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British Guiana.

REPORT

OF THE

SURGEON-GENERAL,

FOR THE YEAR

1933.

Printed by the Authority of His Excellency the Governor.

GEORGETOWN, DEMERARA :

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

1935.

No. 16,293.



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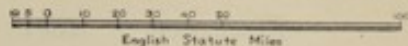
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MAP OF BRITISH GUIANA



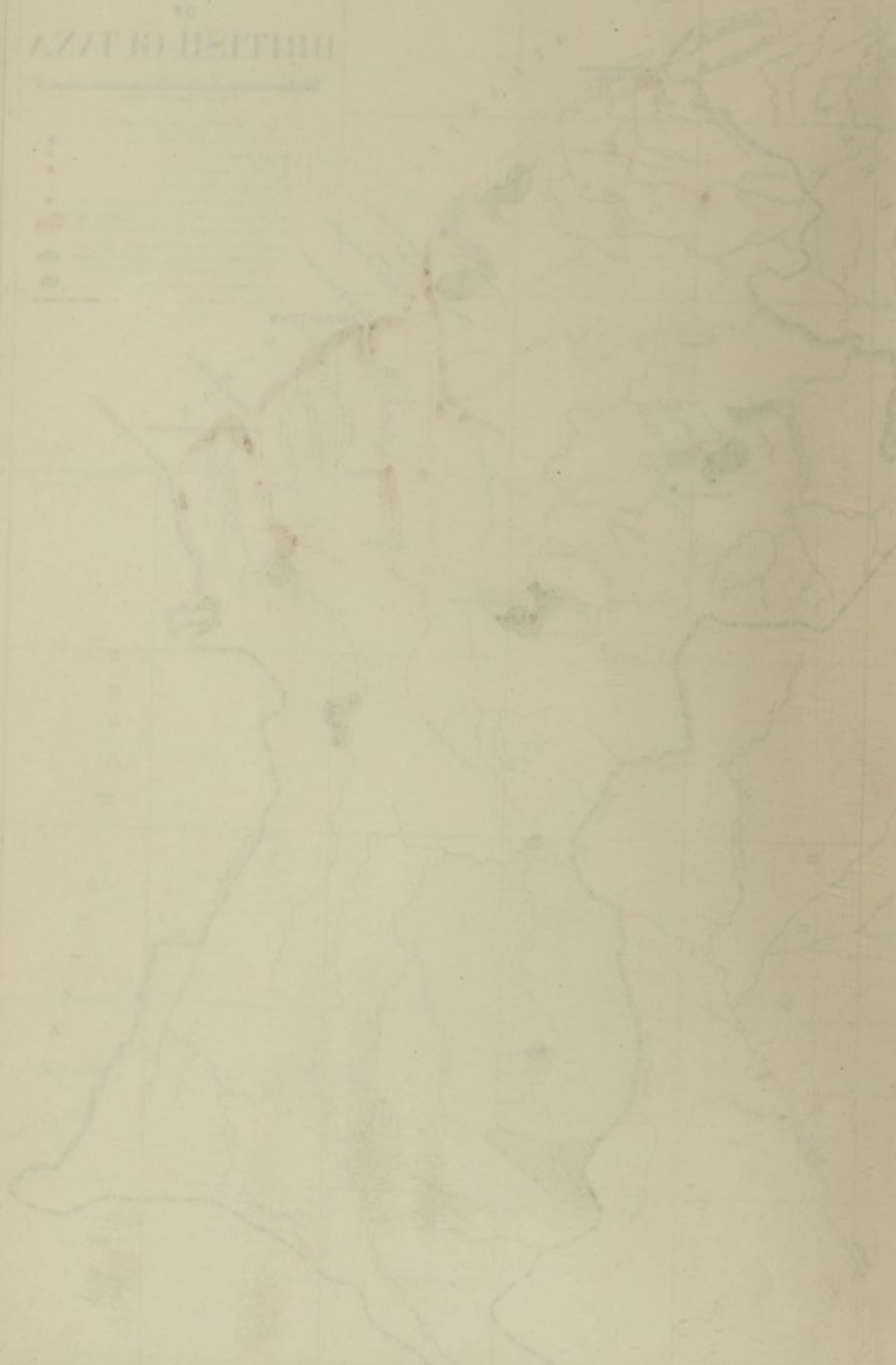
REFERENCE TO COLOURS

- Government Hospitals show thus ●
- Sugar Estates ■
- Government Dependencies ●
- Lepor Atylum—Mahaica and Lunatic Asylum at New Amsterdam show thus ●
- Areas coloured orange and shaded to light orange indicate density of resident population
- Areas coloured blue and shaded to light blue indicate density of floating population engaged in Mining, Cattle rearing and Salata Bleeding
- Indian Reservations show thus ■
- Frontiers show thus



MAP
OF
BRITISH GUJARA

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SURGEON-GENERAL'S OFFICE,
GEORGETOWN, DEMERARA,
29th September, 1934.

SIR,

I have the honour to submit, for the information of His Excellency the Officer Administering the Government 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 1933, together with the returns, etc., appended thereto.

I have the honour to be,

Sir,

Your obedient Servant,

J. A. HENDERSON,
Surgeon-General.

The Honourable
THE COLONIAL SECRETARY.

BRITISH GUIANA.

ANNUAL MEDICAL REPORT FOR THE YEAR ENDING 31st
DECEMBER, 1933.

I.—ADMINISTRATIVE.

1. The Medical Staff as authorized by the Estimates 1933 consists of;—

- 1 Surgeon-General.
- 1 Government Medical Officer of Health.
- 2 Assistant Government Medical Officers of Health.
- 1 Bacteriologist and Pathologist.
- 1 Surgeon Specialist and Resident Surgeon, Public Hospital, Georgetown.
- 1 Medical Superintendent, Leprosy Hospital.
- 1 Ophthalmologist.
- 27 Government Medical Officers.
- 1 Subsidised Medical Officer.

2. The distribution of the staff on the 31st December, 1933, is shewn in Table 1.

TABLE 1.
Distribution of Government Medical Officers on the 31st December, 1933.

(1) Surgeon General.	(2) Government Public Health Department.	(3) Government Bacteriologist and Pathologists*.	(4) Special Medical Appointments.	(5) X-Ray and Electrical Treatment Department.	(6) Officers in charge of Medical Institutions.	(7) Name of Institution and position of Medical Officer.	(8) Medical Officers attached to Institutions.	(9) Officers in charge of Institutions and Districts.	(10) Officers in charge of Medical Districts.	(11) Names of Institutions and Districts.
Dr. J. A. Henderson.	(i) Government Medical Officer of Health and Port Health Officer, Georgetown—Dr. E. N. V. Waac-Bailey (ii) Assistant Government Medical Officer of Health and Port Health Officer, New Amsterdam—Dr. J. H. Pottinger. (2) (iii) Assistant Government Medical Officer of Health and Deputy Port Health Officer, Georgetown—Dr. E. Cochrane	Dr. G. H. Steven.	(i) Surgeon Specialist and Resident Surgeon, Public Hospital, Georgetown—Mr. J. D. Grierson, F.R.C.S. (ii) Medical Superintendent, Leprosy Hospital—Dr. F. G. Rose, F.R.C.E. (iii) Ophthalmologist—Dr. J. A. Brown. (iv) Prison Surgeon, & Medical Officer No. 1 Dispensary and Alms House, Georgetown—Dr. O. M. Francis.	Honorary Radiologist—Dr. F. G. Rose.	(i) Dr. J. Glavin (ii) Dr. C. E. S. Mitchell.	Resident Surgeon, Public Hospital, New Amsterdam, Barbicee. Medical Superintendent, Mental Hospital.	(i) Dr. E. W. Reeces Payse. (3) (ii) Dr. S. C. Bettencourt-Gomes. (4) (iii) Dr. C. R. Stryan. (5) (iv) Dr. G. W. Mearns (v) Dr. W. D. Polard. (vi) Dr. S. T. M. Sang. (vii) Dr. W. W. Beson. (viii) Dr. V. V. H. Hoakai. (ix) Dr. A. W. Dunn (x) Dr. N. J. Abbenetta. (xi) (1 vacancy).	(i) Dr. G. M. Kerry (ii) Dr. C. Ramdeholl. (iii) Dr. G. A. Grandvalet.	(i) Dr. Q. E. de Freitas. (ii) Dr. G. E. Carto-Canje-Highbury (iii) Dr. J. K. R. Buxton. (iv) Dr. L. R. Shar-Port Mourant. (v) Dr. R. N. Cozier (vi) Dr. J. E. Chow. (vii) Dr. D. J. Taitt. (viii) Dr. J. Nedd (ix) Dr. G. T. G. Mahasen. (x) Dr. F. A. Visproe (substituted Medical Officer).	Resident Surgeon, Public Hospital, Suddie, Medical Officer, Suddie District and On-derneem-ing Industrial School. (Acting). Resident Surgeon, Public Hospital, Barbicee and Medical Officer, Bar-tica District. Resident Surgeon, Public Hospital, Mabaruma, and Medical Officer, North Western District. Peter's Hall. Canje-Highbury Buxton. Port Mourant. West Coast, Dem-erara. Cotton Tree. Skaldon. West Bank, Dem-erara. Mahasen. Mahalency.

(1) Is also Surgeon-General's Deputy.
(2) Is also Honorary Medical Officer of Health for the town of New Amsterdam.
(3) Medical Officer in charge of Venereal Diseases Clinic, Public Hospital, Georgetown.
(4) Senior Physician, Public Hospital, Georgetown.
(5) Is also Visiting Medical Officer, Anna Regina, Pomeroon, and Wakenaam Dispensaries.
(6) Senior Surgeon, Public Hospital, Georgetown.
(7) Seconded for duty with the B.G.-Brazil Boundary Commission from 23rd September, 1933.

Appointments.

3. Dr. J. A. Henderson was appointed as Surgeon-General, British Guiana, as from 7th June, 1933. He arrived in the Colony on the 14th and assumed duty on 15th June, 1933, relieving Dr. Q. B. deFreitas, who had been acting as Surgeon-General since the departure of Dr. P. James Kelly, C.B.E., in July, 1932.

4. Dr. A. W. Dunn was appointed Government Medical Officer on the 26th May, 1933, and arrived in the Colony and assumed duty on the 14th June, 1933. He was seconded as Medical Officer to the British Section of the British Guiana-Brazil Boundary Commission as from 23rd September, 1933, and served in this capacity until the end of the year.

Temporary Appointments.

5. Drs. L. H. Wharton and L. S. Jaikaran acted as Medical Officers, the former throughout the year and the latter as from 8th August to the end of the year.

6. Dr. J. A. Nicholson served as a temporary Medical Officer from 14th February to 31st May, 1933, and again from 3rd July, 1933, to the end of the year.

7. Dr. M. O. Luck and Dr. J. Bisessar assisted the Department for a short period during the year.

Retirements and Resignations.

8. Dr. A. G. Coia resigned his appointment as Medical Officer, Public Hospital, Georgetown, as from the 9th September, 1933.

Deaths.

9. There were no deaths during the year.

Leave of Absence.

10. The following officers were on leave of absence out of the Colony during the year :—

Dr. C. E. S. Mitchell, Medical Superintendent, Mental Hospital, from 12th May to 12th October ; Dr. S. C. Bettencourt-Gomes, Senior Physician, Public Hospital, Georgetown, from 28th March to 8th May and from 15th June to 8th November ; Dr. W. D. Pollard, Government Medical Officer, from 9th June to 12th October ; Dr. V. V. H. Hoakai, Government Medical Officer, from 12th May to 31st December ; Dr. J. A. Browne, Ophthalmologist, from 1st to 31st December ; Mr. S. Sandiford, 2nd Class Clerk, Surgeon-General's Office, from 8th November to 31st December ; Mr. D. C. Wason, Fifth Class Clerk, Surgeon-General's Office, from 1st March to 31st August ; Miss A. E. L. Lewis, Fifth Class Clerk, Surgeon-General's Office, from 1st January to 14th January ; Mr. A. Fry, Government Pharmacist, from 29th July to 1st December ; Mr. C. O. Joseph, 1st Class Dispenser, from 4th May to 31st October.

11. The following officers were on leave in the colony :—

Dr. W. D. Pollard, Government Medical Officer, from 6th April to 18th May ; Dr. J. E. Chow, Government Medical Officer, from 30th June to 8th July and from 16th July to 31st December ; Dr. G. A. Grandsoult, Government Medical Officer, from 24th August to 23rd September ; Dr. D. J. Taitt, Government Medical Officer, from 1st to 21st August ; Mr. J. Rohee, Sixth Class Clerk, Public Hospital, Georgetown, from 1st September to 31st December ; Mr. C. W. Joseph, Sixth Class Clerk, Mental Hospital, from 1st June to 31st August ; Mrs. Jessie McCall, Night Matron, Public Hospital, Georgetown, from 1st September to 31st December ; Mrs. S. S. Matthews, Night Matron, Public Hospital, Suddie, from 15th July to 14th October ; Mr. W. J. Nelson, Head Attendant, Leprosy Hospital, from 6th November to 31st December.

Nursing Staff.

12. Five European Nurses are attached to hospitals as under :—

- (a) Public Hospital, Georgetown—
 Superintendent of Nurses—Miss Isabella C. Ferguson.
 Divisional Sisters—Miss M. G. Morris, Miss M. Sharp and Miss H. Prescott.
- (b) Public Hospital, New Amsterdam—
 Superintendent of Nurses—Miss N. M. C. Horrocks.

13. Miss Isabella C. Ferguson was appointed Nurse Superintendent, Public Hospital, Georgetown, in succession to Miss V. M. Meade who resigned during 1932. Miss Ferguson arrived in the Colony and assumed duty on 18th April, 1933, relieving Miss M. G. Morris who had been acting Nurse Superintendent since the 12th November, 1932.

Ordinances, Regulations, Etc.

14. The following Ordinance was passed during the year :—

Ordinance No. 27 of 1933. To make provision for the registration of Opticians, to regulate the practice of sight-testing and for purposes incidental thereto.

15. The following Regulations, etc., were also made during the year :—

- (a) Rules and directions for the Mental Hospital made under section 7 of Ordinance No. 9 of 1930 ;
- (b) Order in Council amending certain of the Schedules to the Hospital Fees Regulations, 1932, in respect of X-Ray fees and fees payable by Band Apprentices ;
- (c) Regulations with respect to the management and good order of the Leprosy Hospital (Leprosy Hospital Regulations, 1932) ;
- (d) Proclamation dated 13th October, 1933, bringing the Opticians Ordinance into force on 26th March, 1934 ;
- (e) Rules of the British Guiana Society for the prevention and treatment of Tuberculosis.

Financial.

16. The following is a comparative statement of revenue and expenditure for the years 1931, 1932 and 1933 :—

(a) Revenue—Medical Department.

1931.	1932.	1933.
\$43,430.86 (includes \$2,737.10 for rent of Quarters occupied by Medical Officers).	\$48,588.57 (includes \$2,400 for rent of Quarters occupied by Medical Officers).	\$43,088.08 (includes \$2,219.50 for rent of Quarters occupied by Medical Officers).

(b) Expenditure—Medical Department including Public Health Department.

1931.	1932.	1933.
\$547,034	\$546,690 ✓	\$554,025.51 ✓

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

1931.	1932.	1933.
12.4%	11.2% ✓	10.8% ✓

II.—PUBLIC HEALTH.

GENERAL REMARKS.

18. An epidemic of Influenza during the first quarter of the year had a far-reaching effect on the general health of the population throughout the country. Not only did it cause a marked increase in the cases of and deaths from Influenza and the allied respiratory diseases but also, secondarily, higher morbidity and mortality rates generally.

19. Following an abnormally heavy rainfall especially in the latter half of the year, there was greater prevalence of Malaria, thus contributing to greater incidence of sickness and of deaths.

20. Malaria and other "Fevers," Pneumonia and Bronchitis, Bowel Diseases, acute and chronic Nephritis, diseases of the Circulatory System and of early Infancy continue to constitute the most prevalent diseases and those responsible for the highest number of deaths. In all these groups the number of deaths and death-rates per thousand (Kidney Diseases excepted) were higher than in the previous year.

21. It is satisfactory to be able to record a decrease in 1933 in the number of deaths and death-rate from Tuberculosis (all forms) compared with the previous year.

22. The general death rate was 24.4 per 1,000 which is the highest ratio since the year 1928. (21.1)

23. The infantile mortality rate was 154 per 1,000 births—the highest ratio since 1928. (154)

A.—General Diseases.

24. *Pneumonia and Broncho-Pneumonia*.—285 cases were treated in public hospitals, with 170 deaths compared with 187 cases and 100 deaths in 1932. The total number of deaths registered in the whole Colony was 712 compared with 508 in the previous year.

25. *Circulatory System*.—236 cases of all forms of heart disease were treated in public hospitals, with 108 deaths, compared with 299 cases and 127 deaths in 1932. The above figures do not include diseases of the arterial, venous and lymphatic systems.

26. *Nephritis*.—459 cases of nephritis were treated in public hospitals with 150 deaths compared with 486 and 135 respectively in 1932. The total number of deaths from nephritis registered in the whole Colony was 517 compared with 491 in the previous year.

27. The following Table shows the number of in-patients with acute and chronic nephritis, together with deaths and case mortality, in public hospitals of the Colony for the last ten years :—

	Cases.	Deaths.	Case Mortality.
1924	763*	221*	28.9%
1925	976	214	21.9%
1926	763	190	24.9%
1927	794	206	25.9%
1928	495	161	32.5%
1929	484	143	29.5%
1930	449	111	24.7%
1931	473	124	26.2%
1932	486	135	27.7%
1933	459	150	32.7%

*Amended to include Uræmia.

28. *Bowel Diseases (Enteritis, Colitis, Diarrhoea, etc., excluding Enteric Fever and The Dysenteries)*. This group accounted for 359 cases and 80 deaths, while the deaths throughout the Colony registered as due to these causes were 456. These figures show a definite increase compared with the corresponding dates in 1932.

29. *Cancer and other Malignant Tumours*.—Malignant disease was responsible for 97 cases and 33 deaths in the Public General Hospitals, compared with 132 and 34 respectively in 1932.

30. The total number of deaths from Cancer in the Colony during 1933 is given by the Registrar-General as 86.

31. The following Table furnishes a comparative statement of diseases treated with deaths in Government Hospitals during the years 1929, 1930, 1931, 1932 and 1933 :—

	1929.		1930.		1931.		1932.		1933.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Malaria ...	2,293	164	2,224	129	1,847	112	2,509	137	2,509	167
Blackwater Fever ...	11	3	12	4	7	3	16	6	9	2
Dysentery ...	144	16	203	19	173	21	105	8	135	20
Enteric Fever ...	91	24	134	29	94	23	82	24	96	30
Diarrhoea and Enteritis and Colitis ...	352	69	289	67	287	63	307	67	359	80
Filariasis (and Filarial Bubo) ...	291	11	243	7	226	9	224	12	271	19
Heart Disease (all forms) ...	363	152	430	165	437	167	299	127	226	170
Nephritis (including Uraemia) ...	484	143	400	99	473	124	483	135	459	150
Pneumonia (including Broncho and Lobar) ...	389	197	278	134	264	131	187	100	285	170
Tuberculosis (including Phthisis) ...	368	127	383	143	453	164	550	170	538	165
Influenza ...	42	...	79	3	235	14	38	...	348	15
Bronchitis ...	820	60	805	71	867	76	716	88	706	103

32. The deaths registered as due to the same diseases throughout the Colony for the same periods are as follows :—

	1929.	1930.	1931.	1932.	1933.
Malaria ...	1,198	1,104	834	1,034	1,140
Blackwater Fever ...	11	12	12	8	6
Dysentery ...	141	105	128	68	118
Enteric Fever ...	44	53	52	46	68
Enteritis (including Diarrhoea) ...	448	380	397	332	456
Filariasis (including Filarial Bubo) ...	52	37	43	52	73
Heart Disease (all forms) ...	351	359	383	336	359
Nephritis (including Uraemia) ...	514	528	487	491	517
Pneumonia (including Broncho and Lobar) ...	661	588	563	508	712
Tuberculosis (including Phthisis) ...	276	302	287	320	289
Influenza ...	121	94	185	91	334
Bronchitis ...	371	386	379	353	415

33. The diseases responsible for the highest number of deaths for the whole Colony during the years 1929, 1930, 1931, 1932 and 1933, arranged in quarterly periods, are shown in the following Table :—

Diseases.	March Quarter.					June Quarter.					Sept. Quarter.					Decr. Quarter.					Total.				
	1929	1930	1931	1932	1933	1929	1930	1931	1932	1933	1929	1930	1931	1932	1933	1929	1930	1931	1932	1933	1929	1930	1931	1932	1933
Fevers (Malaria and others) ...	337	307	218	224	232	227	232	148	191	226	299	278	253	281	309	335	287	215	338	353	1,198	1,104	834	1,034	1,140
Pneumonia and Bronchitis ...	287	319	317	208	380	229	205	141	193	246	243	233	210	200	251	273	187	274	260	250	1,032	944	942	861	1,127
Kidney Diseases ...	133	139	137	114	157	132	126	111	125	111	112	138	124	127	117	148	132	119	135	143	525	535	491	501	528
Diseases of early Infancy (including Premature Birth, Infantile Debility, etc.) ...	155	196	169	157	220	113	109	111	101	118	169	144	110	154	170	223	207	180	229	203	600	656	570	641	711
Bowel complaints (including Dysentery, Diarrhoea, Enteritis, etc.) ...	226	203	189	168	179	126	121	122	92	132	114	89	118	103	133	188	137	165	155	206	654	550	594	458	646
Phthisis and other forms of Tuberculosis ...	82	77	71	83	104	58	64	72	81	58	61	81	78	80	70	75	80	66	76	57	276	302	287	329	289
Diseases of the Circulatory System ...	95	93	116	96	99	97	98	86	88	106	96	94	113	95	99	107	113	106	117	133	398	398	421	396	437
Diseases of the Nervous and Sense Organs ...	96	103	108	90	98	92	109	109	90	101	96	107	94	122	78	96	97	96	89	109	380	416	407	388	386

34. The following Table gives the different forms of malignant growths recorded in Public General Hospitals, together with the racial incidence in each :—

	Carcinoma.		Sarcoma.		Epithelioma.		Rodent Ulcer.		Endothelioma.		Unclassified.		TOTAL.	
	1932	1933	1932	1933	1932	1933	1932	1933	1932	1933	1932	1933	1932	1933
	European (other than Portuguese)	1	3	2	1	3	4
European (Portuguese)	10	7	...	...	1	1	1	...	...	...	...	...	12	8
East Indian	26	22	4	...	3	1	...	...	...	...	...	...	33	23
African	60	45	7	3	1	2	1	...	...	...	...	...	72	50
Mixed	9	9	1	...	...	2	...	...	...	...	...	...	12	11
Chinese	...	1	...	...	...	...	...	...	...	...	...	...	...	1
	106	87	12	3	7	7	2	...	...	...	5	...	132	97

35. The quarterly rainfall at the Botanic Gardens (Georgetown) for the last five years was :—

	1929.	1930.	1931.	1932.	1933.
1st Quarter	11.44	13.04	6.30	16.14	18'
2nd Quarter	33.04	35.16	24.23	41.67	32.50
3rd Quarter	15.99	26.23	23.29	13.96	24.43
4th Quarter	11.15	10.44	15.44	18.74	41.62
Total	71.62	84.87	69.26	90.51	116.55

36. The statement below is a return of deaths occurring in the whole Colony during each quarter of the year for the last five years :—

	1929.	1930.	1931.	1932.	1933.
1st Quarter	2,041	2,069	2,055	1,596	2,429
2nd Quarter	1,539	1,524	1,390	1,432	1,625
3rd Quarter	1,654	1,708	1,673	1,665	1,752
4th Quarter	2,047	1,882	1,730	2,001	2,081

B.—Communicable Diseases.

MOSQUITO OR INSECT-BORNE.

37. *Malaria*.—The total number of deaths registered as due to Malaria for the whole Colony was 1,140, *i.e.*, a death-rate of 3.54 per 1,000 of the population. ✓

38. The number of deaths from Malaria and the malaria death-rates per 1,000 of the population for the previous ten years were :—

Year.	No. of Deaths.	Rate per 1,000.
1923	1,080	3.60
1924	1,148	3.81
1925	1,054	3.46
1926	1,234	4.02
1927	1,715	5.55
1928	1,563	5.07
1929	1,198	3.86
1930	1,104	3.53
1931	834	2.65
1932	1,034	3.25

39. The average number of deaths for the decennium was 1,196 per annum. ✓

40. 2,509 cases were treated in public hospitals, with 167 deaths, compared with 2,509 cases with 137 deaths in 1932.

41. Below is given a Table showing the total number of in-patients treated in public hospitals, the number of cases of malaria and deaths together with the case

mortality, and the annual rainfall as taken at the Botanic Gardens (Georgetown) for the ten years 1924—1933 :—

Year.	Total In-Patients.	Cases Malaria including Black-water Fever.	Deaths Malaria including Black-water Fever.	Case Mortality.	Rainfall (Inches).
1924	17,565	1,815	93	5.1%	86.18
1925	19,025	1,914	77	4.0%	63.25
1926	18,481	1,308	107	8.2%	80.32
1927	20,671	3,188	184	5.8%	118.63
1928	20,126	2,667	156	6.0%	96.48
1929	19,577	2,304	167	7.2%	71.62
1930	19,657	2,236	133	5.9%	84.87
1931	18,276	1,854	115	6.2%	69.26
1932	19,015	2,525	143	5.7%	90.51
1933	19,754	2,518	169	6.7%	116.55

42. The importance of proper maintenance of anti-malaria measures cannot be over-estimated. The above statistics show that much remains to be done in order to effect reduction in the incidence of this disease. It is therefore necessary to stress the need on the part of Local Sanitary Authorities, Managers of Sugar Plantations and all others concerned for continuous application of all practicable means to this end.

