitutes, and (ii) \$984.84 for the payment of a 10% war bonus to employees in receipt of salaries of \$40 and under.

109. *King George V. Silver Jubilee Fund.*—There was no further expenditure from this fund. The balance was \$1,315 at the end of the year.



110. *King George V. Silver Jubilee Maternity Home, Ida Sabina.*—The work on the Upper Berbice River District through this Home continued to serve as a very useful centre of the League's activities amongst the Aboriginal Indians and settlers there. The League midwife who is provided with residential accommodation in the Home conducted 27 deliveries, and with the co-operation of the Government dispenser conducted pre-natal and infant clinics at the various points which are regularly served up and down the river. The Inspector of Midwives visited the District twice, and one visit of inspection was made by a Government Medical Officer from New Amsterdam.

111. Clinics were conducted by Government Medical Officers within their districts and in the more remote areas by Government Dispensers. Supervision and advice were given to expectant mothers and in the case of infants, regular examinations with medical treatment when necessary were made available. 60 clinics were so conducted, exclusive of those on sugar estates.

112. Although it has not yet been possible to finance the appointment of a League midwife for Crabwood Creek, Corentyne, the Government Medical Officer, Springlands, has continued to conduct regular clinics with the assistance of a private midwife resident in the area. A Clinic was also started at No. 19 Village, Corentyne, and was similarly conducted by the Government Medical Officer of the Port Mourant District.

113. Clinics at Bartica continued to be operated at the public hospital, with the voluntary assistance of the members of the branch committee. It has not yet been found possible to provide a health visitor for this district through lack of funds, though the need for such an appointment has the full appreciation of the Central Committee.

114. Infant and ante-natal clinics were held on sugar estates, many of the estate hospitals being now provided with maternity wards where confinements are conducted by midwives employed by the estate authorities under the supervision of the Government Medical Officers.

115. The Inspectors of Midwives supervised the work of the health visitors and midwives stationed in their various districts. Visits of inspection were regularly paid by these officers to the districts under their charge and opportunity was taken to give health instructions to the mothers meeting at the various centres. Mothercraft classes were started by the Inspector of Midwives in the Demerara Districts. Lectures and instructions were given on this subject at schools in Kitty and Lodge Villages to girls who were about to leave school. The classes would be extended to other districts. Inspection of bags and registers of League and other midwives was also carried out by the Inspectors.

116. *Statistical Analysis.*—The infant mortality rate for the whole Colony was 104 per 1,000 births. The League midwives delivered 2,444 living infants, approximately 20.3 per cent. of all infants born in 1940. Of these, 64 died, an infant mortality rate of 26.2 per 1,000 births, in contrast with the Colony's experience of 104 per 1,000. There were 79 stillbirths. Amongst this group 10 mothers died, a maternal mortality rate of 4.1 per 1,000 compared with the Colony's rate of 8 per 1,000. Both these rates are lower than those of the League's experience in 1939 when the infant and maternal mortality rates were respectively 19.1 and 6.6 per 1,000 births.

117. There are maternity wards in each of the five principal hospitals at Georgetown, New Amsterdam, Suddie, Mabaruma, and Bartica.

118. The accommodation in the public hospitals and maternity returns for 1940 are shown in the following table.



TABLE XIX.

	Number of Beds.	Deliveries.	Deaths (Maternal).	No. of Births.	No. of Still-births.
Public Hospital, Georgetown	62	1,227	29	1,084	107
do. Berbice	9	231	7	196	35
do. Suddie	14	125	1	120	5
do. Mabaruma	2	62	...	60	2
do. Bartica	*	26	...	26	...

\* There are 19 beds in the female ward which are available for maternity cases.

#### VIII.—SCHOOL MEDICAL AND DENTAL SERVICES.

119. No regular school medical inspection is undertaken. Occasional inspection is made of Queen's College pupils at the request of the Principal.

120. Dental treatment of children attending primary schools is undertaken. Two-part time school dental officers serve in Georgetown, one in New Amsterdam, and one of the Georgetown officers also serves at Kitty, East Coast, Demerara. A sum of \$1,680 was voted on the 1940 Estimates for this purpose, \$960 of which was allocated to Georgetown, \$480 to New Amsterdam, and \$240 to Kitty.

121. In Georgetown 922 children (313 boys and 265 girls) attending 11 schools received treatment. Of these 344 children (181 boys and 163 girls) received complete treatments. Emergency treatment consisted mainly of extractions, which 578 children (313 boys and 265 girls) from 11 schools received.

122. In New Amsterdam 372 children (159 boys and 213 girls) of 5 schools received treatment. Of these 142 received complete treatment, 91 partial treatment, and 139 emergency treatment.

123. In Kitty 219 children (79 boys and 140 girls) from two schools received treatment. 159 emergency extractions were made from children of 3 schools.

124. The work done at the schools was as follows:—

Prophylactic treatment	...	...	402
Extractions	...	...	1,602
Amalgam fillings	...	...	469
Porcelain or cement fillings	...	...	109
Root Canal treatment	..	...	22

#### IX.—NUTRITION.

125. The Nutrition Committee continued their investigations during the year and submitted a full report on these investigations. A Legislative Council Sessional Paper, "Report on the Diets of Public Institutions," by the Committee was also issued by Government.

126. For reasons of economy, however, the Committee's activities were suspended on the 31st December, 1940. The Government Medical Officer who was seconded to the Committee resumed his substantive duties in the Department, and the Health Visitor was assigned other duties.

#### X.—HOSPITALS AND DISPENSARIES.

##### A.—The Public Hospitals.

127. 7 public hospitals in the Colony provided 954 beds. The nominal bed strength of estate hospitals was 1,495. "Colonna House" (a private nursing home in Georgetown) provides for about 50 cases and Mackenzie Hospital (Demerara Bauxite Company, Limited,) has accommodation for about 67 cases. "Colonna House" was closed temporarily on 30th June, 1940.



128. The daily average number of patients in the Government hospitals (excluding Potaro and Kamakusa) was:—

		1938.	1939.	1940.
Public Hospital, Georgetown	...	613	622	655
Do. New Amsterdam	...	137	140	144
Do. Suddie	...	74	70	65
Do. Bartica	...	35	41	34
Do. Mabaruma	...	22	25	26

129. *Public Hospital, Georgetown.*—The erection of the new maternity wing which was commenced during 1939, was completed and opened on 16th October, 1940. It is provided with 62 beds.

130. The total number of patients admitted to Government hospitals was 20,189 as compared with 21,165 in 1939, and 21,609 in 1938.

131. The following table shows the number of new admissions to hospitals during the year and furnishes approximate figures of admissions of the same patients on one or more occasions. The total thus furnishes in truer perspective the actual amount of sickness occurring in the Colony and treated at the public hospitals.

TABLE XX.

Hospital.	Total admissions during the year.	Persons admitted on one occasion (approx.)	Persons admitted on two occasions.	Persons admitted on more than two occasions (approx.)
Public Hospital, Georgetown	13,821	13,321	440	52
Public Hospital, Berbice	3,190	3,111	71	8
Public Hospital, Suddie	1,727	1,589	120	18
Public Hospital, Bartica	695	660	13	3
Public Hospital, Mabaruma	698	642	49	7
Public Hospital, Kamakusa	51	49	2	...
Public Hospital, Potaro	7	7	...	...
Total	20,189	19,387	695	88

132. The number of patients who sought treatment at the out-patient department of public hospitals is as follows:—

1939	...	62,996
1940	...	66,765

133. Two classes of patients are treated at the out-patient department—"poverty" patients, who are required to pay 24 cents (1/-) and "pauper" patients who receive free treatment.

134. The principal diseases treated in Government hospitals were:—

	Cases.	Deaths.
Malaria (including blackwater fever)	1,600	91
Dysentery	115	7
Enteric Fever	241	60
Bowel Diseases	1,459	91
Pneumonia (all forms)	374	98
Tuberculosis (all forms)	428	134
Bronchitis	549	43
Nephritis	438	114
Diseases of the Heart (all forms)	362	133
Venereal Diseases	1,379	54
The Puerperal State	2,396	44
Cancer (all forms)	169	34



135. The training of nurses continued at the Government hospitals in Georgetown, New Amsterdam, and Suddie. The following were the results of the examinations held:—

(a) Preliminary Examination—Probationer Nurses and Midwifery Students.

		Entered	Passed.	Failed.
April	...	28	23	5
September	...	9	8	1

(b) Final Examination for Graduate Nurse's Certificate:—

		Entered	Passed.	Failed.
June	...	16	16	—

(c) Midwives Final Examination.

		Entered.	Passed.	Failed.
April	...	18	18	—
October	...	14	14	—

136. Table XXI shows the accommodation, number of patients and deaths, average stay, percentage of mortality on number treated, and number of out-patients in each hospital.

137. Table XXII. gives the classes of in-patients and out-patients treated and the number of prescriptions dispensed.

138. Table XXIII. is a return of the surgical operations performed.

139. The number of in-patients treated was 21,069 as compared with 22,025 in 1939.

140. The cost per caput per diem of patients treated, exclusive of medical officers' salaries, was:—

		1938 cents.	1939. cents.	1940. cents.
Public Hospital, Georgetown	...	65.5	72.3	77.11
Public Hospital, New Amsterdam	...	72.1	83.9	79.7
Public Hospital, Suddie	...	75.4	84.7	104.1
Public Hospital, Bartica	...	77.9	75.6	98.7
Public Hospital, Mabaruma	...	123.3	104.4	100.1

TABLE XXI.  
PUBLIC HOSPITALS.

	Georgetown.			New Amsterdam.			Saddle.			Bartica.			Maharuma.			Kamakusa.			Petaro.		
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
Accommodation ...	345	277	622	92	68	161	45	47	92	25	10	35	15	15	30	7	1	8	6	...	6
Patients remaining in Hospital—1st January, 1940 ...	344	281	625	71	50	121	39	43	82	28	7	35	7	9	16	...	...	...	1	...	1
Patients admitted during the year ...	7,476	6,345	13,821	1,798	1,392	3,190	943	784	1,727	504	191	695	330	368	698	48	3	51	...	...	7
Total ...	7,820	6,622	14,442	1,890	1,442	3,332	988	831	1,819	532	198	730	337	377	714	48	3	51	...	...	8
Patients discharged—cured ...	1,672	2,199	3,871	527	436	963	87	27	114	265	114	379	59	82	141	18	1	19	...	...	...
" " not relieved ...	3,885	2,592	6,477	848	602	1,450	763	640	1,403	193	58	251	215	307	427	23	1	24	...	...	2
" " not sick ...	1,119	971	2,090	223	154	377	26	40	66	9	1	10	24	15	39	6	1	7	...	...	4
" " died ...	208	143	351	50	65	115	5	12	17	2	1	3	7	29	36	...	...	...	...	...	...
Patients remaining in Hospital—31st December, 1940 ...	562	477	1,039	157	121	278	79	77	156	26	13	39	24	26	50	...	...	...	...	...	2
Total Patients treated ...	943	244	1,187	61	57	118	22	31	53	32	11	43	8	18	26	1	...	1	...	...	...
The daily average number in Hospital during 1940 ...	7,820	6,622	14,442	1,890	1,442	3,332	988	831	1,819	532	198	730	337	377	714	48	3	51	...	...	8
Average stay in days of patients discharged during 1940 ...	356	269	625	875	589	1,464	315	339	654	2778	732	3509	130	130	260	013	008	001	002	...	002
Average stay in days of patients remaining on 31st December, 1940 ...	16	15	16	11	15	26	11	15	26	1803	1149	1670	150	130	143	87	40	75	35	...	35
Average stay in days of patients died ...	77	76	76	288	368	656	97	224	321	3986	2409	3609	144	109	120	70	...	70	...	...	...
Percentage of Mortality on number treated ...	19	22	20	12	10	23	7	6	13	1103	1730	1356	64	68	66	...	...	...	10	...	10
Number of Out-Patients exclusive of attendances for repeat medicines ...	76	72	74	84	84	809	804	931	862	49	66	53	71	69	70	...	...	...	25	...	25
	23,173	21,639	44,812	3,905	5,790	9,715	2,243	3,458	5,311	1,830	938	2,788	1,272	1,227	2,499	974	202	1,176	331	113	464



TABLE XXII.

IN-PATIENTS DEPARTMENT, PUBLIC HOSPITALS, FROM 1st JANUARY TO 31st DECEMBER, 1940.