43. *Blackwater Fever*.—6 deaths were registered in the whole Colony as due to this disease as compared with 8 in the previous year. In public hospitals 9 cases were treated with 2 deaths.

44. *Filariasis and Filarial Bubo*.—The deaths registered in the whole Colony as due to this disease were 73. The average number of deaths for the ten years 1923-1932 was 57 per annum.

45. 271 cases were treated in public hospitals with 19 deaths compared with 224 cases, with 12 deaths in 1932.

46. *Yellow Fever*.—As for many years past, no cases occurred.

C.—*Infectious Diseases.*

47. *Influenza*.—An epidemic of Influenza occurred in the Colony during the first three months of the year. The numbers attacked were high but the death-rate was not unduly disproportionate. 348 cases were treated in public hospitals with 15 deaths. The deaths registered as due to the same disease throughout the Colony were 334.

48. Georgetown and the plantations and villages on the East and West Banks of the Demerara River suffered most heavily. The disease spread from these centres throughout the Colony though it was less severe in the more remote districts.

49. In the majority of cases the disease presented the usual features while in fatal cases pneumonic complications were the cause of death.

50. At the commencement of the outbreak active measures were promptly instituted wherever it threatened to gain a hold. In Georgetown an isolation ward for the Police was established at the barracks, while emergency hospitals were set up at Windsor Forest and on Pln. Diamond. In addition thousands of leaflets on preventive measures were distributed by the Government and Georgetown Municipal Public Health Departments and disinfection of public rooms was energetically carried out.

51. *Enteric Fever*.—246 cases were notified with 68 deaths. The average numbers of notifications and deaths during the decennium 1923-1932 were 296 and 73 per annum respectively. 96 cases were admitted to public hospitals in which the number of deaths was 30.

52. *Dysentery, including amœbic, bacillary and other forms.*—The deaths registered in the Colony numbered 118, giving a death-rate of 0.36 per thousand compared with 0.54 the average rate per annum during the previous ten years. 135 cases were treated in public hospitals, with 20 deaths compared with 105 cases and 8 deaths in 1932.

53. *Pulmonary and other forms of Tuberculosis.*—289 deaths were recorded by the Registrar-General as due to Phthisis and other forms of Tuberculosis, which represents a death-rate of 0.9 per thousand of the population.

54. The number of deaths and death-rates per 1,000 during the previous ten years were:—

Year.	No. of Deaths.	Rate per 1,000 of population.
1923	394	1.3
1924	344	1.1
1925	349	1.1
1926	326	1.1
1927	345	1.1
1928	301	1.0
1929	276	0.9
1930	302	1.0
1931	287	0.9
1932	320	1.0

55. The average for this decennium was 324 deaths and a death-rate of 1.0.

56. The number of cases notified during the year was 385 (374 being pulmonary and 11 being other forms) compared with 423 in 1932. 538 cases, with 165 deaths, were treated in public hospitals compared with 550 cases and 170 deaths in 1932. Of the hospital cases 514 were pulmonary, with 157 deaths and 24 cases, with 8 deaths were due to other forms of Tuberculosis.

57. The Table below furnishes a statement of the total number of cases treated and deaths in the Georgetown, New Amsterdam and Best Hospitals.

Hospital.	Cases (All forms).		Deaths (All forms).	
	1932.	1933.	1932.	1933.
Georgetown	334	363	129	124
New Amsterdam	42	63	18	19
Best	84	73	9	8

58. *Diphtheria.*—The number of cases notified in the whole Colony was 30 compared with 43 in 1932, and the number of deaths registered was 7 as against 10 in 1932. 17 cases were treated in public hospitals with 7 deaths, compared with 30 cases, and 5 deaths in 1932.

59. *Small-pox.*—No case occurred during the year.

60. *Chicken-pox.*—The number of cases notified in the whole Colony was 120 as against 96 in 1932. There were no deaths. 34 cases were treated in public hospitals.

61. *Tetanus.*—20 cases were treated in public hospitals, with 13 deaths, compared with 30 cases, and 15 deaths, in 1932.

62. *Yaws.*—10 cases were treated in public hospitals compared with 33 cases in 1932. There were no deaths. 351 cases were treated in the out-patient Departments as against 37 cases in 1932.

63. *Venereal Diseases.*—The following Table gives the number of cases of venereal diseases treated as in-patients in public hospitals for the last ten years:—

	SYPHILIS.					Soft Chancro.	Gonorrhoea and its Complications.	Granuloma Venereum.
	Primary.	Secondary.	Tertiary.	Hereditary.	Stage not Indicated.			
1924	85	34	190	46	*	70†	281‡	78
1925	112	16	296	33	*	27	336	*
1926	128	93	361	22	*	51	224	*
1927	246	16	597	39	...	6	195	123
1928	157	38	418	88	1	170	372	145
1929	228	31	352	67	9	120	616	130
1930	271	44	471	37	31	38	626	111
1931	214	121	782	123	68	12	526	57
1932	75	46	651	89	12 = 273	38	647	71
1933	159	51	694	197	7 = 228	60	645	63
	1,675	490	4,722	551	128	592	4,468	778

NOTES:—*Included in other figures in case of Syphilis. Not specially mentioned in case of Granuloma Venereum, and classed under other general headings not listed.
 †Under the heading "Chancres and ulceration of the penis."
 ‡Under the heading "Gonorrhoea" but including complications.

64. It is evident from the statistics quoted that the activities of the clinic have been well maintained. The problem of dealing with defaulters, however, calls for serious attention. The defaulter not only runs a personal risk but is also a menace to the health of the community.

65. The number of Novarsenobillon and other injections given for Syphilis at the public hospitals was 23,785 compared with 25,443 in 1932.

66. The Tables below furnish statements, classified in age-incidence periods, of in-patients treated for venereal diseases in public hospitals, prisons and the Alms House during the year 1933:—

(i)—PUBLIC HOSPITALS.*

Age.	SYPHILIS.									Gonorrhoea and its complications.			Chancroid.			Granuloma Venereum and Pudenti.		
	Primary.			Secondary.			Tertiary or Chronic.†			M.	F.	T.	M.	F.	T.	M.	F.	T.
	M.	F.	T.	M.	F.	T.	M.	F.	T.									
Under 1 year	...	...	...	...	...	...	16	9	25	4	2	6	...	...	...	...	...	...
1 to under 5	...	...	...	...	...	...	4	3	7	2	3	5	...	...	...	...	...	...
5 " 10	...	...	...	...	...	...	7	11	18	3	6	9	1	...	1	...	...	...
10 " 20	16	11	27	6	6	12	49	60	109	61	46	107	7	5	12	3	4	7
20 " 30	53	6	64	15	2	17	105	98	203	203	69	272	22	1	23	10	14	24
30 " 40	23	1	29	6	1	7	105	65	170	143	21	164	9	1	10	8	7	15
40 " 60	18	...	18	5	...	5	109	49	158	72	8	80	6	...	6	9	4	13
60 years and over	1	...	1	1	...	1	34	12	46	18	...	18	...	...	...	...	1	1
Total	121	18	139	33	9	42	429	307	736	506	155	661	45	7	52	30	30	60

* NOTE.—The totals in this Table differ from those in the Table above in that cases of double infection are here included
 † Includes "Hereditary" and "Stage not indicated."

(ii)—GEORGETOWN AND NEW AMSTERDAM PRISONS AND ALMS HOUSE.

Age.	SYPHILIS.									Gonorrhoea and its complications.			Chancroid.			Granuloma Venereum and Pudenti.		
	Primary.			Secondary.			Tertiary or Chronic.*			M.	F.	T.	M.	F.	T.	M.	F.	T.
	M.	F.	T.	M.	F.	T.	M.	F.	T.									
Under 1 year
1 to under 5
5 " 10
10 " 20
20 " 30	2	...	2	2	...	2	...	...	...	3	...	3
30 " 40	2	...	2	1	...	1	...	1	...	1	...	...
40 " 60	2	1	3	2	1	3	...	...	...	3	1	4
60 years and over	1	...	1	...	...	...	...	...	...
Total	6	1	7	7	1	8	2	...	2	6	1	7

* Includes "Hereditary" and "Stage not indicated."

67. The following Table shows the number of Out-patient attendances at public hospitals and Government dispensaries for the past three years:—

	1931.		1932.		1933.	
	Public Hospitals.	Government Dispensaries.	Public Hospitals.	Government Dispensaries.	Public Hospitals.	Government Dispensaries.
Gonorrhoea and its complications ...	6,935	165	6,793	896	6,726	817
Chancroid ...	117	8	145	22	471	6
Syphilis (including Tertiary) ...	14,844	84	16,144	134	17,517	113
Granuloma Venereum and Pudendi ...	270	...	302	12	306	7

68. The Tables below furnish statements, classified in age-incidence periods, of Out-patients (new cases) treated at public hospitals, Government dispensaries and prisons during the year:—

(i) PUBLIC HOSPITALS.

Age.	SYPHILIS.									Gonorrhoea and its complications.			Chancroid.			Granuloma Venereum and Pudendi.		
	Primary.			Secondary.			Tertiary or Chronic.*			M.	F.	T.	M.	F.	T.	M.	F.	T.
	M.	F.	T.	M.	F.	T.	M.	F.	T.									
Under 1 year ...	1	...	1	...	...	...	5	10	15	...	...	...	...	...	...	...	...	...
1 to under 5 ...	...	...	...	...	...	...	1	9	10	...	...	...	...	...	...	...	...	...
5 " 10 ...	1	...	1	...	...	...	7	6	13	2	...	2	...	...	...	...	...	...
10 " 20 ...	38	20	58	13	9	22	46	121	167	153	61	214	12	2	15	4	2	6
20 " 30 ...	85	15	101	23	31	54	160	264	424	545	86	631	37	9	46	3	4	7
30 " 40 ...	40	...	40	14	6	20	174	174	348	271	37	308	11	1	12	3	1	4
40 " 60 ...	19	...	19	...	...	...	150	81	231	118	4	12	5	...	5	1	...	1
60 and over ...	...	...	...	...	...	...	22	3	25	6	...	6	...	...	...	1	...	1
Total ...	184	36	220	50	46	96	565	668	1,233	1,095	188	1,283	65	13	78	12	7	19

NOTE.—* Includes "Hereditary" and "Stage not indicated."

(ii) GOVERNMENT DISPENSARIES.

Age.	SYPHILIS.									Gonorrhoea and its Complications.			Chancroid.			Granuloma Venereum and Pudendi.		
	Primary.			Secondary.			Tertiary or Chronic.*			M.	F.	T.	M.	F.	T.	M.	F.	T.
	M.	F.	T.	M.	F.	T.	M.	F.	T.									
Under 1 year ...	...	...	...	...	...	...	...	...	...	...	2	2	...	...	...	...	...	...
1 to under 5 ...	...	...	...	...	...	...	...	...	...	3	5	8	...	...	...	...	...	...
5 " 10 ...	...	...	...	...	...	...	...	...	...	5	12	17	...	...	...	...	...	...
10 " 20 ...	2	...	2	...	2	1	2	3	38	35	73	1	...	1	...	...	...	...
20 " 30 ...	4	1	5	4	7	11	5	6	101	28	129	3	...	3	1	1	2	...
30 " 40 ...	1	...	1	4	2	6	8	4	12	74	30	104	1	...	1	...	...	...
40 " 60 ...	...	...	...	3	...	3	5	1	6	38	35	73	...	...	...	1	1	2
60 years and over ...	...	...	...	...	...	...	...	...	...	11	38	49	...	...	...	...	...	...
Total ...	7	1	8	11	11	22	19	8	27	270	185	455	5	...	5	2	2	4

NOTE.—* Includes "Hereditary" and "stage not indicated."

(iii)—GEORGETOWN AND NEW AMSTERDAM PRISONS.

Age.	SYPHILIS.									Gonorrhœa and its Complications.			Chaneroid.			Granuloma Venereum and Pudendi.		
	Primary.			Secondary.			Tertiary or Chronic.*			M.	F.	T.	M.	F.	T.	M.	F.	T.
	M.	F.	T.	M.	F.	T.	M.	F.	T.									
Under 1 year
1 to under 5
5 " 10
10 " 20	2	...	2	1	...	1	...	...
20 " 30	...	5	...	5	...	...	...	...	...	...	25	...	25	12	...	12	...	...
30 " 40	12	...	12	11	...	11	...	...
40 " 60	...	1	...	1	...	...	...	...	...	...	5	...	5	...	...	...	...	...
60 years and over
Total	6	...	6	...	...	...	...	...	...	44	...	44	24	...	24	...	...	...

NOTE.— Includes " Hereditary " and " Stage not indicated."

69. The number of cases of Venereal Diseases treated on Sugar Estates for the past three years was :—

	1931.	1932.	1933.
Gonorrhœa	...	171	182
Chaneroid	...	18	12
Syphilis (including tertiary)	...	46	60
Granuloma Venereum and pudendi	...	5	2

70. Classified in age-incidence periods the In-patients treated on Sugar Estates during the year were as follows :—

Age.	SYPHILIS.									Gonorrhœa and its complications.			Chaneroid.			Granuloma Venereum and Pudendi.		
	Primary.			Secondary.			Tertiary or Chronic.*			M.	F.	T.	M.	F.	T.	M.	F.	T.
	M.	F.	T.	M.	F.	T.	M.	F.	T.									
Under 1 year	2	1	3	...	...	...	1	...	1	...	1	1	...	...	...	...	...	...
1 to under 5	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5 " 10	...	1	1	...	1	1	...	...	...	2	...	2	...	...	...	...	...	...
10 " 20	2	...	2	...	2	3	...	...	...	13	7	20	1	...	1	...	...	...
20 " 30	2	1	3	3	...	3	1	...	...	30	8	38	...	...	...	...	...	...
30 " 40	...	...	...	...	2	2	1	1	2	15	6	21	...	...	1	...	...	...
40 " 60	3	...	3	...	...	...	3	...	3	10	1	11	1	...	1	...	...	...
60 years and over	...	...	...	...	...	...	...	...	...	1	2	3	...	...	...	...	...	...
Total	10	3	13	4	5	9	6	1	7	71	25	96	3	...	3	...	...	...

NOTE.—* Includes " Hereditary " and " Stage not indicated."

71. The Table below shows the Out-patients (new cases) treated on Sugar Estates during the year, classified in age-incidence periods :—

Age.	SYPHILIS.									Gonorrhœa and its complications.			Chaneroid.			Granuloma Venereum and Pudendi.		
	Primary.			Secondary.			Tertiary or Chronic.*			M.	F.	T.	M.	F.	T.	M.	F.	T.
	M.	F.	T.	M.	F.	T.	M.	F.	T.									
Under 1 year	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...
1 to under 5	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...
5 " 10	...	...	...	...	...	...	...	...	...	...	2	2	...	...	...	...	...	...
10 " 20	...	...	...	1	1	2	1	...	1	10	3	13	...	...	...	...	...	...
20 " 30	...	2	2	...	...	...	...	1	1	33	3	36	3	...	3	...	...	...
30 " 40	1	...	1	...	1	1	...	...	...	14	3	17	...	...	...	...	...	...
40 " 60	2	...	2	...	...	...	2	...	2	8	2	10	1	...	1	...	...	...
60 years and over	...	...	...	...	...	...	1	...	1	1	...	1	...	...	...	...	...	...
Total	3	2	5	1	2	3	4	1	5	68	13	81	4	...	4	...	...	...

NOTE.—* Includes " Hereditary " and " Stage not indicated."

72. Below are extracts from the report of Dr. E. G. H. Payne, M.B., Ch.B., Medical Officer in charge of the venereal diseases clinics at the Public Hospital, Georgetown:—

“*Staff.*—The staff consisted of one Medical Officer assisted by the following:—

- “ 1 senior male nurse.
- “ 1 senior female nurse.
- “ 2 part-time assistant male nurses.
- “ 1 part-time assistant female nurse.

“ The days on which sessions were conducted remained the same as heretofore.

“*Identification System.*—During the year the issue of cards bearing identification numbers was instituted. Each patient is now referred to by number and not by name. This method greatly facilitates filing and patients records are found with a minimum amount of labour. It has worked very satisfactorily.

“ Cases appeared to come up for treatment earlier than they did in previous years. This is as it should be and may be read as a favourable reaction to educational propaganda.

“ In the column for Hereditary Syphilis, the highest number of cases is to be found in the age period 10-20 years. The conditions for which treatment was sought were mainly diseases of the eye referred from the Ophthalmic Department and lesions of the Osseous system.

“ It is a matter for comment that the cases of Interstitial Keratitis made rapid recovery under treatment with arsenobenzol compounds combined with bismuth preparations.

“ New cases of early syphilis represented 19.08% of the total number of cases of syphilis admitted to the clinic during the year.

“ The ratio of early syphilis to early gonorrhœa was 1 to 2.86.

“*Gonorrhœa.*—The number of cases of acute gonorrhœa were practically the same as in 1932. It was noticed that a smaller number of chronic cases in relation to the number of acute cases applied for treatment. Early infections of gonorrhœa represented 64.4% of the total number of cases of gonorrhœa admitted.

“*Undiagnosed and non-Venereal.*—I regret to have to record that the number of undiagnosed cases continued to be considerable. A fair proportion of these cases were certainly venereal, but as a result of early defaulting, an accurate diagnosis was frustrated. Clinically a large number appeared to be cases of syphilis in the primary and tertiary stages.

“ Many persons applied for treatment under the fear of being infected with venereal disease.

“*Defaulting.*—In Appendix A. V (a) to V (d), I have submitted some statistics which give some idea of the number of defaulters amongst diagnosed cases. Propaganda against defaulting is conducted through the medium of pamphlets which warn all cases to attend the clinic until they are discharged from attendance by the medical officer.

“ In spite of warning men will still brave the dangers of undertreatment in their quest for employment, which in many cases may only be obtained out of the city.

“ Others and especially cases of gonorrhœa amongst workers in the city are just neglectful.

“ Some kind of follow-up system is always necessary for the good working of every V. D. Clinic, and I think the time has arrived when some method may be tried out. For men a short note with the request that the receiver should call on the writer as early as possible, sent in a plain sealed envelope, may be tried. In the case of women patients and mothers of infected children, the services of the Health Visitor might be utilized to persuade defaulters to return for treatment. This method was tried with a fair measure of success

"during the early part of the year under review in the case of defaulting patients referred from the City Welfare and Maternity League. It is well worthy of a further trial."

APPENDIX A.

TABLE I.—NEW CASES (MALE AND FEMALE) ADMITTED TO THE VENEREAL DISEASES CLINIC DURING THE YEAR 1933.

	Sy. 1.	Sy. 2.	Sy. 3.	Acute G.	Ch. G.	Chancroid.	Granuloma Ven.	Hereditary Syphilis.
Comparative figures for year 1932	159	39	534	565	312	65	16	99
...	116	60	929	574	406	35	23	109

TABLE II.—TOTAL ATTENDANCES OF CASES—MALE AND FEMALE—24,062.

Half year	Syphilis.	Gonorrhoea.	Chancroid.	Granuloma Venereum.	Non-Veneral Diseases.	Undiagnosed.
To June	7,338	2,789	187	189	211	466
To December	8,629	3,009	270	122	305	556
Total	15,967	5,798	457	302	516	1,022

TABLE III.—NUMBER OF TREATMENTS GIVEN WITH—

	AB. C.	Bl.	T. E.	Mixed Vaccines.
Half year to June	3,893	5,423	285	434
Half year to December	3,747	4,678	157	127
Total	7,640	10,100	442	561

N.B.—A further number of complementary treatments were given with other chemo-therapeutics, e.g., Manganese Butyrate, Contramine, S. U. P. 36 in cases of Gonorrhoea and its complications.

TABLE IV.—DISMISSALS FROM CLINIC DURING THE YEAR 1933 TO DECEMBER, 31ST.

	Cured.	Non-veneral Disease.	Undiagnosed.
Male	54	114	215
Women	6	56	293
Total	60	170	508

TABLE V.—DEFAULTERS DURING 1933.

(a) No. of cases of Primary Syphilis who had less than one course of treatment.

M.	F.	Total.
80	15	95

(b) No. of cases of Acute Gonorrhoea with less than 3 attendances.

M.	F.	Total.
154	24	178

(c) No. of cases of Acute Gonorrhoea that did not complete their attendance until period of curative tests were made.

M.	F.	Total.
163	11	174

(d) Cases referred from Maternity and Ante-natal Centre.

Total No. referred	...	186
Total No. attended	...	108
Defaulted after attending	...	70

TABLE VI (a).
ACTUAL NUMBER OF PATIENTS TREATED AT V.D. CLINIC DURING 1933 WITH A DISTRICT CENSUS (MALES).

DISEASES.	Georgetown.	Lower E.C., Demerara.	Upper E.C., Demerara.	West Coast, Demerara.	East Bank, Demerara.	West Bank, Demerara.	Berbice.	Essequibo.	Demerara River District.	Total.
Syphilis 1	63	14	9	3	19	9	12	12	12	123
Syphilis 2	17	5	3	3	12	12	12	12	12	36
Syphilis 3	216	52	37	31	36	12	12	12	12	410
Hereditary Syphilis	26	12	6	6	10	1	1	1	1	64
Acute Gonorrhoea	340	54	35	25	34	12	12	12	12	522
Chronic Gonorrhoea	168	47	20	57	23	12	4	12	4	317
Syphilis 1 and Gonorrhoea	32	1	1	4	3	1	1	1	1	42
Syphilis 2 and Gonorrhoea	9	4	1	1	1	1	1	1	1	16
Syphilis 3 and Gonorrhoea	58	20	7	7	7	7	1	3	5	115
Hereditary Syphilis and Gonorrhoea	1	1	1	1	1	1	1	1	1	2
Chancroid	22	7	3	12	12	1	1	1	1	39
Granuloma Venereum	11	1	1	1	1	1	1	1	1	16
Syphilis and Chancroid	4	1	1	1	1	1	1	1	1	6
Gonorrhoea and Chancroid	2	1	1	1	1	1	1	1	1	5
Syphilis and Granuloma	3	1	1	1	1	1	1	1	1	5
Gonorrhoea and Granuloma	1	1	1	1	1	1	1	1	1	1
Syphilis, Chancroid and Gonorrhoea	1	1	1	1	1	1	1	1	1	1
Total	973	219	121	124	140	76	15	25	28	1,719

TABLE VI (b).
ACTUAL NUMBER OF PATIENTS TREATED AT V.D. CLINIC, PUBLIC HOSPITAL, GEORGETOWN, DURING 1933, WITH A DISTRICT CENSUS (FEMALES).

DISEASES.	Georgetown.	Lower E.C., Demerara.	Upper E.C., Demerara.	West Coast, Demerara.	East Bank, Demerara.	West Bank, Demerara.	Berbice.	Essequibo.	Demerara River District.	Total.
Syphilis 1	24	3	1	1	3	12	1	1	1	33
Syphilis 2	14	1	3	1	1	1	1	1	1	19
Syphilis 3	497	72	25	24	46	12	1	1	1	197
Hereditary Syphilis	42	7	12	1	12	12	1	1	1	58
Acute Gonorrhoea	34	9	1	1	4	1	1	1	1	52
Chronic Gonorrhoea	42	9	12	12	4	12	1	1	1	63
Syphilis 1 and Gonorrhoea	8	1	1	1	1	1	1	1	1	19
Syphilis 2 and Gonorrhoea	17	7	1	1	1	1	1	1	1	27
Syphilis 3 and Gonorrhoea	1	1	1	1	1	1	1	1	1	7
Hereditary Syphilis and Gonorrhoea	5	1	1	1	1	1	1	1	1	12
Chancroid	6	1	1	3	1	1	1	1	1	11
Granuloma Venereum	7	2	1	1	1	1	1	1	1	11
Syphilis and Chancroid	1	1	1	1	1	1	1	1	1	2
Gonorrhoea and Chancroid	1	1	1	1	1	1	1	1	1	1
Syphilis and Granuloma	3	1	1	1	1	1	1	1	1	4
Gonorrhoea and Granuloma	1	1	1	1	1	1	1	1	1	1
Total	701	111	59	33	62	35	4	8	1	994

73. *Leprosy*.—During the year the erection of a building to house the children who had been accommodated previously with the adults was practically completed. The cost of this was met from money collected in England by Mrs. E. Ellis supplemented by a grant from the British Empire Leprosy Relief Association.

74. A piped water supply was laid on from an artesian well in Clonbrook Village and has added materially to the amenities of the Institution. It is earnestly hoped that it will prove possible to carry out much needed repairs to the various buildings within the Leprosy Hospital Compound in the near future.

75. The first annual meeting of the British Guiana Branch of the British Empire Leprosy Relief Association was held on 2nd February when His Excellency the Governor presided. The meeting was extremely well attended, much interest being shown by the public in general.

76. The Lady Denham Home Fund, a collection being made by the wife of His Excellency the Governor for the establishment of a home for children rendered destitute by the infection of either themselves or their parents or both with Leprosy, amounted to over \$12,000 at the close of the year.

77. The buildings in the Leprosy Hospital Compound are capable of accommodating 479 patients—303 males and 176 females.

78. The highest and lowest total number of inmates in the Leprosy Hospital was 296 and 258 respectively.

79. The daily average number of inmates resident during the year was 172 males and 108 females—total 280.

80. The number of patients treated in the infirmaries was 230.

81. There were 18 deaths, 13 males and 5 females, during the year, giving a death-rate of 4.5 per cent. of the total number of inmates.

82. The number of new cases admitted was 42 males and 25 females compared with 42 males and 29 females in 1932.

83. The following are extracts from the Annual Report for the year 1933 furnished to the Surgeon-General by Dr. F. G. Rose, M.B.E., B.A., M.B., B.Chir., (Camb.), M.R.C.S. (Eng.), L.R.C.P. (Lond.), M.D., D.M.R. & E. (Camb.), Medical Superintendent, Leprosy Hospital:—

Staff.—The senior staff comprised a Medical Superintendent, Steward, Laboratory Assistant, Electrician, Chief Attendant and Issuer on the male side, and on the female side the Rev. Sister Superior of the Czecho-Slovakian Sisters of the Immaculate Conception, who is Assistant Superintendent of the Female Hospital, with a staff of 5 Sisters, 3 of whom acted as nurses, one as Issuer, and another as cook and housekeeper to the community.