Class of Patients Treated.	Georgetown.	New Amsterdam.	Suddie.	Bartica.	Mabaruma.	Kamakusa.	Potaro.
Seamen ... ..	141	...	...	...	8	...	...
Pay Patients ... ..	2,604	508	155	146	39	9	1
Policemen ... ..	403	39	12	2	...	3	...
<i>Race:</i>							
Europeans (other than Portuguese) ...	310	47	8	5	5	...	...
Europeans (Portuguese) ...	436	28	30	13	11	1	...
Mixed ... ..	1,222	247	138	210	208	13	...
East Indians ... ..	4,303	1,334	977	95	61	1	1
Chinese ... ..	138	8	...	13	6	...	...
Blacks ... ..	7,270	1,624	536	298	107	29	6
Aboriginal Indians ... ..	112	23	120	96	316	7	1
Total ... ..	13,821	3,311	1,809	730	714	51	8

## OUT-PATIENTS DEPARTMENT.—PUBLIC HOSPITALS.

	George- town.	New Am- sterdam.	Suddie.	Bartica.	Maba- ruma.	Kama- kusa.	Potaro.
Number of Out-Patients attended to with Pauper Certificates ... ..	23,295	7,956	4,692	1,899	...	...	...
Number of Out-Patients attended to with Poverty Certificates ... ..	13,651	4,080	619	889	69	...	...
Number of Out-Patients and casualties without Certificates ... ..	2,866	2,359	...	...	2,401	1,176	...
Number of Out-Patients treated during the year (exclusive of repeates) ... ..	44,812	14,395	7,839	2,788	2,470	1,176	464
Number of Government Employees attended to as Out-Patients ... ..	2,136	220	128	28	29	24	10
Number of Prescriptions dispensed for In-Patients ...	95,134	17,338	3,041	2,376	2,047	115	11
Number of Prescriptions dispensed for Out-Patients ...	47,871	12,717	5,311	4,336	3,194	2,017	602

TABLE XXIII.

## RETURN OF SURGICAL OPERATIONS.

	Public Hospital, Georgetown.		Public Hospital, New Amsterdam.		Public Hospital, Suddie.		Public Hospital, Bartica.		Public Hospital, Mabaruma.		Public Hospital, Kamakusa.		Public Hospital, Potaro.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Head and Neck ... ..	220	2	50	...	21	...	4	...	12	...	...	...	...	...
Upper Extremity ... ..	109	...	64	...	10	...	...	...	...	...	...	...	...	...
Lower Extremity ... ..	141	5	85	...	12	...	...	...	...	...	...	...	...	...
Thorax ... ..	34	1	9	...	2	...	3	...	...	...	...	...	...	...
Abdomen ... ..	885	27	112	2	42	5	2	...	...	...	...	...	...	...
Back and Vertebrae ... ..	15	...	2	...	2	...	...	...	...	...	...	...	...	...
Genito-Urinary System ... ..	719	6	147	...	18	...	13	...	4	...	...	...	...	...
Total ... ..	2,123	41	470	2	107	5	31	...	23	...	...	...	...	...

## OPHTHALMIC DEPARTMENT.

141. 5,525 patients were treated during the year as against 5,640 for the previous year. The following table shows the distribution :—

TABLE XXIV.

Public Hospital.	IN-DOOR PATIENTS.						OUT-DOOR PATIENTS.					
	Paying.			Pauper.			Paying.			Pauper.		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Georgetown ...	69	51	120	211	220	431	828	756	1,584	1,489	1,546	3,035
New Amsterdam ...	...	1	1	8	6	14	63	64	127	64	55	119
Suddie ...	...	1	1	2	4	6	10	10	20	26	13	39
Bartica ...	...	...	...	...	...	...	5	8	13	8	7	15
Total ...	69	53	123	221	230	451	906	838	1,744	1,587	1,621	3,208

142. The following major and minor surgical operations were performed :—

TABLE XXV.

	Public Hospital, Georgetown.	Public Hospital, New Amsterdam.	Public Hospital, Suddie.	Public Hospital, Bartica.
Senile Cataract ...	214	...	...	...
Traumatic Cataract ...	2	...	...	...
Congenital Cataract ...	21	...	...	...
After Cataract ...	16	...	...	...
Pterygium ...	28	7	4	...
Glaucoma ...	10	...	...	...
Leucoma of Cornea ...	19	...	...	...
Dacryocystitis ...	9	...	...	...
Ruptured Cornea ...	6	...	...	...
Cellulitis of Eyelid ...	1	...	...	...
Papilloma of Conjunctiva ...	1	...	...	...
Panophthalmitis ...	...	1	...	...
Phthisis Bulbi ...	2	...	...	...
Orbital Cyst ...	3	...	...	...
Endophthalmitis ...	2	...	...	...
Conical Cornea ...	1	...	...	...
Iritis ...	1	...	...	...
Corneal Ulcer ...	...	1	...	...
Mebomian Cyst ...	...	3	...	...
Conjunctiva ...	...	1	...	...
Tarsal Cyst ...	...	4	2	...
Foreign body of Cornea ...	...	1	...	...
Prolapse of Iris ...	4	...	...	...
Total ...	340	18	6	...

143. In addition, 151 minor operations were performed at the out-patient department of the Public Hospital, Georgetown.

144. The revenue derived from all sources was \$2,343.72 as compared with \$1,262.11 in 1939.

145. The number of cases refracted and received prescriptions for glasses was 427.

146. The usual visits were paid to the Leprosy Hospital where a number of cases received treatment.

147. A visit was paid to the Public Hospital, Bartica, where 28 out-patients were treated.

148. 13 cases of trachoma were notified.

## DENTAL DEPARTMENT.

*Public Hospital, Georgetown.*

149. The clinic conducted by Dr. J. R. Heilbron, Dental Surgeon, who serves only part-time, assisted by a nurse, was open to the public daily in the afternoon except on Sundays and public holidays.



150. The number of out-patients treated was 7,131 as compared with 7,187 in 1939. 4,000 were pauper cases (1,318 males and 2,682 females) and 3,131 poverty cases (1,616 males and 1,515 females).

151. The revenue collected amounted to \$421.20 as compared with \$416.68 the previous year.

*Public Hospital, New Amsterdam.*

152. The clinic at this hospital is conducted by Dr. G. M. Gonsalves, dental surgeon, who serves only part-time, assisted by a junior nurse.

153. The clinic was held thrice weekly. 1,389 patients (647 males and 742 females) received treatment and 1993 extractions were done.

154. The revenue collected amounted to \$393.36, compared with \$218.40 in 1939.

**X-RAY AND ELECTRICAL DEPARTMENT.**

*Public Hospital, Georgetown.*

155. Throughout the year the weekly clinic for the Tuberculosis Society was continued.

156. An Electrocardiograph was kindly presented to the hospital by Messrs. Wm. Fogarty, Ltd., and was placed in care of the X-Ray department.