Buildings.—During the year one of the disused female Attendants' cottages was converted into a store by our attendant carpenters and the old store evacuated with the object of converting it into a laboratory and dispensary, a purpose for which the building is well suited. The old laboratory was contained in an area of 90 square feet and space was far too limited to permit of its being used to the best purpose.

A new children's home was erected during the year from funds collected by Mrs. Ellis, a visitor to the Colony and a cousin of the late Bishop Galton.

The buildings comprising the home are 3 in number, one large building for the girls and small boys, a cottage for the bigger boys, and a treatment centre for the children as well as for out-patients.

All the work except the painting was done by inmate and attendant carpenters and reflects, in my opinion, great credit on those concerned.

Dietary.—The dietary scale seems to work satisfactorily and little complaint is now made on this score, a welcome change from the experience of past years.

Occupation.—All the minor repairs of buildings, the erection of the children's home, the preparation of its grounds, the making of boots, shoes and slippers and clothing for the use of the patients were done as usual by patients under the supervision of the chief attendant and attendant carpenters.

Many patients also engaged in farming, poultry rearing, the rearing of sheep, besides carrying on trench-cleaning, weeding and other forms of unskilled labour.

Patients also assist in maintaining cleanliness in the wards, in dressing ulcers, giving injections and local applications and administering treatment in the Electro-therapeutic department.

Sports and Pastimes.—The Guide-troop and Brownie Pack, under the captaincy of Mrs. F. G. Rose, were active throughout the year.

The Rev. L. Chybnalle accepted the post of Scoutmaster to the hospital troop during the year and one of the male attendant staff was appointed Assistant Scoutmaster. The troop held 54 meetings during the year.

“Great interest was shown in the Guide and Brownie troops by the Officials of the Association, in the shape of visits from the President, Lady Denham; the Colony Commissioner, Mrs. G. R. Reid; and others; and Christmas gifts from many ladies in Georgetown who kindly allowed themselves to be nominated as ‘Fairy Godmothers’ to individual Guides and Brownies.

“The Leprosy Board sat for the examination of patients after admission and prior to discharge on three occasions.

“*Gifts.*—Many gifts of books, newspapers, toys, etc., were received and distributed from various donors in Georgetown.

“A sum of \$117.30 was collected by Mrs. F. G. Rose from various firms and individuals out of which Christmas gifts for all the patients were provided for the annual Christmas Tree.

“*School.*—There were 39 scholars on the register, the average attendance for the year being 27.

“*Treatment.*—Specific treatment is now standardized to consist of a preliminary course of Alepol intravenously, followed by Hydnocarpus Oil and Esters intramuscularly. The injections, at first bi-weekly, are later given once a week, later still once a fortnight (when the maximum dose has been attained) and once a month when the stage of quiescence is reached

“Intra-dermal injections of Esters are used in suitable cases.

“Local applications of Trichloroacetic acid and Carbonic snow continue to be used.

“40 operations were performed on the male side and 32 on the female side.

“204 sessions were held in the Electro-Therapeutic department for the treatment of 72 male and female patients.

“The following laboratory investigations were made:—examinations of smears from nasal mucosa, nodules, etc. :—

“ For Mycobacterium leprae	...	...	730
“ Kahn precipitation Test	...	...	34
“ Examination of blood for malarial parasites	...	...	5
“ Examinations of Urine	...	...	11
“ Examination of stools for Ankylostome Ova, etc.	...	...	8
“ Examination of sputum for Bacillus Tuberculosis	...	...	11 ”

84. The statistical returns of the Leprosy Hospital for the year are as follows :—

(1) TABLE SHOWING NUMBER OF PATIENTS TREATED AND PERCENTAGE MORTALITY, 1933.

	M.	F.	T.
Number of patients on 31st December, 1932	161	106	267 ✓
New admissions, 1933	42	25	67 ✓
Re-admitted once in 1933	31	18	49 ✓
Re-admitted twice in 1933	2	4	6 ✓
Re-admitted thrice in 1933	3	1	4 ✓
Total number treated in Leprosy Hospital, 1933	239	154	393 ✓
Died in Leprosy Hospital, 1933	13	5	18 ✓
Percentage mortality, 1933	5.4	3.2	4.5
Daily average number treated, 1933	172	108.3	280.3

(2)-TABLE SHEWING NUMBER OF ADMISSIONS, DISCHARGES, DEATHS, ETC., CLASSIFIED ACCORDING TO RACE AND SEX.

	EUROPEANS.				EAST INDIANS.				Chinese.		Aboriginal Indians.		Black.		Mixed Races.		Total.		Grand Total.
	Other than Portuguese.		Portuguese.		East Indian Immigrants.		B. G. East Indians.		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
	M.	F.	M.	F.	M.	F.	M.	F.											
... Remaining on 31st December, 1932	1	...	6	4	33	9	24	11	2	3	...	...	68	60	27	19	161	106	267
... New admissions in 1933	...	...	4	...	12	6	8	5	...	...	...	...	15	11	3	3	42	25	67
... Re-admissions once in 1933	...	...	1	2	4	3	9	5	...	...	...	...	14	7	3	1	31	18	49
... Re-admissions twice in 1933	...	...	...	...	...	...	1	4	...	...	...	...	1	...	...	...	2	4	6
... Re-admissions thrice in 1933	...	...	...	...	1	...	2	1	...	...	...	...	...	...	...	...	3	1	4
... Remaining on 31st December, 1933	1	...	11	6	50	18	44	26	2	3	...	...	98	78	33	23	239	154	393
... New discharges during 1933	...	...	1	1	4	6	6	4	...	...	...	...	12	5	2	...	25	16	41
... Re-discharges once in 1933	...	...	1	...	3	2	5	5	...	...	...	...	5	5	1	1	15	13	28
... Re-discharges twice in 1933	...	...	...	...	3	2	1	4	...	...	...	...	...	...	...	...	4	6	10
... Re-discharges thrice in 1933	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
... Deaths during 1933	...	...	...	...	...	7	1	1	...	...	...	...	5	3	...	1	13	5	18
... Remaining on 31st December, 1933	1	...	9	5	33	7	31	13	2	3	...	...	76	65	30	21	182	114	296

Remaining on 31st December, 1932
 New admissions in 1933
 Re-admissions once in 1933
 Re-admissions twice in 1933
 Re-admissions thrice in 1933

New discharges during 1933
 Re-discharges once in 1933
 Re-discharges twice in 1933
 Re-discharges thrice in 1933
 Deaths during 1933
 Remaining on 31st December, 1933

(3) TABLE SHEWING 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	74	37	111	New AmsterJam	5	5	10	North Essequibo	10	3	13	Cutaneous	76	58	133
East Coast	24	22	46	East Coast	17	11	28	South Essequibo	3	6	9	Neural	81	51	132
West Coast	16	4	20	West Coast	4	2	6					Mixed Leprosy	26	5	31
East Bank	8	13	21	West Bank	3	...	3								
West Bank	9	2	11	Canje	2	6	8								
Demerara River	4	2	6	Ber.ice River	3	1	4								
Total	135	80	215	Total	34	25	59	Total	13	9	22	Total	182	114	296

Occupation.	M.	F.	T.
Labourer	101	22	123
Unemployed	32	36	68
Scholars	26	18	44
Domestic Servants	...	18	18
Housewives	...	9	9
Seamstresses	...	5	5
Carpenters	3	...	3
Chauffeurs	2	...	2
Vagrants	1	1	2
Bookbinders	2	...	2
Washers	...	2	2
Sailors	1	...	1
Clerks	1	1	2
Schoolmasters	1	...	1
Shoemakers	1	...	1
Salesmen	1	...	1
Farmers	4	2	6
Boiler Makers	1	...	1
Cinema Operator	1	...	1
Porters	4	...	4
Total	182	114	296

D.—Helminthic Diseases.

ANKYLOSTOMIASIS.

85. 53 cases were treated in public hospitals with 5 deaths compared with 69 cases with no deaths in 1932. 126 cases were treated in the Out-patient Departments as against 183 cases in 1932. The deaths registered as due to the same disease throughout the whole Colony were 11 compared with 7 in 1932.

E.—Quarantinable Diseases.

86. There were no cases of plague, cholera, yellow fever, small-pox or typhus during the year.

III.—VITAL STATISTICS.

87. The estimated population on the 31st December, 1933, was 321,260 (317,523) (160,716 males and 160,544 females).

88. There were 10,461 births and 7,848 deaths. The natural increase of population was therefore 2,613.

89. The number of immigrants (8,033) exceeded the number of emigrants (7,199) by 834.

90. The following Table shows the population, the number of births and deaths, the birth-rate and death-rate per 1,000 of the estimated population, the deaths

of children under one year of age, the infantile death-rate per 1,000 births, and the number of still-births from 1923 to 1933 :—

(1) Year.	(2) Population.	(3) Births.	(4) Deaths.	(5) Birth rate.	(6) Death rate.	(7) Deaths of Children under 1 year.	(8) Infantile Death rate per 1,000 Births.	(9) Stillbirths.
1923	299,199	9,109	8,468	30.4	28.3	1,699	177	845
1924	301,204	9,755	7,717	32.4	25.6	1,696	165	822
1925	304,412	10,197	7,352	33.5	24.2	1,582	155	787
1926	305,844	10,653	7,837	34.7	25.3	1,696	159	736
1927	308,473	10,041	8,024	32.6	26.0	1,589	158	777
1928	307,784	8,702	8,575	28.3	27.9	1,607	185	731
1929	309,676	9,824	7,281	31.7	23.5	1,434	146	703
1930	312,489	10,438	7,174	33.4	23.0	1,529	146	697
1931	313,619	9,853	6,848	31.4	21.8	1,373	139	621
1932	317,513	10,825	6,694	34.1	21.1	1,503	139	651
1933	321,789	10,461	7,848	32.6	24.4	1,613	154	627

91. *Births.*—10,461 births (5,339 males and 5,122 females) were registered, giving a birth-rate of 32.6 per 1,000 of the population.

92. In 1932 there were 10,825 births, equivalent to a birth-rate of 34.1 per 1,000.

93. The number of still-births recorded was 627, which was in proportion of 6 to every 100 children born alive.

94. *Deaths.*—7,048 deaths (4,236 males and 3,612 females) were registered giving a general death-rate of 24.4 per 1,000 of the population. This is the highest death-rate per annum recorded since the year 1928 when the ratio was 27.9. An epidemic of influenza during the first quarter of the year, which accounted for 334 deaths throughout the year, the debilitating effect of this disease upon the population with consequent increase in the death-rates of certain of the principal causes, more especially pneumonia and bronchitis, bowel diseases, diseases of early infancy and malaria were the factors mainly responsible.

95. *Infantile Mortality.*—The number of deaths under one year of age was 1,613 which equalled a rate of 154 per 1,000 births. In 1932 there were 1,503 deaths or 139 per 1,000 births.

96. The numbers of deaths in the five principal groups during 1932 and 1933 were as follows :—

	1932.	1933.
Congenital debility, etc. ...	348	447
Fever (Malarial and unqualified) ...	309	296
Premature Birth, etc. ...	293	236
Pneumonia and Bronchitis ...	194	237
Bowel complaints (including Dysentery, Diarrhœa and Enteritis) ...	152	192

97. The Maternal Mortality Statistics (per 1,000 live births) for the years 1931, 1932 and 1933 were as follows :—

	1931.	1932.	1933.
The whole Colony ...	14.8	9.9 ✓	12.1 ✓
Public Hospitals ...	46.6	29.7 ✓	47.3 ✓
Infant Welfare and Maternity League ...	8.1	7.5 ✓	4.7 ✓
Sugar Estates ...	5.7	13.1 ✓	15.8 ✓

98. The following return is taken from the Registrar-General's detailed return of causes of deaths for the years, 1931, 1932 and 1933 :—

The Puerperal State—

Causes of Death.	Deaths.		
	1931.	1932.	1933.
Accidents of Pregnancy ...	21	9	22
Other accidents of labour ...	49	9	6
Puerperal hæmorrhage ...	10	7	14
Puerperal Sepsis ...	30	19	15
Puerperal albuminuria and Convulsions...	36	32	24
Puerperal Phlegmasia Alba Dolens, Embolism and Sudden Deaths ...	...	5	1
Other causes ...	...	27	45
Total ...	146	108 ✓	127 ✓

99. 412 cases of diseases of the puerperal state were treated in public hospitals with 42 deaths.

100. In 1932 there were 405 cases and 42 deaths.

101. The number of normal confinements managed in public hospitals was 1,103, including 40 remaining from the previous year.

City of Georgetown.

102. Below is given a Table showing in parallel columns the separate figures for the Municipal area and for the Georgetown Registration District which includes certain districts outside the municipal boundaries :—

	City of Georgetown.	
	Municipal Area.	Registration Area.*
Estimated Population ...	62,707 ✓	64,207
No. of Births ...	1,619 ✓	1,861
Birth-rate ...	25.8 ✓	29.0
No. of Deaths ...	1,257 ✓	1,331
Death-rate ...	20.0 ✓	20.7
Infantile Mortality ...	124 ✓	127
Deaths from Enteric Fever ...	11	10
Deaths from Malaria ...	75	81

*The deaths of persons in the Hospitals and other Public Institutions in Georgetown have in each case been returned as occurring in the district from which the patients came.

Town of New Amsterdam.

103. The number of births registered was 280 or a rate of 30.7 per thousand compared with 313 or a rate of 34.6 per thousand in 1932.

104. There were 215 deaths or a rate of 23.6 per thousand compared with 159 deaths or a rate of 17.6 per thousand in 1932.

105. The infant mortality was 129 per thousand registered births compared with 89 per thousand in 1932.

106. Malaria Fever was the cause of 21 deaths compared with 8 in 1932.

107. There were 4 deaths from Enteric Fever as against 2 in 1932.

108. The following Tables give the Vital Statistics for each registration district in the Colony for the year 1933 and return of Vital Statistics for Georgetown and New Amsterdam for the years 1933, 1932 and 1931 :—

RETURN OF VITAL STATISTICS FOR EACH REGISTRATION DISTRICT IN THE COLONY FOR THE YEAR 1933.

DISTRICT.	Estimated Population.	Births.	Deaths.	Annual rate per 1,000 living.		No. of deaths due to								Still-Births.	No. of deaths of children under one year of age.	Deaths of children under one year of age to 1,000 registered births.
				Births.	Deaths.	Enteric Fever.	Intestinal Disorders over one year.	All Renal Diseases.	All Respiratory Diseases.	Malarial Fever.	Phthisis and other forms of Tuberculosis.	Intestinal Disorders under one year.				
													Births.				Deaths.
Skeldon	14,013	566	183	40.4	13.1	...	12	7	44	14	4	1	14	51	90	
Port Mourant	23,447	997	449	42.5	19.1	5	23	24	82	74	6	20	37	138	138	
Lower Canje	10,523	276	218	26.2	20.7	1	10	26	39	33	6	8	22	42	152	
Upper Canje	708	24	16	33.9	22.6	...	1	2	3	4	2	...	2	5	208	
New Amsterdam	9,119	280	215	30.7	23.6	4	10	10	30	21	12	10	38	36	129	
Highbury	2,764	88	120	31.8	43.4	1	5	6	19	15	3	2	3	16	182	
Mara and Upper Berbice River	2,729	92	81	33.7	29.7	...	5	13	8	4	2	...	5	15	163	
Cotton Tree	13,140	428	337	32.6	25.6	...	25	27	70	33	5	13	23	72	168	
Mahaicony	10,952	336	210	30.6	19.2	1	16	7	15	47	3	7	25	35	104	
Mahaica	13,030	454	324	34.8	24.9	2	19	23	41	46	7	8	24	84	185	
Buxton	21,531	764	589	35.5	27.4	9	24	23	77	97	16	20	51	133	174	
Plaisance	22,850	775	712	33.9	31.2	10	37	39	126	86	21	20	38	122	196	
Georgetown	64,207	1,861	1,331	29.0	20.7	10	74	82	161	81	90	24	113	236	127	
Peter's Hall	19,173	554	522	28.9	30.9	10	30	42	94	51	27	16	38	111	200	
Demerara River	8,039	191	139	23.8	17.3	...	6	14	12	41	7	2	4	29	152	
Belle Vue	14,160	448	460	31.6	32.5	1	34	38	51	46	30	3	19	89	179	
Leonora	12,823	426	304	32.2	23.7	9	19	22	30	68	5	8	29	72	169	
Philadelphia-Leguan	14,230	461	426	32.4	29.9	4	31	23	71	106	6	14	39	86	187	
Up. Essequibo River	1,201	1	24	8	20.0	...	1	1	7	4	1	...	2	...	...
Bartica	4,688	93	91	19.8	19.4	...	3	1	14	24	11	...	5	8	86	
Up. Mazaruni River	2,221	2	53	9	23.9	...	6	1	9	13	...	1	...	1	500	
Wakenaam	4,113	141	117	34.3	28.4	...	11	8	10	18	1	3	18	25	177	
Suddie	7,911	283	239	35.8	30.2	...	13	26	22	58	8	1	39	46	163	
Anna Regina	11,092	347	323	31.3	29.1	1	26	48	44	57	9	10	21	70	202	
Pomeroon	5,493	278	166	50.6	19.3	...	8	12	11	28	3	1	6	32	115	
North Western	7,103	296	189	41.7	26.6	...	5	3	37	61	4	...	12	38	128	
Males	160,716	5,339	4,236	33.2	26.4	38	232	293	713	545	163	100	352	865	162	
Females	160,544	5,122	3,612	31.9	22.5	30	222	235	414	595	126	92	275	748	146	
Persons	321,260	10,461	7,848	32.6	24.4	68	454	528	1127	1140	289	192	627	1613	308	

RETURN OF VITAL STATISTICS FOR GEORGETOWN AND NEW AMSTERDAM FOR THE YEARS 1933, 1932, 1931.

DISTRICT.	Estimated Population.	Births.	Deaths.	Annual rate per 1,000 living.		No. of deaths due to								Still-Births.	No. of deaths of children under 1 year of age.	Deaths of children under one year of age to 1,000 registered births.
				Births.	Deaths.	Enteric Fever.	Intestinal Disorders over 1 year.	All Renal Diseases.	All Respiratory Diseases.	Malarial Fever.	Phthisis and other forms of Tuberculosis.	Intestinal Disorders under 1 year.				
													Births.				Deaths.
Georgetown, 1933	64,207	1,861	1,331	29.0	20.7	10	74	82	161	81	90	24	113	236	127	
Georgetown, 1932	63,400	1,895	1,215	29.9	19.2	9	51	79	117	89	98	24	147	249	131	
Georgetown, 1931	62,690	1,726	1,190	27.5	19.0	5	54	73	137	65	88	20	159	213	123	
New Amsterdam, 1933	9,119	280	215	30.7	23.6	4	10	10	30	21	12	10	38	36	129	
New Amsterdam, 1932	9,045	313	159	34.6	17.6	2	4	9	29	8	11	5	40	28	89	
New Amsterdam, 1931	8,889	239	202	26.9	22.7	3	24	8	21	11	14	6	33	33	138	

NOTE.—The deaths of persons in the Hospitals and other Public Institutions have in each case been returned as occurring in the District from which the patients came.

IV.—HOSPITALS AND DISPENSARIES.

109. The public hospitals in the Colony are :—

	Public Hospital.	County.	No. of beds.
1	Georgetown ...	Demerara	578
2	New Amsterdam ...	Berbice	161
3	Suddie ...	Essequibo	92
4	Bartica ...	do.	14
5	Mabaruma ...	do.	30
6	Potaro* ...	do.	6
7	Kamakusa* ...	do.	8

*Dispensary Hospitals in interior mining localities.

110. During the year the Seamen's Ward of the Public Hospital, Georgetown, was demolished and a new building erected, which was opened by His Excellency the Governor on the 8th November. The building is composed of three floors and provides accommodation for 16 females (top flat), 16 males (second flat) and 20 police and seamen (third flat).

111. At the Public Hospital, New Amsterdam, the operating theatre was renovated and the lighting arrangements were improved by the installation of a shadowless light fixture. A frigidaire was also installed for storing sera, etc., and the provision of ice.

112. A new and larger electric lighting plant was erected at the Public Hospital, Suddie, which has proved a benefit not only to this institution but to other Government buildings in the vicinity.

113. In regard to the Public Hospital, Bartica, considerable structural alterations and additions were made. These include the provision of a small operating theatre and the extension of the female ward to accommodate five more patients. The Dispensary was enlarged and two rooms were provided for Venereal Diseases and Maternity and Infant Welfare Clinics. Separate quarters were also constructed for the nursing staff.

114. The total number of patients admitted to the Government Hospitals was 19,038, compared with 18,290 in 1932, and 17,556 in 1931.

115. The Table below shows the number of new admissions to hospitals during the year and furnishes approximate figures of admissions of the same patients on one occasion 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 :—

IN-PATIENTS.

Hospital.	Total admissions during year.	Persons admitted on one occasion (approx.)	Persons admitted on two occasions.	Persons admitted on more than two occasions (approx.)
Public Hospital, Georgetown ...	12,540	10,730	650	170
Public Hospital, New Amsterdam ...	2,885	2,525	147	22
Public Hospital, Suddie ...	2,453	2,346	43	7
Public Hospital, Bartica ...	456	436	10	...
Public Hospital, Mabaruma ...	656	562	41	4
Public Hospital, Kamakusa ...	29	25	2	...
Public Hospital, Potaro ...	19	17	1	...
Total ...	19,038	16,641	894	203

Approximately 16,641 persons admitted on one occasion.
Approximately 17,738 persons admitted for the year.

116. The total number of patients who sought treatment at the Out-patient Departments of Public General Hospitals was 58,308. The figures for 1932 and 1931 were 53,245 and 66,637 respectively.

117. The principal diseases treated in Government Hospitals were :—

Diseases.	Cases.	Deaths.
Malaria ...	2,518 ¹	169
Dysentery ...	135	20
Enteric Fever ...	96	30
Influenza ...	348	15
Venereal Diseases ...	1,715 ²	96
Tuberculosis (all forms) ...	538	165
Bronchitis ...	706	103
Pneumonia (all forms) ...	285	170
Nephritis ...	459	150
Bowel diseases ...	359	80
Diseases of the heart ...	236	170
The Puerperal State ...	1,515 ³	42

118. Table 2 shows the accommodation, number of patients and deaths, average stay, percentage of mortality on number treated and number of out-patients in each hospital.

119. Table 3 gives the classes of in-patients and out-patients treated and the number of prescriptions dispensed.

120. Table 4 gives in detail the diseases of out-patients and in-patients treated.

121. Table 5 is a return of the surgical operations performed.

122. The number of in-patients treated was 19,754 as compared with 19,015 in 1932.

123. The daily average number of patients in the three principal hospitals was :—

	1931.	1932.	1933.
Public Hospital, Georgetown ...	487	517	541
Public Hospital, New Amsterdam	137	129	143
Public Hospital, Suddie	74	84	74

124. The cost per caput per diem of patients treated, exclusive of Medical Officers' salaries, was :—

	1931.	1932.	1933.
	Cents.	Cents.	Cents.
Public Hospital, Georgetown ...	77.6	71.	66.9
Public Hospital, New Amsterdam...	75.9	74.8	70.2
Public Hospital, Suddie ...	77.1	71.9	70.7
Public Hospital, Bartica ...	107.5	77.2	83.6
Public Hospital, Mabaruma ...	83.7	73.9	54.8

125. For many years the hospitals have been the training schools for nurses. The period of training has been extended from three to four years.

126. During the year 93 nurses and midwives were trained. The following Table shows the number who qualified by examination :—

Hospital.	(First Examination) Probationers.	(Final Examination) Nurses.	Midwives.	Total.
Georgetown ...	35	5	20	60
New Amsterdam ...	2	5	3	10
Suddie ...	1	2	...	3
Total ...	38	12	23	73

OPHTHALMIC DEPARTMENT.

127. The staff consists of:—

Government Ophthalmologist.
Two nurses.
Clerk.

128. The total number of cases treated during the year was 3,511 as against 3,878, for the previous year. The following Table shows the distribution:—

Public Hospital.	IN-PATIENTS.						OUT PATIENTS.					
	Paying.			Pauper.			Paying.			Pauper.		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Georgetown ...	38	18	56	137	111	248	599	591	1,190	806	792	1,598
New Amsterdam ...	2	5	7	8	7	15	82	88	170	61	93	154
Suddie ...	1	...	1	...	3	3	12	20	32	22	16	37
Total ...	41	23	64	145	121	266	693	699	1,392	889	900	1,789

129. The following surgical operations were performed:—

	Public Hospital, Georgetown.	Public Hospital, New Amsterdam.	Public Hospital, Suddie.
Senile Cataract ...	102	...	...
After Cataract ...	2	...	...
Congenital Cataract ...	1	...	...
Traumatic Cataract ...	6	...	...
Pterygium ...	20	16	3
Dacryocystitis ...	6	1	...
Chronic Glaucoma ...	4	...	...
Leucoma adhaerens ...	2	...	...
Conjunctiva Plasty ...	1	...	...
Iridectomy ...	13	...	...
Entropion ...	2	...	...
Evisceration ...	6	...	...
Enucleation ...	8	...	...
Orbital Cyst ...	...	1	...
Tarsal Cyst ...	...	8	...
Laceration of Eyelid ...	1	...	...
Disorganised Eyeball ...	...	...	1
Papilloma of Conjunctiva ...	2	...	...
Total ...	176	26	4

130. In addition 109 minor operations were performed at the Out-patient Department of the Public Hospital, Georgetown.

131. The number of cases refracted and prescribed glasses was 315.

132. One case of cataract was treated at the Leprosy Hospital.

133. The revenue derived from all sources was \$1,638: as compared with \$1,500.86 in 1932.

DENTAL DEPARTMENT.

134. The staff consists of:—

Two Dental Surgeons (Part-time).
Clerk.
Assistant Nurse.

135. The senior Dental Surgeon (Dr. J. Fung) resigned on the 31st October, 1933, and his place has not yet been filled.

136. The number of out-patients treated was 6,346 as compared with 6,344 in 1932. 3,098 were pauper cases (1,293 males, 1,805 females) and 3,248 poverty cases (1,499 males, 1,749 females).

137. The revenue collected amounted to \$463.80 compared with \$473.52 for the previous year.

138. *Dental Treatment of School Children.*—A sum of \$960 was voted in the 1933 Estimates to give effect to a tentative scheme for the dental treatment of children attending Primary Schools in Georgetown. With the assistance of the Director of Education arrangements were made with Dr. H. Whyte Cameron and Dr. J. L. S. Murray, Dental Surgeons, to conduct the clinics and work was begun on the 14th June, 1933. The schools assigned to Dr. Cameron were Charlestown (Roman Catholic), Freeburg (Anglican) and the Government School. Bedford (Methodist) School was assigned to Dr. Murray.

139. The work done was as follows :—

By Dr. Cameron—

Extractions ...	...	...	459*
Prophylactic treatment	...	...	106
Cement fillings	...	...	73
Amalgam fillings	...	...	340
Gutta Percha fillings	...	...	340

By Dr. Murray—

Extractions ...	...	...	350
Amalgam fillings	...	...	402
Porcelain fillings	...	...	22
Cement fillings	...	...	2
Root canal fillings	...	...	2
Gutta Percha fillings	...	...	3
Root canal treatment and temporary fillings	...	...	18
Pulp capping	...	...	14
Prophylaxis ...	...	...	32
Bone surgery	...	...	2
Abscess attendance	...	...	2

140. The children attended to were between the ages of 6 and 15 years. In many cases the mouths were in a very bad condition and revealed that little or no attention had been given to their teeth.

X-RAY AND ELECTRICAL DEPARTMENT.

Public Hospital, Georgetown.

141. The staff of the Department attached to the Public Hospital, Georgetown, consists of :—

Government Radiographer.
Assistant Government Radiographer.
Two Nurses.

142. Mr. E. Dalton, Assistant Government Radiographer, was appointed Government Radiographer as from the 23rd January, 1933, *vice* Mr. E. A. H. Barham, transferred to West Africa.

143. Mr. A. J. Weston, who was appointed Assistant Government Radiographer, *vice* Mr. E. Dalton, arrived in the Colony and assumed duty on the 15th May, 1933.

144. A new Developing Unit with water cooler incorporated was installed in the dark room during the year. With this Unit the standard (time and temperature) system of development can now be adopted with resulting improvement in the radiograms produced.

145. *Radiographic.*—The total number of examinations made was 2,219, showing a decrease of 148 on the total for 1932. Of these 250 were sent by private

*Includes 50 emergency cases from schools other than those assigned to him.

practitioners and District Government Medical Officers, 157 from the Tuberculosis Clinic, 13 from the Georgetown Maternity and Child Welfare Centre and 1,799 from the Public Hospital, Georgetown.

146. The examinations are classified hereunder :—

Alimentary Canal (Barium Meals, etc.)	...	...	541
Colon (Barium Enemas)	...	...	22
Chests	...	...	373
Teeth	...	...	41
Urinary Tracts	...	...	32
Gall Bladders	...	...	125
Miscellaneous	...	...	1,085
			<hr/>
Total	...	...	2,219
			<hr/>

147. *X-Ray Treatment.*—42 cases were treated and 254 exposures made. This shows an increase of 11 cases and 100 exposures over the figures for 1932. Of the cases treated 20 were sent by private practitioners and Government Medical Officers in districts and 22 were from the Public Hospital, Georgetown.

148. The nature of the cases was as follows :—

Keloids	...	...	3
Rodent Ulcers	...	...	15
Enlarged Spleen	...	...	10
Warts	...	...	1
Filaria	...	...	2
Papilloma	...	...	1
Leukæmia	...	...	1
Cancer of Breast	...	...	3
Tumours	...	...	1
Goitre	...	...	1
Fungating Mass	...	...	1
Keratitis	...	...	1
Depilation	...	...	1
Tinea Barbari...	...	...	1
			<hr/>
Total	...	...	42
			<hr/>

149. *Electrical Treatment.*—The work of this section of the Department continued to increase. Although the total number of patients who attended for treatment was 268 (10 less than the previous year) the number of treatments given was 5,661, showing an increase of 256.

150. The revenue collected during the year was \$1,294.65 as against \$1,491.50 for 1932.

Public Hospital, New Amsterdam.

151. *Radiographic.* The nature of the examinations was as follows :—

Chests	...	...	3
Dental Films	...	...	3
Miscellaneous	...	...	155
			<hr/>
Total	...	...	161
			<hr/>

152. No cases were treated by X-Rays.

153. The revenue collected was \$84.62 as against \$63.84 for 1932.

TABLE 2.
PUBLIC HOSPITALS.

	Georgetown.			New Amsterdam.			Suddie.			Bartica.			Mabaruma.			Kamakusa.			Potaro.		
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
Accommodation ...	332	245	578	92	69	161	45	47	92	10	4	14	15	15	30	8	6	14	6	6	12
Patients remaining in Hospital—1st January, 1933	333	218	551	88	52	140	37	21	58	12	2	14	16	5	21	2	2	23	2	2	4
Patients admitted during the year	7,454	5,486	12,940	1,627	1,258	2,885	1,383	1,070	2,453	337	99	436	336	300	636	28	1	29	19	19	38
Total ...	7,317	5,704	13,021	1,715	1,310	3,025	1,420	1,091	2,511	369	101	470	372	305	677	30	1	31	19	19	38
Patients discharged—cured ...	915	1,170	2,115	326	166	492	194	205	399	19	11	30	160	152	312	6	2	8	2	2	4
" " not relieved	4,712	3,133	7,845	943	869	1,752	996	656	1,615	258	66	324	162	109	261	18	1	19	12	12	24
" " not sick	560	685	1,155	148	135	283	63	45	108	47	9	56	3	2	5	3	...	3	...	...	...
" " died	71	64	135	27	35	62	17	57	74	...	6	6	6	15	24	...	3	...	...	...	...
Patients remaining in Hospital—31st December, 1933	721	507	1,228	186	112	298	145	96	241	29	6	35	39	29	59	3	...	3	...	...	...
9/8	235	543	80	53	138	42	33	75	16	3	19	12	4	16	...	...	...	...	...	...	...
Total Patients treated ...	7,317	5,704	13,021	1,715	1,310	3,025	1,420	1,091	2,511	369	101	470	372	305	677	30	1	31	19	19	38
The daily average number in Hospital during the year 1933	307	234	541	89.2	54.2	143.4	44.4	39.3	74.7	11.19	2.84	11.13	17.30	11.62	23.32	5	0.2	5.2	0.5	0.5	1.0
Average stay in days of Patients discharged during the year 1933	17	14	16	29	15.0	18	10.6	8.9	9.8	9.82	9.80	9.82	14.41	13.30	13.91	6.9	7	6.9	6.5	6.5	6.5
Average stay in days of Patients remaining on 31st December, 1933	44	30	78	36.4	26.1	32.4	13.3	10.4	11.9	17.3	11.66	16.07	23.33	9.5	19.87	...	...	...	4	4	4
Average stay in days of Patients died	14	16	15	9.4	10.7	9.9	8	7.9	8	6.44	10.66	7.17	19.36	4.85	11.94	2.3	...	2.3	8	8	8
Percentage of Mortality on number treated	9.9	8.8	9.4	10.8	8.0	9.9	10.2	8.8	9.6	7.9	5.9	7.4	10.5	6.6	8.7	10	...	9.7	21	21	21
Number of Out-Patients (exclusive of attendances for repeat medicines)	14,367	13,776	28,143	5,624	6,094	12,078	2,460	2,567	5,027	2,061	1,988	4,549	3,381	3,494	6,878	638	30	668	338	107	465

TABLE 3.

IN-PATIENTS DEPARTMENT, PUBLIC HOSPITALS, FROM 1st JANUARY TO 31st DECEMBER, 1933.

Class of Patients Treated.	Georgetown.	New Amsterdam.	Suddie.	Bartica.	North-Western District.	Kamakusa.	Potaro.
Seamen	37	...	...	...	...	...	15
Pay Patients	1,607	397	131	57	80	6	...
Policemen	333	38	15	4	...	2	...
<i>Race:</i>							
Europeans (other than Portuguese)...	187	31	5	4	1	1	...
Europeans (Portuguese)	486	30	30	8	8	1	...
Mixed	1,164	229	155	124	164	5	6
Blacks	6,694	1,492	626	181	72	19	11
East Indians	3,859	1,208	1,603	61	136	2	...
Chinese	82	21	5	3	5	...	...
Aboriginal Indians	68	14	87	89	270	3	2
Total	12,540*	3,025	2,511	470	656†	31	19

* Exclusive of 481 patients remaining in hospital on 31st December, 1934.

† Exclusive of 21 patients remaining in Hospital on 31st December, 1934.

OUT-PATIENT DEPARTMENT.—PUBLIC HOSPITALS.

	George-town.	New Am-sterdam.	Suddie.	Bartica.	North Western District.	Kama-kusa.	Potaro.
Number of Out-Patients attended to with Pauper Certificates	13,319	4,819	3,766	3,734	6,421	...	...
Number of Out-Patients attended to with Poverty Certificates	12,700	6,136	1,243	804	457	...	...
Number of Out-Patients and casualties without Certificates	2,124	1,623	18	11	...	881	50
Number of Out-Patients treated during the year	28,143	12,578	5,027	4,549	6,878	881	497
Number of Government Employees attended to as Out-Patients	2,076	268	59	92	10	42	7
Number of Prescriptions dispensed for In-Patients	77,099	22,021	2,763	1,033	5,945	31	45
Number of Prescriptions dispensed for Out-Patients	38,315	15,733	6,030	7,677	9,606	881	497

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TABLE 4.
HOSPITALS—GEORGETOWN, NEW AMSTERDAM, SUDDIE, BARTICA, NORTH-WESTERN DISTRICT, KAMAKUSA AND POTARO.
Return of Diseases (Out-Patients) and of Diseases and Deaths (In-Patients) for the year 1933.

DISEASES.	P. H., Georgetown.			P. H., New Amsterdam.			P. H., Suddie.			P. H., Bartica.			P. H., N.W.D.			P. H., Kamakusa.			P. H., Potaro.			Totals.																			
	Out-Patients.		In-Patients.	Out-Patients.		In-Patients.	Out-Patients.		In-Patients.	Out-Patients.		In-Patients.	Out-Patients.		In-Patients.	Out-Patients.		In-Patients.	Out-Patients.		In-Patients.	Out-Patients.		In-Patients.	Cases.		Deaths.														
	M.	F.	C.	D.	M.	F.	C.	D.	M.	F.	C.	D.	M.	F.	C.	D.	M.	F.	C.	D.	M.	F.	C.	D.	M.	F.	C.	D.													
1. Enteric Group—													
(a) Typhoid Fever	63	22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(b) Paratyphoid A											
(c) Paratyphoid B										
(d) Paratyphoid C									
(e) Type not defined								
2. Typhus							
3. Relapsing Fever					
4. Undulant Fever				
5. Malaria	9	1	59	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(a) Benign Tertian		
(b) Quartan	
(c) Sub-Tertian	
(d) Chronic Malaria	402	512	304	30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(e) Blackwater		
(f) Unclassified	1,314	1,402	1,017	44	1,000	1,144	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6. Small-Pox—	
Alastrim	
7. Measles
8. Scarlet Fever	
9. Whooping-Cough	
10. Diphtheria	102	81	145	1	78	96	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11. Indurum	
12. Military Fever	
13. Mumps	
14. Cholera		
15. Epidemic Diarrhoea		
16. Dysenteric Group—		
(a) Amoebic	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(b) Bacillary	28	16	64	11	6	2	4	2	1	2	3	1	9	2	17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(c) Unclassified		
17. Plague	
18. Yellow Fever		
19. Spirochaetosis ictero-haemorrhagica		
20. Lagery—		
(a) Nodular			
(b) Anaesthetic		
(c) Mixed		
21. Erysipelas		
22. Acute Poliomyelitis		
23. Encephalitis Lethargica		
...	1,929	2,017	1,813	123	1,097	1,247	436	48	1,116	1,075	568	56	568	321	113	71	1,103	1,115	290	7	134	8	3	...	89	30	7	6,027	5,813	3,170	243					

Carried forward

9 (L.P.S.)
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 1933

TABLE 4—(Continued).
HOSPITALS—GEORGETOWN, NEW AMSTERDAM, SUDDIE, BARTICA, NORTH-WESTERN DISTRICT, KAMAKUSA AND POTARO.
Return of Diseases (Out-Patients) and of Diseases and Deaths (In-Patients) for the year 1933.

DISEASES.	P.H., Georgetown.				P.H., New Amsterdam.				P.H., Suddie.				P.H., Bartica.				P.H., N.W.D.				P.H., Kamakusa.				P.H., Potaro.				Totals.									
	Out-Patients.		In-Patients.		Out-Patients.		In-Patients.		Out-Patients.		In-Patients.		Out-Patients.		In-Patients.		Out-Patients.		In-Patients.		Out-Patients.		In-Patients.		Out-Patients.		In-Patients.		Out-Patients.		In-Patients.							
	M.	F.	C.	D.	M.	F.	C.	D.	M.	F.	C.	D.	M.	F.	C.	D.	M.	F.	C.	D.	M.	F.	C.	D.	M.	F.	C.	D.	M.	F.	C.	D.						
Brought forward	1,928	2,017	1,813	125	1,097	1,217	436	43	1,110	1,076	568	56	5	5	321	113	7	1,103	1,110	330	7	134	8	3	...	89	20	7	...	6,027	5,813	3,170	243					
1.—Epidemic, Endemic and Infectious Diseases—(Contd.)																																						
24. Epidemic Cerebro-Spinal Fever																																						
25. Other Epidemic Diseases																																						
(a) Rubella (German Measles)																																						
(b) Varicella (Chicken Pox)	1	1	21	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(c) Dengue																																						
(d) Epidemic Dropsy																																						
(e) Yaws																																						
26. Glanders																																						
27. Anthrax																																						
28. Rabies																																						
29. Tetanus																																						
30. Mycosis																																						
31. Tuberculosis—																																						
(a) Pulmonary and Laryngeal	9	42	417	125	5	3	63	19	9	19	8	30	21	12	2	3	1	3	1	3	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(b) Tuberculosis of the Meninges or Central Nervous System																																						
(c) Tuberculosis of the Intestines or Peritoneum																																						
(d) Tuberculosis of the Vertebral Column																																						
(e) Tuberculosis of Bones and Joints																																						
36. Tuberculosis of other Organs—																																						
(a) Skin or Subcutaneous Tissue (Lupus)																																						
(b) Bones																																						
(c) Lymphatic System																																						
(d) Genito-Urinary																																						
(e) Other Organs																																						
37. Tuberculosis disseminated—																																						
(a) Acute																																						
(b) Chronic																																						
38. Syphilis—																																						
(a) Primary	127	31	123	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(b) Secondary	27	12	42	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(c) Tertiary	337	488	541	40	74	52	36	3	7	5	2	3	3	11	1	41	33	11	2	1	3	1	...	...	...	...	...	...	...	...	...	...	...	...	...
(d) Hereditary	56	49	100	17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(e) Period not indicated	52	13	50	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
39. Soft Chancres																																						
Carried forward	2,013	2,655	3,109	325	1,221	1,310	575	72	1,124	1,063	697	66	607	384	145	11	1,318	1,345	201	15	145	8	5	...	...	97	31	7	...	7,315	6,896	4,709	487				

Handwritten notes and corrections in the right margin of the table, including numbers like 747.710, 158, 131, 2478, 131, and 2616, with arrows pointing to specific rows in the table.

TABLE 4.—(Continued).
HOSPITALS—GEORGETOWN, NEW AMSTERDAM, SUDDIE, BARTICA, NORTH-WESTERN DISTRICT, KAMAKUSA AND POTARO.
Return of Diseases (Out-Patients) and of Deaths (In-Patients) for the year 1933.

DISEASES.	P. H., Georgetown.			P. H., New Amsterdam.			P. H., Suddie.			P. H., Bartica.			P. H., N.W.D.			P. H., Kamakusa.			P. H., Potaro.			Totals.												
	Out-Patients.		In-Patients.	Out-Patients.		In-Patients.	Out-Patients.		In-Patients.	Out-Patients.		In-Patients.	Out-Patients.		In-Patients.	Out-Patients.		In-Patients.	Out-Patients.		In-Patients.	Out-Patients.		In-Patients.	Cases.		Deaths							
	M.	F.	C.	D.	M.	F.	C.	D.	M.	F.	C.	D.	M.	F.	C.	D.	M.	F.	C.	D.	M.	F.	C.	D.	M.	F.	Cases.	Deaths						
Brought forward	2,613	2,659	3,159	325	1,221	1,310	575	72	1,124	1,468	667	66	667	384	145	11	1,348	1,345	251	13	145	8	5	97	31	7	7,215	6,830	4,759	487				
I.—Epidemic, Endemic and Infectious Diseases—(Contd.)																																		
40. A. Gonorrhoeal and its complications	747	130	467	8	162	25	51	3	1	51	27	1	32	2	6	18	2	7	...	...	...	...	...	...	...	...	...	...	...	...	...
B. Gonorrhoeal Ophthalmia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
C. Gonorrhoeal Arthritis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
D. Granuloma Venereum	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
41. Septicæmia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
42. Other Infectious Diseases—Trypanosomiasis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	3,370	2,796	3,705	348	1,224	1,335	622	75	1,127	1,694	699	67	838	409	178	14	1,386	1,352	257	13	163	8	7	104	31	7	8,312	7,023	5,496	517				
II.—General Diseases not mentioned above—																																		
43. Cancer or other malignant Tumours of the Buccal Cavity	1	1	9	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
44. Cancer or other malignant Tumours of the Stomach or Liver	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
45. Cancer or other malignant Tumours of the Peritoneum, Intestines, Rectum	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
46. Cancer or other malignant Tumours of the Female Genital Organs	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
47. Cancer or other malignant Tumours of the Breast	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
48. Cancer or other malignant Tumours of the Skin	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
49. Cancer or other malignant Tumours of Organs not specified	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
50. Tumours non-malignant	6	12	36	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
51. Acute Rheumatism	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
52. Chronic Rheumatism	83	96	6	...	67	92	15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
53. Scurvy (including Barlow's disease)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
54. Pellagra	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
55. Beri-Beri	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
56. Rickets	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
57. Diabetes (not including Insipidus)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
58. Anæmia—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(a) Pernicious	3	3	22	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(b) Other Anæmia and Chlorosis	42	71	51	8	61	97	15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
59. Diseases of the Pituitary Body
Carried forward	145	202	292	43	132	198	67	6	6	9	3	23	164	11	

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TABLE 4.—(Continued).
HOSPITALS—GEORGETOWN, NEW AMSTERDAM, SUDDIE, BARTICA, NORTH WESTERN DISTRICT, KAMAKUSA AND POTARO.
Return of Diseases (Out-Patients) and of Diseases and Deaths (In-Patients) for the year 1933.

DISEASES.	P.H., Georgetown.			P.H., NewAmsterdam			P.H., Suddie.			P.H., Bartica.			P.H., N.W.D.			P.H., Kamakusa.			P.H., Potaro.			Totals.							
	Out-Patients.		In-Patients.	Out-Patients.		In-Patients.	Out-Patients.		In-Patients.	Out-Patients.		In-Patients.	Out-Patients.		In-Patients.	Out-Patients.		In-Patients.	Out-Patients.		In-Patients.	Out-Patients.		In-Patients.	Deaths				
	M.	F.	C. D.	M.	F.	C. D.	M.	F.	C. D.	M.	F.	C. D.	M.	F.	C. D.	M.	F.	C. D.	M.	F.	C. D.	M.	F.	C. D.	M.	F.	C. D.		
Brought forward	34	34	78	20	...	...	2	29	6	17	8	4	1	...	2	...	...	...	...	...	51	44	113	27	...	...	...
IV.—Affections of the Circulatory System.—(Contd.)																													
90. Other Diseases of the Heart—																													
A.—Valvular																													
(a) Mitral	7	2	15	5	9	2	...	...	...	3	...	...	...	1	...	1	...	...	...	...	20	4	16	5	...	...	...	...
(b) Aortic	3	...	17	6	17	8	...	...	...	2	...	...	...	1	...	3	...	...	...	...	23	9	24	7	...	...	...	...
(c) Tricuspid	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(d) Pulmonary	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
B.—Myocarditis	24	14	114	59	33	24	38	8	...	...	...	...	...	...	...	...	...	...	...	...	65	52	147	70	...	...	...	...
C.—Unclassified	18	40	114	8	40	30	14	7	...	...	...	...	...	42	18	6	1	...	...	...	111	19	49	26	...	...	...	...
91. Diseases of the Arteries—																													
(a) Aneurysm	3	3	6	...	2	...	...	...	...	7	...	...	...	...	...	...	...	...	...	...	12	2	8	3	...	...	...	...
(b) Arteriosclerosis	43	89	34	6	15	24	1	...	...	9	3	...	...	...	...	...	...	...	...	...	67	115	41	6	...	...	...	...
(c) Other Diseases	4	3	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...	...	...	...	...	...	...
92. Embolism or Thrombosis (non-cerebral)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
93. Diseases of the veins—																													
(a) Haemorrhoids	174	55	126	...	45	22	37	...	...	10	2	2	...	6	2	1	...	...	...	...	245	84	172	...	...	...	...	...
(b) Varicose Veins
(c) Phlebitis
94. Diseases of the Lymphatic System—																													
(a) Filariasis	105	160	234	16	21	50	12	...	...	6	14	2	33	32	9	1	...	...	...	...	175	260	271	19	...	...	...	...
(b) Filarial Babo
(c) Elephantiasis
(d) Lymphangitis, lymphadenitis (non-glial)	6	8	21	...	1
(e) Unclassified	108	77	39	2	44	27	12	...	...	6	2	...	...	8	2	...	...	...	...	...	182	125	67	2	...	...	...	...
95. Haemorrhage of undetermined cause
96. Other affections of the Circulatory system
Total	531	491	715	128	237	190	117	15	35	86	29	134	91	24	3	53	32	19	2	7	999	839	959	168	...	...	...	...
V.—Affections of the Respiratory System—																													
97. Diseases of the Nasal Passages—																													
(a) Adenoids	7	3	11	...	4	0	2	...	...	...	...	...	...	...	...	...	...	...	...	...	11	8	23	...	...	...	...	...
(b) Polyps	6	3	9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	3	12	...	...	...	...	...
(c) Rhinitis	58	31	7	...	7	6	2	...	...	1	3	...	...	1	...	1	...	...	...	...	40	45	10	...	...	...	...	...
(d) Coryza	25	24	3	...	39	36	...	...	...	88	59	1	...	79	68	18	...	...	...	...	232	196	22	...	...	...	...	...
(e) Other diseases of nasal passages	23	18	24	...	5	1	...	...	...	9	8	...	...	...	...	...	...	...	...	...	37	28	32	...	...	...	...	...
98. Affections of the Larynx—																													
Laryngitis	12	14	5	1	24	17	4	1	...	7	1	9	11	45	43	16	3
Carried forward	101	93	99	2	79	65	16	1	8	13	20	1	107	81	1	90	70	19	377	323	115	4

TABLE 4.—(Continued).
HOSPITALS—GEORGETOWN, NEW AMSTERDAM, SUDDIE, BARTICA, NORTH-WESTERN DISTRICT, KAMAKUSA AND POTARO.
Return of Diseases (Out-Patients) and of Deaths (In-Patients) for the year 1933.

DISEASES.	P.H., Georgetown.				P.H., New Amsterdam.				P.H., Suddie.				P.H., Bartica.				P.H., N.W.D.				P.H., Kamakusa.				P.H., Potaro.				Totals.									
	Out-Patients.		In-Patients.		Out-Patients.		In-Patients.		Out-Patients.		In-Patients.		Out-Patients.		In-Patients.		Out-Patients.		In-Patients.		Out-Patients.		In-Patients.		Out-Patients.		In-Patients.		Out-Patients.		In-Patients.		Cases.		Deaths.			
	M.	F.	C.	D.	M.	F.	C.	D.	M.	F.	C.	D.	M.	F.	C.	D.	M.	F.	C.	D.	M.	F.	C.	D.	M.	F.	C.	D.	M.	F.	C.	D.	M.	F.	C.	D.		
Brought forward	912	1,003	1,120	100	748	1,082	239	19	158	269	125	14	347	397	23	2	710	782	49	6	57	2	...	36	10	1	...	3,008	3,545	1,577	141	...	...	...	...
VI.—Diseases of the Digestive System—(Cont.)	4	7	5	4	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
124. Other affections of the Liver—		
(a) Abscess		
(b) Hepatitis	
(c) Cholecystitis	
(d) Jaundice	
125. Diseases of the Pancreas	
126. Peritonitis (of unknown cause)	
127. Other affections of the Digestive System	
Total	1,003	1,144	1,265	117	788	1,116	281	24	169	273	136	15	338	399	25	2	757	810	56	7	142	5	2	...	36	10	4	...	3,253	3,757	1,770	165	...	...	...	...
VII.—Diseases of the Genito-Urinary System (non-Veneral)—	
128. Nephritis—
(a) Acute
(b) Chronic (129)
(c) Uræmia
(d) Unclassified
129. A. Chyluria (Non-bilial)
B. Schistosomiasis
131. Other affections of the Kidneys—
132. Pyelitis, etc.
133. Urinary Calculus
134. A. Diseases of the Urethra—
(a) Stricture
(b) Other
B. Other Diseases of the Genito-Urinary System
135. Diseases of the Prostate—
(a) Hypertrophy
(b) Prostatitis
136. Diseases (non-venereal) of the Genitalia of Man—
(a) Epididymitis
(b) Orchitis
(c) Hydrocele
(d) Ulcer of Penis
(e) Phimosis and Paraphimosis
(f) Other	
Carried forward	491	264	691	96	337	151	244	30	142	91	206	48	117	82	19	2	52	41	15	2	11	1	...	7	...	1	...	1,177	639	1,069	178	...	...	...	...	...