157. *Radiographic and Radioscopic Examinations.*—The total number of patients examined during the year was 4,120 being 242 more than the previous year. Of these, 315 were done at the request of private practitioners and Government Medical Officers in districts, 1,260 cases for the Tuberculosis Society, and 18 for the Infant Welfare Centre. The total number of radiosopic examinations was 1,830.

158. The following table gives some indication of the type of examinations made :—

Barium Meals	...	...	162
Barium Enemas	...	...	27
Chests	...	...	1,910
Accessory Sinuses	...	...	70
Urinary Tracts	...	...	50
Gall Bladders	...	...	235
Teeth	...	...	42
Miscellaneous	...	...	1,606

159. *X-Ray Treatment.*—46 patients received 131 treatments ; 34 were sent by private practitioners and district Government Medical Officers. The conditions treated were as follows :—

Dermatitis	...	...	24
Ringworm	...	...	5
Rodent Ulcer	...	...	2
Carcinoma	...	...	2
Eczema	...	...	1
Warts	...	...	1
Lymphadenoma	...	...	1
Pruritus	...	...	2
Myelogenous Leukaemia	...	...	1
Athlete's Foot	...	...	1
Epidermomycosis	...	...	3
Splenic Anaemia	...	...	2
Sycosis Barbae	...	...	1

160. *Electrical Treatment*.—308 patients, 70 less than in 1939, were treated during the year; 4,852 treatments were given.

161. The revenue collected during the year was \$2,196.66 as against \$1,714.62 in 1939.

#### PUBLIC HOSPITAL, NEW AMSTERDAM.

162. 235 radiographic examinations were made. The nature of these examinations was as follows:—

Cranium	...	...	...	4
Jaws	...	...	...	3
Teeth	...	...	...	2
Upper Extremity:—				
Shoulder and Axilla	...	...	13	
Upper Arm	...	..	8	
Elbow	...	...	15	
Forearm	...	...	20	
Wrist	...	...	18	
Hand	...	...	26	
Finger	...	...	2	102
Lower Extremity:—				
Hip	...	...	7	
Thigh	...	...	6	
Knee	...	...	10	
Leg	...	...	13	
Ankle	...	...	8	
Foot	...	...	20	64
Chest	...	...	...	42
Ribs	...	..	...	5
Abdomen	...	...	...	—
Back and Vertebrae	...	...	...	5
Pelvis	...	...	...	7
Kidney	...	...	...	1
Total			...	235

163. No cases were treated by X-Rays.

164. The revenue collected was \$39.20 as against \$40.55 for 1939.

#### B--THE MENTAL HOSPITAL.

165. The following information is derived from the annual report of the Medical Superintendent of the Mental Hospital.

166. The daily average number of patients was 605 (males 358, females 247) compared with 611 in 1939. There were 141 admissions (males 83, females 58) as against 134 in 1939. A total of 750 cases including the 609 patients (359 males, 250 females) remaining on 1st January, were treated during the year. The admissions from the three counties were:—

County.	Males.	Females.	Total.
Demerara	60	37	97
Berbice	18	19	37
Essequibo	5	2	7
Total	83	58	141



167. The admissions classified as to the countries of origin were:—

Country.	Males.	Females.	Total.
British Guiana ...	78	57	135
India ...	3	1	4
Barbados ...	1	...	1
Grenada ...	1	...	1
Total ...	83	58	141

168. There were 44 discharges (males 29, females 15) compared with 36 in 1939, and the total number of patients under treatment at the end of the year was less than at the end of 1939.

169. The number of deaths was 101 (55 males and 46 females) compared with 115 in 1939, and the mortality rate was 13.5 per cent. as against 15.09 per cent. the previous year.

170. The principal causes of death were dysentery, chronic bronchitis, chronic nephritis, lobar pneumonia, cardiovascular degeneration, pulmonary tuberculosis, and senility.

171. The chief diseases treated were malaria, pneumonia, pulmonary tuberculosis and other lung diseases, filariasis, diarrhoea, dysentery, chronic Bright's disease, chicken pox, and general debility.

172. The expenditure for the year was \$76,855.31 compared with \$73,071.29 in 1939, and the revenue \$2,073.48 compared with \$2,014.81 in 1939.

173. The per caput cost per diem was 33.3 cents as against 31.7 cents in 1939.

174. About 30 per cent. of the patients were engaged in some form of occupation and the value of their labour in such occupations as baking, gardening, tailoring, shoemaking, washing, printing, carpentry, woodcutting, etc., was estimated at \$23,492.82.

175. The table below furnishes the accommodation in the various wards of the hospital with classification as to type of patient:—

TABLE XXVI.

Division.	No.	Name of Block.	Accommodation.		Class of Patients.
			Authorised.	Actual Number of Patients on 31st December, 1940.	
Male	421	Ward 1 ...	23	15	Trusted.
		Wards 2, 3, and 4 ...	82	106	Dangerous and refractory.
		Ward 5 ...	71	63	Chronic Creole.
		Ward 6 ...	74	49	Chronic East Indian.
		Ward 7 ...	38	40	Quiet East Indian.
		Ward 8 ...	41	57	Quiet East Indian.
		Wards 9 and 10 ...	...	...	Sick and infirm.
		Ward 11 ...	59	30	Dirty and doubtful.
		Ward 12 ...	33	17	Criminal.
Female	348	Ward A ...	67	39	Chronic Creole.
		Ward B ...	66	36	Chronic East Indian.
		Ward C ...	52	38	Dangerous and dirty.
		Ward E ...	51	83	Doubtful and dirty.
		Wards F and G ...	54	24	Sick and infirm.
		Cottage ...	28	27	Convalescent and trusted.
	769		769	603	

176. *Georgetown Psychological Clinic for Out-Patients.*—The Medical Superintendent continued his visits to the Public Hospital, Georgetown, on the first Wednesday in each month to hold this Clinic.

177. *Entertainment.*—There was an unprecedented number of entertainments and as this branch of the hospital work is one of the most important from the



therapeutic point of view, it is hoped that the record will be maintained or exceeded in the future. Entertainments included cricket, football, hockey and rugby. There were 27 patients' dances and one patients' party. The staff band played on 26 occasions and the British Guiana Militia Band visited and played once. Apart from 3 performances on the stage of the hospital theatre, there were 65 cinema shows. Sound films were kindly lent each week through the courtesy of the film trade and local theatre managers.