1237c. No)

TABLE 4—(Continued.)
 HOSPITALS—GEORGETOWN, NEW AMSTERDAM, SUDDIE, BARTICA, NORTH-WESTERN DISTRICT, KAMAKUSA AND POTARO.
 Returns of Diseases (Out-Patients) and of Diseases and Deaths (In-Patients) for the Year 1953.

DISEASE.	P.H., Georgetown				P.H., New Amsterdam				P.H., Suddie				P.H., Bartica				P.H., N.W.D.				P.H., Kamakusa.				P.H., Potaro.				Totals.			
	Out-Patients.		In-Patients.		Out-Patients.		In-Patients.		Out-Patients.		In-Patients.		Out-Patients.		In-Patients.		Out-Patients.		In-Patients.		Out-Patients.		In-Patients.		Out-Patients.		In-Patients.		Cases	Deaths		
	M.	F.	C.	D.	M.	F.	C.	D.	M.	F.	C.	D.	M.	F.	C.	D.	M.	F.	C.	D.	M.	F.	C.	D.	M.	F.						
IX.—Affections of the Skin and Cellular Tissues—																																
151. Gasgrene	2	1	18	5	1	1	5	3	10	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	4	34	9
152. Carbuncle	4	1	26	1	1	1	1	1	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	5	27	1
152a. Sinus	...	...	34	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	48	...
153. A. Abscess	327	182	509	9	51	56	84	3	156	2	8	29	16	8	29	1	13	7	14	1	14	1	3	2	3	2	412	227	844	13		
P. Whitlow	22	21	97	...	3	2	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	26	26	55	35		
C. Cellulitis	40	20	78	1	74	39	88	2	1	1	1	2	4	3	2	...	...	...	...	...	...	...	...	...	...	...	125	65	169	3		
154. A. Tinea	...	...	1	...	5	7	9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8	12	10	...		
B.—Scabies	6	2	2	...	47	58	9	...	14	6	17	...	2	2	2	...	...	...	...	...	...	...	...	...	...	...	77	42	28	...		
155. Other Diseases of the Skin—																																
(a) Erythema	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(b) Urticaria	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(c) Eczema	32	33	11	...	11	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(d) Herpes	2	2	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(e) Psoriasis	3	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(f) Myiasis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(g) Chiloes	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(h) Ulcers	34	189	342	14	153	87	139	1	12	89	89	1	26	14	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(i) Other Skin Affections	334	249	97	...	89	78	10	...	52	11	24	...	35	29	3	...	34	28	9	...	25	5	...	...	...	...	...	...	531	395	149	1
Total	1,115	656	1,195	50	417	281	346	9	187	105	533	1	190	67	40	...	366	296	66	1	45	1	4	...	30	5	...	...	2,189	1,321	1,886	41
X.—Diseases of Bones and Organs of Lesions (other than Tuberculosis)—																																
156. Diseases of Bones—																																
Osteitis and Osteomyelitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(a) Arthritis	12	3	54	1	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(b) Synovitis	158	118	82	1	104	74	18	...	25	13	6	...	47	49	2	...	26	16	7	...	...	...	...	...	...	...	...	...	...	...	...	...
(c) Spondylitis	22	21	20	...	58	33	17	...	2	1	8	...	11	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
158. Other Diseases of Bones or Organs of Lesion	229	273	47	1	295	267	24	...	194	84	7	...	39	8	3	...	128	99	...	...	2	...	...	...	...	...	...	...	737	730	79	1
Total	412	410	206	4	544	372	61	...	131	98	26	...	93	53	5	...	184	119	8	...	29	...	...	...	19	5	...	...	1,187	1,037	301	4
XI.—Malformations—																																
159. Malformations—																																
(a) Hydrocephalus	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(b) Hypospadias	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(c) Spina Bifida, &c.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(d) Unclassified	7	1	23	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	7	1	26	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7	1	26	2

TABLE 4—(Continued.)
 HOSPITALS—GEORGETOWN, NEW AMSTERDAM, SUDDIE, BARTICA, NORTH WESTERN DISTRICT, KAMAKUSA AND POTARO.
 Return of Diseases (Out-Patients) and of Diseases and Deaths (In-Patients) for the Year 1933.

DISEASES.	P.H., Georgetown			P.H., New Amsterdam.			P.H., Suddie			P.H., Bartica			P.H., N.W.D.			P.H., Kamakusa			P.H., Potaro.			Totals.			
	Out-Patients		In-Patients	Out-Patients		In-Patients	Out-Patients		In-Patients	Out-Patients		In-Patients	Out-Patients		In-Patients	Out-Patients		In-Patients	Out-Patients		In-Patients	Cases		Deaths	
	M.	F.	C. D.	M.	F.	C. D.	M.	F.	C. D.	M.	F.	C. D.	M.	F.	C. D.	M.	F.	C. D.	M.	F.	C. D.	M.	F.		
XII.—Diseases of Infancy—																									
160. Congenital Dehility	2	2	64	44	13	6	17	15	2	1	33	11	1	1	1	1	1	1	1	1	1	17	8	116	71
161. Premature Birth	1	1	30	29	...	...	...	5	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	44	39
162. Other Affections of Infancy	...	...	10	6	...	...	6	2	...	...	28	4	1	1	1	1	1	1	1	1	1	1	1	3	12
163. Infant Neglect (infants of three months or over)	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
Total	3	3	104	79	13	6	31	22	2	1	66	19	1	3	2	3	3	3	3	3	3	19	11	207	122
XIII.—Affections of Old Age—																									
164. Senility—																									
(a) Senile Dementia	...	...	19	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	21	...
(b) Senile Dehility	...	...	46	154	...	...	48	29	15	56	42	50	3	5	18	...	...	...	...	...	...	146	210	235	61
Total	22	46	173	42	49	48	29	15	202	252	52	3	5	18	...	...	...	...	...	...	278	361	256	61	
XIV.—Affections produced by External Causes—																									
165. Suicide by Poisoning	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
166. Corrosive Poisoning (intentional)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
167. Suicide by Gas Poisoning	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
168. Suicide by hanging or strangulation	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
169. Suicide by drowning	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
170. Suicide by firearms	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
171. Suicide by cutting or stabbing instruments	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
172. Suicide by jumping from a height	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
173. Suicide by crushing	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
174. Other suicides	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
175. Food Poisoning—																									
(a) Botulism	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(b) Other	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
176. Attacks of poisonous animals—																									
(a) Snake bite	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(b) Insect bite	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(c) Unclassified	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
177. Other accidental poisonings	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
178. Burns (by fire)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
179. Burns (other than by fire)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
180. Suffocation (accidental)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
181. Poisoning by gas (accidental)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
182. Drowning (accidental)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
183. Wounds (by firearms, war excepted)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Carried forward	21	24	88	9	4	4	25	2	...	...	17	1	2	2	8	...	...	...	...	...	...	34	30	140	12

TABLE 4—(Continued).
HOSPITALS—GEORGETOWN, NEW AMSTERDAM, SUDDIE, BARTICA, NORTH-WESTERN DISTRICT, KAMAKUSA AND POTARO.
Return of Diseases (Out-Patients) and Deaths (In-Patients) for the Year 1933.

DISEASES.	P. H., Georgetown.			P. H., New Amsterdam.			P. H., Suddie.			P. H., Bartica.			P. H., N.W.D.			P. H., Kamakusa.			P. H., Potaro.			Totals.								
	Out-Patients.		In-Patients.	Out-Patients.		In-Patients.	Out-Patients.		In-Patients.	Out-Patients.		In-Patients.	Out-Patients.		In-Patients.	Out-Patients.		In-Patients.	Out-Patients.		In-Patients.	Out-Patients.	In-Patients.							
	M.	F.	C.	D.	M.	F.	C.	D.	M.	F.	C.	D.	M.	F.	C.	D.	M.	F.	C.	D.	M.	F.	Cases.	Deaths.						
Brought forward	36	50	9	1	42	33	7	2	...	45	3	6	16	...	1	...	85	101	...	...	...	62	6				
XV.— <i>Ill-Defined Diseases.</i> —(Contd.).	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
203. —A.—Diseases not already specified or ill-defined—(Contd.)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(c) Asthenia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(d) Shock	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(e) Hyperpyrexia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(f) Debility (excluding 169 & 164(b))	303	438	210	27	142	215	50	15	...	131	9	99	81	...	41	53	1	69	2	...	66	27	1	1						
B.—Malingering	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	435	490	231	31	184	251	57	17	...	178	14	97	97	...	41	53	2	61	2	...	66	29	1	1						
XVI.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
A.—Ophthalmic Department (Out-patients)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
B.—Dental Department (O.P.)	2,732	3,554	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
C.—Casualties (O.P.)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
D.—Not Sick	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
E.—Undiagnosed	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	2,820	3,611	284	...	289	889	63	...	...	75	9	75	...	...	6	...	13	9	...	...	...	...	...	...
Totals, Sections I.—XVI.	14,367	13,776	13,021	1,228	5,624	6,304	3,023	298	2,460	2,567	2,511	241	2,561	1,083	470	30,338	3,494	677	59	638	30	3	338	107	19	4	29,362	28,916	19,754	1,868
Attendances for Repeat Medicines	8,770	9,520	1,907	2,299	526	47	917	194	325	373	205	8	...	28	4	...	12,678	13,351
GRAND TOTAL	23,137	23,295	13,021	1,228	7,531	9,225	3,023	298	2,986	3,044	2,511	241	3,478	2,032	470	55,370	3,873	677	59	843	38	3	386	111	19	4	42,070	42,267	13,754	1,865

*Casualties classified under 153 A and B, 184, 185, 201 A—C, 202, and 205 (f).

TABLE 5.

RETURN OF SURGICAL OPERATIONS—1933.

Operations.	Public Hospital, Georgetown.		Other Hospitals.	
	Cases.	Deaths.	Cases.	Deaths.
HEAD AND NECK—				
Cranium ...	23	...	9	...
FACE—				
Eyelid ...	11	...	6	...
Eye ...	166	...	16	...
Nose ...	12	...	7	...
Cheek ...	11	...	7	...
Jaws ...	14	...	1	...
Lip ...	3	...	1	...
Mouth and Pharynx...	129	1	26	...
Neck ...	14	1	7	...
UPPER EXTREMITY—				
Shoulder ...	4	...	2	...
Axilla ...	5	...	3	...
Upper Arm ...	21	...	3	...
Elbow ...	7	...	3	...
Forearm ...	37	...	6	...
Hand ...	16	...	14	...
Finger ...	24	...	11	...
LOWER EXTREMITY—				
Hip ...	1	...	1	1
Buttock ...	14	1	...	...
Groin ...	11	...	...	...
Thigh ...	31	1	6	...
Knee ...	18	...	5	...
Leg ...	28	7	8	...
Foot ...	43	1	12	1
Toe ...	24	...	16	...
Thorax and Chest ...	3	...	...	...
Breast ...	20	...	1	...
ABDOMEN—				
Abdominal Wall ...	24	1	3	...
Laparotomy ...	250	18	17	2
Hernia ...	162	6	60	2
Rectum ...	99	...	41	...
Anus ...	10	...	8	...
Back and Vertebrae...	4	1	2	...
GENITO-URINARY SYSTEM—				
Kidneys ...	7	...	...	...
Bladder ...	5	1	...	...
Prostrate ...	43	9	...	...
Urethra ...	18	...	6	1
GENITALIA—				
Male ...	204	...	105	...
Female ...	41	1	48	1
	1,558	49	461	8

PUBLIC DISPENSARIES.

154. A new dispensary was opened at Canal No. 1, West Bank, Demerara, on the 3rd January, 1933, to afford medical aid to residents in the vicinity. The dispenser stationed at Canal No. 2 Dispensary attends on Tuesdays and Saturdays. The District Government Medical Officer also visits and supervises the work done. During the year 1,175 cases were treated.

155. Out-patient dispensaries are attached to each of the Public Hospitals in Georgetown, New Amsterdam, Suddie, Bartica, Mabaruma, Kamakusa and Potaro. In the City of Georgetown a Government Public Dispensary also exists at Charles Street.

156. There are now thirteen Government Dispensaries in the charge of qualified dispensers situated in the more remote and populous river districts and in the Diamond and Gold-fields.

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

	Paying Patients.			Police Patients.			Pauper Patients.			Expenditure.	Revenue.
	New Cases.	Repeats.	Total.	New Cases.	Repeats.	Total.	New Cases.	Repeats.	Total.		
No. 1 Charles Street ...	6,562	4,265	10,827	...	...	...	4,379	8,213	12,592	\$ 1,445 60	\$ 2,598 48
Leguan ...	780	30	810	42	8	50	388	30	388	769 63	206 90
Demerara River (Christianburg) ...	889	80	969	59	10	69	1,596	147	1,743	1,094 83	369 65
Berbice River (Ida Sabina) ...	68	1	69	...	...	...	624	26	649	1,234 55	30 08
Pomeroon River (Charity) ...	573	219	792	10	3	13	3,240	596	3,836	1,496 37	340 63
Essequibo River (Supenaam) ...	850	249	1,099	...	...	...	759	202	961	1,575 42	355 12
Moruca River (Acquero) ...	2	...	2	...	...	...	1,683	63	1,746	1,263 58	98
Canal No. 2 Polder ...	1,243	48	1,291	...	...	...	68	12	80	817 34	509 12
Canal No. 1 Polder* ...	1,128	43	1,171	...	...	...	4	...	4	...	275 76
Mara ...	113	33	146	31	9	40	2,628	697	3,325	1,415 65	228 80
Enachu ...	92	44	136	8	2	10	599	280	789	†	134 24
Wakenaam ...	1,235	627	1,862	36	12	48	207	84	291	970 11	496 96
Anna Regina ...	199	7	206	82	2	84	5,437	1,199	6,636	1,399 22	48 72
Parika ...	279	52	331	...	...	...	32	8	40	‡	78 24
	41,373	27,311	68,684	2,468	416	2,884	41,624	11,624	53,248		

* This Dispensary was opened on 3rd January, 1933.

† Supplies are obtained from Public Hospital, Kamakusa.

‡ Supplies are obtained from Leguan Dispensary.

158. Free medicines supplied to a number of Aboriginal Indian Stations at a cost of \$188.83.

V.—MENTAL HOSPITAL.

159. This hospital is situated in the county of Berbice and has accommodation for 738 patients—417 males and 321 females.

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

161. The daily average number of patients was 764 (males 421, females 343) compared with 751 in 1932.

162. There were 93 admissions (males 51, females 42) as against 62 in 1932. With the 749 patients (412 males, 337 females) remaining on January 1st a total of 842 cases were treated during the year.

163. The admissions from the three counties were :—

County.	Males.	Females.	Total.
Demerara ...	30	28	58
Berbice ...	13	10	23
Essequibo ...	8	4	12
Total ...	51	42	93

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

Country.	Males.	Females.	Total.
British Guiana	43	39	82
India	1	2	3
Barbados	1	...	1
Surinam	2	...	2
Dominica	1	1	2
Tobago	1	...	1
Germany	1	...	1
St. Lucia	1	...	1
Total	51	42	93

165. The causes of unsoundness of mind in the cases admitted were:—

Causes.	Males.	Females.	Total.
Domestic worries	17	13	30
Poverty and want	6	16	22
Recurrence	8	6	14
Parturition	...	1	1
Epilepsy	4	1	5
Adolescence	...	2	2
Congenital	4	...	4
Syphilis	1	1	2
Senility	6	1	7
Heredity	...	1	1
Not insane	5	...	5
Total	51	42	93

166. The causes of unsoundness of mind and the numbers under the various headings remain fairly constant, although domestic worries seem to have been a more predominant cause this year. They, along with poverty and want, account for 45.16% of the total admissions. Recurrence accounts for 15.05%. The causes from epilepsy have increased; those from syphilis have diminished.

167. The chief types of unsoundness of mind were melancholia—22; mania—19; delusional insanity—7; epileptic insanity—5; adolescent insanity—2; congenital imbecility—4; and dementia of various forms including senile dementia—11.

168. There were 59 discharges (males 35; females 24) as against 24 in 1932, and the total number of patients under treatment at the end of the year was 21 less than at the end of 1932.

169. The total number of recoveries was 59, representing 35 more than in 1932. Out of 51 males and 42 females admitted, 13 males and 9 females were discharged—*i.e.* equivalent to 23.6% of recoveries as against 6.4% in 1932.

170. The number of deaths was 55 (39 males and 16 females) compared with 42 in 1932 and the mortality rate was 6.5% as against 5.1% in 1932. Of the 93 admissions 9 died within one year of admission—6 males and 3 females, *i.e.* 9.6% of the total admissions.

171. The principal causes of death were general debility, pulmonary tuberculosis, diseases of the respiratory system, chronic nephritis, exhaustion following acute mania, cerebral haemorrhage and acute cerebral congestion.

172. From the above figures it will be seen that the number of male patients has decreased by 23 and the number of female patients has increased by 2 compared with the end of 1932. The deaths of males exceeded those of females by 23 and the discharges of males exceeded those of females by 11. The number of female patients is thus steadily gaining on the number of male patients, the difference being only 50 in the total numbers.

173. The chief diseases treated were malaria, pulmonary tuberculosis and other chest conditions, filariasis, dysentery, Bright's disease, diarrhoea and debility.

174. Thirty-four cases of Chicken-pox occurred amongst the female patients, but no male patients were affected.

175. The expenditure for the year was \$68,331.11 compared with \$71,605.62 in 1932 and the revenue \$1,820.78 compared with \$1,926.04 in 1932.

176. The per caput cost per diem was 23.8 cents as against 25.3 in 1932.

177. Over 55% of of the patients are engaged in some form of occupation and the value of their labour in such occupations as baking, gardening, tailoring, shoe-making, washing, printing, carpentry, woodcutting, etc., was estimated at \$23,285 compared with \$21,742 in 1932

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

Division.	No.	Name of Block.	Accommodation.		Class of Patients.
			Authorised.	Actual Number of Patients Treated.	
Male	417	"A" ...	23	17	Trusted.
		B and C Single Rooms ...	82	91	16 sleeping in Annexe. Dangerous and refractory.
		D Lower ...	71	65	Chronic Creole.
		D Upper ...	74	67	Chronic East Indian.
		E Lower ...	38	37	Quiet East Indian.
		E Upper ...	41	38	Quiet East Indian.
		F (Vacant) ...	...	...
		G Male Infirmary Criminal Annexe ...	55 33	46 27*	Sick and infirm. Criminal.
Female	321	Victoria "A" ...	67	74	Chronic Creole.
		Victoria "B" ...	66	61	Chronic East Indian.
		Single Rooms ...	28	27	Dangerous and dirty.
		Central Block ...	81	97	Doubtful and dirty.
		Female Infirmary ...	54	56	Sick and infirm.
		Doreas (Cottage) ...	25	25	340† Convalescent and trusted.
			738	728	

* 16 patients from B. and C. Block sleep here.

† One small boy included here.

179. Accommodation generally is inadequate. This is particularly the case in the female division where the number of females is steadily gaining on the number of males. Both refractory blocks are overcrowded and there is urgent need for more single room accommodation for patients of both sexes.

180. Structural improvements, alterations and additions were effected in the Central Block and Single Room Block, B. and C. Blocks, the Male Infirmary, D. Block and in the kitchen.

VI.—PRISONS.

181. The general health of the prisoners in the Georgetown and New Amsterdam Prisons has been good. There was no epidemic disease during the year.

182. Food, milk and water supplies were satisfactory.

183. The daily average number of convicts and prisoners was 241.

184. The following Table shows the number of patients treated in prison hospitals during the year :—

Number remaining in hospital on 31st December, 1932 ...	7
Number admitted to hospital during the year ...	292
Number discharged from hospital during the year ...	285
Number died in Prison Hospital ...	...
Number transferred to Public Hospitals ...	6
Number remaining in hospital on 31st December, 1932 ...	8

185. The principal diseases treated were influenza, malaria and filariasis.
186. The number of out-patients treated was 2,725 as against 4,914 in 1932.
187. There was no execution during the year.

VII.—MINING—MAZARUNI DIAMOND FIELDS.

188. The resident staff consists of :—
- 1 Senior Dispenser.
 - 2 Junior Dispensers.
 - 1 Scavenger.
 - 1 Mechanic for motor engine.
 - 2 Boathands.
189. The hospital of eight beds, with a dispensary, is situated at the headquarters station at Kamakusa.
190. An out-station dispensary under the charge of a dispenser is maintained at Enachu.
191. The senior and junior dispensers make routine tours of inspection of the district.
192. The average mining population in the district during the year was 1,834.
193. The health of the district has been satisfactory, the most prevalent diseases being bronchitis, influenza, and malaria. There was a mild epidemic of influenza during February and March.
194. An increase in the incidence of venereal diseases is recorded : 31 cases were treated as against 22 in 1932.
195. The rainfall in the district was 138.79 inches compared with 107.40 inches in 1932.
196. The number of deaths registered during the year was 51 as against 47 in 1932. The causes were :—

Malaria	...	...	...	13
Pneumonia	...	...	...	8
Suicide	...	...	...	1
Dysentery	...	...	...	5
Drowning	...	...	...	1
Other Causes	...	...	...	23

197. Sanitation has been fairly well maintained and with persuasion nuisances were usually abated. Food inspections were carried out regularly and in a few instances unwholesome foodstuffs were condemned and destroyed.

VIII.—SUGAR ESTATES.

198. The total number of these estates is 31. Of these 24 provide and maintain their own hospitals and dispensaries for the benefit of their labour forces and employ their own dispensers and midwives.

199. The influenza epidemic during the first quarter of the year had a far reaching effect on the general health of the population of sugar plantations. Not only did it cause a marked increase in the cases of and deaths from influenza and the allied respiratory diseases but also, secondarily, higher morbidity and mortality rates generally throughout these communities.

200. The greater incidence of sickness and of deaths is also contributed to by a rise in the malaria rate and in respiratory diseases due to exposure consequent upon excessive rainfall in the Colony during the second half of the year.

201. Table I. shows the number of active estates during 1933 and the two previous years, which are equipped with hospitals, together with the estimated population. The names of the estates which have closed down are also given to account for the difference in the number each year:—

TABLE I.

Year.	No. of Estates.	Population.	Estates Hospitals closed down.
1933	24 ✓	61,518 ✓	Mon Repos, East Coast, Demera a.
1932	25 ✓	60,536 ✓	...
1931	25	59,860	Hampton Court, Essequibo.

Note.—The figures for the population include East Indians, Negroes and other races.

202. Table II. furnishes a collective comparison between the population (as estimated by the Immigration Department), the births and birth-rates, deaths and death-rates (as obtained from the Registrars of estates with hospitals) of Sugar Estates in the counties of Berbice and Demerara together with similar returns for the estates in the Colony as a whole:—

TABLE II.

County.	Population.	No. of Births.	Birth-rates.	No. of Deaths.	Death-rates.
Berbice	22,950	875	38.1	468	20.4
Demerara	38,568	1,144	29.6	968	25.1
British Guiana	61,518 ✓	2,019 ✓	32.8 ✓	1,436 ✓	23.3 ✓

203. Table III. compares the returns of the estates of the Colony for 1933 with the two previous years:—

TABLE III.

Year.	Population.	No. of Births.	Birth-Rates.	No. of Deaths.	Death-Rates.
1933	61,518	2,019	32.8	1,436	23.3
1932	60,536	2,067	33.9	1,001	16.5
1931	59,860	1,920	32.0	1,027	17.1

204. The number of deaths recorded in 1933 was 1,436 revealing an increase of 435 over the figure for the previous year. Forty per cent. of this increase was accounted for by influenza, pneumonia and bronchitis. Furthermore, there was a higher death-rate from malaria, which is referred to in paragraph 222.

205. The Death-rate of 23.3 per thousand is the highest ratio since the year 1927.

206. The birth-rate of 32.8 per thousand shows a slight fall compared with the year 1932.

207. The untoward effects of the influenza epidemic coupled with the later rise in malaria and the sequelae of the high rainfall are exhibited in an increased maternal mortality and infant mortality ratio. The infant mortality rate is also reflected in the greater incident of enteritis and the dysenteries.

208. Table IV. gives the number of maternal deaths, the number of births, together with the maternal mortality (being the number of maternal deaths per thousand births) and the infantile mortality as obtained from the number of deaths of

infants under one year of age. The figures are for the year under review, and for the two previous years:—

TABLE IV.

Year.	No. of Births.	Maternal Deaths.	Maternal Mortality.	For all Estates (E.I's) as given by Immigration Department.		
				No. of Births.	Deaths under 12 months.	Infantile Mortality.
1933	2,019 ✓	32 ✓	15.8 ✓	1,874 ✓	346 ✓	184.6 ✓
1932	2,057 ✓	27 ✓	13.1 ✓	1,923 ✓	257 ✓	133.6 ✓
1931	1,920	11	5.7	1,793	222	123.8

209. During the latter part of the year, the proprietors of Plantations Cane Grove, Enmore, Non Pareil, Lusignan, Mon Repos, La Bonne Intention, Vryheid's Lust, Ogle, Diamond, Providence, (East Bank, Demerara), Farm, Ruimveldt, Wales, Leonora, Uitvlugt, De Kinderen, Tuschen, Blairmont Bath and Providence, (Berbice), represented to Government that they desired to engage their own medical officer(s) to attend certain members of their staffs and their families. This was agreed to under the following conditions, viz. :—

- in continuation of...*
- (a) That the senior staff, including Managers, Overseers, Consulting Engineers and Chemists and their families should be attended by their private practitioners; other staffs, labourers and hospital patients remaining in the care of the Government Medical Officer of the district.
 - (b) That the Government Medical Officer would receive the same remuneration as heretofore and that the existing regulations as to the professional services of Government Medical Officers in districts would continue to be observed.
 - (c) In cases of emergency or when for some unavoidable reason the services of the private practitioner are not obtainable, the Estates have the right to call on the services of the Government Medical Officer without extra remuneration.
 - (d) The proprietors undertook to maintain the hospitals and staffs as at present, to collaborate with the Surgeon-General before an estate hospital is closed down and for arrangements for the satisfactory treatment of labourers on estates, and to recognise the existing powers of the Surgeon-General in regard to all matters affecting generally the health of the community and sanitary arrangements on the estates.

210. In the case of Plantations Blairmont, Bath and Providence (Berbice), the private practitioner is in charge of all staffs, the labourers and hospital patients, *i.e.*, all medical and sanitary work.

211. These arrangements remain in force for a period of two years in the first instance, except as regards Blairmont, Bath and Providence (Berbice), where the period is limited to one year.

212. Hospitals and dispensaries were on the whole satisfactorily maintained. Consequent upon the rebuilding of the hospital at Plantation Lusignan, the hospital at Mon Repos was closed at the end of June. There remains at Mon Repos a sick-detention ward for use in case of emergency, but all cases requiring treatment in hospital are now conveyed by boat to Lusignan.

213. In several cases the buildings stand in need of reconstruction and renovation in whole or in part. The equipment, generally speaking, should be of a higher standard. In the course of inspections I have directed the attention of managers thereto and it is earnestly hoped that gradually these defective conditions will be remedied. It is to be recorded with satisfaction that improvements along these lines have taken place in certain plantations within recent years.

214. Continued progress has been made in Maternity and Child Welfare work. A further number of maternity wards were opened, including one at Pln. Albion and at Pln. Non Pareil, and year by year the admissions to these wards are increasing. The success which has attended the Child Welfare Clinics is attributable in no small measure to the active interest which has been shown in them by the wives of the Managers and other ladies on the Plantations.

215. The total number of cases treated in hospitals was 21,651 which represents a considerable increase over the number for 1932 (17,694). The epidemic of influenza, the higher incidence of respiratory diseases and of malaria account therefor. The total number of deaths in hospitals was correspondingly higher, 970 in 1933, compared with 679 in 1932.

216. Table V. furnishes an indication of the general prevalence of sickness on estates during 1933 for the counties of Berbice and Demerara together with a similar comparison for the estates of the Colony over the past three years :—

TABLE V.

County.	Population.	Total Hospital cases.	Total Hospital deaths.	(Per 1,000 Population).	
				Morbidity rate.	Mortality rate.
Berbice	22,950	4,224	232	184.05	10.1
Demerara	38,568	17,427	738	451.8	19.1
Year.					
British Guiana—					
1933	61,518	21,651	970	351.9	15.7
1932	60,536	17,694	679	292.2	11.2
1931	59,860	16,971	666	268	11.1

217. *Infectious Diseases.*—As already mentioned there was an epidemic of influenza throughout the Colony during the first quarter of the year. The number of reported cases which occurred in the plantations is estimated at 3,956, while the number of deaths was 74. All possible effort was made to cope with the situation. Complications in the form of pneumonia were moderately common, and the debilitating effects were reflected in higher morbidity and mortality rates generally, in which they participated.

218. The number of reported cases of all forms of pneumonia totalled 732 with 233 deaths.

219. The incidence of the enterica, 126 cases, shows a slight increase over the number recorded in 1932, but a decrease compared with the year 1931 when the figure was 142. The case mortality, however, is higher, which may well be explained by the malign effects of the influenza epidemic, the rise in the malaria rate during the second half of the year and the weakening influence of exposure following upon the heavy rainfall towards the end of 1933.

220. The same factors, account for the greater number of cases of the dysenteries and enteritis. But, even though these causes are accepted in connexion with the figures for enteric, dysentery, etc., these intestinal diseases remain too prevalent, and it must again be stressed that pure water supplies, better systems of soil disposal and improved sanitation in general are required in order to effect the necessary reduction.

221. Table VI. compares the cases of, and deaths from, enteric fever and certain intestinal diseases (including dysentery and enteritis) in the counties of

Berbice and Demerara during 1933 with corresponding figures from the Colony Estates as a whole for the past three years.

TABLE VI.

County.	Population.	Enteric Fever.		Other Intestinal Diseases.	
		Cases.	Deaths.	Cases.	Deaths.
Berbice	22,950	22	2	273	20
Demerara	38,568	104	25	734	50
British Guiana—					
1933	61,518	126	30	1,007	70
1932	60,536	105	16	709	57
1931	59,869	142	18	825	63

222. *Malaria*.—Table VII. furnishes the number of malaria cases and deaths in hospitals, together with case and death-rates per 1,000 of the estate population during 1933 for the counties of Berbice and Demerara separately and for the estates of the Colony for the past four years.

TABLE VII.

County.	Population.	Cases Malaria.	Deaths Malaria.	Cases per 1,000 Population.	Deaths per 1,000 Population.
Berbice	22,950	921	34	40.1	1.4
Demerara	38,568	5,905	94	153.1	2.4
British Guiana—					
1933	61,518	6,826	128	110.9	2.08
1932	60,536	7,029	86	116.1	1.4
1931	59,860	4,751	61	79.3	1.01
1930	60,352	4,846	88	80.3	1.45

223. There was a general increase of malaria throughout the whole country during the third and fourth quarters of the year. It will be observed, however, that the number of cases in 1933 was slightly less than the number for the previous year.

224. The deaths in hospitals were 128 for the year under review, compared with 86 in 1932. This marked increase occurred chiefly in the plantation hospitals in the county of Demerara: 60 deaths were recorded in 1932, and last year the figure rose to 94. There is little doubt that this higher death-rate for all the plantation hospitals (2.08 per 1,000 of the population) can be ascribed in considerable measure to lowered vitality of the people, which followed the epidemic of influenza thus decreasing their powers of resistance.

225. These statistics once again indicate the urgent necessity for an earnest endeavour to reduce the incidence and severity of malaria not only by anti-mosquito measures but by general improvement in the welfare and housing of the community.

226. *Water Supplies*.—The water supplies of the majority of estates are still obtained by means of fresh water canals or trenches. The water is largely what is known as creek water which is not in itself highly impure. Many of the canals, however, are used also for navigation purposes, and there also exists at the present no protection from contamination by animals, such as by fencing, or from surface pollution generally. Artesian wells have been drilled on some estates, and as a whole they now work satisfactorily, although in some instances the flow has steadily diminished or ceased. There has naturally been some hesitation on the part of estates' managers to extend the principle of artesian wells owing to the possibility, of a diminution or cessation of flow within a comparatively short time due largely to corrosion of the strainer. Now that a more satisfactory strainer has been introduced, it is hoped that confidence will be regained and that further wells will be

sunk as soon as possible. One or two estates have distributed the well water throughout the yards by means of pipes and standpipes at suitable intervals. Such extension, wherever wells are functioning properly should be encouraged. Estate labourers do not readily take to this artesian well water, preferring as they do the distinctive characteristics attached to the creek water. In time, however, they gradually use it and ultimately prefer it. For the washing of clothes rain or creek water is still largely used.

227. Estates' Managers are being impressed with the importance of a pure water supply for their labourers, reducing as it must the high incidence of bowel diseases which at present obtains generally on estates.

228. *Drainage.*—The former policy of the medical authorities in insisting upon wide and deep drains and trenches, more particularly on either side of estate ranges, has been discontinued. The existence of as few drains as possible and of a depth consistent with the carrying off of storm water but otherwise remaining dry during the intervening periods, is now the aim to be achieved. It is in the stagnant water in these old deep drains and trenches, especially if the surface and adjacent banks are not kept clean and free from aquatic overgrowth, that the developmental stages of the mosquito responsible for the transmission of malarial parasites are so commonly found. Similarly, much of the ground around the ranges and generally in the estate yards is irregular and broken-up, and hence ill-drained. Stress is now being laid on the need for the levelling of the ground, the filling in of low-lying swampy areas, and generally the grading off of the land to the surrounding drains in order to permit of more rapid drying by sun and wind and to prevent water from remaining thereon longer than necessary.

229. The need for keeping the drains and trenches (including the fresh water trenches) free from bush, weeds and grass is emphasised. The point in question here also is that when these trenches are cleaned the earth is generally thrown up on one or other bank, and there left, instead of being utilised on the adjacent ground for filling up low-lying areas.

230. *Sewage and Refuse Disposal.*—Whilst the prevailing method of the disposal of sewage still remains what is called the "over-trench" system, estate authorities are being asked to appreciate the sanitary advantages of the septic tank. The type of tank recommended is that of the trough closet system with a capacity sufficient for a five or six-roomed superstructure. Although more expensive in the initial outlay these tanks are permanent and in the end must tend to be more economic, more especially as regards maintenance costs. Not a few estates have now installed one or more of these septic tanks, and it is gratifying to note that recently one large estate has decided to instal septic tanks throughout the estate yards.

231. The disposal of refuse is generally achieved by either burying or burning. Incinerators have been installed on one or two estates, but this system is only recommended where proper and regular supervision can be enforced.

232. The inspection of provision shops on estates is undertaken by District Sanitary Inspectors attached to the Health Department, as also the licensing and registration of milk vendors and cattle-byres. There is need in this connection for a general tightening up of control and for improvement more especially in connection with the type and construction of cattle-byres and their water supply and the disposal of manure. It is strongly recommended that estate authorities should consider the appointment of a whole-time Sanitary Inspector, together with a permanent small sanitary gang, to undertake the supervision and execution of all sanitary measures on their estates.

233. *Anti-malarial Measures.*—Stress has continued to be laid throughout the year on the importance of this aspect of sanitation. Much of the land in the yards

has for many years become broken up and irregular. Further, earth has been borrowed by the labourers for the purpose of making up the mud floors of many of the old ranges. Estate Authorities are continually being reminded of the importance of levelling and grading the land, thereby preventing the accumulation of stagnant water in low-lying areas. This work has been carried out extensively on one estate and to a smaller extent on many other estates during the year under review.

234. In conjunction with present and future building programmes, the preparation of the land for building purposes in this manner prior to the erection of the buildings is being advised.

235. *Buildings.*—The building of ranges is no longer recommended. These ranges consisting frequently of ten or more rooms, whilst perhaps more economical as regards construction, are for many reasons unsatisfactory from a health and sanitary standpoint. The single or two-family cottage system is now recommended, preferably the former, and particular care should be taken in the proper laying out of the land and spacing of the buildings. With the growth of estate populations modifications from the original lay-out have resulted in a somewhat chaotic state of affairs as regards the position, type and general arrangement of buildings in estate yards. What is urgently needed on the part of the authorities is the preparation of a comprehensive "town-planning" scheme, including what may be described (in terms of the English Acts) as improvement and re-construction schemes. Such schemes would include provision, *inter alia*, for an improved system of water supply, drainage and latrine accommodation.

236. The following Tables are also attached :—

TABLE A.

SHOWING THE POPULATION, AND NUMBER OF BIRTHS, STILL-BIRTHS AND DEATHS OF EAST INDIANS AND OTHERS ON SUGAR ESTATES DURING 1933.

NAME OF ESTATE.	POPULATION.			BIRTHS.		STILL-BIRTHS.		DEATHS.		
	East Indians.	Others.	Total.	East Indians.	Others.	East Indians.	Others.	East Indians.	Others.	Non-resident.
Skeldon	1,099	619	2,318	51	19	1	2	23	7	9
Springlands	458	71	529	17	...	...	...	10	...	2
Port Mourant	5,516	334	5,850	236	9	9	1	91	4	14
Albion	5,665	220	5,885	255	4	9	...	94	3	7
Rose Hall	3,165	377	3,542	129	17	11	1	77	4	2
Providence, Berbice	476	100	576	11	4	...	...	13	3	6
Mara	244	122	366	15	10	1	1	14	6	5
Blairmont	1,765	363	2,128	49	9	4	...	69	8	12
Bath	1,676	80	1,756	48	1	1	...	41	1	7
Cane Grove	1,334	143	1,477	57	1	3	1	25	1	5
Enmore	2,306	544	2,850	71	19	4	2	61	10	4
Nonpareil	2,009	513	2,572	71	7	8	1	71	6	1
Lusignan	2,957	765	3,722	91	17	6	3	77	8	15
Mon Repos	...	...	...	31	4	...	...	15	1	1
La Bonne Intention	2,061	83	2,144	84	...	4	...	81	1	4
Vryheid's Lust	1,221	144	1,365	61	11	3	1	41	4	5
Ogle	1,778	383	2,161	73	17	4	...	54	7	1
Diamond	2,631	1,705	4,336	75	15	2	...	56	9	21
Farm	1,257	359	1,696	36	10	9	...	44	4	6
Providence, D.R.	2,326	482	2,778	46	5	6	1	74	3	9
Schoon Ord	431	95	526	...	...	...	...	...	...	...
Waies	1,261	441	1,702	33	12	2	...	64	3	6
Versailles	575	36	611	30	11	2	...	10	...	19
Leonora	3,225	279	3,504	99	2	8	...	78	4	17
Uitvlugt	4,066	739	5,405	99	6	12	1	95	4	2
De Kinderen	1,348	471	1,819	35	15	4	...	50	7	15
Totals	52,080	9,438	61,518	1,794	226	113	15	1,328	108	196

324/11

31.8

2-12/11

TABLE B.

RETURN SHOWING RAINFALL ON SUGAR ESTATES DURING 1933.

ESTATES.	Jan'y.		Feb'y.		March.		April.		May.		June.		July.		August.		Sept.		Oct.		Nov.		Dec.		Total.		
	Ins.	Part's.	Ins.	Part's.	Ins.	Part's.	Ins.	Part's.	Ins.	Part's.	Ins.	Part's.	Ins.	Part's.	Ins.	Part's.	Ins.	Part's.	Ins.	Part's.	Ins.	Part's.	Ins.	Part's.	Ins.	Part's.	
<i>Barbadoes.</i>																											
Skeldon	5	68	7	28	4	54	4	79	9	08	9	10	10	36	6	94	2	81	1	97	7	38	11	41	81	34	
Springlands	10	06	11	68	4	74	6	52	13	27	10	35	14	53	9	58	2	29	...	32	20	06	23	02	126	42	
Port Mourant	3	36	2	86	4	66	4	05	10	90	10	01	8	70	11	51	1	59	1	58	10	68	23	17	93	07	
Albion	5	21	5	38	4	37	4	08	12	36	12	42	10	36	10	37	2	26	1	69	12	82	26	04	167	36	
Rose Hall	4	65	5	35	5	51	4	39	13	40	10	00	9	92	11	18	1	08	6	80	9	82	27	68	169	78	
Providence	5	96	6	31	6	14	3	28	12	73	9	61	10	68	12	09	1	67	3	29	6	88	30	44	108	99	
Mara	4	75	4	46	3	40	3	22	16	65	9	79	6	87	5	90	...	13	2	95	4	00	19	10	75	22	
Blairmont	7	52	5	17	4	82	3	55	19	58	10	78	12	71	10	98	1	96	2	85	3	85	32	93	167	67	
Bath	6	64	2	87	6	25	4	46	17	33	14	19	9	72	13	96	1	18	5	50	6	78	26	42	115	39	
Totals	53	83	51	36	44	43	38	34	110	27	96	25	93	88	92	51	14	97	26	86	82	27	220	21	925	15	
Averages	5.98		5.70		4.93		4.26		12.25		10.69		10.42		10.27		1.66		2.98		9.14		24.46		192.79		
<i>Demerara.</i>																											
Cane Grove	6	35	5	66	5	10	9	20	15	72	12	00	6	80	10	34	...	78	2	62	8	43	32	62	115	62	
Enmore	5	88	3	40	7	07	7	91	11	21	13	57	7	41	9	01	...	56	3	02	14	34	28	19	111	57	
Non Pareil	8	05	3	24	6	05	8	63	12	19	15	77	7	37	12	18	1	27	3	31	16	97	29	42	124	45	
Lusignan	7	29	4	30	6	08	8	41	16	05	16	30	8	66	13	14	1	35	1	36	18	57	27	10	129	32	
Mon Repos	7	24	4	30	6	08	8	41	16	05	16	30	Hospital closed as from June 30th, 1933														
La Bonne Intention	5	56	4	35	6	05	22	60	13	82	12	38	7	56	13	37	1	06	2	72	13	17	22	76	124	80	
Vryheid's Lust	6	91	4	75	5	74	4	26	10	68	10	28	7	04	13	31	...	87	1	83	10	30	22	74	98	71	
Ogle	6	38	5	00	5	74	4	47	13	02	16	36	6	91	13	22	1	50	3	35	10	31	24	55	110	82	
Diamond	6	46	4	90	6	49	10	19	13	70	10	37	6	78	11	35	1	00	9	19	14	72	23	90	118	96	
Farm	6	18	5	18	6	03	7	10	14	03	10	70	5	83	3	82	1	57	3	95	13	44	27	03	104	87	
Providence	16	19	5	69	6	17	7	81	12	78	11	87	6	76	13	92	1	24	5	47	12	31	24	22	124	34	
Wales	6	77	4	79	7	02	7	94	14	83	14	41	8	11	11	88	1	75	11	29	14	34	25	60	128	43	
Versailles	7	03	4	83	4	88	6	18	12	67	13	19	6	04	11	87	1	82	3	63	11	61	21	27	105	62	
Leonora	6	34	5	23	5	68	4	78	14	15	15	58	7	71	8	35	1	22	7	23	14	85	19	89	111	61	
Uitvlugt	6	76	4	71	6	79	4	53	14	53	16	61	10	29	8	48	1	25	9	54	14	07	21	45	119	61	
DeKinderen	6	87	4	41	5	83	5	03	14	70	16	83	9	00	7	55	1	25	8	60	14	46	19	85	114	38	
Totals	116	17	74	65	96	80	126	76	221	33	222	52	112	27	161	49	18	49	77	33	201	89	370	59	1800	29	
Averages	7.26		4.66		6.06		7.92		13.83		13.50		7.01		10.09		1.15		4.83		12.61		23.16		112.51		

IX.—ALMS HOUSE.

237. Accommodation is provided for 808 inmates—514 males and 294 females

238. The number of inmates on the 1st January, 1933, was 829—513 males and 316 females. The number admitted during the year was 478—329 males and 149 females. The daily average for the year was 838.

239. The number of cases treated in the infirmary wards was 1,182—786 males and 396 females.

240. The deaths numbered 232—163 males and 119 females—the death-rate being 21.5 per cent. of the total number of inmates compared with 18.2 per cent. in 1932. This increase in the death-rate is due mainly to two causes (a) the large number of acutely ill patients of advanced age admitted during the year (b) the epidemic of influenza which existed during the months of February and March. The actual deaths which occurred during these months were few but it was observed that a considerable number of those who survived the influenzal attack continued to suffer from general debility and succumbed soon afterwards.

241. The chief causes of death were:—senility, chronic nephritis, hemiplegia, general debility, filariasis and bronchitis.

242. 159 minor operations were performed during the year—94 males and 65 females.

243. Injections were given as follows:—

Streptococcal Vaccine	...	...	22
Typhoid, Paratyphoid, A & B Vaccine	...	...	96
Novarsenobillon	...	...	41
Bismotab	...	...	30
Ametox	...	...	6
			195

244. The number of inmates remaining in the Institution on the 31st December, 1933, was 825—524 males and 301 females—and the chief causes of detention were senility, ulcers, blindness, general debility and hemiplegia.

245. The following Table shows the admissions, deaths, etc., for the last ten years:—

(1) Year.	(2) Total Deaths.	(3) Total persons in Alms House during the year.	(4) Death-rate per cent.	(5) Number of cases of Diarrhoea.	(6) Number of cases of Dysentery.	(7) Number of deaths from Diarrhoea and Dysentery.
1924	353	1,783	19.8	291	26	60
1925	430	2,044	21.03	273	31	60
1926	375	1,829	20.5	350	40	74
1927	324	1,591	20.4	224	40	31
1928	338	1,608	21.02	260	53	46
1929	286	1,429	20.01	148	69	38
1930	203	1,379	14.7	54	19	6
1931	219	1,272	17.2	52	6	4
1932	241	1,318	18.2	90	3	7
1933	282	1,307	21.5	116	13	16

246. *General Remarks.*—This institution, like the larger hospitals, has suffered from overcrowding during the year, the congestion on the female side being particularly noticeable.

247. The food, drinking water supply and clothing were ample and of satisfactory quality. The sanitary conveniences are sufficient and generally satisfactory.

X.—UNDERNEEMING INDUSTRIAL SCHOOL.

248. The report of the Medical Officer is published with the report of the Superintendent.

249. The following Table shows statistical figures for the years 1931, 1932 and 1933:—

	1931.	1932.	1933.
Daily average number of boys in School ...	126	123	109
Daily average number of boys sick ...	6.5	1.05	1.6
Percentage of sick to daily average number of boys ...	5	.85	1.48
Percentage of ankylostome infection during the year ...	.26	.8	...

250. There were 175 admissions to the Infirmary during the year, with no deaths.

251. 13 boys were treated at the Public Hospital, Suddie—8 for abscesses, 4 for wounds and 1 for contusion.

252. 17 boys were admitted to the school during the year. Three contracted malaria, three weeks, one month and four months after admission respectively.

253. 32 cases of malaria were recorded, of these 18 had one attack, 11 two attacks and 3 three attacks.

254. 21 boys were vaccinated against small-pox and 3 boys received prophylactic doses of anti-tetanic serum after minor injuries.

255. The water supply and sanitary arrangements are satisfactory. The grounds have been well kept and drains maintained in good order. On the whole the general health of the boys was very satisfactory.

XI.—MATERNITY AND CHILD WELFARE.

256. The report of the British Guiana Infant Welfare and Maternity League founded in 1914 is published separately and may be had on application to the Secretary.

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

258. The accommodation in these hospitals and the maternity returns for the year are as follows:—

	Number of Beds.	Deliveries.	Deaths (Maternal).	No. of Births.	No. of Still-births.
Public Hospital, Georgetown	26	824	30	731	71
do. New Amsterdam	8	188	7	161	24
do. Suddie	12	76	8	60	17
do. Mabaruma	1	34	1	32	2
do. Bartica	4	11	1	8	3
	<u>51</u>	<u>1133</u>	<u>47</u>	<u>992</u>	<u>117</u>

259. The maternal mortality rate in the above institutions was 47.3 per 1,000 live births as against a ratio of 29.7 in 1932.

260. The total number of births registered in the Georgetown Registration District and in the City of Georgetown was 1,861 and 1,619 respectively. Of this number 731 occurred in the Public Hospital, Georgetown.

261. The work of the Infant Welfare and Maternity League throughout the Colony was well maintained during the year 1933. With the co-operation of the Government Medical Officers and the League Nurses under their charge in the various districts much has been done to further the aims and objects of the League.

262. Consequent upon the resignation of Miss Nurse, Inspector of Midwives and Supervisor of Clinics, towards the close of 1932, and in view of the increasing activities of the League, two Inspectors of Midwives were appointed, one for the Counties of Demerara and Essequibo and one for the County of Berbice. During the year under review the duties of the former were performed by Mrs. K. Wade, who had been acting Inspector of Midwives during the absence of Miss Nurse on leave in 1932, while the latter post was filled by Miss R. Ward. Visits of inspection were paid by the two County Inspectors of Midwives to the various districts under their charge, and the help and advice given by them to mothers were greatly appreciated. The usual inspection of bags and registers of League and other midwives was carried out by them quarterly.

263. As in the previous year, the Subvention of \$12,612.00 was kindly granted by Government. From these funds were subsidised forty nurse-midwives stationed in the most populous centres on the coastal belt and in river areas inhabited by settlers and Aboriginal Indians. In addition to the nurse-midwives seven Health Visitors were employed and very good results were shown at the clinics in their districts. It is the policy of the League in districts where there is a sufficient number of registered midwives gradually to replace them by Health Visitors, as it is thought that the League's activities might thus be better advanced and that more cordial co-operation between private midwives and the League Nurses would thus be ensured.

264. With a view to the prevention of malaria clinic mothers were encouraged to provide mosquito curtains for their infants' cots. In some instances these were provided by the League at cost price or given free of charge in necessitous cases.

265. Infant and ante-natal clinics were conducted by Government Medical Officers at sixty-one village centres and nineteen sugar estates with great success. There was an increase in the number of attendances of infants under one year and of expectant mothers.

266. In some of the districts difficulty is experienced in the working of the clinics owing to the want of suitable accommodation. In most cases the clinics are held either in the office of the Village Councils or in the school rooms.

267. The Branch Committees in the villages have greatly assisted in promoting the activities of the League and through their influence several Village and District Councils have contributed to the Milk Fund and allowed the use of their Village Offices as the meeting place of the clinics. The public spirit of the Local Authorities in this respect is to be commended. New Branch Committees were formed at Suddie and Anna Regina during the year.

268. The Central Committee had the pleasure of meeting Bailie Robertson, a member of the Scottish Committee and of the Executive of the British Social Hygiene Council, who paid a visit to British Guiana in December. Miss Robertson gave a brief but interesting outline of her activities and expressed delight at meeting those connected with Maternity and Child Welfare work in the Colony.

269. Mrs. M. A. Cossou resigned as Secretary of the New Amsterdam Branch, which office she held for eight and a half years. We desire to place on record our sincere appreciation of the services rendered by her during that period.