178. The readmission rate is still rising and has gone up from 7.14 to 14.2 per cent. On the other hand, the average stay in days of those discharged has dropped from 788 to 508 instancing the policy as indicated in last year's report of a more fluid system of admission and discharge which is highly desirable.

### C.—Public Dispensaries.

179. In addition to the out-patients dispensaries attached to the public hospitals in Georgetown, New Amsterdam, Suddie, Bartica, Mabaruma, Kamakusa, and Potaro, and the Government public dispensary at George Street, Georgetown, there are fourteen Government dispensaries in the charge of qualified sicknurses and dispensers, situate in remote, yet populous river districts, and in the diamond and gold-bearing areas. In the majority of these outlying dispensaries the work done by the nurse-dispenser is supervised by the Government Medical Officer of the adjoining district. There is also a Government dispensary at Kurupukari in the Rupununi district (see paragraph 245).

180. The following table gives the number of cases treated, with expenditure and revenue :—

TABLE XXVII.

Dispensary.	Paying Patients.			Police Patients.			Pauper Patients.			Expenditure.	Revenue.
	New Cases.	Repeats.	Total.	New Cases.	Repeats.	Total.	New Cases.	Repeats.	Total.		
No. 1 Dispensary, George Street, Georgetown	449	970	1,419	15	...	15	6,425	10,876	17,301	\$3,207 23	\$ 340 78
Demerara River (Christianburg)	888	125	1,013	28	5	33	965	128	1,094	564 56	380 20
Canal No. 1 Polder	498	31	529	...	...	...	14	2	16	...	126 96
Canal No. 2 Polder	914	78	992	...	...	...	96	4	100	1,482 21	238 68
Berbice River (Ida Sabina)	562	17	579	2	...	2	2,843	118	2,961	339 17	151 12
Mara	29	12	41	22	6	28	712	96	808	1,605 51	11 38
Leguan	1,463	88	1,551	25	3	28	965	61	1,026	432 04	486 55
Parika	71	10	81	15	3	18	61	28	89	...	19 44
Wakenaam	1,417	93	1,510	69	6	75	1,684	87	1,771	1,486 01	423 92
Essequibo River (Supenaam)	1,098	618	1,716	8	1	9	897	539	1,427	988 12	598 78
Anna Regina	639	61	700	24	17	41	5,821	1,285	7,107	1,670 20	168 00
Pomeroon River (Charity)	1,228	30	1,258	2	...	2	3,377	69	3,446	678 28	455 42
Morua River (Acquer.)	8	3	11	...	...	...	3,388	2,278	5,666	1,640 84	2 88
Enachu	186	3	189	30	...	30	880	28	908	643 13	189 00
Kurupukari (Rupununi)	3	...	3	18	...	18	682	13	695	75 13	72

\* Supplies are obtained from Canal No. 2 Polder.

† Supplies are obtained from Leguan Dispensary.

‡ Salary, etc., of Dispenser. Supplies are obtained from the Public Hospital, Kamakusa.

### XI.—PRISONS.

#### Georgetown Prison.

181. The general health of the prisoners was satisfactory.

182. The sanitary arrangements, ventilation and drainage were satisfactory; the water supply was adequate and the food supplies adequate and of good quality.

183. 41 cases (32 males and 9 females) came under medical observation; of these, 8 males were transferred to the Mental Hospital.



184. Injections administered during the year were as follows:—

Anthiomaline	...	60
Bismuth Salicylate	...	62
Bismotab	...	1
Bisglucol	...	97
N.A.B.	...	74
Emetine Hydrochloride	...	19
Hyoscine Hydrobromide	...	1
Insulin	...	55
Tartar Emetic	...	97
Quinine Bihydrochloride	...	2

185. 197 venereal cases (all males) were treated during the year.

186. 71 blood specimens for Kahn's test were sent to the laboratory for examination; of these, 46 (64.8%) were positive and 25 negative.

187. Cases of venereal disease in convicted prisoners are classified as follows:—

Syphilis	...	46
Chancroids	...	25
Granuloma	...	12
Gonorrhoea	...	114

188. In addition to the above, the following cases in remand prisoners not subsequently convicted were also treated:—

Chancroids	...	12
Urethritis	...	9

189. There were 94 sittings for dental extractions and 123 were made.

190. Reading glasses were supplied to 9 prisoners.

*New Amsterdam Prison.*

191. The sanitary arrangements, ventilation and drainage were satisfactory. The water supply was good. Potable water was stored in screened iron tanks, and there was also an abundance of piped creek water supplied by the Municipality of New Amsterdam for sanitary purposes.

192. Food supplies were adequate and of good quality.

193. The number of cases of venereal diseases treated was as follows:—

Gonorrhoea	...	...	...	21
Granuloma	...	...	...	1
Syphilis	...	...	...	13

194. The number of injections given was as follows:—

Tartar Emetic	...	...	...	1
Sulphostab	...	...	...	1
A.T.S.	...	...	...	8
Quinine Bihydrochloride	...	...	...	4

195. 32 dental extractions were made.

196. The following table shows the hospitalization, etc., of prisoners in the Georgetown and New Amsterdam Prisons:—

	Average daily number of Prisoners.	Average daily number in Prison Hospital.	Total number of Admissions.	Number of Deaths.	Number transferred to Public Hospital.	Number transferred to Mental Hospital.
Georgetown	397.01	10.29	178	1	8	8
New Amsterdam	74.01	0.172	6	...	2	...



## XII.—ALMS HOUSE.

197. Accommodation is provided for 808 inmates—514 males and 294 females. The number of inmates on 1st January, 1940, was 524 males and 315 females. The number admitted during the year was 507 (309 males and 198 females) while the daily average was 845. The number of inmates remaining in the institution on 31st December, 1940, was 827 (521 males and 306 females).

198. There are five infirmary wards providing accommodation for 316 patients. 1,236 cases were treated in the infirmary wards—813 males and 423 females. The daily average number of infirmary patients was 233 males, 168 females. The principal diseases treated were—Bright's disease, diseases of the heart, ulcers, chronic bronchitis, malnutrition, paraplegia, epilepsy, rheumatism, and debility.

199. The number of ulcer cases at the end of the year was 100—68 males and 32 females.

200. 109 minor operations were performed on 78 males and 31 females.

201. The following injections were given during the year:—

Tartar emetic	...	...	3
Athiomaline	...	...	35
Fouadin	...	...	55
N.A.B.	...	...	6
Insulin	...	...	220

202. The total number of deaths was 195—120 males and 75 females; the death-rate being 13.7 per cent. of the total number of inmates, compared with 19.7 per cent. in 1939.