270. Below is a statement of maternity work undertaken by League Midwives during the years 1931-1933 :—

	1931.	1932.	1933.
Number of cases undertaken ...	2,568	2,761 ✓	2,661 ✓
Number of deaths of infants ...	70	119 ✓	97 ✓
Number of still-births ...	97	97	115 ✓
Number of deaths of mothers ...	20	20 ✓	12 ✓
Maternal Mortality Rate per 1,000 live births ...	8.1	7.5 ✓	4.7 ✓

271. Infant and ante-natal clinics have been regularly conducted by Government Medical Officers in 61 centres as follows :—

CLINIC RETURNS (VILLAGES) JANUARY—DECEMBER, 1933.

District.	Government Medical Officer.	No. Clinics.	ATTENDANCES OF INFANTS.		No. of Infants Treated.	EXPECTANT MOTHERS.	
			Under 1 year.	Over 1 year.		No. of Attendances.	No. Treated.
Kitty	Dr. S. T. M. Sang	26	979	157	430	103	42
Plaisance	do.	26	733	163	134	42	5
Betervervagting	do.	27	727	292	185	88	57
Burton	do.	22	907	377	202	51	16
Golden Grove	Dr. G. T. G. Boyce	12	281	55	87	18	1
Paradise	do.	12	64	44	38	12	...
Victoria	do.	12	116	54	65	8	2
Ann's Grove	do.	12	133	18	53	...	...
Unity	do.	11	29	6	13	...	...
Mahaica	do.	12	151	33	46	10	1
Supply	do.	11	68	18	32	11	...
De Kinderen	Dr. F. A. Viapree	10	87	5	11	12	...
Mahaicony	do.	12	129	18	42	21	6
Airy Hall	do.	10	114	16	50	9	1
Belladrum	Dr. E. W. Reece	20	163	16	16	29	4
No. 28 Village	do.	21	134	31	56	40	7
Hopetown	do.	20	179	14	10	21	...
No. 8 Village	do.	20	252	41	31	22	7
Rosignol	do.	20	173	41	65	91	17
New Amsterdam	Dr. W. Besson	50	989	53	306	354	276
Sheet Anchor	Dr. G. Carto	12	151	32	31	120	90
Adelphi	do.	21	207	64	70	67	43
Highbury	do.	24	159	42	52	30	19
Sandvoort	do.	12	93	68	37	42	32
Fyrish	Dr. L. R. Sharples	12	409	6	19	105	22
Rose Hall	do.	14	412	11	53	112	20
Letter Kenny	do.	12	452	2	71	75	17
Limlair	do.	11	437	...	48	73	9
No. 59, 64 and 71 Villages	Dr. D. J. Taitt	30	215	66	68	203	17
Kiltarn Lodge	do.	12	95	18	12	12	2
Nos. 47 and 51 Villages	do.	20	236	86	57	49	14
Nos. 78 and 79 Villages	do.	9	189	59	74	276	30
La Penitence	Dr. Q. B. de Freitas	25	1,354	230	413	273	51
Agricola	do.	25	407	146	196	21	10
Grove	do.	21	252	39	86	30	13
Pouderoyen	Dr. J. Nedd	12	283	37	65	85	18
Bagotville	do.	12	256	41	84	54	14
No. 1 Canal Polder	do.	18	147	60	94	29	2
Good Intent	do.	21	180	80	83	60	12
Windsor Forest	Dr. R. N. Cozier	25	121	21	37	...	...
Den Amstel	do.	23	278	68	78	...	...
Hague	do.	23	230	76	50	10	...
Parika	do.	11	105	45	36	...	...
Leguan	do.	18	144	43	47	10	8
Marionville	Dispenser Mitchell	24	79	68	56	16	5
Zeelandia	do.	25	116	61	59	8	3
Bartica	Dr. C. Ramdeholl	25	322	188	153	26	21
Morua	Dispenser Trotman	24	459	137	135	59	3
Pomeroon	Dr. C. R. Subryan	27	177	4	68	40	29
Danielstown	do.	20	75	32	32	1	...
Anna Regina and Bush Lot	do.	37	288	41	135	26	7
Queenstown	do.	24	180	27	60	34	27
Suddie	Dr. G. M. Kerry	25	190	20	110	30	30
Riverstown	do.	26	112	16	39	9	9
Aurora	do.	23	137	4	86	12	8
Morawhanna	Dr. G. A. Grandsoult	32	141	113	136	20	2
		1,101 ✓	15,455	3,503	4,802 ✓	2,969	1,029 ✓

XII.—HYGIENE AND SANITATION.

272. This report refers to the Colony in general and excludes the Municipal areas of Georgetown and New Amsterdam.

1.—ADMINISTRATIVE.

Staff.

273. The authorised staff of the Department in 1933 was as follows :—

(i) Headquarters Staff—

Government Medical Officer of Health—B. N. V. Wase-Bailey, M.B., Ch.B., (Edin.), D.P.H., D.T.M. & H., (Eng.).

Assistant Government Medical Officers of Health—

J. H. Pottinger, M.B., Ch.B., D.P.H., D.T.M., D.T.H., (Liv.).

E. Cochrane, M.B., Ch.B., (Glas.), D.P.H. (Lond.).

Head Clerk (Fifth Class)—C. H. Harewood.
 Second Clerk (Sixth Class)—Miss. E. Lewis.
 Third Clerk (Clerical Assistant)—Miss I. Clarke.

In addition there are two disinfecting assistants who act also as photographers, draughtsmen, and messengers and carry out duties in connection with experimental work.

(ii) *Sanitary Staff*—

County Sanitary Inspectors.

Berbice—F. J. July, M.R.San.I.
 Demerara—H. A. Moonsawmy, F.R.E.S., M.R.San.I.
 Essequibo—Supervised by County Sanitary Inspector, Demerara.

In addition there are—

4 Class II. Sanitary Inspectors.
 20 Class III. Sanitary Inspectors, and
 6 Class IV. Assistant Sanitary Inspectors.

All hold the Local Certificates in Hygiene and Sanitation, and four Class II. eleven Class III., and four Class IV. Sanitary Inspectors hold in addition the Certificate of the Royal Sanitary Institute.

2.—ORDINANCES.

274. No new Ordinances were passed during the year.

3.—NOTIFIABLE DISEASES.

275. The notifiable diseases are Small-pox, Alastrim, Yellow Fever, Cholera, Plague, Tuberculosis (all forms), Enteric Fever, Diphtheria, Chicken-pox, Ophthalmia Neonatorum and Infantile Paralysis.

276. Infantile Paralysis was made notifiable on 26th August, 1933.

277. No cases of Small-pox, Alastrim, Yellow Fever, Cholera or Plague occurred during the year.

278. The total number of cases notified of the remaining diseases for the whole Colony was 833 as compared with 825 in 1932. The deaths registered as due to the same diseases were 364 as against 377 in the previous year.

(i) *Tuberculosis (all forms)*—

279. Below is a Table showing the cases notified and deaths registered in the City of Georgetown, the remainder of the Colony and the Colony as a whole, for the past ten years. These are compared with the cases and deaths of In-Patients of the Public Hospital, the average ten-year case mortality also being given:—

TUBERCULOSIS (ALL FORMS).
 CASES NOTIFIED AND DEATHS REGISTERED.

	City of Georgetown.		Remainder of Colony.		Whole Colony.		Public Hospitals In-Patients.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
1924	184	101	239	243	453	344	290	121
1925	162	95	263	254	425	349	385	141
1926	124	100	195	226	319	326	371	133
1927	116	93	173	252	289	345	388	139
1928	102	76	190	225	292	301	357	122
1929	97	61	230	215	327	276	368	127
1930	122	85	209	217	331	302	383	143
1931	140	78	242	209	382	287	453	164
1932	147	96	276	224	423	320	550	170
1933	123	83	292	206	385	289	540	167
Totals	1,317	808	3,300	2,271	3,626	3,139	4,085	1,427
Average (10-year) Case Mortality.	65.9%		68.4%		86.6%		34.9%	

280. The figures for 1933 show that there has been a marked fall in the numbers of notifications and deaths. While it is gratifying to note that the death rate is distinctly lower than that of the preceding year it would be more satisfactory if an increase in notifications could be recorded. Such an increase in the face of a falling death rate would show that more cases in the early stages were being detected instead of only the advanced and moderately advanced cases as prevails at the present time.

281. The British Guiana Society for the Prevention and Treatment of Tuberculosis increased its activities considerably.

282. Collapse therapy has been undertaken in suitable cases, induction is carried out at the Public Hospital, Georgetown, and once collapse is satisfactorily established the patient is transferred to the Best Hospital. While every endeavour is made to keep the patient in hospital for a reasonable period in order not to lose the benefit of this therapeutic aid, an out-patient Clinic is carried on for those who refuse continued hospitalisation but are in need of refills.

283. An increase in the use of X-Rays for the diagnosis of pulmonary tuberculosis is shown by the fact that 373 radiographs of the chest were taken in 1933 as compared with 148 in 1932.

284. Increased efforts to educate the general public by means of every legitimate form of propaganda have met with considerable success. The figures for attendances of new cases at the King Edward VII. Memorial Tuberculosis Dispensary reached a total of 1,378 for the year. This is the highest figure attained in the twenty-two years during which a dispensary has been in existence.

285. The Annual Report of the Society is published separately and may be obtained from the Honorary Secretary.

(ii) *Enteric Fever*—

286. Below is a Table showing the cases notified and deaths registered in the City of Georgetown, the remainder of the Colony and the Colony as a whole for the past ten years. These are compared with the cases and deaths of In-Patients of the Public Hospitals, the average ten-year case mortality also being given:—

ENTERIC FEVER.
CASES NOTIFIED AND DEATHS REGISTERED.

	City of Georgetown.		Remainder of Colony.		Whole Colony.		Public Hospitals In-Patients.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
1924 ...	158	32	255	57	413	84	229	56
1925 ...	80	16	234	63	314	79	148	40
1926 ...	103	16	297	86	400	102	235	58
1927 ...	67	16	196	74	263	90	143	49
1928 ...	55	14	169	44	224	58	114	31
1929 ...	43	11	157	33	200	44	91	24
1930 ...	24	7	229	46	244	53	124	29
1931 ...	18	5	232	47	250	52	94	23
1932 ...	29	8	177	38	197	46	82	24
1933 ...	30	11	216	57	246	68	96	30
Totals ...	598	136	2,153	545	2,751	681	1,356	364
Average (10-year) Case Mortality.	22.7%		25.3%		24.8%		26.8%	

287. The above Table shows that there has been an increase in the number of cases notified throughout the Colony during 1933, the City of Georgetown showing a proportionately higher rise than the remainder of the Colony.

288. The number of deaths registered during the year is also higher, the case mortality rate for 1933 for the whole Colony being 27.6% as compared with 23.3% for 1932, thus causing a slight rise in the average ten-year case mortality figure.

(iii) *Diphtheria*—

289. Below is a Table showing the cases notified and deaths registered in the City of Georgetown, the remainder of the Colony, and the Colony as a whole for the past ten years. These are compared with the cases and deaths of In-Patients of the Public Hospital, the average ten-year case mortality also being given :—

DIPHThERIA.

CASES NOTIFIED AND DEATHS REGISTERED.

	City of Georgetown.		Remainder of Colony.		Whole Colony.		Public Hospitals In-Patients.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
1924	9	2	5	...	14	2	14	2
1925	47	7	14	6	61	13	29	8
1926	28	3	7	...	35	8	22	3
1927	13	2	17	13	30	15	21	11
1928	21	9	14	11	35	20	16	9
1929	18	4	8	6	26	10	15	6
1930	18	4	20	7	38	11	21	7
1931	19	2	17	7	36	9	13	6
1932	32	5	11	5	43	10	30	5
1933	21	2	9	5	30	7	17	7
Totals	226	45	122	60	348	105	198	64
Average (10-year) Case Mortality.	19.9%		49.2%		30.2%		37.4%	

290. During the year there has been a satisfactory fall in the number of cases throughout the Colony and correspondingly fewer deaths.

(iv) *Chicken-Pox*.—

291. Below is a Table showing the cases notified and deaths registered in the City of Georgetown, the remainder of the Colony and the Colony as a whole for the past ten years. These are compared with the cases and deaths of In-Patients of the Public Hospitals, the average ten-year case mortality also being given :—

CHICKEN-POX.

CASES NOTIFIED AND DEATHS REGISTERED.

	City of Georgetown.		Remainder of Colony.		Whole Colony.		Public Hospitals In-Patients.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
1924	23	1	77	...	100	1	8	1
1925	72	...	24	...	96	...	31	...
1926	29	...	90	...	119	...	18	...
1927	14	...	17	...	31	...	5	...
1928	7	1	44	...	51	1	11	...
1929	9	...	41	...	50	...	14	...
1930	25	...	49	...	74	...	22	...
1931	52	...	18	...	70	...	55	...
1932	55	...	41	1	96	1	43	...
1933	30	...	90	...	120	...	34	...
Totals	316	2	491	1	807	3	241	1
Average (10-year) Case Mortality.	0.6%		0.2%		0.4%		0.4%	

292. While there has been an increase in the number of cases during the year in the country districts there has been a marked decline in the incidence of the disease in the City of Georgetown.

(v) *Ophthalmia Neonatorum*.—

293. Below is a Table showing the cases notified in the City of Georgetown, the remainder of the Colony and the Colony as a whole since this disease was made notifiable:—

OPHTHALMIA NEONATORUM.			
CASES NOTIFIED.			
(Notifications commenced November, 1930).			
	City of Georgetown.	Remainder of Colony.	Whole Colony.
	Cases.	Cases.	Cases.
1930 (Nov.-Dec.) ...	3	5	8
1931 ...	36	12	48
1932 ...	37	29	66
1933 ...	32	18	50
Totals ...	168	64	172

(vi) *Infantile Paralysis*.—

294. No cases of Infantile Paralysis were notified during the year (as from 26th August when it was made notifiable).

4.—GENERAL PREVENTIVE MEASURES.

295. The usual Tables showing in detail the work of the District Sanitary Inspectors are appended.

296. Of specified sanitary improvements carried out there were 45,097 as compared with 53,471 in the previous year. Cases taken to Court numbered 742; of these 36 were withdrawn, the number of convictions obtained being 706.

(i) *Latrine Erection*.—

297. The policy of supervising the erection of dry pit latrines in Village Country and Rural Districts was continued during the year. The total number of latrines of this type erected in 1933 was 2,248 in addition to the conversion of many old and less satisfactory types. While there are still many scattered districts in the Colony without a resident Sanitary Inspector and where generally no form of conservancy is adopted, nearly all the house lots in the controlled districts now have installed a reasonably satisfactory dry pit system. Where latrines require reconstruction steps are taken to ensure the installing of the improved type adopted by the Department. As mentioned in last year's report, this improvement lies chiefly in the enclosing of the two-foot mound by a wooden revetment. As a result of the policy, a reduction in the incidence of intestinal diseases, particularly hook-worm, is anticipated.

298. Wherever financially possible, the septic tank system is recommended and during the year this system has been increasingly adopted on many sugar estates, especially in connection with the new building programmes of cottage settlements, for estate labour. The great advantages of this system over the older systems of over-trench latrines are being realised by the Estate Authorities and it is confidently expected that further progress in this direction will be made during the coming year.

(ii) *Lot Inspection*.—

299. Routine inspection of lots by the District Sanitary Inspectors was continued throughout the year. There is still need however for reduction in the areas of the Districts at present covered by most of the Sanitary Inspectors if more

adequate inspection of lots is to be made possible. With the increasing knowledge and spread of sanitation in the districts, owners and occupiers are calling more frequently upon the Sanitary Inspector for advice and assistance. Continued and repeated inspections are imperative owing to the rapid rate of growth of bush, weeds and grass on the lots and the necessity for their removal as also for the maintenance of inter-lot drains which are liable to rapid silting and the growth of water vegetation if not properly attended to. The erection of dwelling houses also requires constant supervision.

(iii) *Refuse Disposal*—

300. No special arrangements exist at present in Village, Country and Rural Sanitary Districts for the proper disposal of refuse, and, until such time as Local Authorities are able to provide or to contract for systematic collection and disposal of house refuse, the policy continued by the Department must remain that of encouraging burying or burning by individual occupiers.

(iv) *Food Inspection and Sampling*—

301. Shops are regularly visited and foodstuffs inspected. Table IV reveals that of 184,525 samples examined 647 samples were condemned as unfit for human consumption.

302. Milk samples were taken at intervals in the different districts and submitted to the Government Analyst for examination. Out of 1,975 samples taken, 78 were found to be adulterated.

303. Routine ante and post-mortem examinations at slaughter houses were carried out by Sanitary Inspectors wherever such existed as also wherever slaughtering occurred. The chief causes for condemnation of carcasses and portions of carcasses were tuberculosis and parasitic infection of individual organs. The number of carcasses inspected was 8,337, of which 142 were wholly condemned and 3,197 portions of one or another were found unsound and destroyed. In this connection it is interesting to note that whilst condemnation of carcasses or portions thereof was due frequently to tuberculosis the incidence of bovine tuberculosis in children in the colony remains comparatively small.

(v) *Buildings*—

304. The policy of tightening up conditions with respect to the preparation and laying out of land prior to the commencing of building operations and to strict enforcement of the building by-laws has been continued and has now been extended to all districts where there is a resident Sanitary Inspector. Through laxity in building control in the past a state of affairs has arisen which it will take many years to correct and, whilst it will not fully be possible until the putting into force of a revised and up-to-date Public Health Ordinance, it is hoped that the increased vigilance now being exercised will at least prevent any extension of the former state of affairs. Similarly before embarking on new building programmes on the front lands of sugar estates, the Estates Authorities are required to prepare and submit plans and to lay out the land satisfactorily.

(vi) *Water Supply*—

305. During the year several more artesian wells have been reconditioned where the flow had markedly diminished or completely ceased. There is still a great need for pipe-borne distribution of this water from the wells to adjacent villages. This has already been done to a certain extent on the West Bank, Demerara, where the water from the well at Bagotville has been piped for about four miles, distribution being effected by stand pipes at various points.

306. Ponds are still utilised as the water supply in areas where no artesian well exists and where creek water is practically available as a permanent source. Ponds generally constitute a source of mosquito breeding and it is hoped that they

will gradually be eliminated with the advent of a piped supply. The open fresh water trench is still the commonest source of supply for the inhabitants of Village and Country Districts. As these trenches are wholly unprotected from surface contamination, especially from fouling by domestic animals, the extension of the Artesian Well System to such areas will be highly beneficial.

(vii) *Disinfection*—

307. On the receipt of the notification form from the District Medical Officer of any of the notifiable diseases (with the exception of *Ophthalmia Neonatorum*) the Sanitary Inspector of the District concerned is immediately informed by telegram and measures for the disinfection of the premises are promptly carried out, advice being given to those connected with the case.

(viii) *Vaccination*—

308. Public vaccinators appointed in various parts of the Colony continued to vaccinate cases brought to them. Vaccination Officers under the control of the Surgeon-General are appointed for the purpose. The following Table shows the number of vaccinations performed :—

	1924.	1925.	1926.	1927.	1928.	1929.	1930.	1931.	1932.	1933.
Total Vaccinations ...	...	5,150	6,862	4,241	6,668	6,500	4,864	5,179	6,209	4,889
Total verified successful ...	3,905	4,671	6,208	3,610	5,311	5,814	4,777	4,778	5,834	4,636
Per cent. verified successful ...	...	90.7	90.4	85.1	88.6	89.6	98.2	92.3	94.0	95.5

5.—SPECIAL PREVENTIVE MEASURES.

(i) *Anti-malarial Measures*—

309. (a) Bonification of the Thomas Lands to the north and east of Georgetown was continued throughout the year. A grant of \$10,000 was allocated from Unemployment Relief Fund for this purpose and several large areas were bonified under the Department's supervision. These lands, formerly broken up by many large and small trenches, and with the general surface irregular and in many cases swampy, are now available for, and have largely been taken up by Sports Clubs which maintain the land satisfactorily.

(b) The bonification of some twenty acres of land along the foreshore at New Amsterdam was completed during the year thus converting more or less muddy and grass-grown swamps into land capable of being utilised in due course as park land or recreation ground. Reduction in the incidence of mosquitoes (more especially the *aedes taeniorhynchus*) and also the diminution in the infestation from "sand-flies" has been a resulting feature in this work.

(ii) *Model Dry Pit Latrine*—

310. Financial assistance was given in a few instances towards the erection of these latrines under the Department's supervision, more especially in connection with schools in country districts, and assistance was given in many instances of private individuals and Estates Authorities in the direction of the preparation of plans for septic tanks, etc.

(iii) *Water Receptacles*—

311. A simple type of mosquito-proof water receptacle was designed by the Department, more especially for use on smaller premises in country areas where the cost of a larger vat was prohibitive. In order to encourage the use of these water receptacles in the various districts they were sold at a reduced price to those unable to afford more. The commonest receptacles of this nature are generally the ordinary iron or steel oil drum with a capacity of some 40 to 50 gallons and wooden barrels. In order to make them mosquito-proof, it was necessary in the case

of the former to cut a hole at the upper end and insert a wooden box floored with wire gauze. This requires frequent renewal and very often it is simply removed as soon as the Sanitary Inspector turns his back. The present design eliminates this by the arrangement of a "flap-barrel" system constructed inside the length of galvanised iron tubing which passes right through the drum from one side to the other near to the top. The down-take pipe from the gutter is connected to one end of this by means of a right-angled piece, the incoming water simply raising the first flap which drops again as soon as the water ceases. When the drum is full, the overflow automatically lifts the second "flap-barrel" and flows out through the end of galvanised iron tube, this second flap closing similarly to the other. These flaps completely conceal both the intake and outlet of the galvanised iron tube, thus effectively preventing the ingress or egress of mosquitoes. The drum is raised off the ground on a wooden stand and water is drawn through a brass tap which can be locked. Before distribution the drums are effectively cleansed with soda solution to remove the oil and then cement washed in the inside, the outer surface being painted. Cleansing of the drum could be effected simply by removing the galvanised iron tube, inverting and washing it, the tube thereafter being replaced and sealed at its junctions with the drum with a little iron cement. Where there is no down-take pipe and the water merely flows directly off the galvanised or bamboo gutter, in the case of the poorest types of dwellings, a hopper has been provided to fit into the right-angled piece of galvanised iron tubing. These drums have now been in use for some two years and have proved very satisfactory.

(iv) *Education and Propaganda*—

312. (a) A course of lectures in connection with the Local Examination for Sanitary Inspectors' Certificates was given, the examination being held later in the year. Owing to the large number of candidates desirous of sitting the Local Examination for Sanitary Inspectors and in view of the few posts available for successful candidates, the policy was continued of holding these examinations as well as those for the Health Visitors' Certificates every other year in future.

(b) A course of lectures for the Royal Sanitary Institute's Certificate for Sanitary Inspectors and Women Health Visitors and School Nurses was given during the year, the Government and the Assistant Government Medical Officers of Health, the County Sanitary Inspectors for Berbice and Demerara and the Superintendent of the Georgetown Infant Welfare and Maternity Centre being amongst the lecturers. The examination during the year under review was held in Port-of-Spain, Trinidad, the Assistant Government Medical Officer of Health, Berbice, Dr. J. H. Pottinger, being the representative examiner for this Colony. Two Sanitary Inspectors and one Health Visitor from British Guiana were successful in obtaining certificates.

(c) A Health Week was held between the 19th and the 26th November in Georgetown conjointly between the City Public Health Department and the Government Public Health Department. A comprehensive Health Exhibition and Demonstration was held in the Assembly Rooms and was open to the public throughout the week, Sanitary Inspectors and Health Visitors being in charge of the various stalls which represented nearly all the branches of public health and sanitation. The mornings were devoted to the school children in Georgetown together with one or two schools from neighbouring country districts, and some 5,000 children thus passed through the Exhibition during the course of the week. The afternoons and early evenings were devoted to the public generally. Several prominent firms in the city were permitted to have stalls in the Exhibition in order to advertise products connected with health and sanitation. A bureau was attached to the Exhibition and representative literature which had been prepared for the occasion was distributed gratis. Afternoon and evening lectures were delivered by Health Officers, private practitioners, the Chief Sanitary Inspector for Georgetown and the County Sanitary Inspector for Demerara. These took place in the Town Hall and were in many cases supplemented by lantern slides and cinematographic

films. In addition, lectures were given at various institutions and schools in the city. Special grants were allocated towards the cost of this Exhibition both by the Mayor and Town Council of Georgetown and by Government.

(d) Health tours in the country districts were continued during the year as far as staff and funds permitted, various populous centres being chosen, more especially in the county of Berbice. The Department's Health Caravan, equipped with modern apparatus and demonstration material, such as photographs, specimens and models, proceeded generally to the school building or hall and the Exhibition was prepared during the morning. In the afternoon demonstrations were given by Sanitary Inspectors and Health Visitors on each subject first to the school children and later to the general public. In the evening lantern lectures were given by the Government Medical Officer of the district, the Government Medical Officer of Health and the Assistant Government Medical Officer of Health. Literature including the special "Health Series" of the Department was distributed in each case. Attendances at every centre were excellent.

(e) The "Health Series" pamphlets initiated in 1931 by the Department were further extended during the year to include the additional subjects of "Filariasis" and "The Production of Pure Milk," and the earlier ones were not in a few instances further revised or re-written.

6.—NEW PUBLIC HEALTH BILL.

313. The Select Committee, to which had been referred the draft of the New Public Health Bill by the Legislative Council the previous year, continued their sittings and had not completed their deliberations by the close of the year. At the time of writing this report, however,—May, 1934—this Bill has been passed by the Legislative Council.

7.—LABORATORY WORK.

314. During the year the laboratory examined 258 specimens of sputa and found the tubercle bacillus present in 36 cases.

315. The culturing of material from sputa and tissues for the tubercle bacillus was begun.

316. 193 specimens of Blood Films were examined for malarial parasites.