203. The following table shows the admissions, deaths, etc., for the last two years:—

TABLE XXVIII.

Year.	Total Deaths.	Total persons in Alms House during the year.	Death-rate per cent.	Number of cases of Diarrhoea.	Number of cases of Dysentery.	Number of deaths from Diarrhoea and Dysentery.
1939	275	1,395	19.7	14	1	6
1940	195	1,346	13.7	53	1	3

204. The wards, offices and grounds were kept in good condition throughout the year and the sanitary arrangements were satisfactory.

## XIII.—THE ODERNEEMING INDUSTRIAL SCHOOL.

205. The number of boys in the school at the end of the year was 56 and their health was uniformly good. No epidemic of any kind occurred and cases referred to the Public Hospital, Suddie, were 7 in number; dislocation of elbow, inguinal hernia, phimosis, rheumatic arthritis, and malaria fever being the chief causes for transfer. 31 cases were treated in the sick bay of the school for malaria fever, vaccination cellulitis, suppurative teno-synovitis and bronchitis.

206. The following table shows the statistical figure for the years 1938, 1939, 1940:—

	1938.	1939.	1940.
Daily average number of boys in school	... 50	54	57
Daily average number of boys sick	... 0.14	0.3	0.02
Percentage of sick to daily average number of boys	... 0.3	0.5	0.04

207. 20 boys were admitted to, and 15 boys were discharged from the institution during the year. There were no deaths.



208. 6 cases of malaria were treated. Prophylactic treatment for tetanus was given in four cases.

209. The grounds have been well kept and the drains maintained in good order.

#### XIV.—SUGAR ESTATES.

210. There was no change during the year in the arrangements for the medical and sanitary care of sugar plantations.

211. On a majority of the plantations, members of the staff and their families are attended by private practitioners whilst the Government Medical Officer of the district is in charge of the hospital, the labourers, and the sanitation of the compound.

212. Twenty-two out of thirty-one plantations provide and maintain hospitals and dispensaries for their labourers.

213. The total number of births was 2,839 as against 2,029 in 1939. The infant mortality figure was 74.3 as against 91.1 in 1939. There were 1,007 deaths as compared with 1,149 in 1939.

The principal causes of deaths were:—

Causes of Deaths.		Number of Deaths.
1. Malaria	...	68
2. Chronic Bronchitis	...	58
3. Diarrhoea and Enteritis	...	46
4. Bright's Disease	...	44
5. Premature Birth	...	40
6. Lobar Pneumonia	...	34
7. Infantile Debility, Icterus and Sclerema	...	31
8. Asthma	...	28
9. Broncho-Pneumonia	...	24
10. Acute Nephritis	...	22
11. Acute Bronchitis	...	20
12. Enteric Fever	...	16
13. Cerebral Haemorrhage-Apoplexy	...	15
14. Other organic diseases of heart	...	13

214. The total number of patients admitted to estate hospitals was 18,700 as compared with 23,569 in 1939. There were 592 deaths as against 698 in 1939. 10,189 patients were treated at the dispensaries of these hospitals as against 13,278 in 1939.

215. Malaria:—4,290 cases were treated in hospitals with 68 deaths. The average annual figures for the previous five years were 9,344 cases and 119 deaths. The distribution in counties during 1940 was:—

County.	Cases Malaria.	Deaths Malaria.
Berbice	1,384	18
Demerara	2,906	50

216. *Bowel Diseases.*—The following table shows the number of cases and deaths from enteric fever and other intestinal diseases (dysentery, diarrhoea and enteritis) during the years 1939 and 1940:—

TABLE XXIX.

Year.	Enteric Fever.		Other Intestinal Diseases.	
	Cases.	Deaths.	Cases.	Deaths.
1939	130	20	1,013	47
1940	188	16	1,044	52



217. The number of reported cases of all forms of pneumonia was 465 with 67 deaths, as compared with 526 cases and 125 deaths in 1939.

218. The Central Medical Research Laboratory, operating under the ægis of the contributing members of the British Guiana Sugar Producers' Association, continues to extend its very valuable work amongst the large section of the population employed in this industry. It is a pleasure to record the cordial relations that exist between this Laboratory and the Medical Department, from which unquestionable benefits for the whole Colony cannot fail to accrue.

## MINING.

### XV.—A.—MAZARUNI DIAMOND FIELDS.

219. The hospital of 8 beds, with dispensary, is situated at the headquarters station, Kamakusa. An out-station dispensary under the charge of a dispenser is maintained at Enachu. The senior and junior dispensers continue to make routine inspections of their districts.

220. The average population of the district during the year was 4,162.

221. The health of the district was good throughout the year. No disease assumed epidemic form. Malaria was still the prevailing disease and 272 cases (217 males, 55 females) were treated during the year. No deaths from malaria occurred. The importance of quinine prophylaxis was stressed and totaquina tablets were freely distributed.

222. Fresh vegetables, poultry, and beef are very scarce and difficult to obtain at all points in the district. Marmite is stocked in many of the shops and is in great demand.

223. The treatment of cases of venereal diseases entering the district and of those infected within the district is still only palliative. All infected persons are advised to travel to the public hospitals at Bartica and Georgetown for effective treatment.

224. The dispenser at Enachu pays weekly visits alternating fortnightly at important points above Enachu; when possible, the senior dispenser pays weekly visits to Eping-Perenong and intermediate points. Quarterly tours were made to all the navigable areas by the senior dispenser. On these tours, which lasted ten to fourteen days, the junior dispenser at Enachu performed duty at Kamakusa. The weekly visits of the senior dispenser depend on the absence of bed-cases at the hospital.

225. All logies and dwellings are inspected at regular intervals and their occupants are advised to have their respective surroundings cleaned and cleared of all broken bottles, empty tins, refuse, etc., Inspections of foodstuffs are also carried out.

226. One birth was registered during the year.

227. The number of deaths registered was 26 compared with 30 in 1939. The causes were fever 7, drowning 2, Bright's Disease 1, tuberculosis 1, alcoholism 1, accidental fall from tree 1, dysentery 1, pneumonia 3, asthma 1, hernia 1, tetanus 1, fits 2, heart disease 1, unknown 3.

### B.—Potaro Hospital and Dispensary.

228. The hospital-dispensary is situated at 11½ miles, Potaro, and has accommodation for 6 beds. The staff consists of a sick-nurse-dispenser, a nurse (as occasion arises), a porter, a boat-captain and a boat-hand.

229. The health of the district was fair. The prevailing diseases were malaria, bronchitis, and dyspepsia. 8 cases (males) were treated in hospital with 2 deaths. The number of out-patients treated was 1,176 (974 males and 202 females).



230. The usual periodic visits were paid to Garraway Stream, Tumatumari, Kangaruma and Amatak.

*C.—Mackenzie Hospital.—Demerara Bauxite Co., Ltd.—Demerara River.*

231. The staff consists of :—

Hospital—

- 1 Medical Officer.
- 2 Dispensers (1 at Three Friends and Trevern Mines).
- 4 Nurses (1 male).
- 4 Probationers.
- 2 Attendants.
- 6 Ward Maids.
- 2 Cooks.

Mines.—1 Dispenser.

Exploration.—2 Dispensers.

232. The number of beds available in the hospital is 67.

233. 599 cases, with 17 deaths, were treated in hospital during the year. The daily average number of patients was 16. The number of out-patients treated was 14,118.

234. The principal diseases treated were malaria, venereal diseases, dysentery, pneumonia, bronchitis, enteric, and ankylostomiasis. A large number of cases was also treated for wounds, injuries, contusions, abrasions, and fractures.

235. The following is a return of the work done in the Pathological laboratory :—

Blood Counts	...	...	18
Haemoglobin	...	...	8
Blood films for malaria	...	...	802
" " for filaria	...	...	2
" " Miscellaneous	...	...	15
Urine analyses...	...	...	2,770
Stool examinations for amoebae	...	...	276
Sputum examinations for Tuberculosis	...	...	32
Pus smears (Gonorrhoea and miscellaneous)	...	...	129

236. Poverty and pauper cases from the surrounding areas are admitted and treated in the Company's Hospital. By arrangement with Government, a fee of 30 cents per diem is paid for in-patients and 6 cents per attendance for out-patients. The amount so paid during 1940 was \$102.42.

*D.—British Guiana Consolidated Gold Fields—108 Miles, Potaro.*

237. The resident staff consists of a medical officer and a sicknurse-dispenser

238. A "casualty post" is maintained for the treatment of in-patients.

239. 1,270 cases were treated during the year made up as under. There were no deaths.

Members of the staff	...	...	21
In-patients	...	...	84
Out-patients	...	...	1,165

240. The principal diseases treated were malaria, influenza, and pneumonia. A number of cases of injuries were also attended to.

241. General conditions were fair. Articles of food and drink were examined regularly and found to be good. The water supply and drainage were satisfactory.



242. Anti-mosquito and anti-malarial measures were carried out regularly, and latrines were oiled thrice weekly.

#### XVI.—HINTERLAND SETTLEMENTS.

243. Free medicines were supplied to a number of Aboriginal Indian Stations and Mission Stations at a cost of \$151.06. Recognition is given to the willing and free medical attention paid to the inhabitants of these hinterland areas, particularly at Mission Stations, by those in charge, who in the course of years have acquired a very practical and valuable knowledge of elementary therapy, both medical and surgical, and in whom the native places a trust and confidence perhaps not otherwise obtainable.

244. Periodical visits are made by the Government Medical Officer, Skeldon, to a settlement at Orealla, up the Corentyne River, by the Government Medical Officer (Suddie Hospital) to the Wakapoa Mission in the Pomeroun, by the Government Medical Officer, North West District, to the Santa Rosa Mission in the Moruca, and by a Government Dispenser to Santa Mission, Kamoonie Creek, Demerara River.

245. In order to afford some measure of medical aid to residents in the Rupununi, a Government Dispensary was established at Kurupukari in September, 1937, and a dispenser stationed at this point with a suitable supply of drugs and medical comforts. This dispenser also teaches in a primary school established at this post, and performs duty as cattle-trail clerk. During school holidays, he is expected to undertake short tours on first-aid duty to the settlements in this area.

246. The whole question of organised medical services for Aboriginal Indians is under consideration and it is hoped that a scheme of this nature will become operative in the near future.

#### XVII.—METEOROLOGICAL.

247. The rainfall during the year, as registered at the Botanic Gardens (Georgetown) was 69.29 inches as against 65.71 inches in 1939, and the mean percentage of humidity was 78.8 as against 79.8 in 1939.

248. The mean of the four recording stations in Georgetown was 66.47 inches as against 67.64 in 1939.

249. The following reports are appended :—

Appendix I—Summary of the Annual Report of the Government Central Medical Laboratory.

Appendix II—Summary from the Annual report of the Malaria Research Unit.

NORMAN M. MACLENNAN,  
Director of Medical Services.



## APPENDIX I.

SUMMARY OF THE ANNUAL REPORT OF THE CENTRAL MEDICAL LABORATORY,  
GEORGETOWN, FOR THE YEAR ENDING 31st DECEMBER, 1940.

## ROUTINE EXAMINATIONS.

The total number of routine examinations done was 25,345, as compared with 21,400 in 1939. The following is a short summary of the most important. Reference should be made to the typescript report for full details.

## BLOOD.—

1. *Parasitological*.—3,021 films were examined of which 2,227 were negative. 161 showed sub-tertian malaria parasites, 219 benign tertian, 17 quartan and 65 micro-filaria. 14 mixed infections of benign and sub-tertian parasites were recorded, and one of sub-tertian and quartan parasites.

2. *Cultural*.—397 samples were received for culture of which 365 were negative. *Bact. typhosum* was isolated from 28, *Bact. paratyphosum C* from 3, and streptococci from one.

3. *Haematological*.—236 total blood counts, 81 differential counts, and 92 sedimentation rates were done. Blood grouping for transfusion was carried out on 241 individuals and direct matching of donor against recipient in 64.

4. *Serological*.—The Kahn test was done on 8,103 cases and Widal on 630. By far the most common organism agglutinated was *bact. typhosum*.

5. *Biochemical*.—A total of 264 examinations was done comprising Glucose Tolerance Tests, Blood Sugar, Blood Urea, etc.

## FAECES.—

1. *Microscopical*.—Negative findings were 81 out of a total of 1,965 specimens received. *Ankylostoma* accounted for 820 of the positive findings and *entamoeba histolytica* for 27.

2. *Cultural*.—The vast bulk of cultural examinations was on specimens received from patients convalescent from the enteric infections in the isolation wards. Of 790 samples received *bact. typhosum* was isolated from 15 and *bact. flexneri* from 1.

3. *Biochemical*.—124 samples were received to be tested for occult blood.