317. 216 specimens of stools were examined for ova and larvae of parasitic helminths; 8 showed presence of *Ancylostome*, 7 showed presence of *Ascaris* and 1 showed presence of *Trichuris trichuria*.

318. 12 specimens of creek water were examined. In 8 cases Coliform organisms were present in 5 c.c.s. In 4 cases coliform organisms were present in 1 c.c.

319. The *B. Capsulatus* was isolated 3 times, as also were the *B. Metacoli* and the *B. Oxytocus*. An organism which showed Lactose, Glucose, Mannite, Saccharose, Inosite, and Salicin positive but Dulcitol and Adonite negative was isolated twice and an organism which showed Lactose, Glucose, Mannite, Saccharose and Salicin positive but Dulcitol, Adonite and Inosite negative was isolated once.

320. Diseased organs and glands of animals were permanently preserved for exhibition.

321. The various stages of the life history of disease transmitting insects were mounted as permanent specimens.

322. Post mortem examinations were done on 83 rats caught in the Port of Georgetown for the presence of Plague. None, however, were found to be infected.

APPENDIX A.

TABLE I.

Inspections of lots.	Notices served.	Prosecutions.	Convictions.	Withdrawn.	Dismissed.	Struck out.	Amount of fines.
124,497	16,310	742	706	30	6	3	\$906.88

TABLE II.

Lots weeded.	Drains weeded.	Drains dug.	Trenches cleaned.	Ponds cleaned.	Water Receptacles screened.
8,423	4,900	1,404	705	907	2,025

TABLE III.

Latrines erected.	Latrines removed and re-erected.	Latrines repaired.	Latrines limewashed.	Cesspits emptied.	Cesspits oiled.
2,248	1,592	2,112	2,609	112	17,767

TABLE IV.

	1932.	1933.
Inspection of provision shops ...	8,948	7,165
Provision shops cleaned by order ...	1,010	882
Provision shops certified ...	90	9
Inspection of bakeries ...	1,854	900
Bakeries cleaned by order ...	322	272
Bakeries certified ...	6	...
Samples of foodstuffs examined ...	228,573	184,325
Samples of foodstuffs condemned ...	1,653	647
Inspection of butcheries ...	3,981	4,685
Carcasses inspected ...	6,797	8,337

TABLE V.

Milk Sampling, Inspection of Cowpens, etc.	1932.	1933.
Cattle-pens certified as sources of milk supply...	377	173
Licences issued for the sale of milk ...	873	900
Persons medically examined as to fitness for handling milk or milk vessels.	198	8
Persons prosecuted for selling milk unlawfully ...	83	27
Persons prosecuted for selling adulterated milk ...	94	78
Inspection of cattle-pens ...	6,780	4,599
Cattle-pens cleaned by order ...	889	796

TABLE VI.

RESULTS OF MILK SAMPLING—	1932.	1933.
Samples taken ...	1,825	1,975
Samples genuine ...	1,725	1,889
Samples adulterated ...	95	78
Amount of fines ...	\$ 1,399.94	\$ 890.78

TABLE VII.

PERCENTAGE OF ADULTERATED MILK SAMPLES—	1932.	1933.
East Coast, Demerara ...	5.0%	5.6%
West Coast, Demerara ...	2.9%	1.0%
East Bank, Demerara ...	5.6%	5.0%
West Bank, Demerara ...	5.1%	2.2%
Demerara River ...	7.6%	0.0%
Essequibo ...	3.7%	4.0%

XIII.—PORT HEALTH WORK AND ADMINISTRATION.

PORT OF GEORGETOWN.

323. The Surgeon-General is the Quarantine Authority for the Colony.

324. The Staff is as follows:—

Health Officer ...	...	B. N. V. Wase-Bailey, M.B., Ch.B., (Edin.), D.P.H., D.T.M. & H. (Eng.).
Deputy Health Officers ...	...	J. H. Pottinger, M.B., Ch.B., D.P.H., D.T.M. & H. (Liverpool). E. Cochrane, M.B., Ch.B., (Glasgow), D.P.H. (Lond.).
Port Sanitary Inspectors ...	...	J. H. Matthews, (Local Certificate in Hygiene and Sanitation). J. E. Bishop, (Royal Sanitary Insti- tute Certificate).
Engineer ...	...	W. Spooner.

325. During the year the duties of the Port Health Officer were performed by Dr. E. Cochrane, and in his absence, by Dr. B. N. V. Wase-Bailey.

326. Quarantine was maintained during the year as follows:—

(a) Permanently against all South and Central American Ports (except British, French and Dutch) for Yellow Fever, Plague, Small-pox and Cholera.

(b) At different times and for varying periods against Colon, Hayti, Cuba, Tampa, Florida (U.S.A.) and Guatemala for Small-pox; St. Bart's for Alastrim and the Azores for Plague.

(c) St. Thomas, St. Croix, Porto Rico and San Domingo were removed from list of ports under permanent quarantine and arrangements were made to ensure the notification of any occurrence of quarantine diseases in these ports.

327. *Vessels visited by the Port Health Officer.*—During the year seventy-one (71) vessels were visited by the Port Health Officer under the Quarantine Ordinance tabulated as under with fees chargeable in each case.

Month.	Gratis.	\$4.	\$6.50.	\$9.00.	\$2. Revisit).
January ...	1	4	...	...	...
February ...	6	3	...	...	...
March ...	2	3	...	...	...
April ...	1	5	...	1	...
May ...	1	5	2	...	...
June ...	...	4	...	...	...
July ...	1	4	1	...	...
August ...	1	3	...	...	...
September ...	...	2	...	2	...
October ...	...	8	...	...	...
November ...	...	4	...	...	...
December ...	1	6	...	...	...
Total ... 71	14	51	3	3	...

328. Passengers were placed under surveillance by the Port Health Officer as follows:—

For Small-pox ...	...	6
For Cholera ...	...	Nil.
For Yellow Fever ...	...	Nil.
For Plague ...	...	Nil.

329. Vessels consigned to the Demerara Bauxite Company, Mackenzie, Demerara River, with crews placed under surveillance by the Port Health Officer were allowed to proceed to their destination. In each case the Medical Officer of the Bauxite Company was instructed 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.

VESSELS VISITED BY THE PORT SANITARY INSPECTOR.

The total number of vessels visited was as under :—

<i>Steamers.</i>		<i>Sailing Vessels.</i>	
Ocean Steamers	... 118	Schooners	... 117
Coasting Steamers	... 38	Other Craft	... 37
	156		154

331. The total number of visits paid to vessels was as follows :—

<i>Steamers.</i>		<i>Sailing Vessels.</i>	
Ocean Steamers	... 307	Schooners	... 446
Coasting Steamers	... 438	Other Craft	... 192
	745		638

332. The above visits include routine inspection of Government Steamers.

NOTICES SERVED ON MASTERS OF VESSELS LYING IN PORT.

338. During the year no written notices were served on Masters of vessels by the Port Sanitary Inspector. Nuisances occurring on board vessels were abated according to verbal instructions issued.

VESSELS FUMIGATED AND DISINFECTED BY THE PORT HEALTH AUTHORITIES.

334. No fumigation was carried out during the year.

335. Plague precautions were enforced on vessels lying alongside the quay at Georgetown or at Mackenzie, Demerara River.

CARE OF MERCHANT SEAMEN.

336. Sixteen (16) sick seamen were sent to the Public Hospital, Georgetown, for treatment during the year from ocean-going vessels.

DISINFECTION AND FUMIGATING MACHINES.

337. *Clayton Fumigator at the Public Hospital, Georgetown.*—This machine was not employed for fumigation purposes during the year but was subjected to a quarterly test and gave satisfaction on each occasion.

338. *Washington Lyon Steam Disinfecter at the Quarantine Station, Best, West Coast, Demerara.*—This machine was subjected to a quarterly test during the year and worked satisfactorily on each occasion. Several charges of bedding were sterilized for the Tuberculosis Hospital.

339. *Clayton Rat Gassing Machine.*—This machine was not used during the year, but is in good condition.

340. *Trapping and Examination of Rats.*—At varying periods during the year the trapping of rats was carried out in the Port by the Port Health Officer assisted

by the Port Sanitary Inspector with a subsequent examination in the Laboratory attached to the Department. No signs of Plague were found in any of those examined.

QUARANTINE STATION, BEST, WEST COAST, DEMERARA.

341. Regular attention has been directed to the keeping of this station compound in a sanitary condition including the weeding of grass, bushing and the maintenance of proper drainage.

342. The condition of water receptacles on the whole is satisfactory. The necessity never arose during the year to utilize the Quarantine Station for the accommodation of persons arriving in the Colony under surveillance from infected ports, nor was there any case of a dangerous infectious disease in the Port of Georgetown and its vicinity during 1933.

REMARKS.

343. Cablegrams were interchanged as heretofore between the Health Officer of this and other Convention Ports giving notice of passengers under surveillance on board vessels about to sail.

344. The total revenue accruing to Government from sanitary services in the Port of Georgetown in 1933 amounted to \$250.50.

XIV.—METEOROLOGICAL.

345. The rainfall during the year, as registered at the Botanic Gardens, (Georgetown), was 116.55 inches as against 90.51 in 1932 and the mean percentage of humidity was 81.8 as compared with 81.0 in the previous year.

346. The mean of the four recording stations in Georgetown was 109.60 inches as against 87.16 inches in 1932.

347. The following is the meteorological return for the year:—

Month.	TEMPERATURE.						RAINFALL.		WINDS.		Remarks.
	Solar Maximum.	Minimum on Grass.	Shade Maximum.	Shade Minimum.	Range.	Mean.	Amount in Inches.	Percentage of Humidity.	General Direction.	Average Force Velocity.	
January ...	149.4	72.3	84.2	75.2	14.0	79.7	7.24	81.9	N.E.	7.37	
February ...	150.7	71.7	83.6	74.9	15.0	79.2	4.66	77.3	N.E.	7.97	
March ...	149.7	72.3	84.3	75.3	13.0	79.8	6.10	79.3	N.E.	7.39	
April ...	149.4	73.0	85.1	76.1	14.0	80.6	5.60	79.3	S.E.	7.75	
May ...	146.9	74.8	85.1	76.6	15.0	80.8	14.34	83.5	S.E.	6.78	
June ...	145.9	74.4	85.4	75.3	16.0	80.3	12.56	84.3	S.E.	5.85	
July ...	145.7	74.2	86.5	74.9	15.0	80.7	8.16	83.0	S.E.	4.16	
August ...	149.8	74.1	86.2	75.6	15.5	80.9	14.45	83.4	S.E.	4.65	
September ...	150.3	74.5	87.7	76.2	16.5	81.9	1.82	79.4	S.E.	6.11	
October ...	150.9	73.9	87.8	75.8	16.5	81.8	4.12	80.2	S.E.	5.58	
November ...	149.3	73.5	85.7	75.6	17.0	80.6	10.40	83.5	S.E.	5.26	
December ...	145.8	71.7	83.4	73.9	14.5	78.6	27.10*	86.3	N.E.	5.74	* Highest total since 1891.
	148.9	73.4	85.4	75.4	...	80.4	116.55	81.8	...	6.22	

Inches.

Georgetown—Registered Rainfall for the year 1933. 109.60 Mean

XV.—RECOMMENDATIONS.

348. *The erection of a Tuberculosis Hospital.*—The present accommodation at the Public Hospital, Georgetown, for cases of this disease is very unsatisfactory.

349. *The erection of a Venereal Diseases Clinic at the Public Hospital, Georgetown.*—The object is to improve facilities for the out-patient treatment of these diseases in Georgetown and surrounding district. The building used for this purpose is altogether unsuitable.

350. *The erection of a building to be used as a Health Centre and Bureau, Georgetown.*—The need for such an establishment to co-ordinate and extend the various branches of Public Health work has been manifest for some time.

351. *The erection of a new Bacteriology Laboratory, Georgetown.*—For some time past the Bacteriology Laboratory has been inadequate in size and general arrangement, with consequent congestion of accommodation for the various branches of work.

352. *The institution of a Central Medical Store* from which all Public General Hospitals will receive their supplies.

353. The proper maintenance of all Government Hospital buildings. The Leprosy, Mental and Georgetown hospitals in particular stand in great need of repair and renovation.

354. The provision of adequate quarters for the medical staff of the Georgetown Hospital and for the nursing staff at the Georgetown and New Amsterdam Hospitals.

355. *Georgetown Hospital.*—Improvements to the water supply and better administration offices are urgent requirements.

356. Re-organization and increase of the establishment of medical officers are necessary to meet the present and future needs of this institution.

357. *Public Hospital, New Amsterdam, Berbice.*—A new and up-to-date operating theatre is required, also the provision of accommodation for ophthalmic examinations.

358. Small electric lighting plants are required at the Bartica and Mabaruma Hospitals.

359. *The Mental Hospital, Berbice.*—The construction of additional blocks to permit of proper grouping of cases, and of separate buildings for the accommodation of private patients are old standing requirements.

XVI.—SCIENTIFIC.

360. The Annual Report of the Government Bacteriologist for 1933 appears as Appendix I.

J. A. HENDERSON,
Surgeon-General.

APPENDIX I.

ANNUAL REPORT OF THE GOVERNMENT BACTERIOLOGICAL
LABORATORY FOR THE YEAR 1933.

1.—STAFF.

Bacteriologist and Pathologist	...	Geo. H. Steven, M.B., Ch.B. (Edin.).
Laboratory Assistants	...	Messrs. I. and E. A. Singh.
Clerk	...	R. L. Morgan.
Laboratory Attendant	...	Matilda Duncan.

2.—LEAVE.

The following Officers were on leave of absence during the year :—

Dr. Geo. H. Steven from 11th April to 25th April.

Mr. E. A. Singh from 1st July to 12th August.

During the absence of Dr. Steven his duties were performed by Dr. S. C. Bettencourt-Gomes, Senior Physician of the Public Hospital, Georgetown.

3.—BACTERIOLOGICAL AND SEROLOGICAL WORK.

The total number of specimens examined during the year was 13,841. The total in 1932 was 14,193. Of the former, 6,759 were Wassermann Reactions. *48%*

The reduction in number of specimens is mainly due to the absence on leave, and from resignation, of the Medical Officers in charge of the medical wards for six months of the year, during which time their work was in the hands of various Government Medical Officers.

The following is a classified list of the examinations made :—

(a) *Microscopic and Chemical*—

Throat swabs for Corynebacteria Diphtheriæ	...	135	
Sputa for Tuberculosis	...	925	
Nasal smears for Mycobacteria Leprae	...	55	
Faeces for Helminths and Amœbæ	...	603	
Blood for Malaria Parasites	...	698	
Blood for Microfilariae	...	18	
Blood for total and differential Counts	...	618	
Smears for Gonococci and Spirochætes	...	2,330	
Pus for Organisms	...	37	
Urine for Microscopic and Chemical Examinations	...	356	
Tissues for Section	...	47	
Cerebro-spinal Fluids for Globulin, Cell Count, etc.	...	12	
Varia	...	88	
			5,922

(b) *Cultural*—

Urine Cultures	...	60	
Blood Cultures	...	176	
Pus Cultures	...	112	
Faeces Cultures	...	219	
Cerebro-spinal Fluid Cultures	...	5	
Autogenous Vaccines	...	40	612

(c) *Pathological and Biochemical*—

Widal Reactions	...	251	
Blood Urea Estimations	...	140	
Blood Sugar Estimations	...	100	
Urea Concentration Tests	...	45	
Vandenbergh Reactions	...	12	
Wassermann Reactions	...	6,759	7,307

Total .. 13,841

In addition to the above a water analysis was made on three occasions at the Shelter Belt, also on two samples from the Public Buildings, and for the Ice Factory.

There were also several medico-legal examinations of suspected blood stains for the presence of human blood.

4.—SOURCE OF SPECIMENS EXAMINED.

As usual, most of the specimens were received from the Public Hospital, Georgetown, and the various Clinics and out-patients' Departments attached.

The source of the specimens examined is shown below :—

Public Hospital, Georgetown	...	...	10,680
Other Government Institutions	...	...	1,067
Districts run by Government Medical Officers	...	...	414
Municipal Infant Welfare Clinics	...	...	598
Private Practitioners	...	...	1,082
		Total	13,841

5.—REMARKS ON VARIOUS DISEASES, ETC., INVESTIGATED.

(i) *Helminths*—

603 specimens of faeces were examined and 144 were found to contain Ova as follows :—

Anchylostomum Duodenale was present in 118, *i.e.*, 19.5%.

Ascaris Lumbricoides was present in 19, *i.e.*, 3.0%.

Trichuris Trichiura was present 7, *i.e.*, 1.0%.

In 1932, eight hundred and eight-two specimens were examined, of which 244 contained ova. The percentages were *Anchylostomum* 18 per cent, *Ascaris* 8 per cent. and *Trichuris Trichiura* 1.5 per cent.

(ii) *Dysentery*.—Of the aforementioned number of faeces examined *Entamoeba Histolytica* or Cysts were found in 20 or 3.3 per cent. In the previous year the percentage was 0.8 per cent.

Faeces were also cultured for Bacillary Dysentery. *Bacterium Flexneri* was isolated on six occasions, *Bacterium Shiga* twice. Therefore the number of cases of Clinical Dysentery confirmed in the Laboratory was 28—Amoebic 20 and Bacillary 8—as against 11 in 1932.

(iii) *Enteric Group*.—251 Widal reactions were made of which 78 were positive (31 per cent.) viz., 66 (84.6 per cent.) to *Bacillus Typhosum*, and 2 each to *Bacillus Paratyphosum* "A," "B" and "C" (2.5 per cent).

In the previous year of the 198 similar examinations made, 47 were positive (23 per cent.)—90 per cent. agglutinated with *B. Typhosum*, 4 per cent. each with *B. Paratyphosum* "A" and "B" and 2 per cent. with *B. Paratyphosum* "C."

From 156 Blood Cultures made, the *Bacillus Typhosum* was isolated on 20 occasions (12.8 per cent.) as against 6.5 per cent. in 1932.

The *Bacillus* was also isolated 4 times from Cultures of Faeces.

I have again to remark that faeces culture in cases of proved Enteric cases is very seldom asked for, and patients are discharged from Hospital without this important examination being made. In two cases of outbreak in Georgetown, suspected Carriers were sent for examination. Examination before leaving hospital would tend to obviate the risk of Carriers.

(iv) *Nephritis*.—Three hundred and fifty-six specimens of urine were completely examined during the year, and 73 contained more than 0.05 per cent. of Albumen (20.5 per cent).

Blood Urea was estimated in 140 cases; of these 41 contained more than 50 milligrams per 100 c.c. blood (29.2 per cent). and 21 over 100 milligrams per 100 c.c. blood (15 per cent).

The percentages for 1932 were 37 per cent. and 22 per cent., and for 1931 45 per cent. and 20 per cent. respectively.

(v) *Tuberculosis*.—Nine hundred and twenty-five sputa were examined. In the previous year the number was 912.

The *Mycobacterium Tuberculosis* was found in 180 specimens (14 per cent.).

Specimens from patients at the Best Hospital were received for examination throughout the year.

(vi) *Venereal Diseases*.—Six thousand seven hundred and fifty Wasserman Reactions on blood sera were done during the year, and nine on Cerebro-spinal Fluids.

This is an increase of 282 over the 1932 figure, and 1,052 over 1931.

The results for the last two years are as follows:—

	1933.	Percentage.	1932.	Percentage.
Positives ...	2,350	35%	2,176	33%
Weak Positives ...	332	5%	423	6%
Negatives ...	4,077	60%	3,878	61%
Total ...	6,759		6,477	

Two thousand three hundred and thirty smears were examined for Gonococci and Spirochaetes, as compared with 1,565 in 1932, 1,241 in 1931, and 436 in 1930.

(vii) *Diphtheria*.—In 20 of the 155 Pharyngeal Swabs examined the presence of the *Corynebacterium Diphtheria* was proved—*i.e.* 15 per cent.

(viii) *Leprosy*.—The *Mycobacterium Lepra* was found in five of the fifty-five nasal swabs examined. In one case the *Mycobacterium* was also found in the peripheral blood from a nodule.

(ix) *Malaria*.—Six hundred and ninety-eight blood films were examined and Plasmodia were found in 150 (21.4 per cent.). viz.—

Plasmodium Vivax present in 145 of the positives (96.6 per cent.).

Plasmodium Falciparum present in 4.

Plasmodium Malariae present in 1.

(x) *Vaccines*.—Three thousand one hundred c.c. of Antityphoid (T.A.B.) Vaccine were prepared and 2,022 c.c. issued to medical officers of the various districts.

Three thousand c.c. Hæmolytic *Streptococcus* Vaccine mixed strains for *Filaria* prophylaxis were also made. This is injected chiefly in the laboratory. Owing to the great increase in the number of patients who avail themselves of these injections, record cards were instituted during the latter part of the year. There are at present 113 cases on record.

One thousand five hundred and forty c.c. of Autogenous Vaccines were prepared for thirty-seven patients. These comprised 340 c.c. *B.Coli* (*Communius* and *Neopolitanum*), 1100 c.c. *Staphylococcus* (*Aureus* and *Albus*) and 100 c.c. mixed strains of other organisms.

6.—POST MORTEM EXAMINATIONS.

Three hundred and thirty three post mortem examinations were made during the year, as against one hundred and seventy-four in 1932.

The following list shows the "Cause of Death"—

1. <i>General Diseases</i> —			
Ankylostomiasis ...	...	...	1
Asthenia ...	...	...	1
Dysentery ...	...	...	4
Filariasis Abdominal ...	...	...	2
Gangrene ...	...	...	1
Leprosy ...	...	...	1
Malaria ...	...	...	21
Malnutrition ...	...	...	1
Maldevelopment ...	...	...	4
Premature Birth ...	...	...	1
Septicæmia ...	...	...	10
Syphilis ...	...	...	7
Tetanus ...	...	...	1
Tuberculosis Miliary ...	...	...	1
Typhoid Fever ...	...	...	6
			<hr/> 62
2. <i>Injuries</i> —			
Burns ...	...	...	2
Fracture of Ribs ...	...	...	4
Hæmorrhage Abdominal ...	...	...	1
			<hr/> 7
3. <i>Malignant Tumours</i> —			
Carcinoma of Liver ...	...	...	2
Carcinoma of Liver & Pancreas ...	...	...	3
Carcinoma of Stomach ...	...	...	1
Carcinoma of Peritoneum ...	...	...	1
Carcinoma of Oesophagus ...	...	...	1
Carcinoma of Colon & Rectum ...	...	...	1
Sarcoma of Peritoneum ...	...	...	1
Sarcoma of Pancreas ...	...	...	1
			<hr/> 11
4. <i>Disease of Brain and Membranes</i> —			
Cerebral Hæmorrhage ...	...	...	5
Meningitis ...	...	...	10
Encephalitis ...	...	...	1
			<hr/> 16
5. <i>Diseases of the Respiratory System</i> —			
Abscess of Lung ...	...	...	2
Empyema ...	...	...	1
Pleurisy Chronic ...	...	...	2
Pneumonia Lobar ...	...	...	27
Pneumonia Bronchial ...	...	...	9
Tuberculosis of Lung ...	...	...	43
			<hr/> 84
Carried forward ...	...	...	180

Brought forward	...	...
6. Diseases of the Circulatory System—			180
Aneurysm Thoracic	...	3	
Aneurysm Abdominal	...	1	
Anaemia Pernicious	...	1	
Arterio Sclerosis	...	7	
Cardiac Failure with Myocarditis	...	22	
Cardiac Failure with Bronchitis	...	24	
Endocarditis Ulcerative	...	4	
Pericarditis Septic	...	3	
Rupture of Heart	...	2	67
7. Diseases of the Digestive System—			
Abscess of Liver (Multiple)	...	3	
Abscess Perisplenic	...	1	
Tuberculosis of Bowel	...	6	
Duodenal Ulcer (Perforation)	...	1	
Cirrhosis of Liver	...	5	
Enteritis Chronic	...	11	
Gangrene of Bowel	...	1	
Gall Stones	...	1	
Gastritis Acute	...	4	
Intussusception	...	1	
Peritonitis Septic	...	4	
Peritonitis Tubercular	...	6	
Tabes Mesenterica	...	2	46
8. Excretory System—			
Cystitis Septic	...	2	
Nephritis Acute	...	5	
Nephritis Chronic Parenchymatous	...	9	
Nephritis Chronic Interstitial	...	11	
Nephritis Pyelo...	...	1	
Renal Calculus	...	2	
Rupture of Urethra	...	1	
Uraemia	...	1	32
9. Generative System—			
Ectopic Gestation	...	2	
Pregnancy Anaemia	...	2	
Rupture of Uterus	...	1	
Pyosalpinx	...	2	
Pelvis Tuberculosis	...	1	8
Total	...		333

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Government Bacteriologist and Pathologist.

19th March, 1934.

throughout the system

6	6. Division of the Circulatory System—
7	Arterial System
8	Aorta
9	Arteries
10	Arterioles
11	Capillaries
12	Venous System
13	Vena Cava
14	Venae Cavae
15	Venules
16	Capillaries
17	7. Division of the Digestive System—
18	Mouth
19	Salivary Glands
20	Esophagus
21	Stomach
22	Small Intestine
23	Large Intestine
24	Rectum
25	Anus
26	8. Excretory System—
27	Kidneys
28	Ureters
29	Bladder
30	Urethra
31	9. Genital System—
32	Male
33	Female
34	10. Lymphatic System—
35	Lymphatic Vessels
36	Lymphatic Organs
37	11. Nervous System—
38	Brain
39	Spinal Cord
40	Nerves
41	12. Sensory Organs—
42	Eye
43	Ear
44	Nose
45	Tongue
46	13. Skin—
47	Epidermis
48	Dermis
49	Hypodermis
50	14. Miscellaneous—
51	Connective Tissues
52	Muscles
53	Bones
54	Cartilage
55	15. Summary