## SPUTUM.—

Tubercle bacilli were present in 249 specimens out of a total of 1,330 received.

## URINE.—

1. *Microscopical* ...509 samples examined.

2. *Cultural* ...142 " "

3. *Chemical* ...237 " "

4. *Kidney function tests* 62.

## VARIOUS EXAMINATIONS.—

1. *Throat Swabs*.—*C. diphtheria* was present in 49 specimens.

2. *Autopsies*.—134 were performed.

3. *Histological examinations*.—136 specimens examined.

4. *Vaccines*.—84 sets of autogenous vaccines were made during the year as well as the usual stock of T.A.B., streptococcal, and staphylococcal vaccines.

5. *Medico-Legal*.—Exhibits of 9 cases were examined for the police, 15 autopsies done for the Coroner, and 2 exhumations for the same authority.

6. *Urethral, Vaginal and Prostatic Smears*.—*N. gonorrhoea* were present in 546 out of a total of 3,239 received.

Many other minor examinations were carried out but not reported in this summary.

P. A. CLEARKIN,  
Government Bacteriologist and Pathologist.

## APPENDIX II.

SUMMARY FROM THE ANNUAL REPORT OF THE MALARIA RESEARCH  
UNIT FOR THE YEAR—1940.

The service was organised on July, 1939, to investigate the very complex malaria problem of British Guiana where the ordinary techniques involving drainage and larvicides are not usable. It is a co-operative enterprise supported by the Government of British Guiana, the British Guiana Sugar Producers' Association and the Rockefeller Foundation. The Sugar Producers' Association furthermore seconded their medical adviser, Dr. George Giglioli, as



director of the studies and offered the full collaboration of their sanitary organisation which functions on the estates under the supervision of Mr. J. Jack, A.R.S.I. and has made systematic anopheline captures on selected estates not reached regularly by the staff inspectors. In June 1940, Dr. Giglioli was suddenly called away and the direction of the unit fell upon the writer.

The staff, consisting of a laboratory technician, a chief field inspector and five field inspectors, collect and identify anophelines from an area which includes the Demerara River Estuary, the coast between the Demerara and the Essequibo, and the area about Georgetown and eastward along the coast for some distance, with periodic investigations of more distant areas.

The malaria problem of British Guiana is made particularly difficult by the fact that the cultivated and populated part of the country, which is a narrow strip of land 5 to 20 miles wide along the coast, lies below high tide and the ocean is held back by a sea wall extending along the entire length of the coast and up the rivers as far as cultivation is attempted. Behind the canefields are the swampy, wooded "water conservancies" merging into a vast flat rain forest. Tides extend up the rivers over 100 miles. Cane and rice are the principal crops and cane-fields are placed in "flood fallow" periodically by covering with water for 6 to 12 months. The country is a network of canals, each square mile of cane cultivation containing  $64\frac{1}{2}$  miles of irrigation and drainage canals. The population is along the ocean side of this area. The road, lined by houses and villages, runs along the coastal front lands; farther inland are the factories, workers' ranges, pastures and rice fields; and beyond them, the cane-fields which usually extend 5 miles farther inland.

Neither malaria nor anopheline breeding are distributed evenly over this area, suggesting that the problem is not completely hopeless and that investigations should be directed toward ascertaining what factors protect certain dwelling areas against malaria and what factors determine the breeding of anophelines in one body of water and not in another.

Both 1939 and 1940 have been extreme drought years, which produced a cumulative effect on the mosquito population, the full significance of which was not realised until the last half of 1940 when a complete reversal of the normal species distribution in house catches of adults became evident. Before 1940 over 24,600 adult anophelines caught in human dwellings showed the following distribution, although larvae of the four species were found in more or less equal numbers:—

<i>A. darlingi</i>	...	...	98.11%
<i>A. tarsimaculatus</i>	...	...	1.34%
<i>A. albitarsis</i>	...	...	0.55%
<i>A. bachmanni</i>	...	...	0

During 1940, 3,455 anophelines included:

<i>A. darlingi</i>	...	...	49.5%
<i>A. tarsimaculatus</i>	...	...	50.1%
<i>A. albitarsis</i>	...	...	0.4%

During the last quarter of 1940 only 248 (!) anophelines were captured of which 92% were *tarsimaculatus* with 3.5% of each of the other two. This reversal in species distribution was due in part to the disappearance of *A. darlingi*, but during 1940 nearly 13 times as many *A. tarsimaculatus* were found in human dwellings as in previous years when all mosquitoes were more abundant!

Experiments designed to show the zoophilism or androphilism of the various species, and others to investigate the attractiveness of brightly lighted rooms for anophelines were inconclusive because of the drought.

Previous experience suggested that larvae of *A. darlingi* were rarely found in waters having a pH of less than 5.8 or a salinity greater than 0.100 grammes per litre. During 1940 we found larvae of *A. darlingi* in waters having a pH of 3.30 and 3.40 and a salt content of over 1.7 grammes per litre. These findings were made during drought conditions of course.

A more interesting problem was raised by the fact that all breeding of *A. darlingi* disappeared during the drought although water bodies, apparently suitable for breeding, persisted in abundance. There were many potential breeding places having pH ranges from 2.5 to over 7.6 and salt contents ranging from 0.014 to over 10.0 grammes per litre. These observations suggest some fundamental problems in mosquito physiology. Possibly the CO<sub>2</sub> content of the water is of importance and plans are being made to study it.

Certain plantations allowed salt water to enter their canals in order to move cane punts; thereby drastically changing these waters as potential breeding places. The full significance of observations carried out on anopheline breeding at those estates cannot be learned until the return of normal conditions to complete the cycle.

Observations are being carried out at villages where trees and bush have grown up affording shelter to anophelines and at adjacent cleared estate yards exposed to the prevailing



winds. The latter appear to be better protected against anophelines and the return of normal conditions may show that they are better protected against malaria.

At certain estates steps were taken some time ago to gradually concentrate all workers' dwellings in open front lands free from rice fields and maintained clear of trees and bush which might interfere with the ocean breezes. Beyond the dwellings were placed the animal shelters, as a first line of defence against any mosquitoes which might feed on animals, and the open pastures beyond which are the cane fields. This system has already shown promise and may be the solution or partial solution of the malaria problem.

We have had the unusual opportunity of witnessing the complete disappearance of *A. darlingi* breeding, followed by an almost complete disappearance of adults, during the drought.

GEORGE BEVIER,  
Director,  
Malaria Research Unit.